NOTICE CALLING FOR PROPOSAL

<table>
<thead>
<tr>
<th>District:</th>
<th>South Orange County Community College District</th>
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<tbody>
<tr>
<td>Project:</td>
<td>BID NO. 2050: RFQ &amp; P for Exterior Lighting and Controls Retrofit – Phase II Saddleback College</td>
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<tr>
<td>Bid Deadline:</td>
<td>2:00 P.M., March 24, 2016</td>
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<tr>
<td>Mailing Address &amp; Proposal Receipt:</td>
<td>South Orange County Community College District Facilities Planning &amp; Purchasing Health Sciences Building 28000 Marguerite Parkway Mission Viejo, CA 92692 Attn: Brandye D’Lena</td>
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NOTICE IS HEREBY GIVEN that the South Orange County Community College District, of Orange County, CA, acting by and through its Governing Board, hereinafter referred to as "DISTRICT," will receive up to, but not later than, the above-stated time, sealed proposals for the award of an energy services contract per Government Code 4217.10-.18 for the aforementioned project.

Each proposal must conform to and be responsive to the contract documents and be submitted on a form furnished by the DISTRICT.

DESCRIPTION OF THE WORK: The Parking Lot and Roadway Lighting Conversion to LED services will include construction, demo, fabrication and installation to support the replacement and retrofit of existing HID light fixtures to LED fixtures and controls.

ENGINEERING PROJECT COST ESTIMATE OF: $790,000

DETERMINATION OF BEST VALUE: The DISTRICT will review proposals and will award the contract to the responsive Firm whose proposal is determined to provide the Best Value to the DISTRICT. DISTRICT’S written decision shall support the award of the contract by stating the basis of the award.

PREVAILING WAGE: This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) and awarded (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

The California Department of Industrial Relations (DIR) has determined the general prevailing rates of per diem wages for the locality in which the work is to be performed for the Project. Copies of these wage rate determinations, entitled Prevailing Wage Scale, are maintained at the DISTRICT office and are available at the following website: www.dir.ca.gov. It shall be mandatory upon the successful proposer to whom the contract is awarded, and upon any subcontractor listed, to pay not less than the said specified rates to all workers employed by them for the duration of the Project. The general prevailing rate of per diem wages is based upon a working day of eight (8) hours. The rate for holiday and overtime work shall be at least time and one-half. See bid website for summary of new DIR requirements.
A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5

**SUBSTITUTION OF SECURITIES:** DISTRICT will permit successful proposer to substitute securities for retention monies withheld in accordance with California Public Contract code, Section 22300.

**PROCUREMENT OF REQUEST FOR PROPOSAL DOCUMENTS:** Proposers may access the Request for Proposal documents through the DISTRICT’S website at the following address: [http://www.soccccd.edu/businessservices/bs_purchasing_bids.html](http://www.soccccd.edu/businessservices/bs_purchasing_bids.html)

A **MANDATORY PRE-PROPOSAL CONFERENCE WILL BE HELD** at 1:00 pm on Thursday, March 10, 2016 at Saddleback College, Facilities Management Building (Central Plant), 28000 Marguerite Parkway, Mission Viejo, CA 92692. Proposals will not be accepted from any Firm who fails to attend this mandatory conference. Firms are advised to arrive early in order to park and obtain a parking pass from Saddleback College Police. Parking is also available in the staff parking located just inside the front entry of Facilities Maintenance Building.

The DISTRICT reserves the right to reject any or all submittals or to waive any irregularities or informalities in any proposals.

Brandye K. D’Lena  
Executive Director,  
Facilities Planning & Purchasing

**PUBLISH:** THE REGISTER  
March 1, 2016 &  
March 8, 2016
REQUEST FOR QUALIFICATIONS AND PROPOSALS – EXTERIOR LIGHTING AND CONTROLS RETROFIT - PHASE II: SADDLEBACK COLLEGE

South Orange County Community College District (District) is inviting submittals from qualified Firms, partnerships, corporations, associations, or professional organizations to provide and perform Electrical Installations and Retro fits as required for the removal and replace and/or retrofit of the existing campus wide HID lighting fixtures with LED lighting fixtures and controls as defined in the contract documents. Selection will result in an Agreement expected to provide comprehensive, professional construction services to SOCCCD expected to begin May 4, 2016.

If you would like to submit a response to this Request for Qualifications and Proposals, please send seven (7) hard copies and one (1) electronic copy of requested materials to:

South Orange County Community College District
Facilities Planning & Purchasing
Health Sciences Building
28000 Marguerite Parkway
Mission Viejo, CA 92692
Attn: Brandye D’Lena

Questions regarding this RFQ & P may be directed to Brandye D’Lena at bdlena@socccd.edu.

The District may modify the RFQ & P prior to the deadline for submittals by issuance of an electronic addendum on the District bid website at www.socccd.edu.

All responses must be received by mail, recognized carrier or hand delivered by

Thursday, March 24, 2016 @ 2:00 P.M.
INTRODUCTION

South Orange County Community College District seeks Firms that can provide construction services for the Electrical Installations and Retro fits as required to remove, replace and/or retrofit the existing campus wide HID light fixtures with LED light fixtures and controls along with the necessary pre and post monitoring and verification as required to validate the proposed energy savings as defined in the contract documents and consistent with Prop 39 and SDG&E rebate requirements. The District will evaluate proposals to determine the Firm best qualified using Public Contract Code 4217. This RFP & Q is the means by which the District will select a Firm.

The goal of this project is to utilize the existing light poles and either install new LED fixtures or convert the existing roadway bell light fixture housings to LED; in addition, the installation of new lighting controls and the necessary pre and post construction monitoring and verification as required.

The District is requesting qualification statements and proposals from contractors with a proven track record. The District has appointed a Selection Committee that will manage the selection process, review and evaluate the Proposals and make a recommendation regarding the selection of a successful Firm. The committee shall be comprised of individuals with experience, knowledge and program responsibility for the products and services of this Project. The evaluation, selection and recommendation timeframe is expected to be approximately six weeks. Selection will be conducted comprehensively, fairly and impartially. Structured, quantitative scoring techniques will be used to maximize objectivity.

Selection will include an assessment of the Firms’ proven ability to apply their experience and technical expertise to:

- complete this energy savings project in an efficient and skilled manner
- provide quality components per contract documents
- ensure the systems’ operation and persistence of generation for the system life
- minimize lifecycle system costs while maximizing return on investment over the life of the system
- collect, document and assemble in the approved format, all pre and post monitoring and verification data as required of a Prop 39 and SDG&E energy savings project

At a minimum, Firms must possess the ability to construct complex lighting retrofit upgrades on an active college campus; this includes the installation of a modern integrated wireless lighting controls systems.

An Agreement may be awarded in accordance with the defined Basis of Award herein. Each initial offer should contain the Firm’s best terms from a technical and cost/price standpoint.

The selected team will work with the assigned project manager, take an active leadership role in the entire construction process, make presentations as require to the Board of Trustees when scheduled, prepare the final documents, gather and submit as require pre and post construction monitoring and verification data consistent with Prop 39 and SDG&E rebate requirements, complete construction, provide a fully
functional system and obtain project close out. It is the intent of this Request for Qualifications and Proposals (RFQ & P) to establish the specifications, terms and conditions governing the selection process.

BACKGROUND:

Saddleback College, located in Mission Viejo, celebrated its 40th anniversary on September 23, 2008. Saddleback College is approximately 175 acres and serves over 41,000 students each year.

This RFQ & P addresses the need, and lays the foundation for the improvement of Parking Lot and Roadway lighting campus wide by replacing or retrofitting the existing with new LED Lighting and Controls. These new lighting and controls will provide better more even lighting levels, improve efficiency, reduce maintenance expense and provide a foundation for future expansion.

The selected Firm will be required to construct the requisite Parking Lot and Roadway, Phase Ii retrofit project, and deliver a fully functional Parking Lot and Roadway Lighting and Controls system with a two year maintenance period and a minimum two year warranty for all work performed. Some individual warranty requirements are greater as stated herein.

SUBMITTAL INFORMATION AND SUBMITTAL SCHEDULE

All submittals shall be in the form and formatted as specified in this RFQ & P. Submittals which do not include all of the elements as specified, or which deviate from the proposed format and content as specified, may be deemed “non-responsive” by the evaluation committee and eliminated from further consideration.

Time is of the essence. Submitting Firms will be expected to adhere to the required dates and times.

Submittal questions must be in writing and be directed to Brandye D’Lena, bdlena@socccd.edu with the subject line indicating “Question(s) for LED Lighting Retrofit RFQ & P”. If questions are submitted after the deadline, they will not be answered and Firms must provide a submittal using the information in the RFQ & P and any addenda provided.

Request for Qualification & Proposals Submittal Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>RFQ &amp; P - 1st Advertisement</td>
<td>March 1, 2016</td>
</tr>
<tr>
<td>RFQ &amp; P - 2nd Advertisement</td>
<td>March 8, 2015</td>
</tr>
<tr>
<td>Mandatory Pre-proposal meeting</td>
<td>March 10, 2016, 1:00 pm</td>
</tr>
<tr>
<td>Deadline for written questions</td>
<td>March 17, 2016</td>
</tr>
<tr>
<td>Last addendum</td>
<td>March 21, 2015</td>
</tr>
<tr>
<td><strong>Deadline for RFQ &amp; P Submittal</strong></td>
<td>March 24, 2016</td>
</tr>
<tr>
<td>Interviews (Optional)</td>
<td>March 30, 2016</td>
</tr>
<tr>
<td>Contract Negotiation</td>
<td>April 1, 2016 1:30-3:30</td>
</tr>
<tr>
<td>Board Meeting Date</td>
<td>April 25, 2016</td>
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Firms who intend to respond to the RFQ & P shall participate in a mandatory pre-proposal meeting/site walk which will begin per the schedule above at:

**Saddleback College**  
**Facilities Management Office**  
(Central Plant End of Service Road-See Exhibit I, Campus Map)  
28000 Marguerite Parkway  
Mission Viejo, CA 92692

Firms shall set aside two hours. There will be a sign in sheet at the start and roll call at the completion. Eligible candidates must be present for both.

During the review of the submittals, SOCCCD will not report apparent errors or request submittal clarification. Submittals will be interpreted as presented. Firms are responsible to proof documents to avoid errors.

The delivery package must be clearly marked with the RFQ & P for Exterior Lighting and Controls Retrofit – Phase II, Firm’s name and address, contact name, email and phone number.

**Submittals may be withdrawn at any time before the deadline by written request of person signing the Certification.**

**Late submittals will be returned to the Firm without evaluation and Firm will not qualify for consideration.** It is the Firm’s responsibility to ensure submittals are received on or before the deadline and at the identified location. A postmark will not be accepted as meeting the delivery requirement. Third party carriers are routed through the warehouse and may experience delay from carriers stated delivery timeframe. Hand delivery should include time allowances for limited parking, the possibility of elevator failure (third floor delivery) or other potential obstacles to reaching the delivery location in a timely manner.

**SCOPE OF WORK**

The District intends to hire a Firm to construct turnkey Exterior Lighting and Controls Retrofit – Phase II Upgrades according to the specifications of this RFQ & P. The Firm shall take into consideration the sites’ space parameters, applicable California state and local ordinances and codes; budget constraints; utility interconnection requirements, and other relevant factors.

**Services:** The Exterior Lighting and Controls Retrofit – Phase I Upgrade services will include installation and or retrofit of the exterior lighting to upgrade the existing HID lighting to LED as well as production of the requisite documents for obtaining stamped approval by regulatory authority, buy out through to construction completion and close out including submittal of electronic as-builts provided in CAD and PDF programs as approved by the college. District’s general conditions are attached and shall apply. Firms must possess the ability to construct Roadway, Walkway and Parking lot lighting retrofits vital for student safety; for protection against assault, theft and vandalism; for convenience; and for comfort to the user.
Overview

1. **Experience.** The successful proposer must meet at a minimum the following:
   
   1.1. Experience with building systems similar to those required for this Project, and technical capability to address a broad range of systems, including without limitation:
       
       a. Exterior roadway and parking lot lighting installation and retrofit
       b. Exterior wireless parking lot and roadway lighting controls
       c. Retrofitting existing light poles with new fixtures and fixture mounts

   1.2. Project experience that supports the Firm’s project delivery on time and within budget

   1.3. Experience with the California Division of the State Architect (DSA).

   1.4. Commissioning experience and success.

   1.5. Relative project staff experience

   1.6. Demonstrated capability in contracting, management, construction and maintenance to provide a broad range of services, which may include but are not limited to the following:
       
       a. Energy Audit and Project Development: Technical energy audit to evaluate costs and savings of a variety of energy-saving measures; project development plan including financial analysis.
       
       b. Construction/Implementation: Equipment procurement; construction management; thorough understanding of legal and political restrictions of public entities.
       
       c. Commissioning/Maintenance: Commissioning; continuing operations and maintenance for all improvements; staff training on routine maintenance and operations of systems; maintaining long-term, high efficiency performance on buildings; fully staffed and factory certified in-house services department with 24/7 call center.

   1.7. Expertise in energy conservation and proven ability to obtain rebates or other incentives.

   1.8. Ability to satisfy District’s insurance, bond & safety requirements.

2. **College Operation.** The college will be in session during this planned work and the Firm will coordinating all activities as necessary around college activities and shall maintain safe lighting levels not less than the current levels throughout the college at all times during construction.

3. **Schedule.** The Exterior Lighting and Controls Retrofit – Phase II Services effort is expected to begin upon award after Board approval as noted in the schedule above and end no later than August 30th, 2016.

4. **Tasks.** The following are the expected tasks and deliverables associated with the Exterior Lighting and Controls Retrofit – Phase II Upgrade Services effort:
1. **Task 1: Project Initiation**

Meet with Saddleback College Facilities/Central Plant project team to develop and finalize a detailed work plan and schedule which at a minimum will establish meeting and presentation schedules, clarify roles and responsibilities of both staff and consultant teams, and include an evaluation methodology, in accordance with Lighting and Controls Retrofit – Phase I Upgrade terms and conditions and appropriate to meet the highest standard for the consultant’s practice and define emerging roles.

*Deliverables:*

a) Meeting notes  

b) Final work plan and project schedule  

c) Roles and Responsibilities Matrix  

d) Evaluation methodology  

Identify and order material. Identify pipeline supply issues immediately and provide recommendations for improvement.

2. **Task 2: Monitoring and Verification**

The contractor will provide, define and implement the Monitoring and Verification (M&V) work plan with the college and the assigned SDG&E representative and SOCCCD representative. Execute the Prop 39 and SDG&E pre-construction monitoring of the existing lighting immediately after award.

3. **Task 3: Pre-Construction Analysis**

Review available background materials and any other relevant information relating to the project including, but not limited to:

- As-Built information on the existing central plant  
- Construction documents on the Lighting and Controls Retrofit  
- Meet with staff members most knowledgeable about the Project.

*Deliverables:*

a) Summary of meeting notes with College representatives and key stakeholders  

b) Roles and Responsibilities Matrix

4. **Task 4: Construction**

Construction services shall be for the Electrical Installations and Retrofit of the existing campus wide HID parking lot light fixtures with new LED light fixtures and controls as defined in the plans and specifications. This shall include strict adherence to Prop 39 and SDG&E rebate requirements. The contractor will provide all materials and labor required to provide a fully functional system
prior to final acceptance. This project shall be managed and inspected by the District and the notification of final acceptance issued by the assigned project manager.

5. **Task 5: Closeout and Final Verification**

Perform Final Verification as defined in the (M&V) work plan and complete all necessary documentation to the college, assigned SDG&E representative and SOCCCD representative to support and secure all the Prop 39 and SDG&E monitoring and verification requirements for this project.

**INSTRUCTIONS FOR SUBMITTING QUALIFICATIONS AND PROPOSALS**

Firms shall submit seven hard copies and one electronic copy in a sealed box or envelop clearly marked: “Proposal-Firm name, Sealed Proposal for **Exterior Lighting and Controls Retrofit**. Hard copies shall be formatted on standard 8 ½ x 11 white paper with each page clearly numbered on the bottom. Each section, 1 – 11 listed below, shall be tabbed. The original copy shall be marked “Original” and must be wet signed by person authorized to bind the Firm.

“Qualifying Firms must not be on the federal list of current companies or individuals that have been declared ineligible to receive Federal contracts due to a violation of Executive Order 11246, as amended; Section 503 of the Rehabilitation Act of 1973, as amended 29 U.S.C. Section 793; and/or the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. Section 4212”.

All submittals shall be in the form and formatted as specified in this RFQ & P. **Submittals which do not include all of the elements as specified, or which deviate from the proposed format and content as specified, may be deemed “non-responsive” by the evaluation committee and eliminated from further consideration.**

Statement of Qualifications and Proposals should minimally include the following information:

1. **Cover Letter.** A maximum one-page, dated introductory letter must be submitted including the date, Firm’s legal name, address, telephone and fax numbers, and the name, title, and signature of the person(s) authorized to submit the proposal on behalf of the Firm.

2. **Table of Contents.** A Table of Contents of the material contained in the proposal shall follow the Cover Letter and outline in sequential order the major sections (identified in this section of the RFQ & P) and any subsections of the Proposal.

3. **Executive Summary**

   (1) Years in the electrical contracting business.

   (2) Generally describe services and method for satisfying the District’s expectations, and goals including general and technical approach to partner with the District.

   (3) Indicate the number of full-time employees and provide a general description of staffing resources including the total number of professional staff employed.

   (4) Describe technical resources such as computer capabilities, software applications, and personnel.
(5) In general, describe your experience with:

(a) Public works, especially educational facilities;
(b) Division of the State Architect
(c) California Community Colleges

Note: Exhibit B, the Qualification Matrix, should be completed and placed in this section behind the executive summary. This form will be used as part of the review process.

3. Experience. Provide any professional registration, certifications and affiliations for the Firm. List accreditations and qualifications, such as, the U.S. Department of Energy, U.S. Department of Defense, etc., and describes the relevance of such accreditations or qualifications to this Project. Describe your experience with lighting retrofit construction projects and more particularly community college projects. Indicate the total number of similar facilities designed and or constructed by your Firm. Identify the scope of work performed within the last five years. Identify whether parking lot lighting retrofit experience cited is with new design, renovation design, construction, maintenance, and operations, monitoring, training, etc. Percentage breakdown of self-performed work vs. sub-contracted. Identify trades for work that is not performed by Contractor. Elaborate on Firm’s approach to equipment procurement in relationship to best value and scheduling. Specify which Projects were performed by the personnel recommended for this Work. Provide contact names and phone numbers for each listed project.

Financial Standing - Provide a current annual report or audited profit and loss statement. This information will be treated as confidential. Provide the amounts and carriers of general and professional liability insurance and bonding capacity. Provide information relating to the filing of bankruptcy actions, debtor proceedings, case or proceeding, voluntary or involuntary by or against Firm. Include any order or decree rendered against Firm directing any readjustment, arrangement, composition or reduction Firm’s debts, liabilities or obligations or making any assignment for the benefit of creditors or any similar actions. For the purposes of this paragraph, the “Firm” includes Firm, subsidiary, parent or affiliate and any member of Firm’s management team that will be assigned to the Project.

Evidence that the Firm is legally certified to conduct business in the State of California for the services offered and experience with college and university educational facilities and other institutional services.

Litigation. The Firm must have an acceptable history of working proactively to avoid litigation. Provide specific information on termination for default, litigation settled or judgments entered within the last five (5) years including mechanics liens or stop notices filed against or by Firm resulting from or attributable to its current or past involvement with projects. Describe any current or past disciplinary actions taken by the California Contractors State License Board. Failure to properly make this disclosure may result in the rejection of all or any part of the Firm’s proposal or termination or nay contract or agreement entered into pursuant to this RFQ & P process.

Project Experience
Briefly describe all parking lot lighting retrofit projects or related projects similar in type, size, scope and location to the District’s Exterior Lighting and Controls Retrofit – Phase I project completed by your company that demonstrate your capability to complete the District’s Project on time and within budget. Provide the following:

a. Project name, location, and A number if applicable.
b. District contact-reference information, including title, telephone number, fax number and e-mail address.
c. Project type and use. (Preferably community college District or other public educational facility.)
d. Size and scope, including specific work related to energy, water, and other O&M cost savings.
e. Anticipated schedule with original and actual start and completion dates. (Preferably within the last 10 years.)
f. Project and construction cost and fee.
g. Staff: project manager, project engineer, superintendent. (Individuals as those proposed on your organizational chart for this RFP & Q Project.)
h. Sub-Contractors/Sub-consultants. (Individuals as those proposed on your organizational chart for this RFP & Q Project.)
i. Include photos or other illustrations.
j. If applicable, explain in detail any termination or failure to complete a contract; debarment by any public entity; conviction for violating a state or federal antitrust law by bid or proposal rigging, collusion, or restrictive competition between bidders or proposers, or conviction for violating any other federal or state law related to bidding or professional services performance; knowing concealment of any deficiency in the performance of a prior contract; falsification of information or submission of deceptive or fraudulent statements in connection with a contract; willful disregard for applicable rules, laws or regulations. Information regarding any of the above, at the sole discretion of the District, may deem to indicate an unsatisfactory performance record.

5. Business and Personnel. This section of the proposal should establish the ability of the Firm to satisfactorily perform the required services as demonstrated by its representation of staff availability. Information shall further specifically include:

a. The business structure including whether the Firm is a subsidiary or affiliate of another company or entity or whether Firm or any subsidiary, parent, affiliate, or related entity is directly or indirectly owned or controlled (in whole or in part) by any general contractor or any other contractor or consultant related to or performing work in connection with the Project.

b. If the Firm utilizes resources from more than one office, indicate office locations and how work would be coordinated. A one page for summary and up to five additional to highlight project specific information is allowed if appropriate.

c. Number of qualified staff
d. Identification of any services noted in the Agreement(s) not provided in-house

e. Identification of proposed sub consultants

f. Identification of proposed subcontractors per bid forms

g. Organizational Chart of proposed project team detailing relationship or the team members. All personnel assigned to District projects, employees, sub-consultants or subcontractors must:

i. Possess the minimum qualification to perform the services provided

ii. Have knowledge and understanding of terms and conditions, major services and activities required to perform services provided

iii. Have a minimum of three years of directly related experience

iv. Have not entered into a subcontract with any Firms who are ineligible to perform work on a public works project pursuant to Labor Code 17777.1 or 17777.7

h. Include resumes of proposed management personnel, including any proposed sub-consultants who would likely be assigned to projects. Provide name and professional qualifications of proposed personnel. Specifically define the role of each person and outline his or her individual experience. Identify any certifications or licenses held (No more than one page per person).

i. Firms must provide a statement that all proposed participants will meet or exceed the minimum qualifications specified herein.

6. **Scope of Work.** The Scope of Work section herein provided describes the expected effort of the Firm; however, the Firm may recommend refinements, suggestions or brief restatements of the scope of work in this section. Provide information in concise a manner as possible.

   a. The Proposal shall include a description of the approach Firm will use to procure long lead time equipment, pre and post metering, construct, and commission the system to meet the goals of the District. The Proposal shall describe how the Firm will comply with the requirements of the District, obtain timely DSA closeout and accommodate ongoing campus operations during construction, including how the Firm intends to meet the proposed schedule.

   b. The Proposal shall describe the Firm’s approach to Project and construction management, document control and project administration. The Firm shall indicate how the Work will be phased to meet the goals of the District. The Proposal shall include a narrative addressing how the Firm recommends Work shall progress in order to efficiently execute the design review, installation, pre and post metering, testing and commissioning of the systems. The Proposal shall also describe quality assurance procedures and safety plans. The Proposal shall contain a description of the Firm’s strategy for communicating with the District and assisting them in their efforts to achieve the overall objectives as described herein.
c. This section shall also contain an implementation narrative. The implementation narrative shall include procurement strategy for equipment and materials: submittal reviews, fabrication, staging, construction, installation and commitment from suppliers and/or manufacturers substantiating the availability of major long lead time equipment to meet the proposed schedule.

d. The technical portion of the Proposal shall describe the equipment, materials and methods to be employed by the Firm to meet the goals of the District for the Project and the requirements set forth in this RFQ & P. The Firm shall provide a narrative that describes the equipment and systems proposed and demonstrates how they meet the requirements of the RFQ & P. The technical portion of the Proposal shall include the following:

   i. Proposed System Overview: Technical narrative that describes your means and methods for the installation and integration of the proposed systems including but not limited to:

   ii. Pre and post metering. Compliance documentation and verification of the pre and post metering.

   iii. Preliminary Layout of the wireless Systems: Describe your approach to wireless system coverage, redundant coverage and testing.

   iv. Software and controls: Specifications of proposed controls software including screenshots of user interface and system diagnostic capabilities, programming, and user interfaces.

7. Economic Evaluation. Addressed prior to RFQ & P.

8. Services. Define which services your firm will be provided in-house and those for which you will hire consultants. Define the number of years you have worked with each consultant proposed as part of potential project teams. (One page maximum)

9. Additional Data. Provide additional information about the Firm as it may relate to this RFQ & P.

   a. Indicate ongoing professional education of staff and total number of permanent employees. DVBE, Small business, small disadvantaged business, minority-owned Firms, and small women-owned business participation level. Consortia of small businesses, minority-owned Firms, and women’s business enterprises are encouraged, and subcontracts with small businesses, minority-owned Firms, and women’s business enterprises are also encouraged. (Include as an appendix if desired).

   b. Project Schedule: The Proposal shall contain a comprehensive critical path methodology schedule describing all activities of the Project. Project schedules shall be submitted electronically in MS Project. Activities with durations of 10 days or longer shall be shown. Show all float days as belonging to the owner. Align your projects schedule with you schedule of values to allow for ease of verification of pay
applications. Start your schedule with the notice to proceed and end your schedule with customer acceptance.

c. Warranty: Firm shall submit a summary of warranties for each system component manufactures warranty, demonstrating compliance with RFQ & P requirements as well as full warranty agreements with terms and conditions. Note: All warranty periods shall commence upon customer acceptance and recordation of Notice of Completion not upon jobsite receipt or installation.

10. Client References. This section of the proposal permits Firms to demonstrate their ability and competence to satisfactorily perform the required services by using similar services recently completed for other clients. Information should be furnished for both the Firm and any listed subcontractors / consultants included in the proposal and shall include:

a. Firm, sub-contractor / consultant name
b. Project name, location and description
c. Client contact name
d. Telephone number
e. Email address

This section may also include letters of recommendation or testimonials

11. Agreement Review. Review and comment on any proposed modifications to the attached draft Agreement(s). Recommend additional work scope if appropriate to allow for improved outcome for the District.

12. Certification. Complete, provide authorized signature, and date the CERTIFICATION - REQUEST FOR QUALIFICATION & PROPOSALS enclosed with this RFQ & P

Responses to the RFQ & P should be complete and be prepared to provide an insightful, straightforward, and concise overview of the capabilities of your company. Deviation from the defined content, order and format prescribed in this RFQ & P may result a non-responsive evaluation and Proposal rejection. Submittals received after the due date and time will not be considered or reviewed. The emphasis of your submittal should be on completeness and clarity of content.

The District reserves the right to waive any immaterial deviation in a submittal. The decisions to provide a waiver shall in no way modify or compromise the overall purpose of the submittal, nor excuse the Firm from full compliance with all requirements if awarded an Agreement.

The sample standard agreement (Exhibit E) is not to be included with the Firm’s submittal.

BASIS OF AWARD

Firm selection of the Exterior Lighting and Controls Retrofit – Phase I will be a phased process.

1. The first stage will be based on analysis focusing on the RFQ & P submittals.
2. The second stage may involve interviews with one or more of the shortlisted firms to present their full understanding of, and responsiveness to, this RFQ & P, and their specific experience (at selection committee’s option).

3. The third stage is successful contract negotiations, recommendation to the Board and contract award.

If the selection committee desires clarification during the evaluation, the District at its option, may submit a clarification request in writing to one or more Firm(s). District will identify a response date in the letter asking for clarification. If the committee does not receive a response from Firm(s) by the response date, the committee will determine how to interpret the Proposal. For the purposes of this Proposal, “Clarification” means communication with a Firm for the sole purpose of eliminating minor irregularities, informalities, or apparent clerical mistakes in the Proposal. Clarification does not give the Firm an opportunity to review or modify the Proposal, except to the extent that correction or apparent clerical mistakes result in a revision.

The selection committee may contact any references including those provided by Firm in the Proposal.

If Interviews are schedule, they will be in accordance with the date provided herein. Firms must be available on the identified date in order to be considered. “Interviews” means any oral or written communication between the District and the Firm other than communications conducted for the purpose of a minor clarification, whether or not initiated by the District that involves information essential for determining acceptability of Proposal or provides Firm an opportunity to review or modify its Proposal.

Prior to presenting a recommendation to the Board of Trustees, District staff will engage in contract negotiations with selected Firm. If negotiations with the first team selected are unsuccessful, negotiations will commence with the second team and so on until an agreement has been successfully negotiated or SOCCCD rejects all proposals.

**Note:** By virtue of submission, the proposing Firm declares that all information provided in the Statement of Qualifications is true and correct.
1. General information about SOCCCD may be found at http://www.socccd.edu. Recent projects are listed at the "Bids" tab.

2. All submittals shall remain active and valid for ninety days following closing date for receipt. The District reserves the right to negotiate the scope and cost of any submittal.

3. Selection may be made solely on the basis of the stage one submittal review or the selection committee may deem it necessary to interview applicants as part of the selection process.

4. The proceedings of the selection committee are confidential. Members are not to be contacted by the proposers. All communication between proposers and the District shall be through the contact information provided above for submitting RFQ & P materials.

5. All materials, except financial information, submitted in response to this RFQ & P shall become the property of SOCCCD and shall be considered a part of Public Record. The District reserves the option to retain or dispose of all submittals whether selected or rejected.

6. Only written changes to the RFQ & P will be valid. Verbal representations will not be binding on either party. Proposers are responsible to monitor the District bid page for addenda information.

7. SOCCCD reserves the right to reject any or all responses to this RFQ & P. Any and all costs incurred in preparing and submitting a response to this RFQ & P is the sole responsibility of the proposer.

8. This request does not constitute an offer of employment or a contract for services. The action to award the Agreement is vested solely in the Board of Trustees of the District.

9. The Agreement which the successful proposer will be required to execute and the payment bond required in accordance with Civil Code Section 9550, are included in the Project Documents. The payment bond shall be in the amount not less than one hundred percent (100%) of the amount of the contract in accordance with Civil Code Section 9554. The successful bidder will also be required to furnish a separate faithful performance bond in the amount of one hundred percent (100%) of the contract and in the form included in the Project Documents, which shall remain in full force and effect through the guarantee period as specified in the General Conditions. All bond premiums shall be at bidder’s cost.

10. Surety Qualifications for Bonds. Bidders shall ensure all surety companies have a minimum rating of "A-VIII," as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Company, Oldwick, New Jersey 08858. Only California admitted surety insurers will be acceptable for the issuance of all bonds (bid, payment and performance bonds). (Code of Civil Procedure Section 995.311) DISTRICT shall verify the status of the surety by printing out information from the website of the California Department of Insurance confirming the surety is an admitted surety insurer and attaching it to the bond. If a California-admitted surety insurer issuing bonds does not meet these requirements, the insurer will be considered qualified if it is in conformance with Section 995.660 of the California Code of Civil Procedure and proof of such is provided to the District.
11. **DIR Registration of Contractor and Subcontractors.** A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

This Project is a public works project as defined in Labor Code section 1720. Each contractor bidding on this Project and all subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with DIR and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. For more information and up to date requirements, contractors are recommended to periodically review the DIR’s website at www.dir.ca.gov. Contractor shall be solely responsible for ensuring compliance with Labor Code section 1725.5 as well as any requirements implemented by DIR applicable to its services or its subcontractors throughout the term of the Agreement and in no event shall contractor be granted increased payment from the District or any time extensions to complete the Project as a result of contractor’s efforts to maintain compliance with the Labor Code or any requirements implemented by the DIR. Failure to comply with these requirements shall be deemed a material breach of this Agreement and grounds for termination for cause. The contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4 on at least on a monthly basis (or more frequently if required by the District or the Labor Commissioner) and in a format prescribed by the Labor Commissioner. The District reserves the right to withhold contract payments if the District is notified, or determines as the result of its own investigation, that contractor is in violation of any of the requirements set forth in Labor Code section 1720 et seq. at no penalty or cost to the District. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

The District may modify the RFQ & P prior to the deadline for submittals by issuance of an electronic addendum on the District bid website. Firms/Individuals; all addenda will be posted on the bid website and it is the proposers responsibility to ensure they have obtained and reviewed all addenda.

**Specific Inclusions**

1. **Exhibit A: Proposal Form and Agreement**
2. **Exhibit B: Exterior Lighting and Controls Retrofit – Phase II – Qualification Matrix**
3. Exhibit C: Not used
4. Exhibit D: Sample Invoice for monthly billings
5. Exhibit E: Sample Agreement for Exterior Lighting and Controls Retrofit – Phase II
6. Exhibit F: Not Used
7. Exhibit G: Documents due at Lump Sum Price Approval
8. Exhibit H: General Conditions
9. Exhibit I: Campus Map

*Proposals shall be received up to but not later than the time and date listed in the schedule.*
TO: South Orange County Community College District

The undersigned declares the Saddleback College Exterior Lighting and Controls Retrofit – Phase I RFQ & P has been read and understood and further agrees and proposes to furnish all necessary labor, materials and equipment to provide the requirements of the RFQ & P, including plans and specifications complete with allowances for equipment considerations in accordance with Prop 39 and the “DLC” fixture list, all in accordance with the terms and conditions and will take in full payment therefore the following total guaranteed maximum lump sum price according to the RFP, with all taxes included:

SUBMITTED BY: ____________________________________________________________

Name of proposing firm

Address: ________________________________________________________________

Phone: ________________________________________________________________

Licensed in accordance with the Governing Authority

GC License No. ____________________________ Expiration date: ______________

To Whom it May Concern:

The undersigned represents that he/she has carefully examined the site, the proposed Contract Documents consisting of RFQ & P documents, including any and all Addenda prepared by the District or District representative pertinent to the construction of the above referenced Project and further, being familiar with all other conditions affecting the work, the undersigned hereby proposes and agrees to furnish and provide all labor, materials, supervision, transportation, tools, equipment, services and other facilities necessary and required for the expeditious completion of the Work included in the RFQ & P indicated above, in strict conformity with said conditions and Contract Documents.

The undersigned has reviewed the work outlined in the RFP and fully understands the scope of work required in this proposal, and acknowledges that his proposal includes the work of all trades within required scope of work in the Proposal, and agrees that this proposal, if accepted by the District, will be the basis for a contract with the District to enter into such a contract in accordance with the intent of the Contract Documents.
The undersigned agrees to complete the work required within the time indicated, subject to liquidated damages as specified.

The undersigned has notified the District of any discrepancies or omissions, or of any doubt about the meaning of any of the Contract Documents, and has contacted the District before proposal due date to verify the issuing of any clarifying Addenda.

OTHER CONDITIONS

1. Proposer declares that its firm was not assisted or represented by an individual who has, in an owner or owner’s agent capacity, been involved in this project or this proposed contract in the past two consecutive years.

2. The undersigned further acknowledges receipt of the following Addenda, which are a part of the Contract Documents: (Include All Addenda Received)

   NO. ___  DATE ________________________  NO. ___  DATE ________________________

   NO. ___  DATE ________________________  NO. ___  DATE ________________________

   NO. ___  DATE ________________________  NO. ___  DATE ________________________

3. The following alternates are described in the contract documents and are included in the price for the above stated project: (List any Alternates)

   Alternate No.____: None ______________________________________________ Price: $ __________

~ The remainder of this page intentionally left blank ~
Exterior Lighting and Controls Retrofit – Phase II RFQ & P - Qualification Matrix

<table>
<thead>
<tr>
<th>Fir m</th>
<th>Proposing Firm to complete highlighted cells</th>
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<tbody>
<tr>
<td>Location (City/State)</td>
<td>NOTE: Firm to validate quantities listed on this sheet with supporting documentation in appropriate proposal tab sections.</td>
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<th>Description</th>
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<td>Cover Letter - Professional/Format/Signed</td>
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<td>Table of Contents - Correct &amp; Professional</td>
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<tr>
<td>3</td>
<td>Executive Summary - professional - coherent - relevant - concise</td>
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<td>4</td>
<td>Experience</td>
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<td></td>
<td>Years in business (min 3)</td>
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<td>Location - proximity to campuses</td>
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<td></td>
<td>Number of Projects <strong>in past 5 years</strong></td>
<td>Other</td>
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<td></td>
<td>Type of related project</td>
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<td># Mediation/Litigation in last 5 years</td>
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<td>5</td>
<td>References &amp; Recommendations</td>
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</tr>
<tr>
<td></td>
<td>Number of References with phone #s</td>
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<tr>
<td></td>
<td>Number of Written Recommendations from past clients</td>
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<td></td>
<td>Phone Interview results</td>
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<td>Personnel</td>
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<td>Number of in-house staff &gt; 5+ years of experience</td>
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<td>7</td>
<td>Scope of Work</td>
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<td></td>
<td><em>LED Roadway and Parking lot lighting installation and retrofit experience</em></td>
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<tr>
<td></td>
<td><em>Wireless lighting controls experience</em></td>
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<td>8</td>
<td>Services - Philosophy</td>
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<td></td>
<td>Quality Control - Process, etc.</td>
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</table>
Additional Data re. Company
Other
DVBE

Fee Proposals Rates-Sealed Envelope

Client References

Agreement Review
Review and comments attached

Certification signed w/ correct # of addenda noted
**SAMPLE: CRITERIA AND BILLING FOR EXTRA WORK**

NOT USED
Invoices for services shall be provided once per month and within 60 calendar days of performance of the services and shall have an AIA version Schedule of Values attached.

<table>
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<tr>
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<tr>
<td>Project Manager</td>
<td>Date: TBD</td>
</tr>
<tr>
<td>South Orange County Community College District</td>
<td>SOCCCD Project Number: 2028</td>
</tr>
<tr>
<td>28000 Marguerite Parkway</td>
<td>Firm Invoice number: TBD</td>
</tr>
<tr>
<td>Mission Viejo, CA 92692-3635</td>
<td>Pay Application Number: TBD</td>
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<td><strong>Project:</strong> Exterior Lighting and Controls Retrofit – Phase II Saddleback College</td>
<td></td>
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</table>

**Firm TBD**

**Firm Address**

**City / State / Zip code**

**Phone Number**

**Services from Month/01/Year - Month/31/Year**

<table>
<thead>
<tr>
<th>Billing</th>
<th>Percent of Fee</th>
<th>Fee</th>
<th>% Comp</th>
<th>Earned</th>
<th>Previous Billing</th>
<th>Current Billing</th>
<th>Balance Remaining</th>
</tr>
</thead>
<tbody>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>XX.00</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>XX.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>XX.00</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>XX.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>XX.00</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CONTRACT AMOUNT**

| XX.00 | 0.00 | 0.00 | 0.00 | XX.00 |

**Amendment 01**

**REVISED CONTRACT AMOUNT**

| 0.00 | 0.00 | 0.00 | 0.00 | XX.00 |

**Reimbursable Expenses**

**List reimbursable items**

**Total Reimbursable rate at 1.1 times**

| TBD | 1.1 | TBD |

**TOTAL THIS INVOICE**
TABLE OF CONTENTS: EXTERIOR LIGHTING AND CONTROLS RETROFIT – PHASE II - SADDLEBACK COLLEGE

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This AGREEMENT, dated the __________ day of __________, 2016, in the County of Orange, State of California, is by and between South Orange County Community College DISTRICT (hereinafter referred to as “DISTRICT”) and XXXXXXXXXX (hereinafter referred to as “CONTRACTOR”).

ARTICLE 1 DEFINITIONS

1.1. Capitalized terms used in the Contract Documents, including but not limited to the Request for Proposals, Designation of Subcontractors, Non-collusion Declaration, Workers’ Compensation Certificate, Faithful Performance Bond, Payment Bond, Escrow Agreement, if applicable, Drug-Free Workplace Certification, Change Orders, Shop Drawing Transmittals, Insurance Certificates and Endorsements, Guarantees, Contractor’s Certificate Regarding Non-Asbestos Containing Materials, Disabled Veteran Business Enterprises Certification, if applicable, General Conditions, Supplemental Conditions, if any, Special Conditions, if any, Drawings, Specifications, and all modifications, addenda and amendments thereto by this reference incorporated herein, shall have the meanings assigned to them in the General Conditions. If not defined in the General Conditions or elsewhere, they shall have the meanings reasonably understood to apply to them by the context of the portion of the Contract Documents where such terms are used. The Project Documents are complementary, and what is called for by any one shall be as binding as if called for by all.

ARTICLE 2 THE WORK

2.1. **Scope of Work.** CONTRACTOR shall execute the entire Work called for by the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of DISTRICT or other Project Team members retained by DISTRICT.

2.2. **Standard of Performance.** In addition to and without limiting CONTRACTOR’S other obligations under the Contract Documents, CONTRACTOR shall at all times in its performance of its obligations under the Contract Documents conform to the following general standards of performance:

   a. comply with the requirements of the Contract Documents;
   b. comply with Applicable Laws;
   c. conform to the standard of care applicable to those who provide project services and construction of the type called for by this Agreement for projects of a scope and complexity that is comparable to the Project;
   d. furnish efficient business administration of the Work, utilizing sufficient senior level management and other qualified personnel to manage the Work; and
e. apply its best and highest skill and attention to completing the Work in an expeditious and economical manner, consistent with the expressed best interests of the DISTRICT and within the limitations of the Contract Sum and Contract Time.

**ARTICLE 3**

**CONTRACT TIME**

3.1. **Notice to Proceed.** No physical construction at the Site shall proceed prior to the date fixed in the Notice to Proceed with Construction.

3.2. **Contract Time.**
   a. **Construction.** CONTRACTOR shall achieve Completion of the entire Work not later than 119 Calendar Days after Notice to Proceed.

3.3. **Liquidated Damages to District.**
   a. **DISTRICT Right.** The DISTRICT and the CONTRACTOR acknowledge and agree that if the CONTRACTOR fails to Complete the Work within the Contract Time, the DISTRICT will suffer substantial losses which are both extremely difficult and impracticable to ascertain and on that basis agree, as a reasonable estimate of those losses and not a penalty, to the payment by CONTRACTOR of liquidated damages pursuant to this Section 3.4.
   
   b. **Daily Rate.** If the CONTRACTOR fails to achieve Completion of the entire Work within the Contract Time for Completion, the CONTRACTOR shall pay the DISTRICT as liquidated damages the amount of Two Thousand Dollars ($2,000) per Day for each Day occurring after the expiration of the Contract Time for Completion until the CONTRACTOR achieves Completion of the entire Work.
   
   c. **Extensions of Time.** Liquidated damages shall not be charged to Contractor for Delays to Completion for which the Contractor is entitled under the Contract Documents to receive an adjustment of the Contract Time for Completion.
   
   d. **Partial Completion.** Liquidated damages shall not be reduced or apportioned for Completion of portions of the Work prior to Completion of the entirety of the Work.
   
   e. **Remedies.** DISTRICT may deduct such liquidated damages as are payable hereunder from money due or to become due to the CONTRACTOR, or pursue any other legal remedy to collect such liquidated damages from the CONTRACTOR and/or its Surety.
   
   f. **Not a Limitation.** DISTRICT’S rights under this Section 3.4 shall not be interpreted as precluding or limiting: (1) any right or remedy of DISTRICT in the event of CONTRACTOR Default other than a failure to Complete the Work within the Contract Time; or (2) DISTRICT’S right to order an acceleration, at CONTRACTOR’S Own Expense, of performance of the Work to overcome Delay, including, without limitation, a Delay for which DISTRICT has the right to assess liquidated damages.

3.4. **Liquidated Damages to Contractor.**
a. CONTRACTOR’S Right. DISTRICT and CONTRACTOR acknowledge and agree that if CONTRACTOR is unable due to Compensable Delay to Complete the Work within the Contract Time, the CONTRACTOR and its affected Subcontractors and Subconsultants will suffer losses which are both extremely difficult and impracticable to ascertain and on that basis agree, as a reasonable estimate of those losses and not a penalty, to the payment by DISTRICT of liquidated damages pursuant to this Section 3.5.

b. Daily Rate. The Contract Sum shall be increased by the sum of Two Thousand Dollars ($2,000) per Day as liquidated damages for each Day for which CONTRACTOR is entitled under the Contract Documents to an adjustment extending the Contract Time for Completion due to Compensable Delay, with no additional amount added thereto for Allowable Markup thereon.

c. Payment by DISTRICT. A Change Order or Unilateral Change Order for an adjustment to the Contract Sum for the liquidated damages permitted by this Section 3.5 shall be executed prior to Final Completion. Notwithstanding any other provision of the Contract Documents to the contrary and without limitation to the DISTRICT’S rights of withholding payment permitted elsewhere in the Contract Documents or under Applicable Laws, amounts due to the CONTRACTOR pursuant to this Section 3.5 shall be payable as part of, and not prior to the due date for, Final Payment to CONTRACTOR.

d. Exclusive Remedy. Liquidated damages payable pursuant to this Section 3.5 constitute the CONTRACTOR’S sole and exclusive right and remedy for recovery of Losses to CONTRACTOR and its Subcontractors and Subconsultants, of every Tier, due to Delay, regardless of the cause or duration of the Delay and regardless of whether the Delay is a Compensable Delay, Excusable Delay or Unexcused Delay.

e. Deleted Work. In the event that Deleted Work results in a shortening of the Contract Time, the Contract Sum shall be reduced by an amount calculated as the product of (1) by the number of Days in the period of shortening, multiplied by (2) the liquidated damages amount stated in this Section 3.5.

ARTICLE 4 CONTRACT SUM


a. Price. DISTRICT shall pay the CONTRACTOR in current funds for the CONTRACTOR’S complete performance of the Work in accordance with the Contract Documents. In no event, however, shall the Firm Fixed Price be greater than the Maximum Allowable Price (MAP) of (engineer’s estimate reflects Seven Hundred and Ninety Thousand and 00/100 Dollars ($790,000) actual value to be determined at final contract negotiation). The MAP is the maximum amount the DISTRICT will pay and includes all costs and fixed fees set forth below for Construction Services, Fee, and Hard Costs as defined below.

1. Maximum Allowable Price (MAP). This is the advertised price that is the maximum amount contained in the DISTRICT’S budget for all Work to be provided by the
CONTRACTOR, and is the amount the CONTRACTOR agrees, in collaboration with the DISTRICT, will not be exceeded when establishing the Lump Sum Price.

2. Fixed Fees. Fixed fees include Construction Services and Fee, as defined below.

3. Open Book Buyout of Subcontracts. This shall be accomplished collaboratively with the DISTRICT. The final Hard Costs amount will be included in the Lump Sum Price.

b. Construction Services. The total sum payable for Construction Services shall not exceed XXXXXXXXX ($XXXXXX.XX). These sums are incorporated into the MAP as stipulated in Article 4.1.

c. Fee. The Fee payable to the CONTRACTOR shall not exceed (XXXXX %) of the MAP, not to exceed XXXXXXXXXX ($XXXXX.XX). These sums are incorporated into the MAP as stipulated in Article 4.1.

d. Hard Costs. The total sum payable for Hard Costs shall not exceed ($XXXXXX). These sums will be incorporated into the Lump Sum Price as stipulated in Article 4.1, and include 2% DISTRICT allowance.

e. All Inclusive Lump-Sum Price. This shall be the sum total of Fixed Fees and final Hard Costs established through this proposal process and at the end of Contract negotiation. The Contract Sum set forth in Article 4 is the total lump-sum maximum amount payable by DISTRICT to CONTRACTOR for performance of the Work under the Contract Documents and is deemed to cover all losses arising out of or related to the performance of the Work, including, without limitation, the effects of natural elements upon the Work, unforeseen difficulties or obstructions affecting the performance of the Work (including, without limitation, unforeseen conditions at the Site that do not constitute Differing Site Conditions) and fluctuations in market conditions and price escalations (whether occurring locally, nationally or internationally) from any cause.

ARTICLE 5 INSURANCE

5.1. CONTRACTOR shall take out, prior to commencing the work, and maintain, during the life of this Agreement and throughout the warranty period, and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain the insurance coverages set forth below and in Articles 16, 17, 18 and 19 of the General Conditions. CONTRACTOR agrees to provide all evidences of coverage required by DISTRICT including certificates of insurance and endorsements.

Public Liability Insurance for injuries including accidental death, to any one person in an amount not less than $2,000,000

Subcontracts of every tier and $1,000,000

Page 29 of 227
Subject to the same limit for each person on account of one accident, in an amount not less than $2,000,000

Subcontractors of every tier $1,000,000

Property Damage Insurance in an amount not less than $2,000,000

Subcontractors of every tier $1,000,000

Course of Construction Insurance without exclusion or limitation in an amount not less than $2,000,000

Excess Liability Insurance (Contractor only) $2,000,000

Insurance Covering Special Hazards: The following special hazards shall be covered by rider or riders to above-mentioned public 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

5.2. **Waiver of Subrogation.** Contractor waives (to the extent permitted by law) any right to recover against the District, and its respective elected officials, officers, employees, agents, and representatives for damages to the Work, any part thereof, or any and all claims arising by reason of any of the foregoing, but only to the extent that such damages and/or claims are covered by property insurance and only to the extent of such coverage (which shall exclude deductible amounts) actually carried by the District.

a. The provisions of this section are intended to restrict each party to recovery against insurance carriers only to the extent of such coverage and waive fully and for the benefit of each, any rights and/or claims which might give rise to a right of subrogation in any insurance carrier.

b. The District and the Contractor shall each obtain in all policies of insurance carried by either of them, a waiver by the insurance companies there under of all rights of recovery by way of subrogation for any damages or claims covered by the insurance.

5.3. **Additional Insured Endorsement Requirements.** The Contractor shall name, on any policy of insurance required the District, their officers, employees, Construction Manager, Architect, and all other Agents and Representatives as additional insureds. Subcontractors shall name the Contractor, the District, their officers, employees, Construction Manager, Architect, and all other Agents and Representatives as additional insureds. The Additional Insured Endorsement included on all such insurance policies shall state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance that is applicable to the loss, such other insurance shall
be on an excess or contingent basis. The insurance provided by the Contractor must be
designated in the policy as primary to any insurance obtained by the District. The amount of the
insurer’s liability shall not be reduced by the existence of such other insurance.

**ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS**

6.1. **List of Contract Documents.** The Contract Documents, include, without limitation, the following:

a. **Project Criteria.** The Project Criteria set forth in the RFP & Q Documents.

b. **RFP & Q Documents.** The RFP & Q Documents and Addenda, with the exception of
   Approved Deviations.

c. **Proposal.** The CONTRACTOR’S written responses to the RFP & Q, including its Proposal.
   The Contract Documents shall not include any portion of the Proposal that deviates from
   the Project’s Defined Scope.

d. **Agreement.** This executed Agreement between DISTRICT and CONTRACTOR.

e. **General Conditions.** The General Conditions to the Agreement.

f. **Division One Requirement.** The Division One Requirements to the Agreement.

g. **General Requirements, Supplemental and Special Conditions.** Any General
   Requirements and Supplemental and Special Conditions.

h. **Final Construction Documents.** The Final Construction Drawings and Technical
   Specifications to be hereafter prepared by the CONTRACTOR and its Subconsultants that
   are accepted by the DISTRICT and approved by the DSA in accordance with the terms of
   the Contract Documents; provided, however, that, with the exception of Approved
   Deviations, the Contract Documents shall not include any portion of the Proposal that
   deviates from the Project Program or Criteria.

i. **Addenda.** All Addenda associated with the completed set of contract documents.

j. **Reference Documents.** All Reference Documents associated with the completed set of
   contract documents.

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.

WHEREFORE, This Agreement is entered into as of the day and year first written above.

**CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTOR’S STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT REGARDING A PATENT ACT OR OMISSION IS FILED WITHIN FOUR YEARS OF THE DATE OF THE ALLEGED VIOLATION. A COMPLAINT REGARDING A LATENT ACT OR OMISSION PERTAINING TO STRUCTURAL DEFECTS MUST BE FILED WITHIN 10 YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY**
QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA, 95826.

“DISTRICT”
South Orange County Community College District

By: _________________________________
   Dr. Debra L. Fitzsimons
   Vice Chancellor of Business Services

Date: _________________________________

“CONTRACTOR”
Selected Contractor’s Name

By: _________________________________

Name: ________________________________

Title: _________________________________

Date: _________________________________

Contractor’s License No.

____________________________________

Tax ID

____________________________________

(CORPORATE SEAL OF CONTRACTOR, if corporation)
DESIGN PHASE TERMS AND CONDITIONS

Not Used
Exhibit G – Forms due at Lump Sum Price Approval

Exterior Lighting and Controls Retrofit – Phase II Saddleback College RFQ & P - Exhibit G
Documents due at Maximum Allowable Price Approval

**DESIGNATION OF SUBCONTRACTORS**

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, license number and the location of the place of business 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. Pursuant to Labor Code section 1725.5 and 1771.1, all subcontractors (of any tier) performing work on this Project must be properly registered with the Department of Industrial Relations (DIR) and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. 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. Violation of this requirement (including the procurement of a subcontractor for the Project if no subcontractor is specified) can result in the DISTRICT invoking the remedies of Public Contract Code Sections 4110 and 4111.

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. 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.

Public Contract Code section 4108 authorizes a General Contractor to request a faithful performance and payment bond from a subcontractor. The General Contractor’s written or published request for subsbids must specify the amount and requirements of the bond or bonds to be provided by the subcontractor. If the subcontractor fails to provide the requested faithful performance or payment bond, the general contractor may reject the subcontractor’s subbid and make a substitution of another subcontractor. If the general contractor fails to specify the bond requirements in the subbid documents, the general contractor is precluded from imposing bond requirements thereafter.
### BID 2050
Exterior Lighting and Controls Retrofit – Phase II
Saddleback College

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<thead>
<tr>
<th>Description &amp; Portion of Work</th>
<th>Name of Subcontractor</th>
<th>Location &amp; Place of Business</th>
<th>License Type and Number</th>
<th>E-Mail &amp; Telephone*</th>
<th>DIR Registration Number*</th>
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### Exhibit G – Forms due at Lump Sum Price Approval

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</tr>
</thead>
</table>

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

Proper Name of Bidder:

Date:

Name:

Signature of Bidder Representative:

Address:

Phone:

Page 36 of 227
NON COLLUSION DECLARATION

(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

______________________________
Print Name
WORKERS' COMPENSATION CERTIFICATE

Labor Code Section 3700.

"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 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 the performance of the work of this contract.

________________________________________
Name of the Contractor

By: ______________________________________
Signature

________________________________________
Print Name

________________________________________
Title

________________________________________
Date

(In accordance with Article 5 [commencing at Section 1860], Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under the contract.)
PAYMENT BOND (CALIFORNIA PUBLIC WORK)

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the South Orange County Community College District (sometimes referred to hereinafter as “DISTRICT”) has awarded to _______________________________ (hereinafter designated as the “CONTRACTOR” or “Principal”), an agreement for the work described as follows: _______________________________ (hereinafter referred to as the “Public Work”); and

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

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

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

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

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

IN WITNESS WHEREOF, we have hereunto set our hands and seals this_____________ day of ______________, 20__.

PRINCIPAL/CONTRACTOR:

________________________________________

By: ______________________________________

SURETY:

________________________________________

By: ______________________________________

Attorney-in-Fact
IMPORTANT: THIS IS A REQUIRED FORM.

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

Any claims under this bond may be addressed to:

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

Telephone:  Telephone:

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

STATE OF CALIFORNIA )
COUNTY OF ) ss.

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

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

WITNESS my hand and official seal.

________________________________________
Notary Public in and for said State

Commission expires: _______________________

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.
KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the South Orange County Community College District (sometimes referred to hereinafter as “DISTRICT”) has awarded to ________________________________ (hereinafter designated as the “CONTRACTOR” or “Principal”), an agreement for the work described as follows: __________________________________________________________________ (hereinafter referred to as the “Public Work”); and

WHEREAS, the work to be performed by the CONTRACTOR is more particularly set forth in that certain contract for said Public Work dated _______________ ____________________, (hereinafter referred to as the “Contract”), which Contract is incorporated herein by this reference; and

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

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

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

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

As a condition precedent to the satisfactory completion of the contract, the above obligation shall hold good for a period of One (1) year(s) after the acceptance of the work by DISTRICT, during which time if Contractor/Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect
the DISTRICT from loss or damage made evident during the period of One (1) year(s) 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 Principal shall be, and is declared by the DISTRICT to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by DISTRICT as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages; or, at DISTRICT’S sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by DISTRICT of the lowest responsible bidder, arrange for a contract between such bidder and the DISTRICT and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the “balance of the Contract price” (as hereinafter defined), and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term “balance of the Contract price,” as used in this paragraph, shall mean the total amount payable to Principal by the DISTRICT under the Contract and any modifications thereto, less the amount previously paid by the DISTRICT to the Principal, less any withholdings by the DISTRICT allowed under the Contract. DISTRICT shall not be required or obligated to accept a tender of a completion contractor from the Surety.

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

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

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

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

In the event suit is brought upon this bond by the DISTRICT and judgment is recovered, the Surety shall pay all costs incurred by the DISTRICT in such suit, including reasonable attorneys’ fees to be fixed by the Court.
Exhibit G – Forms due at Lump Sum Price Approval

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

PRINCIPAL/CONTRACTOR:

________________________________________

By: ______________________________________

SURETY:

________________________________________

By: ______________________________________

Attorney-in-Fact

The rate of premium on this bond is ______________________________ per thousand.

The total amount of premium charged: $__________________________ (This must be filled in by a corporate surety).
IMPORTANT: THIS IS A REQUIRED FORM.

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

Any claims under this bond may be addressed to:

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

Telephone:__________________________  Telephone: ________________________________

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

STATE OF CALIFORNIA )
) ss.
COUNTY OF )

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

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

WITNESS my hand and official seal.

______________________________ (SEAL)
Notary Public in and for said State

Commission expires:__________________________

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.
ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into, as of__________________________, 20_____, by and between South Orange County Community College District, whose address is 28000 Marguerite Parkway, Mission Viejo, CA 92692 hereinafter called "DISTRICT;" ________________________________, whose address is__________________________, hereinafter called "Contractor;" and, ________________________________, whose address is__________________________, hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the DISTRICT, 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 DISTRICT pursuant to the Agreement entered into between the DISTRICT and Contractor for _________ in the amount of _________, dated ________________ (hereinafter referred to as the "Agreement"). Alternatively, on written request of the Contractor, the DISTRICT shall make payments of the retention earnings directly to the Escrow Agent. When the Contractor deposits the securities as a substitute for retention earnings, the Escrow Agent shall notify the DISTRICT within ten (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 DISTRICT and Contractor. Securities shall be held in the name of DISTRICT, and shall designate the Contractor as the beneficial owner.

(2) The DISTRICT 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 DISTRICT makes payment 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 DISTRICT 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 DISTRICT. These expenses and payment terms shall be determined by the DISTRICT, Contractor and Escrow Agent.

(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 DISTRICT.

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

(8) Upon receipt of written notification from the DISTRICT 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 DISTRICT and the Contractor pursuant to Sections (5) to (8), inclusive, of this Escrow Agreement and the DISTRICT 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 DISTRICT and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of DISTRICT:  On behalf of Contractor:

Title

Name

Signature

Address
Exhibit G – Forms due at Lump Sum Price Approval

On behalf of Escrow Agent:

________________________________________
Title

________________________________________
Name

________________________________________
Signature

________________________________________
Address

At the time the Escrow Account is opened, the DISTRICT 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.

DISTRICT

________________________________________
Title

________________________________________
Name

________________________________________
Signature

CONTRACTOR

________________________________________
Title

________________________________________
Name

________________________________________
Signature

Escrow Agent

________________________________________
Title

________________________________________
Name

________________________________________
Signature
GUARANTEE

Guarantee for ___________________. We hereby guarantee that the___________________, which we have installed in ________________________________, has been done in accordance with the Project Documents and that the work as installed will fulfill the requirements included in the Project Documents. The undersigned agrees to repair or replace any or all of such work, together with any other adjacent work which may be displaced in connection with such repair or replacement, that may prove to be defective in workmanship or material within a period of one (1) year from the date of completion of the Project, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of the undersigned’s or undersigned surety’s failure to commence and pursue with diligence said repairs or replacements within ten (10) calendar days after being notified in writing by the DISTRICT or within forty eight (48) hours in the case of an emergency or urgent matter, the undersigned authorizes the DISTRICT to proceed to have said defects repaired or replaced and made good at the expense of the undersigned and surety who hereby agree to pay the costs and charges therefore immediately upon demand. (General Conditions Article 47(d)) The undersigned and its surety shall be jointly and severally liable for any costs arising from the DISTRICT’S enforcement of this Guarantee.

________________________________________
Name of Contractor

By: ______________________________________
Signature of Contractor

________________________________________
Print Name

________________________________________
Title

Contractor shall provide copy of this Guarantee to CONTRACTOR’S surety.
Guarantee (continued)

Name of Subcontractor
(if work performed by subcontractor)

By: ________________________________
Signature of Subcontractor

Print Name

Title

Representatives to be contacted for service:

Name: ________________________________

Address: ________________________________

Telephone: ________________________________
SHOP DRAWING TRANSMITTAL

The procedure governing shop drawing submittals is contained in the General Conditions. In addition, all Supplemental Conditions, Special Conditions and Specifications must be followed by the CONTRACTOR.

Failure to comply with all requirements will constitute grounds for return of the shop drawing for proper resubmittal. CONTRACTOR shall sequentially number each submittal.

Date: ___________________________ Submittal No.: ___________________________

From: ___________________________ To: ___________________________

Project Name: ___________________________

This is a(n):  
Original ______
Submittal ______
2nd Submittal ______
[ ] Submittal ______

Subject of Submittal: Equipment Specification
Designation: Section(s):

Complete either (a) or (b)

(a) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown (no exceptions).

(b) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown, except for the following deviations (List deviations on an attached sheet).

(continued on next page)
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. This shop drawing has been coordinated with all other shop drawings received to date by CONTRACTOR and this duty of coordination has not been delegated to subcontractors, material suppliers, the ARCHITECT, or the engineers on this Project.

________________________________________
Signature of Contractor or Supplier
DRUG-FREE WORKPLACE CERTIFICATION

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

Pursuant to Government Code Section 8355, every person or organization awarded a contract from a State agency 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 workplace;
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 terms and requirements of Government Code Section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free 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 also understand that if the DISTRICT determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract awarded herein is subject to suspension of payments, termination, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350, et seq.
Exhibit G –Forms due at Lump Sum Price Approval

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

NAME OF CONTRACTOR

________________________________________
Signature

________________________________________
Print Name

________________________________________
Title

________________________________________
Date
SMOKE-FREE WORKPLACE CERTIFICATION

Pursuant to Board Policy 2150, South Orange County Community College District maintains a smoke free environment in all District sites in order to maintain an educational and workplace environment that is conducive to the health and safety its students and employees. The use of tobacco products, to include but not limited to, the burning of any type of cigar, cigarette, or pipe, electronic (vapor) cigarette, and the use of smokeless/chewing tobacco is strictly prohibited within or on any District facility or property.

Tobacco products shall not be commercially sold or distributed in any manner on any District site including free samples from vendors or other entities. Advertising and sponsorship of events by any entity is also prohibited.

Contractor certifies that they will publish a statement notifying its subcontractors/employees with the details of this policy as it pertains to work at District sites.

This policy pertains to students, faculty, staff, administrators, contractors, visitors, and the general public attending events or working at any site within the District. Additionally, this policy applies to all District owned facilities and construction sites, owned or leased and regardless of location, and all state and auxiliary vehicles.

I acknowledge that I am aware of the provisions of SOCCCD Board policy 2150 and hereby certify that I will adhere to the requirements of the Smoke-Free Workplace policy.

____________________________________
NAME OF CONTRACTOR

____________________________________
Signature

____________________________________
Print Name

____________________________________
Title

____________________________________
Date
CHANGE ORDER NO. ____________ (ADDITIVE)

PROJECT: __________________________________________________________________________

TO: ______________________________________________________________________________

You are hereby directed to provide the extra work necessary to comply with this Change Order.

DESCRIPTION OF CHANGE: ______________________________________________________________________________

________________________________________________________________________________________

COST (This cost shall not be exceeded.):

Original contract price: $ ________________

Change Order amount: $ ________________

New contract price: $ ________________

TIME FOR COMPLETION:

Original completion date: ________________

Time for completion of

Change Order: ________________

New completion date: ________________

Contractor agrees to perform the above-described work in accordance with the above terms and in compliance with applicable sections of the Project Documents. The amount of the charges under this Change Order is limited to the charges allowed under Article 60 of the General Conditions. The adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in this 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 this Change Order, unless otherwise provided in this Change Order.

No additions or deletions to this Change Order shall be allowed, except with written permission of District. Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising from this Change Order.

(continued on next page)
Exhibit G – Forms due at Lump Sum Price Approval

This Change Order is hereby agreed to, accepted and approved.

CONTRACTOR

By: ________________________________
    Signature

______________________________
    Print Name

______________________________
    Title

______________________________
    Date

ARCHITECT

By: ________________________________
    Signature

______________________________
    Print Name

______________________________
    Title

______________________________
    Date
YOU ARE HEREBY DIRECTED TO COMPLY WITH THIS CHANGE ORDER.

DESCRIPTION OF CHANGE:

COST (This cost shall be deleted.):

Original contract price: $ ________________
Change Order amount: $ ________________
New contract price: $ ________________

TIME FOR COMPLETION:

Original completion date: ________________
Time for completion of Change Order: ________________
New completion date: ________________

Contractor agrees to deduct the above-described work in accordance with the above terms and in compliance with applicable sections of the Project Documents. Contractor agrees to the adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in this Change Order.

No additions or deletions to this Change Order shall be allowed, except with written permission of District. Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising from this Change Order.

(continued on next page)
This Change Order is hereby agreed to, accepted and approved.

CONTRACTOR

By: ____________________________  By: ____________________________
Signature

______________________________  ________________________________
Print Name, Title

______________________________  ________________________________
Date

DISTRICT

ARCHITECT

By: ____________________________
Signature

______________________________
Print Name, Title

______________________________
Date
CONTRACTOR'S CERTIFICATE REGARDING NON-ASBESTOS CONTAINING MATERIALS

Per Article 70 of the General Conditions.

Certification for _______________________. We hereby certify that no Asbestos, or Asbestos Containing Materials shall be used in this Project or in any tools, devices, clothing, or equipment used to affect the __________ which we have installed in the South Orange County Community College District under Project/Bid No. __________.

(a) The Contractor further certifies that he/she has instructed his/her employees with respect to the above mentioned standards, hazards, risks and liabilities.

(b) Asbestos and/or asbestos containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite and actinolite.

(c) Any or all material containing greater than one-tenth of one percent (.1%) asbestos shall be defined as asbestos containing material.

(d) Any disputes involving the question of whether or not material contains asbestos shall be settled by electron microscopy. The costs of any such tests shall be paid by the Contractor if the material is found to contain asbestos.

(e) All work or materials found to contain asbestos or work or material installed with asbestos containing equipment will be immediately rejected and this work will be removed at no additional cost to the District.

__________________________  ____________________________
Date                Name of Contractor

By: ____________________________
Signature

__________________________  ____________________________
Print Name, Title
RECYCLED CONTENT CERTIFICATION

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

The undersigned declares that he or she is the person who prepared a proposal for the Project Name (hereinafter referred to as “Project”) and submitted it to the South Orange County Community College District (DISTRICT) on behalf of ______________________ (CONTRACTOR).

Pursuant to Public Contract Code Section 12205, all contractors are required to certify in writing under penalty of perjury the minimum (if not exact) percentage of recycled contract in materials, goods or supplies offered or products listed in Section 12207 used in the performance of their contract, regardless of whether the product meets the required recycled product percentage as defined in Section 12209. The recycled content shall include both post-consumer material and secondary material as defined in Public Contract Code Section 12200. The CONTRACTOR may certify that the product contains zero recycled content. For purposes of this Certification, the definitions found in Public Contract Code Section 12200 shall apply.

I declare under the laws of the State of California that the following percentages of Post-consumer Material and Secondary Material is in the materials goods or supplies offered for, or products used in, the performance of the Contract for the Project:

% Post-consumer Material % Secondary Material

Executed on this _______ day of _________________, 2016 at ___________________.

CONTRACTOR

____________________________________

Signature

____________________________________

Print Name, Title

Subscribed and sworn before me
This __________ day of ______________________, 2016

____________________________________

Notary Public in and for the State of California

My commission expires: ______________________
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ARTICLE 1  DEFINITIONS

1.1. Basic Definitions

a. **Acceptance.** The point that the Work as a whole is accepted by the Board of Trustees.

b. **Action of the Governing Board.** A vote of a majority of the members in a lawful meeting.

c. **Acts of God.** As defined in Public Contract Code Section 7105.

d. **Addenda.** The changes in Plans, Specifications, Drawings, and/or Project Documents which have been authorized in writing by the DISTRICT or ARCHITECT, and which alter, explain or clarify the Project Documents prior to the bid deadline.

e. **Agents & Representatives.** All project participants employed by or holding contract with the DISTRICT other than the CONTRACTOR.

f. **Agreement.** Includes collectively all Project Documents.

g. **Applicable Laws.** All statutes, ordinances, rules, regulations, policies and guidelines enacted by Governmental Authorities (including, without limitation, Environmental Laws and Disability Laws), codes adopted or promulgated by Governmental Authorities (including, without limitation, building and health and safety codes), lawful orders of Governmental Authorities and common law, including but not limited to, principles of equity applied by the courts of the State of California, which are in effect at the time the Work is performed.

h. **Application for Payment.** CONTRACTOR’S itemized application for Progress Payment or Final Payment prepared, submitted and substantiated for review and approval by DISTRICT in accordance with the requirements of the Contract Documents.

i. **Approval.** Written authorization by ARCHITECT or DISTRICT.

j. **ARCHITECT.** Architect of Record/individual or representative acting as the licensed architect that has responsibility for preparing the Construction Documents and whose professional certification stamp will appear on the Construction Documents.

k. **Award of Contract.** The action of the Board of Trustees duly approving the DISTRICT’S entering into the Agreement with the CONTRACTOR.

l. **Board of Trustees.** The governing board of the South Orange County Community College District.

m. **Change Order.** A written instrument, signed in accordance with the requirements of the General Conditions, setting forth the agreement of DISTRICT and CONTRACTOR on the terms of the contract adjustment.

n. **Concurrent Delay.** The portion of two or more delays affecting the critical path to Completion that are overlapping or co-existent
o. **CONTRACTOR.** Those mentioned as such in the Agreement. They are treated throughout the Project Documents as if they are of singular number and neuter gender.

p. **Construction Documents.** The Division of the State Architect stamped Drawings and Specifications for the Project, including all addenda and construction change directives (CCDs).

q. **Contract Documents.** The following collection of documents governing the CONTRACTOR’S performance of the Work:

1. Notice Calling for Bids
2. Information for Bidders
3. Bid Form
4. Designation of Subcontractors Form
5. Noncollusion Affidavit
6. Workers’ Compensation Certificate
7. Faithful Performance Bond
8. Payment Bond
9. Agreement
10. Escrow Agreement
11. Drug Free Workplace Certification
12. Change Orders
13. Insurance Forms
14. Guarantee Forms
15. Contractor’s Certificate Regarding Non-Asbestos Containing Materials
17. General Conditions
18. Supplemental and Special Conditions (if applicable)
19. Drawings, Specifications and all modifications addenda and amendments
20. Reference documents
21. Labor Compliance Program documents
22. Those documents, or portions or provisions of documents that, although not listed in subparagraphs a through above, are expressly cross-referenced therein or attached thereto.

r. **Date of Commencement of Construction.** The starting date set forth in the Notice to Proceed, from which is measured the Contract Time for completion of the Work. If no Notice to Proceed is issued, then the DATE OF Commencement of Construction shall be the date the CONTRACTOR actually commences Work at the Site as noted in final construction progress meeting minutes.

s. **Day.** Defined as business day unless otherwise noted.

t. **Defective Work.** Work by CONTRACTOR or its subcontractors that contains, includes or constitutes materials, equipment labor, workmanship, construction services or other construction performed or provided by the CONTRACTOR or its subcontractor that is (a) faulty, omitted, incomplete, or deficient or (b) does not conform to Applicable Laws, the
Contract Documents, or the requirements of any inspection, reference standard, test, code or approval specified in the Contract Documents.

u. **Department of Industrial Relations.** The Department of Industrial Relations of the State of California.

v. **Disability Laws.** All applicable federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees or requirements of any Government Authority, for persons with disabilities, including, without limitation, the Americans With Disabilities Act (42 U.S.C. §§ 12101, et seq.) and the Fair Housing Amendments Act of 1988 (42 U.S.C. §§ 3604 et seq.).

w. **DISTRICT.** The Governing Board of the South Orange County Community College District for a community college district organized under the laws of the State of California, acting through its Chancellor, Vice Chancellor(s) or their designees designated by him/her to act on his/her behalf.

x. **Drawings.** The graphic and pictorial portions of the Project Criteria or Construction documents showing the design, location and dimensions of the Work, including Plans elevations, details, schedule and diagrams. The term “Drawings” is used interchangeably with “Plans”.

y. **DSA.** The Division of the State Architect in the Department of General Services for the State of California.

z. **Environmental Laws.** All applicable federal, state, local or municipal laws, rules orders, regulations, statutes, ordinances, codes, decrees, or requirements of any Governmental Authority, which regulate, relate to, or impose liability or standards of conduct concerning any Hazardous Substance (including, without limitation, the use, handling, transportation, production, disposal, discharge or storage thereof), occupational or environmental conditions on, under, or about the Site or Existing Improvements (including, without limitation, soil, groundwater, and indoor and ambient air conditions), or occupational health or industrial hygiene (but only to the extent related to Hazardous Substances on, under, or about the Site of Existing Improvements), as now or may at any later time be in effect, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 [42 U.S.C. §§ 9601 et seq.]; the Resource Conservation and Recovery Act of 1976 [42 U.S.C. §§ 6901 et seq.]; the Clean Water Act (also known as the Federal Water Pollution Control Act) [33 U.S.C. §§ 1251 et seq.]; the Toxic Substances Control Act [15 U.S.C.A. §§ 2601 et seq.]; the Hazardous Substances Transportation Act [49 U.S.C. §§ 1801 et seq.]; the Insecticide, Fungicide, Rodenticide Act [7 U.S.C.A §§ 136 et seq.]; the Superfund Amendments and Reauthorization Act [42 U.S.C.A. §§ 6901 et seq.]; the Clean Air Act [42 U.S.C. §§ 7401 et seq.]; the Safe Drinking Water Act [42 U.S.C.A §§ 300f et seq.]; the Solid Waste Disposal Act [42 U.S.C. §§ 6901 et seq.]; the Surface Mining Control and Reclamation Act [30 U.S.C.A. §§ 1201 et seq.]; the Emergency Planning and Community Right to Know Act [42 U.S.C §§ 11001 et seq.]; the
Occupational Safety and Health Act [29 U.S.C. 655 and 657]; the Residential Lead-Based Paint Exposure Act (Title X of the Housing and Community Development Act of 1992) [15 U.S.C. §§ 2681 et seq.]; the Lead-Based Paint Poisoning Prevention Act [42 U.S.C. §§ 4821 et seq.]; and all similar federal, state or local laws, rules orders, regulations, statutes, ordinances, codes, decrees or requirement.

aa. **Escrow Agent.** The entity serving as escrow agent pursuant to California Public Contract Code §22300 in connection with the deposit of securities or retention.

bb. **Existing Improvements.** All improvements that, as of the Award of Contract date are located above or below the surface of the ground at the Site, including but not limited to existing buildings, utilities, infrastructure improvements and other facilities.

c. **Extra Work.** Labor, materials, equipment, services or other work, not reasonably inferable from the design and other information set forth in the Contract Documents, the performance of which requires the expenditure by the CONTRACTOR or additional and unforeseen costs of performance. References to Extra Work shall not be interpreted to mean or imply that the CONTRACTOR is entitled to contract adjustment unless such Extra Work is accepted through written instruction by the DISTRICT.

da. **General Conditions.** The herein set forth general terms and conditions governing performance of the Work.

e. **Governmental Authority.** The United States, the State of California, the County of Orange, the City in which the Project is located, any other local (other than county, regional, state or federal political subdivision, authority, agency, department, commission, board, bureau, court, judicial or quasi-judicial body, and any legislative or quasi-legislative body, or instrumentality of any of them, which exercises jurisdiction over the Project, Work, Site, CONTRACTOR or DISTRICT, including, without limitation, any Governmental Authorities (including, without limitation, DSA) having jurisdiction to review and approve or reject the Construction Documents, Contract Documents or the Work based on compliance or non-compliance with Applicable Laws.

ff. **Hazardous Substance.** Either of the following: (1) any chemical, material or other substance defined as or included within the definition of “hazardous substances,” “hazardous wastes,” “extremely hazardous substances,” “toxic substances,” “toxic material,” “restricted hazardous waste,” “special waste,” “contamination” or words of similar import under any Environmental Law, including, without limitation, the following: petroleum (including crude oil or any fraction thereof), asbestos, asbestos-containing materials, polychlorinated biphenyls (“PCBs”) and PCB-containing materials, whether or not occurring naturally; or (2) any substance that because of its quantity, concentration or physical or chemical characteristics poses a significant present or potential hazard to human health and safety or to the environment, and which has been determined by any governmental Authority to be a hazardous waste or hazardous substance.
gg. **Inspector of Record.** A certified inspector approved by the Office of Regulations Services of the Division of State Architect for the Department of General Services of the State of California to inspect the Work pursuant to the Field Act (California Education Code §§ 81130.3 et seq.) and applicable provisions of the California Code of Regulations with a class rating sufficient for the Work.

hh. **Lean Scheduling.** Using a reverse phase schedule, subcontractors plan the project starting with the last work activity and work backwards to ensure that each subcontractor consider what work must be done prior to any scheduled activity thus ensuring adequate durations are in place for late activities, possible constraints are identified early and all participating trades have buy-in during Project planning.

ii. **Locality.** Where the work is performed means the county and city in which the work is done.

jj. **Notice of Completion.** A “notice of completion” as defined in California Civil Code §3093 means the written notice by DISTRICT and approved by the Board of Trustees confirming the date that the Work is finally completed by CONTRACTOR.

kk. **Notice to Proceed.** The written notice issued by the DISTRICT to the CONTRACTOR to begin the Work.

ll. **Plans.** The graphic and pictorial portions of the Project Criteria or Construction Documents showing the design, location and dimensions of the Work, including plans elevations, details, schedules and diagrams. The term “Plans” is used interchangeably with “Drawings”.

mm. **Project.** The planned undertaking as provided for in the Project Documents by DISTRICT and CONTRACTOR.

nn. **Project Documents.** Collectively, to wit: Notice Calling for Bids, Information for Bidders, Bid Form, Bid Security, Designation of Subcontractor form, Information Required of Bidder, all prequalification forms submitted pursuant to Public Contract Code Section 20111.5, if any, Noncollusion Affidavit, Workers’ Compensation Certificate, Faithful Performance Bond, Payment Bond, Agreement, Escrow Agreement, Drug-Free Workplace Certification, Change Order forms, Shop Drawing Transmittals form, Insurance Certificates and Endorsements, Guarantee form, Contractor’s Certificate Regarding Non-Asbestos Containing Materials, General Conditions, Supplemental Conditions, if any, Special Conditions, if any, Drawings, Specifications, and all modifications, addenda and amendments thereto. The Project Documents are complementary, and what is called for by any one shall be as binding as if called for by all.

oo. **Provide.** Shall include "provide complete in place," that is, "furnish and install."

pp. **Record Documents.** The collection of documents assembled and prepared by CONTRACTOR (including, without limitation, the Record Drawings and Specifications, warranties, guaranties, maintenance and operations manuals and other documents both
hard copy and electronic format) that are to be maintained by the CONTRACTOR on the Site and delivered to the DISTRICT upon Final Completion of the work showing the condition of the Work as actually built. For purposes of these Contract Documents, the Record Drawings and Specifications are defined to include both hard copy and electronic format marked by CONTRACTOR to show the condition, location and placement of the Work as actually built, including, without limitation, the locations, lengths and dimensions of mechanical, electrical, plumbing, HVAC or similar portions of the Work that are depicted diagrammatically in the Contract Documents.

qq. **Safety Orders.** Those orders issued by the Division of Industrial Safety and OSHA safety and health standards for construction.

rr. **Schedule of Values.** A detailed, itemized breakdown of the Contract Sum, which provides for an allocation of the dollar values to each of the various parts of the Work.

ss. **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.

tt. **Site.** (1) The parcel of land identified in the Contract Documents on which the Project is to be constructed and such additional parcels as may be purchased by DISTRICT for such construction; (2) all areas adjacent to such parcels that may be used by CONTRACTOR for staging, storage, parking or temporary offices; and (3) all land areas, both private and public, adjacent to such parcels on which Work is required to be performed under the Contract Documents, Applicable Laws or permits relating to the Project.

uu. **Specifications.** The portion of the Construction Documents consisting of the written requirement for materials, equipment, standards and workmanship for the Work and performance of related services.

vv. **Standards, Rules, and Regulations.** Recognized printed standards that shall be considered as one and a part of these Specifications within limits specified.

ww. **Subcontractor.** Those parties having a direct contractual relationship with CONTRACTOR and one who furnishes material worked to a special design according to Plans, Drawings, and Specifications, but does not include one who merely furnishes material not so worked.

xx. **Surety.** The person, firm, or corporation that executes as a California admitted surety insurer, the CONTRACTOR’S Bid Security, faithful performance bond and payment bond per California Insurance Code §995.120.

yy. **Work.** Labor or materials (including, without limitation, equipment and appliances) or both, incorporated in, or to be incorporated in the Project by the CONTRACTOR or subcontractor.

zz. **Workers.** Laborer, worker, or mechanic employed by the CONTRACTOR or subcontractor.
1.2. Correlation, Interpretation and Intent of Contract Documents

a. **Technical Words.** Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

b. **Incidental Items.** The naming of any material or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and labor therefore, in accordance with first-class practices of the trade involved, unless specifically noted otherwise.

c. **Applicable Laws.** Compliance with Applicable Laws shall be considered as a part of the Work.

d. **Singular, Gender, Captions.** When appropriate to the contexts, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include any other gender, and each shall include corporation, partnership, trust or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only as a matter of reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

e. **Cross-References.** Any cross-references indicated between various paragraphs or other portions of the Specifications, Drawings or other Contract Documents are provided for the convenience of the CONTRACTOR and shall not be deemed to be all-inclusive.

f. **Demolition.** Existing Improvements at the Site, for which no specific description is made in the Project Criteria or Approved Deviations, but which could be reasonably assumed to interfere with the satisfactory completion of the Work, shall be removed and disposed of by the CONTRACTOR without Contract Adjustment.

g. **Omissions.** Items missing from the Contract Documents shall nevertheless be provided by the CONTRACTOR, without Contract Adjustment, to the extent reasonably inferable from the Contract Documents as being necessary to satisfy the Project.

h. **Conditions Precedent.** Wording used in the Contract Documents indicating that a right of the CONTRACTOR or an obligation of DISTRICT (either directly or through the District Project Manager) is subject to or conditioned upon the occurrence of a condition or event, whether or not such condition or event is within the control of CONTRACTOR, DISTRICT or others and whether or not such condition or event is designated to be a condition precedent, shall be understood and interpreted to mean that the stated condition or event is a condition precedent to the existence, arising, performance and exercise of such right or obligation.
i. **Design Deficiencies.** Statements in the Contract Documents to the effect that CONTRACTOR shall comply with or conform to the requirements of the Contract Documents shall not be interpreted as relieving the CONTRACTOR from any responsibility to correct any design deficiency in the Construction Documents.

j. **Conflicts.** All conflicts in the Contract Documents shall be reported to the District Project Manager in writing before proceeding with the Work affected thereby. Notwithstanding the order of precedence provisions set forth in this document, in the event of conflict between any of the Contract Documents, the provision placing a more stringent requirement or greater burden on the CONTRACTOR or requiring the greater quantity or higher quality material or the workmanship shall prevail, unless otherwise directed by the DISTRICT in writing. Conflicts that cannot be so resolved shall be interpreted in accordance with the following order of precedence (the first being the highest order of precedence):

1. Applicable Laws (provided, however, that where the Contract Documents or manufacturer’s recommendations or specification required standards higher than those of Applicable Laws, the Contract Documents or manufacturer recommendations or specifications shall control);

2. Addenda;

3. Change Orders, Unilateral Change Orders and Field Orders;

4. General Conditions;

5. Supplementary and Special Conditions;

6. Final Construction Documents approved by DISTRICT; and

7. Reference Documents.

k. **Rehabilitation Work.** If any existing conditions in Existing Improvements, such as deterioration or construction not complying with Applicable Laws, be discovered by CONTRACTOR, with respect to which the Work covered by the Contract Documents does not provide for rectification of such conditions in a manner that complies with Title 24, California Code of Regulations, then a separate set of Drawings and Specifications, detailing and specifying the Work required to so rectify such conditions shall be developed and approved by the Office of Regulations Services of the Division of the State Architect in the State Department of the General Services for the State of California before proceeding with the Work.

**ARTICLE 2 STATUS OF CONTRACTOR**

2.1. **Independent Contractor.** 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
DISTRICT 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 DISTRICT employees and shall not be considered in any manner to be DISTRICT employees. DISTRICT shall be permitted to monitor the activities of the CONTRACTOR to determine compliance with the terms of the Project Documents.

2.2. **Licensed Contractor.** CONTRACTORS are required by law to be licensed and regulated by the Contractors’ State License Board. Any CONTRACTOR not so licensed is subject to penalties under the law, and the contract will be considered void pursuant to Section 7028.7 of the Business and Professions Code. Any questions concerning a contractor may be referred to the Registrar, Contractors’ State License Board, 9821 Business Park Drive, P. O. Box 26000, Sacramento, CA 95826.

**ARTICLE 3 CHANGE IN NAME AND NATURE OF CONTRACTOR’S LEGAL ENTITY**

3.1. **Legal Change.** Before CONTRACTOR makes any change in the name or legal nature of the CONTRACTOR’S entity, CONTRACTOR shall first notify the DISTRICT in writing and cooperate with DISTRICT in making such changes as the DISTRICT may request in the Project Documents.

**ARTICLE 4 CONTRACTOR’S SUPERVISION, PROSECUTION AND PROGRESS**

4.1. **Personnel.** During progress of the work, CONTRACTOR shall keep on the work Site at all times that Work is underway competent management personnel (“Personnel” equals project manager and superintendent) satisfactory to DISTRICT.

   a. Before commencing the work herein, CONTRACTOR shall give written notice to DISTRICT and ARCHITECT of the name, qualifications and experience of Personnel.

   b. If any one or more of the Personnel is found unsatisfactory by DISTRICT, CONTRACTOR shall replace the unsatisfactory Personnel with one or more that are acceptable to the DISTRICT.

   c. Personnel shall not be changed except with written consent of DISTRICT, unless Personnel proves to be unsatisfactory to CONTRACTOR and/or ceases to be in its employ, in which case, CONTRACTOR shall notify DISTRICT and ARCHITECT in writing and replace said personnel with one or more replacement acceptable to the DISTRICT.

   d. Of the assigned Site Personnel, one or more persons shall be identified to represent CONTRACTOR and all directions given to identified personnel shall be as binding as if given to CONTRACTOR. If no single person is identified to represent CONTRACTOR, all Site Personnel shall be determined to act as CONTRACTOR representatives.

   e. CONTRACTOR shall provide prior to the start of the Work, telephone numbers where Personnel can be reached 24 hours a day, 7 days a week.
4.2. **Project Knowledge.** 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.

a. **Document Inconsistency.** CONTRACTOR shall carefully study and compare all Plans, Drawings, Specifications, and other instructions and shall at once report to ARCHITECT any error, inconsistency or omission which CONTRACTOR or its employees may discover. The CONTRACTOR represents itself to DISTRICT as a skilled, knowledgeable, and experienced CONTRACTOR. The CONTRACTOR shall carefully study and compare the Project Documents with each other, and shall at once report to the ARCHITECT any errors, inconsistencies, or omissions discovered. The CONTRACTOR shall be liable to the DISTRICT 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.

b. **Verify Dimensions.** 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 DISTRICT 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 DISTRICT. This responsibility for verification of dimensions is a non-delegable duty and may not be delegated to subcontractors or agents.

c. **Intent.** Omissions from the Plans, Drawings or Specifications, or the mis-description 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 mis-described work, but they shall be performed as if fully and correctly set forth and described in the Plans, Drawings and Specifications.

d. **Unknown Conditions.** Save and except as hereinafter provided, CONTRACTOR agrees at CONTRACTOR’S Own Expense to assume the risk and costs of Extra Work and Delay due to concealed or unknown conditions, surface or subsurface, at the Site or in Existing Improvements.

1. **Differing Site Conditions.** Differing Site Conditions are those conditions located at the Site or in Existing Improvements and not otherwise ascertainable by CONTRACTOR in the performance of its obligations that constitute: (1) hazardous materials that constitute hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of Applicable Laws; (2) subsurface
or concealed conditions at the Site or concealed conditions in Existing Improvements which differ materially from those indicated by the Contract Documents or other information available to CONTRACTOR prior to the Notice of Award; or (3) unknown physical conditions at the Site or concealed conditions in Existing Improvements of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

2. Notice of Change and Investigation. If CONTRACTOR encounters conditions it believes constitute Differing Site Conditions, then CONTRACTOR shall, before such conditions are disturbed, give notice stating, without limitation, a detailed description and precise location of the conditions encountered. Upon receipt of notice from CONTRACTOR, DISTRICT shall promptly investigate CONTRACTOR’S report of Differing Site Conditions.

3. Change Order Request. If CONTRACTOR intends to seek a contract adjustment based upon Differing Site Conditions, it shall submit a complete and timely Change Order Request setting forth its request. If DISTRICT finds that Differing Site Conditions exist, then a contract adjustment shall be made in such amounts and durations as DISTRICT determines according to a good faith determination by DISTRICT are reasonable and permitted by these general conditions.

4. Waiver by Contractor. Failure by CONTRACTOR to strictly comply with these requirements concerning the timing and content of any notice or request for contract adjustment based on Differing Site Conditions shall constitute a waiver by CONTRACTOR of the right to further recourse or recovery upon such claim.

5. Final Completion. No claim by CONTRACTOR for additional compensation for Differing Site Conditions shall be allowed if asserted after final payment.

4.3. **Daily Reports by Contractor.** At the close of each working day, the CONTRACTOR shall submit a daily report to the DISTRICT, ARCHITECT and the Inspector, on forms approved by the DISTRICT, 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 it shall be signed by the DISTRICT and the CONTRACTOR. In the event of disagreement, pertinent notes shall be entered by each party to explain points which 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.

a. Labor. The report shall show names of workers, classifications, and hours worked and hourly rate. Project Superintendent expenses are not allowed.

b. Materials. The report shall describe and list quantities of materials used and unit cost.
c. 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.

d. Inspection and Testing Activities. A list of inspections performed by name of inspector and testing company and the type of inspection, items of the Work involved and a description of the outcome of such inspection or test.

e. Visitors, Guests, Dignitaries. A list of visitors and guests by name, title, company and purpose of visit.

f. Areas of the Work. As statement of the areas of the Site on which the Work was performed and a detailed description of the stage, status and progress of the Work in each such area at the beginning and end of the Day.

g. Accidents, Delays, Defective Work. A description in detail of any injuries to the workers, accidents or delays that occurred or defective work that was encountered.

h. Payment. Timely and complete submission of daily reports by CONTRACTOR shall be a condition to CONTRACTOR’S right to payment under the contract.

4.4. Progress Meetings. CONTRACTOR shall coordinate and attend all progress meetings at the Site, at which meetings progress of the Work shall be reported in detail with reference to the then-current updated Schedule accepted by the DISTRICT. Progress meetings shall be held weekly, or at such other time or frequency as DISTRICT, in its sole and absolute discretion, deems necessary. The ARCHITECT, Inspector of Record and each Subcontractor then actively performing Work, scheduled to become active within one week (greater if determined to be in the best interest of the project) or currently a critical path activity whether or not performing, shall have a competent and knowledgeable representative present at such progress meeting to report on the condition of the Work of such Subcontractor and to receive relevant information. Meeting notes shall be taken by the CONTRACTOR and draft form distributed to the DISTRICT, all meeting attendees and all other affected parties. Meeting Minutes will become final with incorporated comments by team members upon completion of the next regularly scheduled weekly meeting.

4.5. Notice Requirements. Under no circumstances shall information contained in CONTRACTOR’S daily job reports, monthly reports or progress meeting minutes relieve CONTRACTOR of its obligations to comply with, serve as a substitute for, nor constitute a waiver by DISTRICT of its right to insist upon, CONTRACTOR’S compliance with the provisions of the Contract Documents relative to timely and complete notice to DISTRICT of changes, delays, claims, or other matters for which written notice is required by the Contract Documents.

4.6. Use of Site. CONTRACTOR shall coordinate operations with, and secure the approval of, DISTRICT before using any portion of the Site.

a. Staging Area. CONTRACTOR will be assigned staging space on or adjacent to the Site, and all field offices, materials and equipment shall be kept within this area. Unless otherwise required by the Contract Documents, CONTRACTOR shall be responsible for restoring
such areas and surrounding areas to the condition they were in prior to CONTRACTOR’S commencement of the Work.

b. Existing Improvements. During the installation of the Work, CONTRACTOR shall ensure that Existing Improvements are adequately protected. Upon Final Completion of the Work, all Existing Improvements that may have been damaged shall be restored to the condition they were in prior to CONTRACTOR’S commencement of the Work.

c. Unauthorized Use. Personnel of CONTRACTOR and the Subcontractors shall not occupy, live upon or otherwise make use of the Site during any time that the Work is not being performed at the Site, except as otherwise approved by DISTRICT.

d. College Operations. CONTRACTOR shall anticipate and take all necessary and reasonable measures to minimize and control dust and noise that might interfere with the use or enjoyment of the Site by the DISTRICT and the College’s students, staff and visitors. The CONTRACTOR shall familiarize itself with the activities of the College, including, without limitation, campus functions and ceremonies and plan the Work so as to avoid interferences or disturbances therewith. The CONTRACTOR shall enclose the working area with a substantial barricade and arrange the Work to cause minimum amount of inconvenience and danger to students, faculty, staff and visitors.

e. Site Security. CONTRACTOR is responsible for the security of the Site and all of the Work. Fences, barricades and other perimeter security shall be maintained in good condition and secured with locking devices. Damage shall be repaired immediately. Graffiti and unauthorized postings shall be removed or painted over so as to maintain a clean and neat appearance. Mobile equipment and operable machinery shall be kept locked or otherwise made inoperable whenever left unattended.

f. Persons on Site. CONTRACTOR shall not allow any person, other than the workers on the Project, or other individuals authorized by DISTRICT, to come upon any portion of the Site where the Work is being performed. Only authorized personnel will be permitted on the Site. CONTRACTOR shall at all times maintain good discipline and order among its employees and the employees of Subcontractors. Any person in the employ of CONTRACTOR or any of Subcontractor whom DISTRICT may deem, in its sole and absolute discretion, incompetent, unfit, intemperate, troublesome or otherwise undesirable shall be excluded from the Site and shall not again be employed on the Site except with written approval of DISTRICT and all losses to CONTRACTOR or DISTRICT associated therewith shall be paid at CONTRACTOR’S own expense.

g. Confinement of Operations. CONTRACTOR shall confine apparatus, the storage of materials and the operations of the workers to limits indicated by Contract Documents or as otherwise directed by DISTRICT in writing. CONTRACTOR shall confine access and parking at the Site to areas permitted by Applicable Laws and/or DISTRICT direction. CONTRACTOR acknowledges that it is experienced in performing construction within limited and confined areas and spaces such as those that are anticipated to exist on this
Project and agrees to assume responsibility, without a contract adjustment, to take all special measures (including, without limitation, those related to protection, storage, staging and deliveries) as may be necessary to adapt its performance to the constraints of the Site.

h. Prohibited Substances. CONTRACTOR shall not permit (1) the possession or use of alcohol, smoking or controlled substances on the Site.

4.7. **Dust, Fumes, Noise.** CONTRACTOR shall take preventive measures to minimize, and eliminate wherever reasonably possible, generation of dust, fumes and noise.

a. CONTRACTOR shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three times daily during dry weather. Watering, with complete coverage of disturbed areas shall occur at least three times a day, preferably in the mid-morning afternoon and after work is done for the day.

b. The CONTRACTOR shall ensure that traffic speed on unpaved roads and Project site areas are reduced to 15 miles per hour or less to reduce PM10 and PM2.5 fugitive dust haul road emissions by approximately 44%.

c. The California Air Resources Board, in Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations, imposes a requirement that heavy duty trucks accessing the site shall not idle for greater than five minutes at any location. This measure applies to construction traffic. Prior to grading, a sign shall be posted on-site stating that workers need to shut off engines after five minutes of idling.

d. All Rubber Tired Dozers and Scrapers shall be CARB Tier 2 Certified or better.

e. Equipment and materials shall be staged in areas that will create the greatest distance between construction related noise sources and the noise sensitive receptors nearest the construction site. Construction Equipment staging areas shall be located at least 300 feet away from Sensitive Receptors.

f. All equipment shall be equipped with properly operating and maintained mufflers. To the extent feasible, haul routes shall not pass directly by sensitive land uses.

4.8. **Drainage, Erosion.** CONTRACTOR shall be responsible for changes in patterns of surface water drainage resulting from, and related erosion control made necessary by, the performance of the Work. DISTRICT Projects are part of a larger common plan of development and CONTRACTOR’S are required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) regardless of size of Project impacted area.

a. CONTRACTOR’S Responsibility. The CONTRACTOR shall (1) file and obtain the Storm Water Permit; (2) furnish all notices required under the Storm Water Permit; (3) prior to starting any Work at the Site prepare the Storm Water Management Plans and Storm Water Pollution Prevention Plans; and (4) take all necessary steps to monitor, report, enforce and otherwise implement and comply with the requirements of the Storm Water Permit, Storm Water Management Plans and Storm Water Pollution Prevention Plans and
all Applicable Laws pertaining to the elimination or mitigation of storm water pollutant
discharge to separate storm sewer systems or other watercourses, including without
limitation, applicable requirements of the State Water Resources Control Board, Orange
County Region Water Quality Control Board and municipal storm water management
programs.

b. Copies of Reports. The CONTRACTOR shall provide copies of all reports and monitoring
information to the DISTRICT.

c. Violations. The CONTRACTOR recognizes and understands that failure to comply with the
requirements of the Storm Water Permit is a violation of federal and state law.

d. Condition of Payment. Compliance by the CONTRACTOR with these requirements shall
be a condition to the CONTRACTOR’S right to payment under its Applications for Payment.

e. Costs of Compliance. The CONTRACTOR represents and warrants that it has included in
the contract sum all costs of compliance with these requirements.

4.9. **Land Clearing and Excavation Activities**

a. Prior to land-clearing activities from February 1 through August 31, at the expense of the
CONTRACTOR and in relationship to addressing CEQA mitigation measures, a qualified
biologist shall first evaluate the type and extent of vegetation removal and the impact, if
any on nesting birds. If determined necessary, the biologist shall conduct a survey and
specify the appropriate mitigation measures for impacts which may include avoidance of
occupied nests, working outside an established buffer area, modified scheduling of
grading and clearing, and monitoring of active nests during construction.

b. Prior to any excavation, the CONTRACTOR shall compare the limits of proposed
excavations with the depth and lateral extent of existing sub-surface disturbances,
including foundations, utility and fill materials using information including but not limited
to: as built construction plans, underground utility surveys and geotechnical information
including boring and trenching logs. Should excavations exceed five feet in depth, a
qualified paleontologist shall be retained to conduct additional paleontological
assessment using pre-construction geotechnical surveys to better define the subsurface
geological feature of the campus. Should data indicate paleontological sensitivity, District
shall retain a qualified paleontologist to facilitate a preconstruction meeting and monitor
all earth-moving activity with the potential to disturb previously undisturbed
paleontologically sensitive sediment. Should resources be uncovered as a result of
grading or excavation shallower than five feet, work shall cease until a paleontological
monitor arrives.

c. All clearing, grading, earth-moving or excavation activities shall cease when winds exceed
25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.

4.10. **Solid Waste Management.** CONTRACTOR shall comply with all provisions of Applicable Laws
(including, without limitation, the requirements of the California Public Resources Code, rules and
regulations of the California Integrated Waste Management Board and provisions of any Site-
specific plans adopted by District) that are applicable to the activities of contractors performing
construction or related activities on the Site.

a. Recycling. Without limitation to the foregoing, the Design-Build Entity shall take action
to ensure that no less than ninety percent (90%) of marketable materials generated from
the activities of the Design-Build Entity and Subcontractors on the Site that are not fully
consumed in the performance of the Work are recycled.

b. Records. Design-Build Entity shall maintain, and make available to the District Project
Manager upon request, complete and accurate records verifying its compliance with its
obligations under this Section 3.23.

c. Condition of Payment. Compliance by the Design-Build Entity with these requirements
shall be a condition to the Design-Build Entity’s right to payment under its Applications
for Payment.

d. Costs of Compliance. The Design-Build Entity represents and warrants that it has included
in the Contract Sum all costs of compliance with these requirements.

4.11. Remediation by CONTRACTOR. The provisions of this paragraph shall apply only if the Work to
be performed by CONTRACTOR includes within its scope the removal, abatement, moving,
handling, containment, disposal or transport of Hazardous Substances or Mold.

a. Advance Submissions. Before CONTRACTOR or any of its Subcontractors or
Subconsultants moves, removes, or transports Hazardous Substances to a facility for the
receipt, treatment, storage or disposal of the Hazardous Substances (“Hazardous
Substances Facility”), CONTRACTOR shall cause the person or entity who will be moving,
removing or transporting the Hazardous Substances to provide to DISTRICT the following:
(1) verification of the Hazardous Substance Facility’s or other transporter’s licensed status
to haul such materials; (2) verification of the Hazardous Substance Facility’s licensed
status, including a current permit to receive the specific materials to be transported there;
(3) certification that the Hazardous Substance Facility is not under enforcement action by
the U.S. Environmental Protection Agency (“EPA”) or applicable State Government
Authority or listed on any applicable EPA or applicable State Government Authority list of
violating facilities; (4) verification of the Hazardous Substances Facility’s EPA
Identification Number (if applicable); and (5) original executed letter(s) of indemnity from
the Hazardous Substances Facility bearing the Hazardous Substance Facility’s letterhead.
CONTRACTOR further warrants that the selected Hazardous Substance Facility is
appropriately licensed and permitted to store, treat and dispose of Hazardous Substances
waste in connection with the Work.

b. CONTRACTOR Responsibility. CONTRACTOR warrants that it is aware of and understands
the hazards which are presented to persons, property and the environment in
performance of the transportation, storage and disposal of Hazardous Substances.
CONTRACTOR and its Subcontractors, and agents shall be responsible for the following:
(1) processing the application for, and receiving on behalf of the DISTRICT or appropriate
entity, an EPA or state-equivalent generator identification number (if required); (2)
preparing manifests and other shipping documents; (3) making all necessary
arrangements (after consultation with DISTRICT or DISTRICT Consultant) for any off-Site transportation, treatment, storage and disposal of Hazardous Substances in accordance with Applicable Laws; (4) ensuring the proper and lawful transportation and disposal of Hazardous Substances, even if such services are performed by other entities under contract with CONTRACTOR or its Subcontractors; and (5) taking any necessary actions to ensure such proper transport and disposal of Hazardous Substances in the event of any contingency, such as the rejection of the Hazardous Substances as nonconforming by any waste disposal facility. CONTRACTOR shall promptly provide to DISTRICT copies of all manifests and other shipping documents confirming the receipt and proper disposal of all waste at the Hazardous Substances Facility, even if such services are performed by other entities under contract with CONTRACTOR or its Subcontractors.

c. Reporting Requirements. CONTRACTOR shall comply with any Hazardous Substances release reporting requirements to Governmental Authorities directly applicable to CONTRACTOR. Notice of such reporting must be provided in advance to DISTRICT or concurrently in the event of an emergency.

d. Samples. CONTRACTOR and its Subcontractors shall retain all media samples for the longer of (1) the longest holding period specified in any federal, state or local laboratory analytical procedures or guidance for the analyses performed; or (2) three months for soil samples and thirty (30) Days for water samples. Further storage or transfer of samples will be made at DISTRICT’S expense upon DISTRICT’S written request of CONTRACTOR. CONTRACTOR shall require by contract that each and every Subcontractor and agent of CONTRACTOR who performs testing of samples in connection with the Work properly disposes of such samples in accordance with Applicable Laws after completion of testing and notice to DISTRICT. Regarding any such samples which may remain on-Site, provided DISTRICT or DISTRICT Consultant has approved of such on-Site storage in advance, DISTRICT agrees to pay all costs associated with the storage, transport, and disposal of such samples.

e. Verification. Upon Final Completion of the Work, CONTRACTOR shall confirm by a writing delivered to DISTRICT or DISTRICT Consultant that: (1) all Hazardous Substances specified for removal in the Contract Documents have been removed; and (2) all Hazardous Substances wastes removed from the Site as part of the Work have been disposed of in accordance with this Subparagraph 10.3.1.2 and Applicable Laws in a Hazardous Substances Facility.

f. Mold. CONTRACTOR is responsible to immediately notify DISTRICT in writing if any conditions in the construction materials incorporated or to be incorporated into the Work or present in existing improvements are encountered at the Site that CONTRACTOR or any Subcontractor knows or, in the exercise of due care, should know indicate the presence of Mold or if untreated are likely to result in the growth of Mold. CONTRACTOR shall thereafter take such precautions as are reasonably required to prevent the exposure of persons to such conditions until they have been evaluated. Except as otherwise authorized by the Contract Documents or as are usual and customary according to prevailing standards of the construction industry in the vicinity of the Project,
CONTRACTOR shall not allow water or moisture to come into contact with materials in existing improvements or with materials located at the Site that are incorporated or to be incorporated into the Work and if such contact occurs, the areas affected shall be inspected by CONTRACTOR, using appropriate consultants experienced in testing and evaluating Mold, for the presence of Mold and evaluated for the potential of future growth of Mold. All portions thereof that are found to indicate the presence of Mold, or that are found to be in a condition that has the potential for becoming a source of Mold, shall be removed and replaced. Costs incurred by CONTRACTOR due to its failure to perform its obligation under this paragraph shall be borne by CONTRACTOR at CONTRACTOR’S own expense.

g. Release of DISTRICT Liability. CONTRACTOR assumes the risk that its employees or the employees of its Subcontractors, and other persons that they cause or permit to be present on the Site, may be exposed to known or unknown Hazardous Substances or Mold. Under no circumstances shall DISTRICT be liable for, and CONTRACTOR hereby fully and unconditionally releases DISTRICT and the other Indemnitees from, and agrees to defend and indemnify DISTRICT and the other Indemnitees on the terms set forth in section, against, any and all known and unknown loss resulting from or relating to the exposure of any employee of CONTRACTOR or its Subcontractors, or other person that they cause or permit to be present on the Site, to: (1) Hazardous Substances or Mold encountered in connection with or as a result of the performance of the Work, or (2) Hazardous Substances or Mold not necessarily encountered in connection with the performance of the Work, but to which any of them may nevertheless be exposed as a result of their being present on the Site.

h. Governmental Authorities. CONTRACTOR shall provide to DISTRICT copies of all written communications with Governmental Authorities or others relating to Hazardous Substances or Mold (other than privileged communications); provided, however, that non-disclosure of privileged communications shall not limit Design-Build Entity’s obligation to otherwise comply with the terms of the Contract Documents, including, without limitation, this section.

i. Subcontractors, Subconsultants. CONTRACTOR shall include provisions in all contracts it enters into with Subcontractors for the Work requiring them to assume toward CONTRACTOR and DISTRICT the same obligations that CONTRACTOR assumes toward DISTRICT under this section. CONTRACTOR shall require the Subcontractors to ensure that such provisions are included in all contracts they enter into with all lower-tier subcontractors.

4.12. Other Services and Expenditures. Other services and expenditures shall be described in such detail as the DISTRICT may require. 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.
5.1. **Bind Terms.** 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 DISTRICT for acts and omissions of any subcontractor and of persons either directly or indirectly employed by any 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 DISTRICT, nor shall the Contract Documents be construed to be for the benefit of any subcontractor.

5.2. **No Relief upon Consent.** DISTRICT’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.

5.3. **Designation of Subcontractors.** 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, Public Contract Code Section 4100, et. seq.

5.4. **Licensed Subcontractor.** In accordance with Business and Professions Code Section 7059, if CONTRACTOR is designated as a "specialty contractor" (as defined in Section 7058 of the Public Contract Code), all of the work to be performed outside of the CONTRACTOR’S license specialty shall be performed by a licensed subcontractor in compliance with the Subletting and Subcontracting Fair Practices Act, Public Contract Code Section 4100, et seq.

5.5. **File Subcontractor Agreements.** 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 DISTRICT before the subcontractor begins work. Each subcontract shall contain a reference to the Agreement between the DISTRICT 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 ARCHITECT if in the ARCHITECT’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.

5.6. **No Ineligible Subcontractors.** A CONTRACTOR may not permit a subcontractor who is ineligible to bid or work on, or be awarded, a public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code to bid on, be awarded, or perform work as a subcontractor on a public works project.

**ARTICLE 6** PROHIBITED INTERESTS
6.1. No official of DISTRICT who is authorized in such capacity and on behalf of DISTRICT 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 DISTRICT who is authorized in such capacity and on behalf of DISTRICT 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 DISTRICT for any compensation received by CONTRACTOR hereunder, should CONTRACTOR aid, abet or knowingly participate in violation of this Article 6.

ARTICLE 7  DISTRICT’S INSPECTOR

7.1. **General.** One or more Inspector(s), including special inspectors, as required, will be employed by DISTRICT and will be assigned to the Project.

7.2. **No Direction to Work.** 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 DISTRICT shall be at CONTRACTOR’s sole cost and expense and there will be no delay damages incurred by DISTRICT for such work.

7.3. **Fully Informed.** 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 or ARCHITECT 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.

7.4. **Notification.** CONTRACTOR understands and agrees that the Inspector for the Project may also serve concurrently as inspector for other DISTRICT projects and may not therefore be available on Site during the entire work day. It shall be the responsibility of CONTRACTOR to notify the Inspector not less than twenty-four (24) hours in advance of materials and equipment deliveries and required inspections.

7.5. **Inspection Trailer.** NOT USED.

ARTICLE 8  ARCHITECT’S STATUS

8.1. **General.** The ARCHITECT shall be the DISTRICT’s representative during construction and shall observe the progress and quality of the work on behalf of the DISTRICT. ARCHITECT shall have the authority to act on behalf of DISTRICT only to the extent expressly provided in the Project Documents. ARCHITECT shall have authority to stop work whenever such stoppage may be
necessary in ARCHITECT’S reasonable opinion to ensure the proper execution of the Project Documents.

8.2. **Evaluate Performance.** The ARCHITECT shall be, in the first instance, the judge of the performance of the work. ARCHITECT shall exercise authority under the Project Documents to enforce CONTRACTOR’S faithful performance.

8.3. **Authority.** The ARCHITECT shall have all authority and responsibility established by law. The ARCHITECT has the authority to enforce compliance with the Project Documents and the CONTRACTOR shall promptly comply with instructions from the ARCHITECT or an authorized representative of the ARCHITECT.

8.4. **Governing Decision.** 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 ARCHITECT 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 question or dispute arising out of or related to the foregoing matters and the instructions of the ARCHITECT relating thereto.

8.5. **CONTRACTOR’S Responsibility.** General supervision and direction of the work by the ARCHITECT shall in no way imply that the ARCHITECT or his or her representatives are in any way responsible for the safety of the CONTRACTOR or its employees or that the ARCHITECT 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**

9.1. 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**

10.1. **General.** 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 (DISTRICT) 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. Section 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.
10.2. **Assignment of Rights.** CONTRACTOR, for itself and all subcontractors, agrees to assign to DISTRICT all rights, title, and interest 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 DISTRICT tenders final payment to the CONTRACTOR and CONTRACTOR shall require assignments from all subcontractors to comply herewith.

**ARTICLE 11   OTHER CONTRACTS**

11.1. **General.** DISTRICT 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.

11.2. **Inspect and Report.** 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 ARCHITECT in writing any defects in such work that render it unsuitable for such proper execution and results. CONTRACTOR will be held accountable for damages to DISTRICT 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 contractors' work after execution of CONTRACTOR'S work.

11.3. **Define Changes in Work.** To ensure proper execution of its subsequent work, CONTRACTOR shall measure and inspect work already in place and shall at once report to the ARCHITECT in writing any discrepancy between executed work and Project Documents.

11.4. **Review Work Compatibility.** 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 DISTRICT in prosecution of the Project to the end that CONTRACTOR may perform this Agreement in the light of such other contracts, if any.

11.5. **Non Exclusive Occupancy.** 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, DISTRICT 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.

11.6. **No Damages.** DISTRICT 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 DISTRICT respecting the order of precedence in performance of contracts.

**ARTICLE 12   OCCUPANCY**
12.1. DISTRICT 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  DISTRICT’S RIGHT TO TERMINATE AGREEMENT

13.1. Termination for Cause. 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 equipment, tools, and materials in the necessary quantity and quality 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 DISTRICT, or if CONTRACTOR or its subcontractors should otherwise be guilty of a violation of any provision of this Agreement, then CONTRACTOR shall be deemed to be in default of the Agreement and DISTRICT may, without prejudice to any other right or remedy, serve written notice upon CONTRACTOR and its Surety of DISTRICT’s intention to terminate this Agreement, such notice to contain the reasons for such intention to terminate, and unless within ten (10) calendar days after the service of such notice such condition shall cease or such violation shall cease, or arrangements satisfactory to DISTRICT for the correction thereof be made and corrective action commenced in a diligent and workmanlike manner and pursued to satisfactory completion, this Agreement shall upon the expiration of said ten (10) calendar days, cease and terminate. In such case, CONTRACTOR shall be excluded from the worksite and not be entitled to receive any further payment until work is finished to DISTRICT’s satisfaction.

13.2. Surety Take Over. In the event of any such termination, Surety shall have the right to take over and perform this Agreement, provided, however, that if Surety within five (5) calendar days after service upon it of said notice of termination does not give DISTRICT written notice of its intention to take over and perform this Agreement or does not commence performance thereof within ten (10) calendar days after date of serving such notice of termination by DISTRICT on Surety, DISTRICT may take over the work and prosecute same to completion by any means determined by DISTRICT including hiring another contractor for the account and at the expense of CONTRACTOR, and CONTRACTOR and its Surety shall be liable to DISTRICT for any excess cost or other damages occasioned by the DISTRICT thereby. Time is of the essence in this Agreement. If the DISTRICT takes over the work as hereinabove provided, the DISTRICT 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.
13.3. **Back charge Additional Compensation.** The expense of finishing the work, including compensation for additional architectural, managerial, and administrative services, shall be a charge against CONTRACTOR and CONTRACTOR agrees that the charge may be deducted from any money due or becoming due to CONTRACTOR from DISTRICT or CONTRACTOR shall pay the charge to the DISTRICT. Expense incurred by DISTRICT as herein provided, and damage incurred through CONTRACTOR’S default, shall be certified to DISTRICT by ARCHITECT. The Surety shall become liable for payment should CONTRACTOR fail to pay in full any cost incurred by the DISTRICT.

13.4. **Non-appropriation of Funds/Insufficient Funds.** In the event that sufficient funds are not appropriated to complete the Project or the DISTRICT determines that sufficient funds are not available to complete the Project, DISTRICT may terminate or suspend the completion of the Project at any time by giving written notice to the CONTRACTOR. In the event that the DISTRICT exercises this option, the DISTRICT 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 fifteen percent (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 DISTRICT. DISTRICT 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 DISTRICT may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

13.5. **Other Remedies.** The foregoing provisions are in addition to and not a limitation of any other rights or remedies available to the DISTRICT.

**ARTICLE 14  BONDS**

14.1. **Performance and Payment Bonds.** Within fourteen (14) Days of Notice of Intent to Award or Board approval of contract, CONTRACTOR shall deliver to DISTRICT a good and sufficient labor and material payment bond ("Payment Bond") and a good and sufficient performance bond ("Performance Bond"), each in the amount of one hundred percent (100%) of the Contract Sum.

a. Changes. The penal amounts of the Performance Bond and Payment Bond shall be increased on account of Change Orders and Unilateral Change Orders increasing the Contract Sum. If requested by DISTRICT, CONTRACTOR shall deliver to DISTRICT evidence of the increases of such penal amounts.

b. Replacement. Should any bond required hereunder or any Surety on such bond become or be determined by DISTRICT to be insufficient, it shall be replaced within ten (10) Days by a bond that fully complies with the requirements of this section.

c. Duration. The Payment Bond shall remain in effect until acceptance of the Work and all Claims of CONTRACTOR and the Subcontractors of any Tier, have been fully and finally
resolved. The Performance Bond shall remain in effect and assure faithful performance of all CONTRACTOR’S obligations under the Contract Documents, including, without limitation, warranty obligations.

d. Premiums. The premiums for the Performance Bond and Payment Bonds are included in the Contract Sum and shall be paid by CONTRACTOR at CONTRACTOR’S Own Expense.

e. Obligee. A Performance Bond shall name DISTRICT as obligee. All performance bonds, if any, purchased by Subcontractors shall name DISTRICT as a dual obligee with CONTRACTOR.

f. No Exoneration. The Performance Bond and Payment Bond shall contain provisions to the effect that Change Orders, Unilateral Change Orders, Field Orders, Modifications, Changes and Contract Adjustments shall in no way release or exonerate CONTRACTOR or its Surety from their obligations and that notice thereof is waived by the Surety.

g. No Limitation. The requirements of this section pertaining to the Performance Bond and the Payment Bond shall be without limitation to any other obligations CONTRACTOR may have under Applicable Laws to provide bonding for the benefit of, and to assure payment to the Subcontractors performing the Work for the Project.

h. Subcontractor Bonds. Each performance bond, if any, furnished by a first-Tier Subcontractor shall include a provision whereby the Surety consents to the contingent assignment of CONTRACTOR’S rights under such bond to DISTRICT as provided in section.

14.2. **Condition of Payment.** No payments to CONTRACTOR for Work performed shall be made or due until there has been full compliance with the requirements of this section.

14.3. **Surety Rating.** Any Surety company issuing the Payment Bond or Performance Bond shall be, at all times while such bonds are in effect, listed in the latest published United States Treasury Department list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” and have a current A.M. Best rating of A VIII or better.

14.4. **Communications.** DISTRICT shall have the right to communicate with Surety with respect to matters that are related to performance of the Work. CONTRACTOR shall be provided with a copy of all such communications that are in writing. Such communications shall not create or be interpreted as creating any contractual obligation of DISTRICT to Surety.

**ARTICLE 15 SUBSTITUTION OF SECURITIES**

15.1. **Securities for Investment.** Pursuant to the requirements of Public Contract Code Section 22300, upon CONTRACTOR’S request, DISTRICT will make payment to CONTRACTOR of any earned retention funds withheld from payments under this Agreement if CONTRACTOR deposits with the DISTRICT or in escrow with a California or federally chartered bank acceptable to DISTRICT, securities eligible for the investment pursuant to Government Code Section 16430 or bank or savings and loan certificates of deposit, upon the following conditions:
a. CONTRACTOR shall be the beneficial owner of any securities substituted for retention funds 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 DISTRICT’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 in the form as set forth in Public Contract Code section 22300(f) 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.

15.2. **Deposit Security.** 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 DISTRICT 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.

15.3. **Payment to Escrow.** In the alternative, under Section 22300, CONTRACTOR, at its own expense, may request DISTRICT 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 DISTRICT, pursuant to the terms of Section 22300.

15.4. **Full Force and Effect.** 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.

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**ARTICLE 16  FIRE INSURANCE**

16.1. CONTRACTOR will procure at CONTRACTOR'S own expense, and before commencement of any work under this Agreement, fire insurance on the Project. Amount of fire insurance shall be sufficient to protect against loss or damage in full until work is accepted by DISTRICT.
CONTRACTOR shall submit proof of insurance and shall provide endorsements on forms provided by the DISTRICT or on forms approved by the DISTRICT.

ARTICLE 17  PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

17.1. **General.** CONTRACTOR shall take out and maintain during the life of this Agreement such public liability and property damage insurance as shall protect CONTRACTOR and DISTRICT from all claims for personal injury, including accidental death, to any person (including, as to DISTRICT, injury or death to CONTRACTOR's or subcontractor's employees), as well as from all claims for property damage arising from operations under this Agreement, in amounts as set forth in the Agreement.

17.2. **Subcontractor Insurance.** CONTRACTOR shall require its subcontractors, if any, to take out and maintain similar public liability and property damage insurance in like amounts or insure the activities of its subcontractors in CONTRACTOR's own policy.

17.3. **Builder's Risk.** CONTRACTOR, during the progress of the work and until final Acceptance of the work by DISTRICT upon completion of the entire Agreement, shall maintain Builder's Risk/“All Risk,” course-of-construction insurance in an amount not less than as set forth in the Agreement. Coverage is to provide extended coverage and insurance against vandalism, malicious mischief, perils of fire, sprinkler leakage, civil authority, sonic boom, earthquake, collapse, flood, wind, lightning, smoke, riot, debris removal (including demolition), and reasonable compensation for ARCHITECT’S services and expenses required as a result of such insured loss upon the entire work which is the subject of the Project Documents, including completed work, work in progress to the full insurable amount thereof, and temporary field offices placed at the project Site by the Contractor or District Consultants in conjunction with the Project. The risk of damage to the work due to the perils covered by the Builder’s Risk/“All Risk” Insurance, as well as any other hazards which might result in damage to the work, is that of CONTRACTOR and the surety, and no claims for such loss or damage shall be recognized by DISTRICT nor will such loss or damage excuse the complete and satisfactory performance of the Agreement by CONTRACTOR.

17.4. **Proof of Insurance.** CONTRACTOR shall submit proof of insurance and shall provide endorsements on the forms provided by the DISTRICT or on forms approved by the DISTRICT. Such insurance shall be issued by admitted surety insurers under the same conditions as required for bonds on the Project.

ARTICLE 18  WORKERS' COMPENSATION INSURANCE

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

18.2. **Full Employee Coverage.** 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 DISTRICT certificates of its insurance protecting workers and a thirty (30) day notice shall be provided to DISTRICT 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 DISTRICT or on forms approved by the DISTRICT. Such endorsements shall be submitted concurrently with the Project Documents.

ARTICLE 19 PROOF OF CARRIAGE OF INSURANCE

19.1. **General.** CONTRACTOR shall not commence work nor shall it allow any subcontractor to commence work under this Agreement until all required insurance certificates and endorsements from admitted surety insurers have been obtained and delivered in duplicate to and approved by DISTRICT. Such insurance shall be issued by admitted surety insurers under the same conditions as required for bonds on the Project. CONTRACTOR shall provide proof of insurance on DISTRICT approved forms without revisions.

19.2. **Certificate Contents.** Certificates and insurance policies shall include the following:

   a. A clause stating: "This policy shall not be canceled or reduced in required limits of liability or amount of insurance until notice has been mailed to DISTRICT stating date of cancellation or reduction. Date of cancellation or reduction may not be less than thirty (30) days after date of mailing notice."

   b. 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.

   c. Statement that the DISTRICT is an additional insured under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by the DISTRICT.

19.3. **Failure to Provide.** In case of CONTRACTOR's failure to provide insurance as required by the Agreement, the DISTRICT may, at DISTRICT's option, take out and maintain at the expense of the CONTRACTOR, such insurance in the name of CONTRACTOR, or subcontractor, as the DISTRICT 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
20.1. **General.** 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.

20.2. **Compliance.** 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 ARCHITECT for further instructions regarding said work, or (2) disregarded the ARCHITECT'S instructions regarding said work.

20.3. **Clarification.** Questions regarding interpretation of Drawings and Specifications shall be clarified by the ARCHITECT. Before commencing any portion of the work, CONTRACTOR shall carefully examine all Drawings and Specifications and other information given to CONTRACTOR. CONTRACTOR shall immediately notify ARCHITECT and DISTRICT in writing of any perceived or alleged error, inconsistency, ambiguity, or lack of detail or explanation in the Drawings and Specifications. If CONTRACTOR or its subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any work under the Project Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, CONTRACTOR shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof. In the event ARCHITECT 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 ARCHITECT'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.

20.4. **Order of Precedent.** 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 ARCHITECT 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 DISTRICT.

20.5. **Standard Meaning.** 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.

20.6. **Trade Term.** 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.

20.7. **Associated Items.** 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 material and/or equipment as per best practices of the trade(s) involved, unless specifically noted otherwise.

20.8. **Record Documents.**

a. Posting. CONTRACTOR shall maintain Record Drawings and Specifications in a satisfactory record condition by posting, on a weekly basis (or, in the case of building or site mechanical, electrical, plumbing or fire sprinkler systems, as soon thereafter as is reasonable and practical and prior to payment request for associated Work), thoroughly and neatly, all Changes to the Work and the location of the Work, including, without limitation, the location of portions of the Work shown diagrammatically, as occurs in the actual construction of the Work, as well as any as-built conditions noted by other DISTRICT Consultants, including, without limitation, DISTRICT Consultants involved in the commissioning process. Each revision, change and notation shall be coordinated with other revisions, changes and notations and accurately annotated and cross-referenced by the CONTRACTOR.

b. Property of District. All Record Drawings and Specifications and other Record Documents shall be deemed the sole property of the DISTRICT and at the earlier of Final Completion or termination of the CONTRACTOR, shall be turned over to DISTRICT.

c. Final Completion. CONTRACTOR shall, as a condition to Final Completion and Final Payment, furnish the DISTRICT with one (1) annotated hard copy and one (1) computer disk (using software format acceptable to the DISTRICT) of the Record Specifications. Each page of such Record Drawings and the cover page of such Record Specifications shall prominently bear the words "Record Documents" and the CONTRACTOR’S approval by manual signature certifying that, to the best of his/her knowledge, they are true and accurate and that the indications thereon represent the actual condition of the Work.

d. Condition of Payment. Compliance by CONTRACTOR with the requirements of this Record Documents paragraph shall be deemed a condition to CONTRACTOR’S right to payment upon its Applications for Payment.

e. **Drawings Furnished for Posting.** DISTRICT will furnish to CONTRACTOR one (1) complete set of drawings for posting of changes. Additional copies shall be provided upon payment by CONTRACTOR. During the construction period, CONTRACTOR shall maintain the set of drawings in a satisfactory record condition, and shall thoroughly and neatly post, as they occur, all additions, deletions, corrections and/or revisions in the actual construction of the Project. The Record Drawings must be posted monthly and be current prior to each submission of each certificate of payment.
ARTICLE 21 OWENSHIP OF DRAWINGS

21.1. All Plans, Drawings, designs, Specifications, and other incidental architectural and engineering work or materials and other Project Documents and copies thereof furnished by DISTRICT are DISTRICT’s property. They are not to be used in other work and are to be returned to DISTRICT on request at completion of work, and may be used by DISTRICT as it may require, without any additional costs to DISTRICT.

ARTICLE 22 DETAIL DRAWINGS AND INSTRUCTIONS

22.1. **Additional Information.** In case of ambiguity, conflict, or lack of information, ARCHITECT 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 therefrom. Such additional instructions shall be furnished with reasonable promptness, provided that CONTRACTOR informs the ARCHITECT of the relationship of the request to the critical path of construction.
   
a. Work shall be executed in conformity therewith and CONTRACTOR shall do no work without proper Drawings and instructions.

b. The ARCHITECT will furnish necessary additional details to more fully explain the work, which details shall be considered as part of the Project Documents.

22.2. **Increased Detail.** 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 ARCHITECT within five (5) days of the receipt of same. In case no notice is given to the ARCHITECT 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 ARCHITECT will either modify the Drawings or shall recommend to DISTRICT a change order for the Extra Work involved.

22.3. **Proper Performance.** 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 ARCHITECT such directions and/or drawings as may be necessary for the proper performance of the work.

22.4. **Improper Work.** 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 ARCHITECT 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 DISTRICT 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. ARCHITECT shall determine such difference in value. The DISTRICT, at its option, may pursue either recommendation made by the ARCHITECT.
ARTICLE 23 SUBMITTALS AND SHOP DRAWINGS

23.1. **Not Contract Documents.** Shop Drawings, Product Data, Samples and other Submittals are not Contract Documents. Their purpose is to demonstrate for those portions of the Work for which Submittals are required the way the CONTRACTOR proposes to conform to the Work to the designs and other information in the Contract Documents.

23.2. **Submittal Review.** All Shop Drawings, Product Data, Samples and other Submittals required by the Contract Documents shall be submitted to DISTRICT for its review, with a copy to College Director of Facilities and to such of DISTRICT’S Consultants or Separate Contractors as DISTRICT may direct in writing.

   a. Transmittal Form. All Submittals shall be accompanied by an accurately completed transmittal in the form required by District. With respect to Submittals of documents, the transmittal shall give a list of the numbers of the sheets submitted. All sheets shall be marked with the name of the Project and the name of CONTRACTOR, shall be numbered consecutively and referenced to the sheets or paragraphs of the Drawings and Specifications affected. A separate transmittal form shall be used for each specific item or class of material or equipment for which a Submittal is required. Transmission of Submittals of 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 dictates review of the group or package as a whole. Any Submittal not accompanied by such transmittal form, or where all applicable items on the form are not completed, may be returned for re-submittal without review.

   b. Similar Work Together. Except where the preparation of a Submittal is dependent upon the approval of a prior Submittal, all Submittals pertaining to the same class or portion of the Work shall be submitted simultaneously.

   c. Appropriate Back up. Submittals shall consist of the appropriate combination of catalog sheets, material lists, manufacturer’s brochures, technical bulletins, specifications, diagrams and product samples, necessary to describe a system, product or item. Submittals shall show in detail the size, sections and dimensions of all members, the arrangement and construction of all connections, joints and other pertinent details, and all holes, straps and other fittings for attaching the Work. When required by the Contract Documents, engineering computations shall be submitted.

   d. Timely Submittal. CONTRACTOR shall in all cases submit its Submittals within a time frame sufficiently early to allow review of the same by the ARCHITECT, DISTRICT and DISTRICT Consultants without causing Delay to construction progress. CONTRACTOR will be responsible to pay, at CONTRACTOR’S own Expense, additional services fees and costs incurred by DISTRICT in order to expedite review of Submittals which are not submitted in a timely fashion.
e. Checked and Coordinated. The CONTRACTOR’S submission of Submittals to DISTRICT constitutes a representation that the CONTRACTOR has determined or verified materials and field measurements and conditions related thereto, and that it has checked and coordinated the information contained within such Submittals with the requirements of the Contract Documents and with the Submittals for related Work. CONTRACTOR’S review and approval of shop drawings shall include the following stamp: “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. This shop drawing has been coordinated with all other shop drawings received to date by CONTRACTOR and this duty of coordination has not been delegated to subcontractors, material suppliers, the ARCHITECT, or the engineers on this project. Signature of CONTRACTOR”

f. Evidence of Approval. Submittals without evidence thereon of the CONTRACTOR’S approval shall be returned, without further consideration, for resubmission in accordance with these requirements.

g. Information Submittal. Informational Submittals (i.e., Submittals upon which no responsive action is expected) may be required and if so shall be limited to those Submittals so identified in the Contract Documents. Submittals made by CONTRACTOR which are not required by the Contract Documents may be returned without action.

h. ARCHITECT/ENGINEER Review. The ARCHITECT/ENGINEER shall review and submit CONTRACTOR’S Shop Drawings, Product Data, Samples and other Submittals to the DISTRICT, in accordance with the latest Submittal Schedule accepted by the DISTRICT. If prints of the Shop Drawings, Product Data, Samples and other Submittals are returned to the CONTRACTOR marked “NO EXCEPTIONS TAKEN,” formal revision of said drawing will 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 six (6) copies of the revised drawing to the ARCHITECT. If prints of the drawing are returned to the CONTRACTOR marked “REJECTED RESUBMIT,” the CONTRACTOR shall resubmit six (6) new copies of the drawing to the ARCHITECT.

i. Attention to Revisions. CONTRACTOR shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or other Submittals, to revisions other than those requested by ARCHITECT or DISTRICT on previous Submittals.

23.3. Deviations. CONTRACTOR shall, notwithstanding any review or approval thereof by ARCHITECT and DISTRICT be solely responsible for the content of all Submittals. Without limitation to the foregoing, deviations in Submittals from requirements of the Contract Documents shall remain the sole responsibility of CONTRACTOR unless CONTRACTOR has specifically informed ARCHITECT and DISTRICT in writing, using Substitution Form, of such deviation at the time of submission of the Submittal and DISTRICT has given specific written approval thereof.
23.4. **No Basis for Adjustment.** Revisions indicated on Shop Drawings, Product Data, Samples or other Submittals shall not be considered as a basis for a Contract Adjustment.

23.5. **Submittal Approval before Work.** CONTRACTOR shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or other Submittals until the respective Submittal has been returned by the ARCHITECT and DISTRICT with an indication that it has been reviewed and that the Work addressed by the Submittal may proceed. Such Work shall be in accordance with such Submittals, unless such Submittal indicates that there are corrections to be made. If corrections are indicated to be made then the Work shall be in accordance with the re-submitted and corrected Submittal that is reviewed and returned to the CONTRACTOR by the ARCHITECT and DISTRICT. Fabricating dimensions, quantities of material, applicable code requirements, and other contract requirements shall be the CONTRACTOR’S responsibility particularly where piping, machinery, and equipment and the required arrangements and clearances are involved.

23.6. **Deferred Approval.** CONTRACTOR shall submit its related DSA Deferred Approval Submittals to DSA through the ARCHITECT with an original, manual signature of the professional engineer registered in the State of California responsible for preparing such Submittal. Calculations of a structural nature must be approved by the Division of State ARCHITECT. Shop drawings shall be submitted at a time sufficiently early to allow review of same by the Division of State Architect (DSA) if required, and the ARCHITECT, and to accommodate the rate of construction progress required under the Project Documents. CONTRACTOR will be required to pay ARCHITECT’S reasonable and customary fees in order to expedite review of shop drawings which are not submitted in a timely fashion.

23.7. **No Delay Claim.** 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 ARCHITECT of said drawings is delayed beyond the time provided hereinbefore and the CONTRACTOR can establish that the ARCHITECT’S delay in review actually resulted in a delay in the CONTRACTOR construction schedule. CONTRACTOR shall not be entitled to any claim for damages resulting from DSA review extending beyond fifteen (15) calendar days after submittal. However, DISTRICT may consider an extension of time due to any delay caused by DSA review.

23.8. **Submittal Process.** CONTRACTOR shall check and verify all field measurements and shall submit to ARCHITECT, with sufficient advance time, six (6) copies, checked and approved by CONTRACTOR, of all shop or setting list drawings, schedules, and materials list required for the work of various trades. ARCHITECT 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 fourteen (14) calendar days (and more than 14 calendar days for complex reviews). CONTRACTOR shall make any corrections required by ARCHITECT, file three (3) corrected copies with ARCHITECT, and furnish such other copies as may be needed for construction within fourteen (14) calendar days. ARCHITECT’S approval of such drawings, schedules, or materials list shall not
relieve CONTRACTOR from responsibility for deviations unless CONTRACTOR has in writing called ARCHITECT'S attention to such deviations at time of submission and secured ARCHITECT'S written approval, nor shall it relieve CONTRACTOR from responsibility for errors in shop drawings or schedules.

23.9. **Complete and Conforming.** All submittals of shop drawings, catalog cuts, data sheets, schedules and material lists shall be complete and shall conform to contract Drawings and Specifications.

23.10. **Direct Communication.** The CONTRACTOR may authorize a material or equipment supplier to deal directly with the ARCHITECT 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.

23.11. **Complete by Second Submittal.** The CONTRACTOR shall make a complete and acceptable submittal to the ARCHITECT by the second submission of drawings. The DISTRICT shall withhold funds due the CONTRACTOR to cover additional costs of the ARCHITECT'S review beyond the second submission and any other costs incurred by DISTRICT.

**ARTICLE 24 LAYOUT AND FIELD ENGINEERING**

24.1. All field engineering if required for laying out of 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 DISTRICT.

**ARTICLE 25 SOILS INVESTIGATION REPORT**

25.1. **General.** When a soils investigation report has been obtained from test holes at the Site, such report is available for the CONTRACTOR’S use for work under this Agreement. Such report shall not be part of the Agreement. Any information obtained from such report or any information given on the project documents as to surface and subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only, is not guaranteed and does not form a part of the Agreement. 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 which differ materially from those indicated in the soils investigation report, then CONTRACTOR shall notify the DISTRICT within five (5) working days of discovery of the condition.

25.2. **No Warranty.** **WARNING:** DISTRICT does not warrant the soils at the project Site nor any information contained in any soils report. Soils investigation report is provided for CONTRACTOR'S information only. CONTRACTOR must conduct an independent investigation of the project Site and the soils conditions of the Site. DISTRICT 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.
a. CONTRACTOR agrees that no claim against DISTRICT will be made by CONTRACTOR for damages and hereby waives any rights to damages in the event that during progress of work CONTRACTOR encounters subsurface or latent conditions at the worksite materially different from those shown on project documents.

**ARTICLE 26  TESTS AND INSPECTIONS**

26.1. **Code Compliance.** Tests and inspections will comply with California Code of Regulations and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction over the Project.

26.2. **General.** One or more Inspectors of Record, including special inspectors as required, will be employed by DISTRICT and will be assigned to the Work. The fees of Inspectors of Record shall be directly paid for by DISTRICT. No work shall be carried on except under the inspection, and with the knowledge, of the appropriate inspector(s) of record and CONTRACTOR shall be responsible, at CONTRACTOR’S Own Expense, to remove and replace any Work performed without such inspection by the appropriate Inspector of Record.

26.3. **Coordination.** CONTRACTOR shall schedule, arrange, and coordinate its activities with the activities of the DISTRICT, Inspectors of Record, Design Consultant, DISTRICT Consultants and others designated by DISTRICT to inspect or observe the Work. CONTRACTOR understands and agrees that the Inspector of Record for the Project may also serve concurrently as inspector for other DISTRICT projects and may not therefore be available on site during the entire work day. It shall be the responsibility of CONTRACTOR to notify the Inspector not less than forty-eight (48) hours in advance of materials and equipment deliveries and required inspections. When, in order to comply with the intent of the Contract Documents, inspection or observation must be made at the plant or mill of the manufacturer or fabricator of material or equipment, CONTRACTOR shall notify the DISTRICT, as well as any other persons identified by DISTRICT as assigned by it to inspect or observe the Work, a sufficient length of time and no less than seventy two (72) hours in advance to allow for arrangements to be made for such inspection or observation.

26.4. **Uncovering of Work.** DISTRICT or an Inspector or Record shall have the right to request that any portion of the Work be uncovered by CONTRACTOR for inspection. Except as otherwise provided, if such Work is found to be in accordance with the Contract Documents, then all of the additional costs incurred in uncovering, replacing and re-covering the Work shall constitute grounds for CONTRACTOR, upon proper notice, to receive a contract adjustment for compensable change and if such uncovering, replacing and re-covering of the Work causes a delay, such delay shall constitute grounds for CONTRACTOR, upon proper notice, to receive a contract adjustment for compensable delay. If such Work is not in accordance with the Contract Documents, then such costs of uncovering, replacing and re-covering shall be paid for by CONTRACTOR at CONTRACTOR’S Own Expense and any resulting delay shall be consider an unexcused delay.

26.5. **Off-Hours Inspections.** CONTRACTOR shall request approval by DISTRICT before arranging any inspections either: (1) before 6:00 am or after 6:00 pm on Monday through Friday, or (2) on any Saturday, Sunday, holiday or any other time when Work is not usually in progress. Such request
shall be delivered to DISTRICT at least two (2) working days in advance of the inspection being performed. Approval or disapproval of such request is in the sole and absolute discretion of DISTRICT, which approval will be communicated to CONTRACTOR by the DISTRICT. Except where such off-hours inspections are due to a breach by DISTRICT of an obligation under the Contract Documents, the additional cost (over and above that which would be required for inspections during regular business hours) to DISTRICT of the inspection shall be paid for by CONTRACTOR at CONTRACTOR’S Own Expense.

26.6. **Off Site Inspections.** CONTRACTOR shall be responsible for any additional inspection cost due to fabrication of materials being performed outside of Orange County.

26.7. **Access to the Work.** CONTRACTOR shall make available for use by DISTRICT, Inspectors of Record, Design Consultant, DISTRICT Consultants and others assigned to inspect or observe the Work, any equipment (wheelbarrow, shovel, ladder, man-lift, etc.) that is available or in use on Site, and is required to assist in such inspections or observations.

26.8. **Right to Stop Work.** Inspectors of Record shall, only if and to the extent permitted by applicable laws, have the authority, but not the obligation, to stop the Work whenever provisions of Contract Documents are not being complied with, or the conduct of the Work poses a probable risk of harm to persons or property.

26.9. **No DISTRICT Duty.** No authority of the DISTRICT, Inspectors of Record, Design Consultant, DISTRICT Consultants or others designated by DISTRICT to inspect the Work that is conferred by the Contract Documents nor any decision made by any of them in good faith either to exercise or not exercise such authority, nor any recommendation by any of them, shall give rise to a duty or responsibility on the part of any of them to CONTRACTOR or to the Subcontractors of any Tier.

26.10. **CONTRACTOR Responsibility.** Inspections or observations by the DISTRICT, Inspectors of Record, DISTRICT Consultants or others shall not in any way relieve CONTRACTOR from its sole responsibility for full compliance with all of the terms and conditions of the Contract Documents, nor be construed to lessen, to any degree, CONTRACTOR’S responsibility for providing efficient and capable superintendence as required herein or for incorporating into the Work only those items of the Work that conform to the Contract Documents. Welding procedures shall be purchased solely through American Welding Society (AWS).

26.11. **Reimbursement to DISTRICT.** Without limitation to any other provisions of the Contract Documents, CONTRACTOR shall reimburse the DISTRICT at CONTRACTOR’S Own Expense, or DISTRICT shall have the right, at its option, to withhold from payments due to CONTRACTOR, costs of inspections, observations or testing and other losses that are incurred for any of the following reasons: (1) CONTRACTOR has failed to execute the Work in accordance with the Contract Documents; (2) materials or equipment have been substituted by CONTRACTOR without prior approval by the DISTRICT; (3) defective work; or (4) to conduct load testing of certain portions of the structure that have not fully met the requirements of the Contract Documents.
27.1. **Protection.** CONTRACTOR shall provide adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation, which conform to applicable safety standards.

27.2. **Greater than Five Feet.** If this Agreement involves the excavation of any trench or trenches five (5) feet or more in depth, and the Project cost is in excess of $25,000, the CONTRACTOR shall, in advance of excavation, submit to the DISTRICT for acceptance or to whomever DISTRICT designates which may include a registered civil or structural engineer employed by the DISTRICT to whom authority to accept has been delegated, 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 said plan has been accepted by CAL-OSHA and a CAL-OSHA permit for such plan delivered to the DISTRICT. Labor Code Section 6500 and 6705; Health and Safety Code Section 17922.5)

27.3. **Greater than Four Feet.** If this Agreement involves the digging of trenches or excavations that extend deeper than four feet below the surface, the following shall apply pursuant to Public Contract Code section 7104:

a. The CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the DISTRICT, 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 different from those indicated.

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.

b. **Material Difference.** The DISTRICT 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. In the event a dispute arises between the DISTRICT and the CONTRACTOR, 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.

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**ARTICLE 28 DOCUMENTS ON WORK**

28.1. 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 ARCHITECT, ARCHITECT’S representatives, and all authorities having jurisdiction. CONTRACTOR shall be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project.

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**ARTICLE 29 STATE AUDIT**

29.1. 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 DISTRICT, 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 DISTRICT or as part of any audit of the DISTRICT for a period of three (3) years after final payment is made under this Agreement.

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**ARTICLE 30 SUBSTITUTIONS**

30.1. **Prior to Bid Opening.** 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) working days before the bid opening date and hour. If the substituted item is acceptable, the DISTRICT will approve it in an Addendum issued to all bidders of record. Requests received less than ten (10) working days prior to bid opening will not be considered. DISTRICT shall only consider substitution requests from the bidder submitting the bid for the project.

30.2. **After Bid Opening and Prior to Award of Contract.** If the bidder clearly indicates in its bid that it is proposing to use an “equal” product, the brand name or trade name, if any, of a proposed substitute item shall be inserted in the spaces provided on the SUBSTITUTION REQUEST FORM. Any submittal provided after the aforementioned deadline will not be considered. If the bidder fails to indicate 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. It is expressly understood and agreed to by the bidder that the DISTRICT reserves the right to reject any such proposed substituted item. It is further expressly understood and agreed by bidder that in the event the DISTRICT 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 DISTRICT.
30.3. **The Substitution Request Form.** Requests for substitutions of products, materials, or processes in place of a specified item must be in writing on the DISTRICT’S Substitution Request Form (“Request Form”) at the time of submitting bids to the District.

a. The **SUBSTITUTION REQUEST FORM** must be accompanied by evidence as to whether the proposed substitution:

1. Is equal in quality/service/ability to the Specified Item;
2. Will entail no changes in detail, construction, and scheduling of related work;
3. Will be acceptable in consideration of the required design and artistic effect;
4. Will provide no cost disadvantage to the District;
5. Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
6. Will required no change of the construction schedule.

b. In completing the **SUBSTITUTION REQUEST FORM**, the bidder must state, with respect to each requested substitution, whether the bidder will agree to provide the Specified Item in the event that the District denies the bidder’s request for such requested substitution. In the event that the bidder has agreed in the Request Form to provide the Specified Item and the District denies the bidder’s requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District.

30.4. **“Equal Substitution.”** With respect to all proposed substitutions of “equal” items, the bidder shall submit all pertinent and appropriate data substantiating its request for substitutions within fifteen (15) days prior to the Award of Contract. DISTRICT shall only consider substitution requests from the bidder submitting the bid for the Project. The DISTRICT is not responsible for locating or securing any information which 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 DISTRICT shall be the sole judge as to the quality and suitability of proposed substituted items, and decisions of the DISTRICT shall be final and conclusive. Unless extended by the mutual agreement of the parties, the DISTRICT shall notify the successful bidder of the decision concerning the proposed substitution of “equal” items prior to the Award of Contract. Also such decisions by the DISTRICT shall be in writing, and no proposed substituted item shall be deemed approved unless the DISTRICT 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.

30.5. **“Or Equal.”** Whenever in Specifications any materials, process, service or equipment is indicated or specified by brand name, trade name, proprietary name or by name of manufacturer, such specification shall be deemed to be used for the purpose of facilitating description of material, process, service or equipment desired and shall be deemed to be followed by the words “or equal,” and CONTRACTOR may, unless otherwise stated, offer any material, process, service, or
equipment which shall be substantially equal or better in every respect to that so indicated or specified subject to DISTRICT or ARCHITECT approval.

30.6. **Burden of Proof.** If material, process, service, or equipment offered by CONTRACTOR is not, in opinion of ARCHITECT, or DISTRICT, substantially equal or better in every respect to that specified, then CONTRACTOR shall furnish the material, process, service, or equipment specified. Burden of proof as to equality of any material, process, service, or equipment shall rest with CONTRACTOR. Provision authorizing submission of "or equal" substantiating data shall not in any way authorize an extension of time for performance of this Agreement.

30.7. **Defective “Equal”.** In the event CONTRACTOR furnishes material, process, service or equipment other than what was specified by the DISTRICT and which has been accepted by the DISTRICT and which later is defective, then CONTRACTOR at its sole cost and expense shall furnish the DISTRICT specified material, process, service or equipment or fully replace with new the defective material process, service or equipment at DISTRICT’s discretion.

30.8. **Cost of Approved Alternate.** In the event CONTRACTOR furnishes material, process, service, or equipment more expensive than that specified, difference in cost of such material, process, service, or equipment so furnished shall be borne by CONTRACTOR. Any engineering, design fees, or approval agencies’ fees required to make adjustments in material or work of all trades directly or indirectly affected by the approved substituted items shall be borne entirely by CONTRACTOR. Any difference in cost between an approved substitution which is lower in cost than the originally specified item shall be refunded or credited by CONTRACTOR to DISTRICT.

30.9. **Preferred material.** Price, fitness and quality being equal with regard to supplies, the District may prefer supplies grown, manufactured, or produced in California and next prefer supplies partially manufactured grown, or produced in California provided the bids of said suppliers or the prices quoted by them do not exceed by more than 5% of the lowest bids/prices quoted by out of state suppliers, the major portion of the manufacture of the supplies is not done outside of California and the public good will be served thereby. (Government Code section 4330-4334).

**ARTICLE 31  SAMPLES**

31.1. **General.** 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 ARCHITECT. This provision shall not authorize any extension of time for performance of the work. ARCHITECT 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.

31.2. **ASTM Testing.** Unless specified otherwise, sampling, preparation of samples and tests shall be in accordance with the latest standards of the American Society for Testing and Materials.

31.3. **Test Approval before Installation.** Samples shall, upon demand of ARCHITECT or DISTRICT, 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 which are of value after testing will remain the property of the CONTRACTOR.

ARTICLE 32  PROGRESS SCHEDULE

32.1. **General.** Within five (5) calendar days after Board approval of contract, CONTRACTOR shall submit a preliminary schedule that describes the work sequence planned in the first 30 days of construction.

32.2. Within 21 calendar days following Board approval of contract, CONTRACTOR shall prepare and submit for DISTRICT's acceptance the Initial Construction Schedule for the value reporting, planning and scheduling, of all work required under the Project Documents. The schedule will separately identify those milestones or events that must be completed before other portions of the work can be accomplished.

32.3. **Format.** The schedule shall be in the form of a critical path progress schedule that shows, in graphic form, a plan for performance of the Work within the Contract Time. It shall indicate the beginning and completion dates of all phases of construction, using Primavera P3 or later version, as a time-scaled bar chart showing:

a. continuous flow from left to right and activities and milestones that are critical to Completion of the Work;

b. identification of “float”, techniques or methods designed to suppress depiction of available float are strictly prohibited;

c. a clearly highlighted critical path, no more than ten percent (10%) of the activities shall be shown as critical;

d. Durations and specific calendar days shall be clearly and legibly shown for the early and late start and finish of each activity; and

e. With the exception of DISTRICT review periods and governmental authority review periods, any activity having a duration of more than fifteen (15) Days will be segmented into fifteen (15) Day increments;

f. The weighted cost value expressed as a percentage of the total cost of the Work for each activity;

g. The final labor force curves by trade;

h. Anticipated duration for shop fabrication requiring special inspections;

i. The anticipated purchase and delivery of major materials and equipment (procurement schedule); and

j. The District’s occupancy requirements with an item with duration for DISTRICT furnished Furniture, Fixture and Equipment procurement and installation.
32.4. **Software Use.** Alternate software may be not be used unless DISTRICT provides written approval in advance of use.

32.5. **Submittal Review.** The scheduling is necessary for the DISTRICT’s adequate monitoring of the progress of the Work and shall be prepared in accordance with the time frame described in the Agreement. The DISTRICT may reject schedule and require modification to it if, in the opinion of the ARCHITECT or DISTRICT, adherence to the progress schedule will cause the Work not to be completed in accordance with the Agreement. CONTRACTOR shall adhere to any such modifications required by the DISTRICT.

32.6. **Lean Scheduling.** CONTRACTOR will participate in no less than six Lean Scheduling exercises prior to each new grouping of major trades coming on Site. CONTRACTOR will exchange scheduling information with subcontractors and suppliers. CONTRACTOR will order work, equipment and materials with sufficient lead time to avoid interruption of the work.

32.7. **Monthly Schedule.** The CONTRACTOR shall submit to DISTRICT a monthly schedule to reflect the actual sequence of the work which shall be totally separate and apart from the original progress schedule.

32.8. **Revised Schedule due to Completion Jeopardy.** The CONTRACTOR shall also, if requested by the ARCHITECT or DISTRICT, provide revised schedules within ten (10) calendar days if, at any time, the ARCHITECT or DISTRICT, consider the completion date to be in jeopardy. The revised schedule shall be designed to show how the CONTRACTOR intends to accomplish the work to meet the original completion date. The form and method employed by the CONTRACTOR shall be the same as for the original progress schedule. The CONTRACTOR shall modify any portions of the schedule that become infeasible because of "activities behind schedule" or for any other valid reason. CONTRACTOR will provide documents and justification for any schedule changes. An activity that cannot be completed by its original completion date shall be deemed to be behind schedule.

32.9. **Revised Schedule due to Extension Request.** CONTRACTOR shall submit a revised schedule within ten (10) consecutive calendar days of CONTRACTOR’S request for any extension of time. Failure to submit such schedule will result in CONTRACTOR waiving his/her right to obtain any extension of time.

32.10. **Float Ownership.** It is agreed that the DISTRICT owns the “float” on this Project. If CONTRACTOR submits a revised schedule showing an earlier completion date for the Project, DISTRICT’S acceptance of this revised schedule shall not entitle CONTRACTOR to any delay claim or disruption damages or any other damages due to any such revised schedule. Nothing provided here in shall be construed as a direct, indirect or implicit acceleration order to the CONTRACTOR.

32.11. **Condition of Payment.** Compliance by CONTRACTOR with the requirements of this Article and the other provisions of the Contract Documents pertaining to preparing, submitting, revising and updating the schedule is a condition to DISTRICT’S obligation to make payment to CONTRACTOR. Recognizing that scheduling is a continuing, cumulative and recurring obligation, failure by DISTRICT to assert a right to withhold payment under this Article due to a noncompliance by CONTRACTOR with its schedule obligations shall not waive or diminish the DISTRICT’S right to
withhold, or the DISTRICT’S right to disapprove of, future payments on account of such noncompliance or any other past or future noncompliance of the same or similar nature.

32.12. **Look Ahead.** In addition to the requirement to update the baseline schedule, CONTRACTOR is responsible to provide a four week rolling schedule at each progress meeting. This Schedule will include activities that are 1 week behind the Data Date and 3 weeks ahead of the Data Date. The Data Date shall be the date of the progress meeting. Schedule shall include information for all trades on-Site. Schedule will identify any work that is proposed outside the regular working hours.

32.13. **Digger Report.** CONTRACTOR will provide a digger report (version 3.0 or later) with each schedule submittal.

**ARTICLE 33  TIME ALLOWANCES**

33.1. **Notice to Proceed.** DISTRICT will serve a Notice to Proceed upon Contractor by hand delivery, email or delivery to Contractor at legal address.

33.2. **Start Date.** Start date for Contract Times shall be on the date indicated in the Notice to Proceed. If no date is indicated, then the start date for contract time shall be the 5th calendar day from date that Contractor receives DISTRICT’s written Notice to Proceed, unless the Notice to Proceed is served by mail only, then the Start Date under the Contract shall be the tenth (10th) calendar day following the date of mailing. The Contractor shall commence work on such day, and shall prosecute the Work diligently to completion thereafter. No work shall commence before contract bonds and insurance certificates have been filed with the DISTRICT and the contract has been signed by the DISTRICT.

33.3. **Notice of Delay.** Notice shall constitute application for extension of time only if notice requests extension and sets forth the impact of the delay on the critical path and CONTRACTOR’S estimate of additional time required together with full recital of causes of unavoidable delays relied upon.

a. With respect to any matter that may involve or require an adjustment extending the Contract Time, CONTRACTOR shall, within fourteen (14) Days after receipt by DISTRICT of a notice of delay, submit to DISTRICT a written Request for Extension.

b. No time extensions shall be granted for delays for which CONTRACTOR fails to give timely notice and CONTRACTOR hereby waives any and all damages for delay for which timely notice is not given.

c. CONTRACTOR recognizes and acknowledges that timely submission of a formal notice of delay and a formal request for extension, whether or not the circumstances of a delay may be known to DISTRICT or available to DISTRICT through other means, are not mere formalities but are of crucial importance to the ability of DISTRICT to promptly identify, prioritize, evaluate and mitigate the potential effects of delay. Any forms of informal notice, whether verbal or written (including, without limitation, statements at regular job meetings or entries in monthly reports, daily logs, job meeting minutes, updated Design-Build Schedules or look-ahead schedules), that do not strictly comply with the formal
requirements herein, shall accordingly be deemed insufficient to satisfy the notice requirements.

d. Any request for extension of time shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant is entitled as a result of the occurrence of said event. No claim for an adjustment in the contract times will be valid and such claim will be waived if not submitted in accordance with the requirements of this paragraph.

e. The CONTRACTOR’S failure to perform in accordance with the construction schedule shall not be excused because the CONTRACTOR has submitted time extension requests, unless and until such requests are approved by DISTRICT.

33.4. **Change of Contract Times.** The contract times may only be changed by change order or written amendment and time is of this essence in this Agreement.

a. Adjustments. The Contract Times will be adjusted due to

1. changes in the Work ordered by DISTRICT;

2. acts or neglect by DISTRICT’s consultants, acts or neglect of utility districts, acts or neglect of other contractors performing other Work, provided CONTRACTOR has fully and completely performed its responsibilities under the Contract Documents, including but not limited to, its cooperation and coordination responsibilities required by the Contract Documents;

3. Fires, floods, abnormal weather conditions, earthquakes, civil disturbances, or Acts of God, provided damage resulting from same is not the result of CONTRACTOR’S failure to properly protect the Work as required by the Contract Documents. Notwithstanding the foregoing, the contract times shall not be extended unless CONTRACTOR has actually been prevented from completing any part of the Work within the contract time due to delay which is (i) beyond the control of CONTRACTOR and (ii) due to reasons for which CONTRACTOR is not responsible and (iii) a claim for delay is made as provided for herein. Delays attributable to and within the control of a subcontractor, or its subcontractors, or supplier shall be deemed to be delays within the control of CONTRACTOR.

b. Weather. The Contract Times will be adjusted due to Weather. CONTRACTOR shall have no right to an adjustment in the time of completion due to weather conditions which are normal for the locality of the Site.

1. The time period for completion of the project has been determined with consideration given to the average climatic range prevailing in the locality of the Site.

2. Delays due to adverse weather conditions will not be allowed for weather conditions which do not directly impact the performance of the critical path. Whenever the CONTRACTOR has undertaken an exterior critical path activity
which is directly impacted by adverse weather conditions, the CONTRACTOR shall immediately notify the DISTRICT of the potential delay to such activity. The DISTRICT shall inspect the Site, meet with the CONTRACTOR and confirm that the exterior critical path activity is impacted and grant an extension of the Contract Times sufficient to allow the CONTRACTOR to perform the impacted activity.

c. Non-compensable Delay. Where CONTRACTOR is prevented from completing any part of the Work within the contract due to delay beyond the control of both DISTRICT and CONTRACTOR, an extension of contract times in an amount equal to the time loss due to such delay shall be the CONTRACTOR’S sole and exclusive remedy for such delay. DISTRICT shall not be liable to CONTRACTOR, any subcontractor, any supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of CONTRACTOR, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, Acts of God or acts or neglect by utility districts.

d. Concurrent Delay. The Contract Times will be adjusted due to Concurrent Delay. If delays acceptable for evaluation occur concurrently, the maximum extension of the Contract time shall be the number of days from the commencement of the first delay to the cessation of the delay which ends last. If an inexcusable delay occurs concurrently with acceptable delays for evaluation, the maximum extension of the Contract Time shall be the number of days, if any, by which the duration of a delay exceeds the inexcusable delay. The duration of concurrence is non-compensable.

e. Expiration of Contract. Delay in completion of the Work beyond the expiration of the contract time resulting from causes other than those listed as acceptable for evaluation are considered inexcusable delays and shall not entitle the CONTRACTOR to an extension of the contract time or an adjustment of the Contract amount.

f. Calculating Changes Involving Time. Contract Adjustments to the contract sum or contract time that are based on an extension of the contract time for compensable delay or a shortening of the contract time due to deleted Work shall be calculated as stated below, with no allowable markup thereon for CONTRACTOR. Contract Adjustments that are based on an acceleration in performance of the Work that is ordered by DISTRICT in writing to overcome a compensable delay for which the CONTRACTOR is entitled to an extension of the contract time that has been properly requested and is not granted by DISTRICT due to a DISTRICT decision to accelerate rather than extend the contract time shall be calculated as stated below:

1. Extensions. Provided that CONTRACTOR has complied with the contract provisions (including, without limitation, the requirements pertaining to timely delivery of a Notice of Delay and Request for Extension), if, as a result of excusable delay or compensable delay to the actual, as-built critical path of activities leading to achievement Completion, CONTRACTOR is unable to achieve Completion of the Work within the contract time Completion, then the contract time for
completion of Final Construction Documents shall be extended, either by Change Order or Unilateral Change Order, for the length of the proven, resulting delay to CONTRACTOR’S ability to complete the construction Work within the contract time. The contract time shall not be adjusted for unexcused delays.

2. Shortening. CONTRACTOR shall within ten (10) Days after receiving notice of deleted Work prepare and deliver to DISTRICT a time impact analysis of the impact of the deleted work upon the critical path to determine if the contract time should be shortened thereby and if so the duration of the shortening. If the DISTRICT and CONTRACTOR are unable to agree upon the duration of the shortening, then DISTRICT shall make a good faith determination of the reasonable amount of time that the contract time shall be shortened on account of such deleted Work.

3. Prescribed Calculations.
   i. Work Day Lost Calculations. CONTRACTOR may claim an excusable delay or a compensable delay for a full Day only if all Work on a critical path activity is stopped for more than six (6) hours of a normal eight (8) hour work Day and for a half-Day only if all Work on a critical path activity is stopped for three (3) to six (6) hours of such a normal Work Day. No excusable delay or compensable delay may be claimed if all Work on a critical path activity is stopped for less than three (3) hours of such a normal work Day. Similarly, where deleted Work results in the projected avoidance of the need to perform more than six (6), or between three (3) and six (6) hours of all Work on a critical path activity on such a normal work Day, the contract time shall be contracted by a full Day or half Day, respectively.

   ii. Dry Out Time Calculations. Contract Adjustments to the contract time that are based upon unusual precipitation that is an Act of God as defined herein, shall include, in addition to the number of Days of excusable delay to which CONTRACTOR is entitled due to a cessation of Work that occurs at the Site while the unusual precipitation is occurring, an additional extension for the delay to the critical path of activities affecting Completion that is the result of CONTRACTOR being unable, after cessation of the unusual precipitation at the Site, to proceed with performance of Work due to wet or muddy conditions at the Site (hereinafter referred to as “dry out” time); provided, however, that the amount of dry out time for which CONTRACTOR is entitled to an extension of time in any given calendar month shall not exceed the number of Days that is the product derived by multiplying (a) the number of Days of excusable delay to which CONTRACTOR is entitled due to a cessation of Work that occurs at the Site while such unusual precipitation is occurring, by (b) a fraction, the (i) numerator of which is the number of Days of excusable delay due to measurable unusual precipitation occurring at the Site...
during such calendar month that constitutes an Act of God as defined herein, and (ii) the denominator of which is the total number of Days of measurable precipitation occurring at the Site during said calendar month (including both the number of Days comprising the normal, 10-year monthly average of measurable precipitation recorded by NOAA and the excess, or unusual precipitation that constitutes an Act of God as defined herein.

33.5. **DISTRICT Response to Time Change Request.** All claims and adjustments in the contract times shall be determined by DISTRICT and shall be in accordance with the requirements set forth in the section on Changes and Extra Work.

a. After receipt of a timely and complete request for extension, DISTRICT shall investigate the facts concerning the cause and extent of such delay and, depending on whether the request for extension is justified, will notify CONTRACTOR of its approval or disapproval in writing of all or a portion of CONTRACTOR’S request.

b. Extensions of time approved by DISTRICT shall apply only to that portion of the Work affected by the delay, and shall not apply to other portions of Work not so affected.

c. DISTRICT shall have the right, exercised in its sole and absolute discretion, in lieu of granting a contract adjustment to the contract time for compensable delay, to direct in writing the acceleration of the Work by CONTRACTOR in order to recapture time lost due to such compensable delay. The DISTRICT and CONTRACTOR shall endeavor prior to commencement of such acceleration to mutually agree upon the amount of compensation to be paid therefor. DISTRICT shall have the right, in the absence of such an agreement, to direct in writing that CONTRACTOR accelerate. CONTRACTOR shall comply with such directive. CONTRACTOR’S right to a contract adjustment to the contract sum on account of such acceleration shall be limited to (1) the premium time portion of any overtime paid for labor provided by CONTRACTOR or any subcontractor, plus (2) additional supervision costs for additional shifts of supervision provided at the Site by CONTRACTOR only (not by Subcontractors or Subconsultants), plus (3) allowable markup thereon. Except as directed by DISTRICT in writing, no statements, conduct or actions by DISTRICT will be construed as creating an obligation on the part of DISTRICT to agree to a contract adjustment to the contract sum on account of any cost of overtime or other costs associated with an acceleration of the Work to recapture time lost due to compensable delay.

33.6. **No Damage for Contractor Caused Delay.** CONTRACTOR shall not be entitled to any compensation, including but not limited to extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays caused in whole or in part by CONTRACTOR’S failure to perform its obligations under this Contract, or during periods of delay concurrently caused by CONTRACTOR and either DISTRICT or others. CONTRACTOR may be compensated for delays caused directly and solely by DISTRICT except that CONTRACTOR shall not be entitled to damages for delay to the Work caused by the following reasons:
a. DISTRICT’s right to sequence Work in a manner which would avoid disruption to the
DISTRICT’s tenants and their contractors or other prime contractors and their respective
subcontractors, exercised as a result of CONTRACTOR’S failure to perform its cooperation
and coordination responsibilities required by this Contract;

b. DISTRICT’s enforcement of government act or regulation, or the provisions of the Contract
Documents; and

c. Extensive requests for clarifications to Construction Documents or modifications to
contract, provided such clarifications or modifications are processed by DISTRICT or its
consultants in a reasonable time commensurate with provisions of Contract
requirements.

33.7. Extension of time does not waive DISTRICT’S Rights. Granting of time extension for any reason
shall in no way operate as waiver on part of DISTRICT, of right to collect liquidated damages for
other delays or of right to collect other damages or other rights to which DISTRICT is entitled.

ARTICLE 34 MATERIALS AND WORK

34.1. General. 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.

34.2. New Material. 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.

34.3. Storage. 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. DISTRICT
has no obligation to pay for any prefabricated material stored offsite until delivered and installed
to the jobsite and inspected and approved by the Inspector of Record.

34.4. Timely Procurement. CONTRACTOR shall, after issuance of the Notice to Proceed by DISTRICT,
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 ARCHITECT, furnish to
the ARCHITECT documentary evidence showing that orders have been placed.

34.5. DISTRICT Material Orders. DISTRICT 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.

34.6. No Interest Retained. 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 DISTRICT 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 DISTRICT as to
owner thereof.

34.7. **Protection of Supplier’s Rights.** Nothing contained in this Article, 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 DISTRICT, 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.

34.8. **CONTRACTOR Retains Title.** 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 DISTRICT; no part of said materials and/or equipment shall be removed from its
place of onsite/offsite 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 DISTRICT or its authorized representative.

**ARTICLE 35 INTEGRATION OF WORK**

35.1. **General.** 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 ARCHITECT.

35.2. **CONTRACTOR Costs.** All costs caused by defective or ill-timed work shall be borne by
CONTRACTOR.

35.3. **Consent of ARCHITECT.** 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 ARCHITECT. 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.

35.4. **DSA Review.** Cutting, boring, saw-cutting or drilling through structural elements of Existing
Improvements is not to be started until the details (if the details are not already shown in, or as
shown do not conform to, the DSA-approved Contract Documents) have been reviewed and
approved the appropriate subconsultant responsible for structural engineering and the DSA field
engineer.
35.5. **Match Existing.** 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 DISTRICT.

35.6. **Phased Construction.** 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 DISTRICT. 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 36 OBTAINING OF PERMITS, LICENSES AND EASEMENTS**

36.1. **General.** Permits, 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 ARCHITECT before demand is made for the certificate of final payment. CONTRACTOR shall, and shall require subcontractors to, maintain contractors’ licenses in effect as required by law.

36.2. **Payment for Easements.** Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by DISTRICT, unless otherwise specified.

36.3. **Utility Coordination.** Permits and charges for installation, and inspection thereof, of utility services by serving utilities shall be secured and paid for by DISTRICT.

**ARTICLE 37 SURVEYS**

37.1. Surveys to determine location of property lines and corners will be supplied by DISTRICT. Surveys to determine locations of construction, grading, and site work, shall be provided by CONTRACTOR.

**ARTICLE 38 EXISTING UTILITY LINES; REMOVAL, RESTORATION**

38.1. **Unidentified Utilities.** Pursuant to Government Code Section 4215, the DISTRICT 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 DISTRICT 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 DISTRICT in the Plans or Specifications, CONTRACTOR shall immediately notify the DISTRICT and the utility in writing. CONTRACTOR shall be compensated according to the provisions governing changes in the work.

38.2. **Other Utilities.** 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 DISTRICT 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.

38.3. **Code Requirements.** 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 39  WORK TO COMPLY WITH APPLICABLE LAWS AND REGULATIONS

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

39.2. **Notify of Variance.** If CONTRACTOR observes that Drawings or Specifications are at variance therewith, CONTRACTOR shall promptly notify ARCHITECT in writing and any changes deemed necessary by the ARCHITECT 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 ARCHITECT, 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 Marshall, or other body or agency, CONTRACTOR shall be responsible for satisfying requirements of such bodies or agencies.

### ARTICLE 40  ACCESS TO WORK AND PHOTOGRAPHY

40.1. **Access.** DISTRICT 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 DISTRICT’s representatives may perform their functions.

40.2. **Consent to Photographing.** CONTRACTOR is advised that DISTRICT intends, from time to time, to take photographs, videotapes and/or motion pictures of the Work, and workers located on the Site and proximate settings. CONTRACTOR consents to the use of CONTRACTOR’S name and likeness in instructional or training uses, news releases, advertising and/or publicity throughout the world in perpetuity, in all media now known or hereafter invented. CONTRACTOR shall include in its contracts with its Subcontractors a consent by the Subcontractor to the use of Subcontractor’s name and the likenesses of its employees on the same terms as provided for herein applicable to such consent by CONTRACTOR.

### ARTICLE 41  PAYMENTS BY CONTRACTOR

41.1. **General.** CONTRACTOR shall pay:

a. For all transportation and utility services not later than the 20th day of the calendar month following that in which such services are rendered;
b. 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

c. 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.

d. Within seven (7) days from the time that all or any portion of the retentions are received by CONTRACTOR from DISTRICT, to each of its subcontractors from whom retention has been withheld, each subcontractor’s share of the retention received. However, if a retention payment received by CONTRACTOR is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor, if the payment is consistent with the terms of the subcontract. CONTRACTOR may withhold from a subcontractor its portion of the retentions if a bona fide dispute exists between the subcontractor and the CONTRACTOR. The amount withheld from the retention shall not exceed one hundred fifty percent (150%) of the estimated value of the disputed amount.

ARTICLE 42    INSPECTOR’S FIELD OFFICE

42.1. CONTRACTOR shall provide for the exclusive use of Inspector a temporary field office to be located as directed by Inspector and to be maintained until removal is authorized by DISTRICT. Office shall be of substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. Door shall have a key-type lock or padlock hasp. A table satisfactory for study of Plans and two chairs shall be provided by CONTRACTOR. CONTRACTOR shall provide and pay for adequate electric lights, telephone service (not a pay phone), and adequate heat for the field office until authorized removal.

ARTICLE 43    UTILITIES

43.1. General. All utilities, including but not limited to electricity, water, gas, and telephone used on work shall be furnished and paid for by CONTRACTOR. 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. When it is necessary to interrupt any existing utility service to make connections, a minimum of forty-eight (48) hours advance notice shall be given to the DISTRICT, the College Director of Facilities and ARCHITECT. Interruptions in utility services shall be of the shortest possible duration for the work at hand and shall be approved by the DISTRICT and the ARCHITECT. In the event any utility service is interrupted without the required forty-eight (48) hour notice, then CONTRACTOR shall be liable
for all damage suffered by DISTRICT due to the interruption. Upon completion of work, CONTRACTOR shall remove all temporary distribution systems.

43.2. **Use of Existing Utilities.** CONTRACTOR may, with written permission of DISTRICT, use DISTRICT’s existing utilities by making prearranged payments to DISTRICT for utilities used by CONTRACTOR for the Project.

### ARTICLE 44 SANITARY FACILITIES

44.1. The CONTRACTOR shall provide sanitary temporary toilet and wash facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The toilet facilities shall be maintained in a sanitary condition at all times and shall be left at the Site until removal is directed by the Inspector. Use of toilet and wash facilities in the Work under construction shall not be permitted. Use of existing or permanent toilet facilities shall not be permitted except by written consent of DISTRICT.

### ARTICLE 45 CLEANING UP

45.1. 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 and shall remove same promptly and with not greater than one week between removals. 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. 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 DISTRICT shall do so and the cost thereof shall be charged to the CONTRACTOR and deducted from any progress payment due.

### ARTICLE 46 PATENTS, ROYALTIES, AND INDEMNITIES

46.1. The CONTRACTOR shall hold and save the DISTRICT 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 DISTRICT, 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 DISTRICT.

### ARTICLE 47 GUARANTEE

47.1. **Warranty.** 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.
47.2. **Assignment.** CONTRACTOR does hereby unconditionally and irrevocably assign to DISTRICT all warranties and guarantees issued or made by any Subcontractor of any Tier (including, without limitation, any manufacturer, supplier and distributor). Such assignment shall not relieve CONTRACTOR of, or otherwise limit, any of its obligations contained in the Contract Documents, including, without limitation, the general responsibility and liability of CONTRACTOR for a breach by a Subcontractor (including, without limitation, any manufacturer, supplier and distributor) of a warranty or guarantee given by such Subcontractor in connection with the Work.

47.3. **Warranty Period.** 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.

47.4. **Repairs.** District 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 DISTRICT and with due diligence and dispatch as required to make the work ready for use by DISTRICT, 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 DISTRICT’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 DISTRICT’s use of the work.

47.5. **DISTRICT Right to Repair.** 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, DISTRICT 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.

47.6. **Dangerous Condition.** If, in the opinion of the DISTRICT, Defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the DISTRICT or to prevent interruption of operations of the DISTRICT, the DISTRICT will attempt to give the written notice required by this Article. If the CONTRACTOR or Surety cannot be contacted or neither complies with the DISTRICT’s requirements for correction within a reasonable time as determined by the DISTRICT, the DISTRICT 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 DISTRICT will not relieve the CONTRACTOR and Surety of the guarantees provided in this Article or elsewhere in the Project Documents.
47.7. **Not a Limitation.** 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 shall furnish to DISTRICT all appropriate guarantee or warranty certificates upon completion of the Project or upon request by DISTRICT.

47.8. **Delivery of Bound Volume.** All guarantees required under this Article shall be in writing on the Guarantee form included in the Project Documents. All such guarantees and warranties shall be: (1) in writing; (2) indexed and bound; (3) accompanied by such certifications and instruction materials as may be required by the Contract Documents; and (4) issued or assignable by their terms to DISTRICT and will in the latter case be assigned to DISTRICT. Nothing herein shall limit any other rights or remedies available to DISTRICT.

47.9. **Manuals.** CONTRACTOR shall provide to DISTRICT instruction manuals for all items which require same.

   a. Two (2) hard copies and one (1) electronic version of operations and maintenance manuals will be prepared and transmitted to DISTRICT within the Contract Time for Final Completion.

   b. Final Payment will not be due until District Project Manager has received manuals covering the Work that are either required to be provided by the terms of the Contract Documents or if not required are customarily provided according to usual commercial practices applicable to the portion of Work involved. Operating instructions will be included within the equipment manuals and will state all information necessary for DISTRICT to operate, use, maintain and service the equipment fully and efficiently.

47.10. **Fees.** The DISTRICT may collect its reasonable costs and attorneys' fees in any action to enforce this Article.

## ARTICLE 48 DUTY TO PROVIDE FIT WORKERS

48.1. **General.** 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.

48.2. **Excluded from Work.** Any person in the employ of the CONTRACTOR or subcontractors whom DISTRICT or ARCHITECT 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 DISTRICT.

## ARTICLE 49 WAGE RATES, TRAVEL AND SUBSISTENCE

49.1. **General.** 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 DISTRICT 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 file with the Clerk of the DISTRICT’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. Labor Code Section 1773.2. The rates are available on the Internet at www.dir.ca.gov “Statistics & Research.”

49.2. **Holiday and Overtime.** Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Agreement applicable to each particular craft, classification or type of worker employed.

49.3. **Not Less than Prevailing Rate.** 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.

49.4. **Travel and Subsistence.** 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 1773.8.

49.5. **Changes in Rates during Bid.** 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.

49.6. **Penalty.** Pursuant to Labor Code Section 1775, CONTRACTOR shall as a penalty to the DISTRICT, forfeit fifty dollars ($50) 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 amount of the penalty shall be determined by the Labor Commission and shall be based on consideration of the CONTRACTOR’S mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage, or the previous record of the CONTRACTOR in meeting his or her prevailing rate of per diem wage obligations, or the CONTRACTOR’s willful failure to pay the correct prevailing rate of per diem wages. A mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage is not excusable if the CONTRACTOR had knowledge of his or her obligations under this part. 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.

49.7. **Closest Correspondence of Trade.** Any worker employed to perform work on the Project, which work is not covered by any craft or classification listed in the general prevailing rate of per diem wages determined by the Director shall be paid not less than the minimum rate of wages specified therein for the craft or classification which most nearly corresponds to work to be performed by
them, and such minimum wage rate shall be retroactive to time of initial employment of such person in such craft or classification.

49.8. **Per Diem.** Pursuant to Labor Code Section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in Labor Code Section 1773.8.

49.9. **Wage Rates and Deductions.** 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 50  HOURS OF WORK

50.1. **General.** 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 hereinafore 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 at not less than one and one-half times the basic rate of pay.

50.2. **Records.** 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 DISTRICT and to the Division of Labor Standards Enforcement, Department of Industrial Relations.

50.3. **Penalty.** Pursuant to Labor Code Section 1813, the CONTRACTOR shall pay to the DISTRICT a penalty of Twenty-Five Dollars ($25) 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.

50.4. **No Additional Cost to DISTRICT.** Any work necessary to be performed after regular working hours, or on Saturdays or other holidays shall be performed without additional expense to DISTRICT.

### ARTICLE 51  PAYROLL RECORDS

51.1. **General.** 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.

51.2. **Certified Payroll.** 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 as required by law or
at DISTRICT direction.

b. A certified copy of all payroll records enumerated in subdivision (a) shall be made
available for inspection or furnished as required by law or upon DISTRICT request, the
Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards
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 either the DISTRICT, the
Division of Apprenticeship Standards, 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.

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. Dated: ____________________________ Signature: _______

51.3. **File Certified Copy.** Contractor shall file a certified copy of the payroll records enumerated in
subdivision (a) with the entity that requested the records within ten (10) days after receipt of a
written request. In the event that the CONTRACTOR fails to comply within the 10-day period, the
CONTRACTOR shall, as a penalty to the DISTRICT, forfeit Twenty-Five Dollars ($25) for each
calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the
request of the Division of Apprenticeship Standards or the Division of Labor Standards
Enforcement, these penalties shall be withheld from progress payments then due.
51.4. **Redacted Copy.** Any copy of payroll records made available for inspection as copies and furnished upon request to the public by the DISTRICT, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual’s name, address, and social security number. The name and address of the CONTRACTOR shall not be marked or obliterated.

51.5. **Location of Payroll Records.** The CONTRACTOR shall inform the DISTRICT 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.

51.6. **Pre-Construction Meetings, Interviews.** The CONTRACTOR shall attend any pre-construction meetings held by the DISTRICT to discuss labor requirements. The CONTRACTOR and the subcontractors shall allow the DISTRICT, DISTRICT Third Party Labor Compliance Officer, DISTRICT Consultants and the Department of Industrial Relations, and designated representatives of each, to conduct, at their discretion, interviews of workers at the Site during working hours.

51.7. **Compliance.** It shall be the responsibility of the CONTRACTOR to ensure compliance with the provisions of this Article and the provisions of Labor Code Section 1776.

51.8. **Condition of Payment.** Compliance by the CONTRACTOR with the requirements of the provisions of this Article and the provisions of Labor Code Section 1776 shall be a condition to the CONTRACTOR’S right to payment under its Applications for Payment. Without limitation to the foregoing, payments to the CONTRACTOR shall not be made when payroll records are delinquent or inadequate.

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**ARTICLE 52 APPRENTICES**

52.1. **General.** The CONTRACTOR acknowledges and agrees that, if this Agreement involves a dollar amount greater than or a number of working days greater than that specified in Labor Code Section 1777.5, this Agreement is governed by the provisions of Labor Code Section 1777.5. It shall be the responsibility of the CONTRACTOR to ensure compliance with this Article 51 and with Labor Code Section 1777.5 for all apprenticing occupations.

52.2. **Registered Apprentices.** 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.

52.3. **Apprentice Wage.** 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.

52.4. **Standards and Agreements.** 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 apprenticeship shall be in accordance with the
provisions of the apprenticeship standards and apprentice agreements under which he or she is training.

52.5. **Apprentice Ratios.** Pursuant to Labor Code Section 1777.5, the CONTRACTOR and any subcontractors employing workers in any apprenticeship craft or trade in performing any work under this Agreement shall employ apprentices in at least the ratio set forth in Section 1777.5 and apply to the applicable joint apprenticeship committee for a certificate approving the CONTRACTOR or subcontractor under the applicable apprenticeship standards for the employment and training of apprentices.

52.6. **Contract Award to Apprenticeship Committee.** Every contractor and subcontractor shall submit contract award information to the applicable joint apprenticeship committee 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.

52.7. **Noncompliance.** If the CONTRACTOR or subcontractor willfully fails to comply with Labor Code Section 1777.5, then, upon a determination of noncompliance by the Chief of the Division of Apprenticeship Standards, the CONTRACTOR or subcontractor shall be subject to the penalties imposed under Labor Code Section 1777.7. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council.

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

52.9. **Fully Acquainted.** 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 State Division of Apprenticeship Standards, 455 Golden Gate Avenue, 8th Floor, San Francisco, California 94102, (415) 703-4920.

ARTICLE 53  LABOR - FIRST AID

53.1. 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., Sec. 651, et seq.).

ARTICLE 54  PROTECTION OF PERSONS AND PROPERTY

54.1. **General.** 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 DISTRICT. CONTRACTOR shall provide such heat, covering, and enclosures as are necessary to protect all persons, 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.

54.2. **Safety.** 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, on a twenty-four (24) hours a Day, seven (7) Days a week basis, and to provide a safe and healthful place of employment.

a. **Protection.** CONTRACTOR shall furnish, erect and properly maintain at all times, as directed by DISTRICT or ARCHITECT 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 security personnel for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction.

b. **Illness and Injury Prevention Plan.** Prior to the start of the Work, CONTRACTOR shall prepare and submit to DISTRICT an Illness and Injury Prevention Plan, which shall comply with the requirements of the Contract Documents and shall include, at a minimum, guidelines, requirements and procedures for the following: safety management policy; emergency response plan; illness and injury prevention procedures; safety meetings; accident investigation; basic accident causes; safety inspection checklist; fire prevention and control; report forms; and employee safety manual and procedures for achieving compliance with safety requirements of insurers. A copy of the Illness and Injury Prevention Plan shall be maintained on Site at all times and provided to the DISTRICT upon request. CONTRACTOR, and any member of the CONTRACTOR Team, where applicable, is solely responsible for monitoring activities at the Site for compliance with the Illness and Injury Prevention Plan and for the enforcement thereof.

c. **Safety Representative.** 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. Name and position of person so designated shall be reported in writing to DISTRICT by CONTRACTOR.

d. **First Aid.** CONTRACTOR shall maintain emergency first aid treatment for all workers and other persons on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A., §§651 et seq.) and all other Applicable Laws.

e. **Loading, Storage.** CONTRACTOR shall be responsible for coordinating the storage and staging of materials and equipment on-Site and off-Site and shall not load or store or permit any part of the Work or the Site to be loaded or stored so as to endanger the safety of persons or property.
f. Unsafe Conditions. CONTRACTOR shall immediately correct any condition that exists on the Site, or that DISTRICT, in its reasonable judgment, determines to exist on the Site, that is unsafe or potentially unsafe to persons or property. If, in the sole and absolute discretion of DISTRICT, the condition is potentially life-threatening, the DISTRICT may, with or without notice to CONTRACTOR, take whatever immediate action is necessary to correct the life-threatening condition, and the costs thereof, including, without limitation, any additional service fees or costs of the DISTRICT, Design Consultant, Inspectors of Record, DISTRICT Consultants or others to whom DISTRICT may be liable, shall be reimbursed to DISTRICT by CONTRACTOR at CONTRACTOR’S Own Expense. Nothing set forth in this paragraph shall be interpreted as an assumption of any obligation on the part of the DISTRICT, Inspectors of Record, Design Consultant, DISTRICT Consultants or other persons or entities other than CONTRACTOR and the Subcontractors, to report such conditions to CONTRACTOR nor as relieving CONTRACTOR of any of its responsibilities under the Contract Documents.

g. Corrections. 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.

h. Separate Contractors. With respect to work of separate contractor being performed within an area of the Site that is under the responsibility or control of the CONTRACTOR, CONTRACTOR shall: (1) provide copies of the IIPP to the separate contractors; (2) protect the separate contractors’ work and workers from loss due to the actions or inactions of CONTRACTOR and the subcontractors; and (3) notify the separate contractor and DISTRICT of any observed violation by the separate contractor of the IIPP or of any violations by the separate contractor of Applicable Laws governing safety on the Site. Nothing herein shall be interpreted as relieving the separate contractors from their obligations to comply with the CONTRACTOR’S IIPP, as excusing any failure by a separate contractor from performing its obligations under its contracts with DISTRICT or Applicable Laws or as obligating CONTRACTOR to directly supervise or enforce the obligations of the separate contractors to comply with the requirements of the IIPP or applicable law relating to safety.

54.3. Safety Emergency. In an emergency affecting safety of person or of work or of adjoining property, CONTRACTOR, without special instruction or authorization from ARCHITECT or DISTRICT, 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 ARCHITECT or DISTRICT. Any compensation claimed by CONTRACTOR on account of emergency work shall be determined by written agreement with the DISTRICT.

54.4. Safeguards. 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. CONTRACTOR shall (unless waived by the DISTRICT in writing):

a. Provide substantial barricades around any shrubs or trees indicated to be preserved.
b. Deliver materials to building area over route designated by ARCHITECT.
c. When directed by DISTRICT, take preventive measures to eliminate objectionable dust.
d. Enforce all instructions of DISTRICT and ARCHITECT regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on construction Site.
e. 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 DISTRICT.

54.5. **Hazardous Material Release.** CONTRACTOR and its Subcontractors shall not cause the introduction, discharge, release, emission, spill, storage, treatment or disposal of any Hazardous Substance on or adjacent to the Site. Should CONTRACTOR or its Subcontractors introduce, discharge, release, emit, spill, treat, store or dispose of any Hazardous Substance on the Site in violation of the foregoing obligation or otherwise in violation of Applicable Laws, CONTRACTOR shall at CONTRACTOR’S own expense and without limitation to DISTRICT’S other rights or remedies for default immediately (1) inform DISTRICT in writing of such event, (2) advise DISTRICT with respect to any release reporting or notification requirement that may apply as a result of such event, (3) assist DISTRICT in complying with any such reporting or notification requirement as determined by DISTRICT, and (4) perform any investigation, remediation, removal or other response that is necessary or desirable in order to abate or clean up the condition resulting from such event to the full satisfaction of DISTRICT and any applicable Governmental Authority. Such Hazardous Substances shall be removed and properly disposed of as soon as they can be accepted at an appropriate disposal facility, and in no event later than sixty (60) Days after such waste is generated, unless a longer time is approved by DISTRICT.

54.6. **Indemnification of Adjacent Property Owners.** In the event CONTRACTOR enters into any agreement with the owners of any adjacent property to enter upon such property for the purpose of performing the Work or other activities incidental to the Work, CONTRACTOR shall fully indemnify, defend and hold harmless any person or entity which owns or has any interest in such adjacent property against any loss resulting from the acts or omissions of the CONTRACTOR.

54.7. **Responsibility for Loss.** CONTRACTOR shall promptly remedy loss to any property or person caused in whole or in part by the failure of CONTRACTOR, the subcontractors of any Tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable to fully comply with the requirements of this section, except loss attributable solely to the negligent acts or omissions of the DISTRICT, Inspectors of Record, Design Consultant, DISTRICT Consultants or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable, in whole or in part, to the negligence, willful...
misconduct or violation of Applicable Laws by CONTRACTOR or a subcontractor of any Tier, or the failure by CONTRACTOR to comply with the Contract Documents. The foregoing obligations of CONTRACTOR are in addition to and not a limitation upon CONTRACTOR’S indemnity obligations.

ARTICLE 55  NON-DISCRIMINATION

55.1. In the performance of the terms of this Agreement, CONTRACTOR agrees that it will not engage in nor permit such subcontractor as it may employ to engage in unlawful discrimination in employment of persons because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, age or sex of such persons.

ARTICLE 56  SCHEDULE OF VALUES AND PERIODICAL ESTIMATES

56.1. General. CONTRACTOR shall furnish on form(s) approved by DISTRICT:

a. Within ten (10) calendar days of Award of Contract a detailed schedule of values prepared in a form and incorporating a level of detail satisfactory to DISTRICT, that allocates the Contract Sum to various portions of the Work, giving complete breakdown of contract price for each component of the Project or Site which shall include all subcontractor/supplier agreements showing dollar amounts of these agreements to justify the schedule of values; and

b. Balanced Allocation. The Schedule of Value shall be balanced, reflecting in each line item CONTRACTOR’S estimated or actual cost commitments for the category of Work included in the line item and a proportionate share of CONTRACTOR’S overhead and profit. Techniques, such as “front-end loading”, designed to create an imbalanced cash flow are strictly prohibited.

c. Updating. The Schedule of Values shall be updated by CONTRACTOR each month as necessary to reflect the CONTRACTOR’S actual progress in the Work. An updated Schedule of Values shall be attached to each Application for Payment.

d. Substantiation. CONTRACTOR shall provide such data as DISTRICT may reasonably require to substantiate that the Schedule of Values has been prepared in conformance with the requirements of the Contract Documents. Failure to provide such substantiation shall result in the Schedule of Values being deemed incomplete and unapproved by DISTRICT.

e. Corrections. If corrections are required in order to make the Schedule of Values comply with the requirements of the Contract Documents, such corrections shall be made as a condition of the CONTRACTOR’S Application for Payment being considered properly prepared, submitted and complete.

f. Changes to Work. Costs involved in the performance of Work covered by change orders, unilateral change orders or field orders shall be separately scheduled.

g. Applications for Payment. The Schedule of Values prepared by CONTRACTOR in accordance with the requirements of the Contract Documents shall be used as a basis for DISTRICT’S review and approval or disapproval of Applications for Payment.
56.2. **ARCHITECT’S Review.** Values employed in making up any of these schedules are subject to the ARCHITECT'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 57  CONTRACTOR CLAIMS**

57.1. If the CONTRACTOR shall claim compensation for any damage sustained by reason of the acts of the DISTRICT or its agents, CONTRACTOR shall, within five (5) calendar days after sustaining of such damage, make to the ARCHITECT 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 DISTRICT 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.

**ARTICLE 58  DISPUTES DECISIONS AND RESOLUTION**

58.1. **Initial Analysis.** The ARCHITECT shall, within a reasonable time, make decisions on all matters relating to the CONTRACTOR’S execution and progress of the work. The decisions of the ARCHITECT shall not be binding, but shall be advisory only on the CONTRACTOR for the purpose of CONTRACTOR’S obligation to proceed with the work.

58.2. **Continuous Work.** 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 CONTRACTOR'S sole remedy shall be to submit such controversy to determination by a court of the State of California, in Orange County, having competent jurisdiction of the dispute, after the Project has been completed, and not before.

58.3. **Settlement Procedures.** 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 DISTRICT of Three Hundred Seventy Five Thousand Dollars ($375,000) or less shall be subject to the settlement procedures set forth in Public Contract Code Section 20104, et seq. which provisions are incorporated herein by reference.

a. Mediation Requirements. All claims, disputes or controversies arising out of or relating to the PROJECT or to this agreement or the breach thereof shall be first attempted to be resolved through mediation.

b. Arbitration. If mediation is unsuccessful, claims, disputes or controversies arising out of or relating to this AGREEMENT will be decided by arbitration in accordance with the American Arbitration Association then prevailing unless the parties mutually agree otherwise.
1. No arbitration arising out of or relating to this Agreement shall include, by consolidation, joinder or in any other manner, any additional person not a party to this Agreement except by written consent containing a specific reference to this Agreement and signed by the CONTRACTOR, DISTRICT and any other person sought to be joined. Consent to arbitration involving an additional person or persons shall not constitute consent to arbitration of any dispute not described therein or with any person not named therein.

2. This agreement to arbitrate shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

3. Notice of demand for arbitration shall be filed in writing with the other party to this AGREEMENT in accordance with the rules of the American Arbitration Association. The demand shall be made within a reasonable time after the claim, dispute or other matter in question has arisen. In no event shall the demand for arbitration be made after the date when institution of legal or equitable proceedings based upon such claim, dispute or other matter in questions would be barred by the applicable statutes of limitation.

4. In any judicial proceeding to enforce this agreement to arbitrate, the only issues to be determined shall be those set forth in 9 U.S.C. Section 4 Federal Arbitration act and such issues shall be determined by the court without a jury. All other issues, such as, but not limited to, arbitrability, prerequisites to arbitration, compliance with contractual time limitations, applicability of indemnity clauses, clauses limiting damages and statutes of limitation shall be for the arbitrators whose decision thereon shall be final and binding. There shall be no interlocutory appeal of an order compelling arbitration.

5. The award rendered by the arbitrators shall be final and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

58.4. **Jurisdiction.** Unless otherwise provided, this Agreement shall be governed by the law of the state and county where the Project is located.

**ARTICLE 59 PAYMENTS**

59.1. **General.** Unless otherwise specified in writing, each month within thirty (30) days after receipt by the DISTRICT of the monthly progress schedule and an undisputed, properly submitted payment request from CONTRACTOR which has been certified for payment by the ARCHITECT, there shall be paid to CONTRACTOR a sum equal to ninety five percent (95%) of value of work performed and of materials delivered to the jobsite and inspected and approved by the Inspector of Record and subject to or under the control of the DISTRICT and unused up to the last day of the previous month, less aggregate previous payments. Public Contract Code Section 20104.50. Monthly payments shall be made only on the basis of monthly estimates which shall be prepared by
CONTRACTOR on a form approved by DISTRICT and filed before the fifth 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 DISTRICT shall have the right subsequently to correct any error made in any estimate for payment. CONTRACTOR shall not be entitled to have any payment estimates processed or be entitled to have any payment for work performed so long as any lawful or proper direction concerning work, or any portion thereof, given by the DISTRICT or ARCHITECT shall remain not complied with by the CONTRACTOR. CONTRACTOR agrees to the five percent retention on all progress payments for construction projects which exceed in cost a total of five thousand dollars. Public Contract Code Section 9203.

59.2. **Support Documents.** DISTRICT has discretion to require from the CONTRACTOR any of the following information with the Application for Payment: (i) certified payroll covering the period of the prior Application for Payment; (ii) unconditional waivers and releases from all subcontractors/suppliers for which payment was requested under the prior Application for Payment; (iii) receipts or bills of sale for any items; and/or any other items noted within these general conditions as a condition for payment. CONTRACTOR agrees that payment may be contingent upon District receiving any one or more of these documents.

59.3. **ARCHITECT Review.** Before payment is made hereunder, a certificate in writing shall be obtained from the ARCHITECT 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 a part of the claim made and filed with the DISTRICT, provided that if the ARCHITECT shall, within three (3) days after written demand therefore, fail to deliver such certificate to the DISTRICT, the CONTRACTOR may file its claim with the DISTRICT 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 DISTRICT will either allow said claim as presented or shall, by an order entered on the minutes of said DISTRICT state the reasons for refusing to allow said claim. It is understood, moreover, that the certificate of the ARCHITECT shall not be conclusive upon the DISTRICT, but advisory only.

59.4. **DISTRICT Review.** Upon receipt of CONTRACTOR’S payment request, DISTRICT shall review the payment request as soon as practicable after receipt for the purpose of determining that the payment request is proper. Any payment request determined not to be proper shall be returned to the CONTRACTOR as soon as practicable but not later than seven (7) days after receipt and shall be accompanied by a document setting forth in writing the reasons(s) why the payment request was not proper. Public Contract Code Section 20104.50.

59.5. **No Acceptance.** No payment by DISTRICT hereunder shall be interpreted so as to imply that DISTRICT has inspected, approved, or accepted any part of the work.

59.6. **District Nullification.** DISTRICT reserves the right to nullify any prior approval of an Application for Payment that is later found to have not complied with the requirements of the Contract
Documents, whether or not such noncompliance was observed or apparent on the face of the Application for Payment, and based on such nullification DISTRICT may take either of the following actions, as applicable: (1) if the Application for Payment has not yet been paid by DISTRICT, disapprove of that portion of the Application for Payment that is not in compliance and withhold payment of that sum until the noncompliance is fully rectified, or (2) if the Application for Payment has been paid by DISTRICT, nullify the prior approval and withhold payment of such disputed amounts in response to future Applications for Payment; provided, however, that in either case the amount of the DISTRICT’S nullification shall be limited to that portion of the amount requested in the Application for Payment that is in dispute and the amount of its withholding from the current or any future Application for Payment shall be limited to the amount nullified plus any additional withholding permitted to protect DISTRICT from loss or threatened loss.

59.7. **No Waiver by District.** Neither approval by DISTRICT, failure by DISTRICT to exercise its right of nullification with respect to, nor payment by DISTRICT upon, an Application for Payment or any portion thereof shall be interpreted as or constitute a waiver or release of any of DISTRICT’S rights to require CONTRACTOR’S full compliance with the Contract Documents.

59.8. **Changes in Work.** Applications for Payment may include requests for payment on account of Compensable Changes in the Work which have been properly authorized by Change Order or Unilateral Change Order.

59.9. **Percentage Completion.** Progress Payments shall indicate the CONTRACTOR’S estimated percentage of completion of each line item listed in the Schedule of Values as of the end of the period covered by the Application for Payment.

59.10. **Disagreements.** In the event of a disagreement between DISTRICT and CONTRACTOR over the accuracy or reasonableness of the CONTRACTOR’S percentage estimates, the DISTRICT shall make a good faith determination, which percentage shall then be inserted by CONTRACTOR and the Application for Payment submitted, or resubmitted, incorporating such revision.

59.11. **Certification by CONTRACTOR.** Each submitted Application for Payment shall be signed by CONTRACTOR with a certification that: (1) the data comprising the Application for Payment is accurate and the Work has progressed to the point indicated; (2) to the best of CONTRACTOR’S knowledge, information and belief, the Work is in accordance with the Contract Documents; (3) CONTRACTOR is entitled to payment in the amount certified; and (4) all sums previously applied for by CONTRACTOR on account of the Work performed by the Subcontractors that have been paid by DISTRICT have been paid to the Subcontractors performing such Work, without any retention, withholding or back charge by DISTRICT.

59.12. **Stored Materials.** DISTRICT may, in the exercise of its sole and absolute discretion, approve or disapprove for inclusion in CONTRACTOR’S Application for Payment the cost of materials to be incorporated but not yet incorporated in the Work and delivered and suitably stored either at the Site or at a bonded warehouse location acceptable and within proximity for verification by the DISTRICT. As part of any request for such approval, CONTRACTOR shall furnish evidence satisfactory to DISTRICT: (1) of the cost of such materials; (2) that such materials are under the
exclusive control of CONTRACTOR, or if not, that title to the materials is in the DISTRICT’S name, free of any lien or encumbrance; and (3) with respect to materials stored off-Site, that the materials are safely and suitably stored with appropriate insurance coverage satisfactory to DISTRICT. No payment or approval by DISTRICT shall (a) be construed as an inspection or acceptance of the materials; (b) relieve CONTRACTOR of its continuing and sole responsibility for the care and protection of, and sole responsibility for any loss to, such materials, from any cause whatsoever; or (c) operate as a waiver of rights by DISTRICT.

59.13. **Title.** CONTRACTOR warrants that title to all the Work covered by an Application for Payment will pass to DISTRICT no later than the time of payment. CONTRACTOR further warrants that upon submittal of an Application for Payment all Work for which approval for payment has been previously issued by DISTRICT shall, to the best of CONTRACTOR’s knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of CONTRACTOR, the Subcontractors, or other persons or entities making a claim by reason of having provided labor, materials, equipment and services for the Work.

59.14. **Summary of Claims.** Unless otherwise provided, on or before making request for final payment of the undisputed amount due under the Agreement, CONTRACTOR shall submit to DISTRICT, 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 DISTRICT 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.

59.15. **Subcontractor Retention Release.** CONTRACTOR shall pay each of its subcontractors from whom retention has been withheld each subcontractor’s share of the retention received within seven (7) days from the time that all or any portion of the retention are received by the CONTRACTOR subject to any limitations set forth in Public Contract Code Section 7107(e).

59.16. **Joint Payment.** DISTRICT shall have the right, if deemed necessary in its sole and absolute discretion, to issue joint checks made payable to CONTRACTOR and any of the Subcontractors of any Tier. The joint check payees shall be solely responsible for the allocation and disbursement of funds included as part of any such joint payment. Endorsement on such check by a payee shall be conclusively presumed to constitute receipt of payment by such payee. In no event shall any joint check payment be construed to create: (1) any contract between DISTRICT and any of the Subcontractors of any Tier; (2) any obligation from DISTRICT to any of the Subcontractors; or (3) any third-party rights against DISTRICT.

59.17. **Direct Negotiation of Stop Notices.** DISTRICT shall have the right to directly discuss, negotiate, settle or pay, without notice to or participation by CONTRACTOR, any stop notice claims asserted by the Subcontractors of any Tier, and to deduct such sums paid from sums due to CONTRACTOR.

59.18. **Release of Stop Notices.** With the exception of that portion, and only that portion, of a stop notice or other claim that arises as a result of a failure by the DISTRICT to make payment to CONTRACTOR under circumstances constituting a breach of the Contract by DISTRICT, if any stop
notice or other claim, whether invalid or valid, is made, filed with, served upon or asserted against the DISTRICT or the Site by any Subcontractor of any Tier, or their agent or employee, for money claimed due, then CONTRACTOR shall within five (5) Days after written notice by the DISTRICT procure, furnish and record appropriate releases or other instruments which under Applicable Laws will fully release, extinguish and remove such stop notice or claim, as well as any notices of pending action or other notices recorded against the Site in connection with the enforcement thereof. All costs of such actions by CONTRACTOR shall paid for by CONTRACTOR. Unless and until fully released as aforesaid, the DISTRICT shall have the right to retain from any payment then due, or thereafter to become due, to CONTRACTOR an amount equal to one hundred and fifty percent (150%) of the amount necessary to satisfy, discharge and defend against any such stop notice or claim and any action or proceeding thereon. If the amount to be paid, or the amount retained, is insufficient to satisfy, discharge and defend against any such stop notice or claim and any action or proceeding thereon, then CONTRACTOR shall be liable for the difference and upon demand shall immediately deposit the same with the DISTRICT. These provisions are in addition to such other rights as the DISTRICT may have against CONTRACTOR under the Contract Documents or Applicable Laws.

59.19. **No District Obligation.** DISTRICT shall have no obligation to pay or to see to the payment of money to any of the Subcontractors except as may otherwise be required by Applicable Laws.

59.20. **Application for Final Payment.** Upon issuance by DISTRICT of the Notice of Final Completion, CONTRACTOR shall submit to DISTRICT its Application for Payment requesting Final Payment. DISTRICT will review and approve or disapprove of the Application for Payment requesting Final Payment.

59.21. **Conditions to Final Payment.** Without limitation to any other conditions to payment set forth elsewhere in the Contract Documents, the following shall be conditions to a proper submission, and to DISTRICT’S approval, of CONTRACTOR’S Application for Payment requesting Final Payment:

a. submission of a certificate evidencing that the insurance required by the Contract Documents is in force;

b. submission of conditional releases and waivers of stop notice and bond rights upon final payment in the form required by California Civil Code §8132 executed by CONTRACTOR and by all the Subcontractors of every Tier;

c. submission of all Close-Out Documents including, without limitation, complete, accurate As-Built Drawings and Specifications certified by CONTRACTOR;

d. compliance with the Labor Compliance Program including, without limitation, proper payment of prevailing wages as defined in California Labor Code §1720, et seq., timely submission of adequate and complete certified payroll records as required by the Contract Documents for any time period that Work was performed, which have not been submitted by CONTRACTOR in connection with its previous Applications for Payment, submission of certifications by CONTRACTOR and each Subcontractor, as required by the
Labor Compliance Program or Applicable Laws, certifying that all employee benefit contributions due and owing have been paid in full; and

e. submission of any other documents or information required by the Contract Documents as a condition of Final Payment or Final Completion.

59.22. **Disputed Amounts.** Pursuant to California Public Contract Code §7107, DISTRICT may deduct and withhold from Final Payment an amount of up to one hundred fifty percent (150%) of any disputed amounts, including, without limitation, amounts to protect DISTRICT against any loss caused or threatened as a result of CONTRACTOR’S failing to fully satisfy the conditions of Final Completion and Final Payment.

59.23. **Waiver by CONTRACTOR.** Acceptance of Final Payment by CONTRACTOR or a Subcontractor shall constitute a waiver of all rights by that payee against DISTRICT for recovery of any loss, excepting only those Claims that have been submitted by CONTRACTOR prior to or at the time of CONTRACTOR’S submission of its Application for Payment requesting Final Payment.

59.24. **Completion.** Work shall be deemed one hundred percent complete upon Completion and the amount released to CONTRACTOR shall, subject to District’s right to withhold be a sum sufficient to increase the total of Progress Payments to CONTRACTOR to ninety five percent (95%) of the Contract Sum.

59.25. **Retention Release.** The final payment of the five percent (5%) retention of the value of the work done under this Agreement, if unencumbered, shall be made thirty-five (35) days after recording by the DISTRICT of the Notice of Completion at the County Recorder’s Office. Approval of Completion of the Project will be made only by action of the governing board of DISTRICT. Public Contract Code Section 7107.

**ARTICLE 60  CHANGES AND EXTRA WORK**

60.1. **General.** DISTRICT 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. DISTRICT has discretion to order changes on a “time and material” basis with adjustments to time made after CONTRACTOR has justified through documentation the impact on the critical path of the Project.

60.2. **Entire Compensation.** 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.

60.3. **Architect Authority.** In giving instructions, ARCHITECT shall have authority to make minor changes in work, not involving change in cost, and not inconsistent with purposes of the Project. Otherwise, except in an emergency endangering life or property, no Extra Work or change shall be made unless in pursuance of a written order from DISTRICT, authorized by action of the governing board, and no claim for addition to contract sum shall be valid unless so ordered.

60.4. **Request Proposal.** If the ARCHITECT determines that work required to be done constitutes Extra Work outside the scope of the Agreement, the ARCHITECT 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 which shall include a complete itemized cost breakdown of all labor and materials showing actual quantities, hours, unit prices, and the wage rates required for the change. If the change order involves a change in construction time, a request for the time change shall accompany the change order cost breakdown. All such requests for time shall be specified by CONTRACTOR as either “work days” or “calendar days.” Any request for time received with only the designation of “days” shall be considered calendar days. The term “work days” as used in this paragraph shall mean Monday through Friday, excluding Saturdays, Sundays and federal/State of California observed holidays. If the work is to be performed by a subcontractor, CONTRACTOR must include a bid from the subcontractor containing the same detailed information as required for CONTRACTOR. No extensions of time will be granted for change orders that, in the opinion of the ARCHITECT, do not affect the critical path of the Project.

60.5. **Value Determination.** Value of any such Extra Work, change, or deduction shall be determined at the discretion of DISTRICT in one or more of the following ways:

- a. By mutual written acceptance of a lump sum proposal from CONTRACTOR properly itemized and supported by sufficient substantiating data to permit evaluation by DISTRICT and ARCHITECT.

- b. By unit prices contained in CONTRACTOR’s original bid and incorporated in the Project Documents or fixed by subsequent agreement between DISTRICT and CONTRACTOR.

- c. 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.
  2. Basis for Establishing Costs
     i. 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 which would increase the Extra Work cost will not be permitted unless the CONTRACTOR establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

ii. 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 DISTRICT reserves the right to approve materials and sources of supply, or to supply materials to the CONTRACTOR if necessary for the progress of the work. No markup shall be applied to any material provided by the DISTRICT.

iii. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $500 or less or where an invoice is not provided.

A. 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.

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

C. All equipment shall be acceptable to the ARCHITECT, 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.

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

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

<table>
<thead>
<tr>
<th>EXTRA CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Material/Equipment (attach itemized quantity and unit cost plus sales tax)</td>
</tr>
<tr>
<td>ii. Labor (attach itemized hours and rates)</td>
</tr>
<tr>
<td>iii. Subtotal</td>
</tr>
<tr>
<td>iv. If subcontractor performed work, add Subcontractor’s overhead and profit to portions performed by it, not to exceed 15% of Item iii. above</td>
</tr>
<tr>
<td>v. Subtotal</td>
</tr>
<tr>
<td>vi. General Contractor’s Overhead and Profit, not to exceed 15% of Item v if Contractor performed the work. If subcontractor performed 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 performed by Subcontractor shall not exceed 5% of Item v.</td>
</tr>
<tr>
<td>vii. Subtotal</td>
</tr>
<tr>
<td>viii. Bond and Liability Insurance Premium, if in fact additional bonds or insurance were actually purchased, not to exceed 1% of</td>
</tr>
</tbody>
</table>
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 costs or expenses not included are deemed waived. For purposes of determining the cost, if any, of any Extra Work, change, addition or omission hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to CONTRACTOR, and CONTRACTOR shall ensure that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of CONTRACTOR’s cost in determining the actual cost of construction for purposes of any Extra Work, change, addition or omissions in the work as provided herein.

60.6. **Procedures.**

a. **Notice of Change.** CONTRACTOR shall submit a written Notice of Change to DISTRICT if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes a compensable change, deleted work, compensable delay or other matter that may involve or require a Contract Adjustment (additive or deductive). Such notice shall be provided prior to commencement of performance of the Work affected and no later than three (3) working days after the discovery date of such circumstance.

b. **Form.** Notices of Change shall be provided using forms furnished by the DISTRICT. Failure by DISTRICT to request or approve a particular form shall not relieve CONTRACTOR of its obligation to provide a Notice of Change in a written form that complies with the requirements specified below:

1. a general statement of the circumstances giving rise to the Notice of Change (including, without limitation, identification of any related field order);

2. an reasonable order of magnitude estimate by CONTRACTOR of any related Contract Adjustments (additive and deductive) to the Contract Sum; and,

3. if such circumstances involve a right to adjustment of the contract time due to compensable delay or excusable delay that has not been waived, CONTRACTOR shall include, if not previously provided, a complete and timely Notice of Delay.

c. **Waiver by CONTRACTOR.** Failure by CONTRACTOR to provide a complete and timely notice of change under circumstances where a notice of change involving a change is required shall constitute a waiver by CONTRACTOR of the right to a Contract Adjustment on account of such circumstances and a waiver of any right to further recourse or recovery.
by reason or related to such change by means of the claims dispute resolution process or by any other legal process otherwise provided for under Applicable Laws.

d. Deductive Adjustments. Failure by CONTRACTOR to submit a timely or proper Notice of Change under circumstances in which a Notice of Change is required shall in no way affect DISTRICT’S right to a deductive Contract Adjustment on account of such circumstances.

60.7. **No Written Authorization.** Without limitation to any other provisions of the Contract Documents expressly or impliedly requiring performance of Work at CONTRACTOR’S own expense, any change performed by CONTRACTOR pursuant to any direction other than a duly authorized and executed change order or unilateral change order shall be paid for by CONTRACTOR at CONTRACTOR’S own expense.

60.8. **Unilateral Change Order.** The purpose of a Unilateral Change Order is to establish the DISTRICT’S estimate of the undisputed amount of an otherwise disputed Contract Adjustment.

a. Good Faith Determination. The DISTRICT’S estimate in a Unilateral Change Order of a Contract Adjustment shall be based upon a good faith determination by DISTRICT of the Contract Adjustment to the contract sum and/or contract time that is appropriate under the circumstances and consistent with the terms of the Contract Documents.

b. Claim by CONTRACTOR. If CONTRACTOR disputes any portion of the DISTRICT’S good faith determination of the Contract Adjustment that is set forth in a Unilateral Change Order, CONTRACTOR shall file within thirty (30) Days after issuance of the Unilateral Change Order by DISTRICT a claim. The amount of the Contract Adjustment requested in the claim shall not exceed the difference between the amount (either in terms of dollar amount or amount of time extension) of the Contract Adjustment requested by CONTRACTOR and the amount (either in terms of dollar amount or amount of time extension) of the Contract Adjustment granted in the Unilateral Change Order. CONTRACTOR shall have no reserved right, and hereby waives any such right that may exist under Applicable Law, to seek in such claim a Contract Adjustment or recovery that is based upon any amount (either in terms of dollar amount or amount of time extension) that is in excess of such difference.

c. Waiver by CONTRACTOR. Failure by CONTRACTOR to submit a claim within thirty (30) days after issuance of a Unilateral Change Order by DISTRICT shall constitute a waiver by CONTRACTOR of the right to further recourse or recovery, either by means of the claims dispute resolution process or by any other legal process otherwise provided for under Applicable Laws, based on an assertion that the amount of the Contract Adjustment on account of the change or delay described in such Unilateral Change Order should be different than the amount of the Contract Adjustment set forth in such Unilateral Change Order.

60.9. **Time Allotted.** If the CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligates the DISTRICT 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 DISTRICT, 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 bases 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 DISTRICT within such five (5) day period shall be deemed a waiver and relinquishment of such a claim. If such notice be given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions.

60.10. Qualifying Language Prohibited. CONTRACTOR use of qualifying language stamps on DISTRICT Drawings or contract forms is prohibited. Contractor shall not countersign or endorse any form, drawing, change order, contract or other documents with any conditions not mutually agreed to in advance by the DISTRICT and the CONTRACTOR. Endorsement of a contract, change order, specification, drawing or form with the following: “This change order is being executed without waiver of the right to seek additional compensation for such services,” shall be of no legal force or effect.

ARTICLE 61 COMPLETION

61.1. Contract Time. CONTRACTOR shall achieve Completion of the Work, or such portion of the Work as may be designated at any time by DISTRICT for separate delivery, in accordance with the requirements of the contract time and other provisions of the Contract Documents. However, the DISTRICT, at its sole option, may accept completion of the Project 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 DISTRICT, except for minor corrective items, as distinguished from incomplete items.

61.2. Request for Inspection. A final walk through of the Project to determine completion 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 DISTRICT shall make adjustments to the contract price by reducing the amount thereof to pay for any costs incurred by the DISTRICT 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.

61.3. Punch List. At the conclusion of such inspection, DISTRICT shall prepare and give to CONTRACTOR a Punch List of items, if any, to be completed or corrected for Completion. If CONTRACTOR disputes any of the items included, it shall so note its objection on the Punch List. CONTRACTOR shall proceed within forty-eight (48) hours after preparation of the Punch List to commence correction and completion of the items on the Punch List, including, without limitation, any disputed items, and all such items of Work shall be completed by CONTRACTOR before the Work will be considered as Complete. Failure by DISTRICT, Inspector of Record, Design Consultant or CONTRACTOR to include an item on the Punch List does not alter the responsibility of CONTRACTOR to perform the Work in accordance with the Contract Documents. Items of Work
necessary for Completion that, for any reason, have been omitted from the Punch List shall be added to the Punch List and shall be promptly completed by CONTRACTOR upon request by DISTRICT, Design Consultant or Inspector of Record made at any time prior to Final Payment.

61.4. **Re-Inspection.** CONTRACTOR shall notify DISTRICT when the items of Work shown on the Punch List are completed. DISTRICT, Inspector of Record, Design Consultant and such others as DISTRICT deems necessary or appropriate will then make a further inspection to determine whether such Work is Complete. If such inspection, or any subsequent re-inspection required pursuant hereto, discloses any item, whether or not included on the Punch List, which must be completed or corrected before Completion, CONTRACTOR shall, as a condition of Completion, complete or correct such item, which shall then be re-inspected to confirm that such Work is Complete. CONTRACTOR shall reimburse DISTRICT, or DISTRICT may at its option withhold from CONTRACTOR payments, amounts incurred by DISTRICT, Inspector of Record, Design Consultant, DISTRICT Consultants or others whose services, for reasons within the control or responsibility of CONTRACTOR or the Subcontractors, are necessary for more than two (2) such re-inspections to determine Completion.

61.5. **Partial Occupancy or Use.** DISTRICT reserves the right to beneficially occupy all or any portion of the Work at any time before Completion of the entire Work. Beneficial occupancy means that DISTRICT has assumed physical occupancy and use of such portion of the Work. Commencement of improvements or other work by separate contractors in order to ready the Work for use or occupancy by DISTRICT shall be unconditionally permitted in all cases prior to Completion and shall not constitute a taking of beneficial occupancy by DISTRICT. Exercise by DISTRICT in accordance with the provisions of this section of its right to take beneficial occupancy shall not constitute grounds for a Contract Adjustment. The DISTRICT’S right of beneficial occupancy of all or a portion of the Work prior to Completion shall be subject to the following conditions:

a. DISTRICT and such others as DISTRICT deems necessary will make an inspection of the portion of the Work to be beneficially occupied and prepare a list of items to be completed or corrected in the same manner as required by and subject to the same conditions as set forth above.

b. Beneficial occupancy by DISTRICT shall not be construed as acceptance of that portion of the Work which is to be occupied.

c. Except as otherwise provided in this section, beneficial occupancy by DISTRICT shall not constitute a waiver of rights of the DISTRICT against CONTRACTOR. Notwithstanding anything stated in this section or elsewhere in the Contract Documents to the contrary, beneficial occupancy by DISTRICT shall not constitute a waiver of rights of DISTRICT relating to defective Work in the area beneficially occupied or in any other portion of the Work.

d. Prior to the DISTRICT’S taking beneficial occupancy, CONTRACTOR shall submit to DISTRICT an itemized list of each piece of equipment located in or serving the area to be occupied stating the date operation of such piece of equipment commenced, together
with operating instructions, manuals and other information required by the Contract Documents. CONTRACTOR shall provide, in the areas beneficially occupied, on a continual basis, utility services, elevator service, and heating and cooling systems in operable condition commencing at the time of beneficial occupancy and until Completion of the entire Work. DISTRICT shall be responsible, from and after taking occupancy, for utility consumption, regular operation and regular maintenance of such systems or equipment.

e. Provided that all of the equipment and systems located in or serving the occupied area are complete and operational, the Guarantee to Repair Period, as well as other express warranties on materials, equipment or other Work installed and contained entirely within that portion of the Work which is beneficially occupied, will commence upon the first date of actual beneficial occupancy or use of such occupied portions of the Work by DISTRICT.

f. DISTRICT shall pay all normal operating and maintenance costs resulting from its use of equipment in areas beneficially occupied.

g. DISTRICT shall pay all utility costs that arise out of its beneficial occupancy.

h. CONTRACTOR shall not be responsible for providing security in areas beneficially occupied.

i. DISTRICT shall use its best efforts to prevent its beneficial occupancy from interfering with the conduct of CONTRACTOR’S remaining Work.

j. CONTRACTOR shall not be required to repair damage caused solely by DISTRICT’S beneficial occupancy.

k. CONTRACTOR shall continue to maintain all insurance required by the Contract Documents in full force and effect.

61.6. **Notice of Completion.** The DISTRICT shall accept completion of the Project and have the Notice of Completion recorded within ten (10) days of acceptance of completion of the Project when the entire work including punch list items shall have been completed to the satisfaction of the DISTRICT. Civil Code Section 3093. The work may only be accepted as complete by action of the DISTRICT’s Governing Board.

**ARTICLE 62  ADJUSTMENTS TO CONTRACT PRICE**

62.1. **Adjustment due to Deficiency.** If CONTRACTOR defaults or neglects to carry out the work in accordance with the Project Documents or fails to perform any provision thereof, DISTRICT may, after ten (10) days written notice to the CONTRACTOR and Surety without prejudice to any other remedy it may have, make good such deficiencies.

62.2. **Withhold Payment.** 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 DISTRICT shall withhold from the final payment an amount equal to one hundred fifty percent (150%), as determined by the DISTRICT, of the amount of each item until such time as the item is completed. Public Contract Code Section 7107.
ARTICLE 63  CORRECTION OF WORK

63.1.  **General.** CONTRACTOR shall promptly remove all work identified by DISTRICT 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 DISTRICT and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

63.2.  **DISTRICT Removal and Sale.** If CONTRACTOR does not remove such work within a reasonable time, fixed by written notice, DISTRICT 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, DISTRICT 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 64  EXTENSION OF TIME - LIQUIDATED DAMAGES

64.1.  **General.** The CONTRACTOR and DISTRICT 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 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 DISTRICT to the CONTRACTOR under the terms of the Project Documents. The CONTRACTOR will pay to the DISTRICT or DISTRICT 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. Government Code Section 53069.85 for purposes of this article, the work shall be considered "complete" in accordance with the provisions of the Article, "COMPLETION", except that the work may be considered complete without formal Acceptance by the DISTRICT Governing Board so long as the Governing Board, at its next regularly scheduled meeting, accepts the work.

64.2.  **Exemptions.** 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 DISTRICT 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. DISTRICT 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 DISTRICT's finding of fact thereon shall be final and conclusive on the parties hereto. 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 65  PAYMENTS WITHHELD

65.1.  **General.** In addition to amount which DISTRICT may retain under Article entitled "COMPLETION" and Article entitled "PAYMENTS," DISTRICT 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 DISTRICT pursuant to Article 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 DISTRICT, another contractor, or subcontractor.

h. Site clean-up as provided in Article entitled "CLEANING UP."

i. Payments to indemnify, defend, or hold harmless the DISTRICT.

j. Any payments due to the District including but not limited to payments for failed tests, utilities or imperfections.

k. Extra services for ARCHITECT.

l. Extra services for the INSPECTOR 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.

m. Failure of CONTRACTOR to submit on a timely basis, proper and sufficient documentation required by the Project Documents, including without limitation, monthly progress schedules, shop drawings, submittal schedules, schedule of values, product data and samples, proposed product lists, executed change orders and verified reports.

n. Any other obligation(s) of the DISTRICT which the DISTRICT is authorized and/or compelled by law to perform.

65.2. **Payments on Behalf of the CONTRACTOR.** DISTRICT may apply such withheld amount or amounts to payment of such claims or obligations at its discretion. In so doing, DISTRICT shall make such payments on behalf of CONTRACTOR. If any payment is so made by DISTRICT, then such amount shall be considered as a payment made under contract by DISTRICT to CONTRACTOR and DISTRICT 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. DISTRICT will render CONTRACTOR an accounting of such funds disbursed on behalf of CONTRACTOR.
65.3. **Adjustment.** As an alternative to payment of such claims or obligations, DISTRICT, in its sole discretion, may reduce the total contract price as provided in Article entitled "ADJUSTMENTS TO CONTRACT PRICE."

**ARTICLE 66   TAXES**

66.1. **General.** CONTRACTOR will pay all applicable federal, state and local taxes on all materials, labor, or services furnished by it, and all taxes arising out of its operations under the Project Documents.

66.2. **Documents.** 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 DISTRICT, upon request, will execute documents necessary to show (1) that the DISTRICT 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 DISTRICT. No excise tax for such materials shall be included in any bid price.

**ARTICLE 67   NO ASSIGNMENT OR THIRD PARTY RIGHTS**

67.1. **No Assignment.** 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 DISTRICT, be terminated, revoked and annulled, and the DISTRICT 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.

67.2. **No Third-Party Rights.** Nothing contained in the Contract Documents is intended to make any person or entity who is not a signatory to this Contract a third-party beneficiary of any right of CONTRACTOR (including, without limitation, any right of CONTRACTOR to a benefit derived from, or to the enforcement of, an obligation assumed by DISTRICT) that is expressly or impliedly created by the terms of the Contract Documents or by operation of Applicable Laws.

**ARTICLE 68   NOTICE**

68.1. **General.** 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 DISTRICT, by personal delivery thereof to DISTRICT, or by depositing same in United States mail, enclosed in a sealed envelope addressed to DISTRICT, 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.

68.2. **Extent of Agreement.** The Contract Documents represent the full and complete understanding of every kind or nature between the parties and all preliminary negotiations and prior representations, proposals and contracts, of whatever kind or nature, are merged herein and superseded hereby. No verbal agreement or implied covenant shall be held to vary the provisions of the Contract Documents. Any modification the Contract Documents will be effective only by written instrument signed by both DISTRICT and CONTRACTOR and shall, if required by Applicable Laws, be formally approved or ratified by the Board of Trustees.

**ARTICLE 69  NO WAIVER AND SEVERABILITY**

69.1. **No Waiver.** The failure of the DISTRICT 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.

69.2. **Severability.** Should any part, term, portion or provision of the Contract Documents, or the application thereof to any party or circumstance, be held to be illegal, invalid or in conflict with Applicable Laws, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts, terms, portions or provisions, or the application thereof to any other party or circumstances, shall be deemed severable and the same shall remain enforceable and valid to the fullest extent permitted by Applicable Laws.

**ARTICLE 70  NON-UTILIZATION OF ASBESTOS MATERIAL**

70.1. **General.** The CONTRACTOR will be required to execute and submit the Certificate Regarding Non-Asbestos Containing Materials.

70.2. **Criteria for Removal.** 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, decontaminations and removals will meet the following criteria:

a. Decontamination and removal of work found to contain asbestos or work installed with asbestos containing equipment shall be done only under the supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency (EPA).
b. The asbestos removal contractor shall be an EPA accredited contractor qualified in the removal of asbestos and shall be chosen and approved by the asbestos consultant who shall have sole discretion and final determination in this matter.

c. The asbestos consultant shall be chosen and approved by the DISTRICT who shall have sole discretion and final determination in this matter.

d. The work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

70.3. **Cost.** Cost of all asbestos removal, including, but not necessarily limited to the cost of the asbestos removal contractor, the cost of the asbestos consultant, analytical and laboratory fees, time delays and additional costs as may be incurred by the DISTRICT shall be borne entirely by the CONTRACTOR.

70.4. **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 DISTRICT, its Governing Board, employees, agents, and ARCHITECT and assigns for all asbestos liability which may be associated with this work. The CONTRACTOR further agrees to instruct his/her employees with respect to the above mentioned standards, hazards, risks and liabilities.

**ARTICLE 71 LEAD**

71.1. Pursuant to the Lead-Safe Schools Protection Act (Education Code Sections 32240, et seq.) and other applicable law, the CONTRACTOR shall not use lead-based paint, lead plumbing and solders, or other potential sources of lead contamination in the construction of any new school facility or the modernization or renovation of any existing school facility.

**ARTICLE 72 GOVERNING LAW**

72.1. The laws of the State of California shall govern the Project and the Agreement.
Exterior Lighting and Control Retrofit
Phase 2
100% CD
FEBRUARY 19, 2016

SADDLEBACK COLLEGE
28000 MARGUERITE PKWY., MISSION VIEJO, CA 92692

ELECTRICAL
P2S ENGINEERING
5000 EAST SPRING STREET, 8TH FLOOR
LONG BEACH, CA
562-497-2999

P2S Engineering, Inc.

VICINITY MAP

SITE MAP
### GENERAL NOTES

1. **CONSTRUCTION:**
   - The construction drawing notes indicate that the construction of all electrical fixtures shall be installed in accordance with the specifications and codes applicable to the job site.

2. **CODES AND STANDARDS:**
   - The construction shall be performed in accordance with the current edition of the International Electrical Code (NEC), the National Fire Protection Association (NFPA), and any applicable local codes.

3. **MATERIALS:**
   - All materials shall be of the quality and type specified in the specifications and shall conform to the requirements of the code.

4. **MANUFACTURER'S SPECIFICATIONS:**
   - The manufacturer's specifications shall be used in conjunction with the specifications and codes.

5. **WORKMANSHIPO:**
   - The work shall be performed in a workmanlike manner and shall comply with the specifications and codes.

6. **MAINTENANCE:**
   - The electrical system shall be maintained in good working order and shall comply with the specifications and codes.

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## LIGHT FIXTURE SCHEDULE

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<td>V-A</td>
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### NOTES:
- PROVIDE FIXTURES COMPLETE WITH NECESSARY MOUNTING HARDWARE REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTOR TO FIELD VERIFY TENON AND SLIPFITTER SIZE REQUIRED PRIOR TO PLACING ORDER.
- PROVIDE FIXTURE COMPLETE WITH 0-10V DIMMABLE DRIVER. CONTRACTOR SHALL VERIFY CIRCUIT AND VOLTAGE SYSTEM PRIOR TO SUBMITTAL PROCESS.
- CONTRACTOR SHALL VERIFY POLE TYPE PRIOR TO INSTALLING MOTION SENSOR.
- CONTRACTOR SHALL RELINQUISH EXISTING FIXTURE LENS TO CAMPUS UPON REMOVAL. RECONNECT TO EXISTING CIRCUITS. CONTRACTOR TO FIELD VERIFY SOURCE PRIOR TO INSTALLATION.
NOTES

DISCONNECT AND REMOVE EXISTING FIXTURE. PROVIDE AND INSTALL NEW LIGHT FIXTURE, TYPE AS NOTED, AND RECONNECT TO EXISTING CIRCUIT. REFER TO LUMINAIRE SCHEDULE ON SHEET E002 FOR FIXTURE TYPE. FIELD VERIFY POWER SOURCE PRIOR TO INSTALLATION.

PROVIDE AND INSTALL NEW WIRELESS CONTROL MODULE IN EXISTING POLE. EXERGY # XRG-502-XXX-MS-IP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE WIRELESS CONTROL MODULE IN (E) POLE. COORDINATE WITH EXISTING FIELD CONDITION PRIOR TO INSTALLATION. FIELD VERIFY AND REFER TO FIXTURE SCHEDULE ON SHEET E002 FOR VOLTAGE REQUIREMENTS. REFER TO WIRING DIAGRAM 1 ON SHEET E601.

PROVIDE AND INSTALL NEW ANTENNA TO TOP OF LIGHT POLE CAP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE ANTENNA IN (E) POLE. CONNECT ANTENNA TO WIRELESS CONTROL MODULE VIA COAXIAL CABLE PROVIDED BY MANUFACTURER. CONTRACTOR TO FIELD VERIFY AND PROVIDE MANUFACTURER WITH CABLE LENGTH REQUIRED. PROVIDE AND INSTALL NEW CAP WHERE CAP IS MISSING.

1. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

2. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

3. PROVIDE LABEL FOR ALL STEEL LIGHT FIXTURE POLE. REFER TO DETAIL 5/E603 FOR STEEL POLE LABELING METHOD.
GENERAL NOTES

1. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

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NOTES

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PROVIDE AND INSTALL NEW ANTENNA TO TOP OF LIGHT POLE CAP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE ANTENNA IN (E) POLE. CONNECT ANTENNA TO WIRELESS CONTROL MODULE VIA COAXIAL CABLE PROVIDED BY MANUFACTURER. CONTRACTOR TO FIELD VERIFY AND PROVIDE MANUFACTURER WITH CABLE LENGTH REQUIRED.

EXISTING PANEL 480Y/277V 'LA' FEEDS EXISTING LIGHT POLES IN THE GREENHOUSE PARKING LOT. CONTRACTOR SHALL BYPASS EXISTING LIGHTING CONTROL CONTACTORS FOR EXISTING CIRCUITS FEEDING GREENHOUSE PARKING LOT LIGHT POLES. CONTRACTOR SHALL FIELD VERIFY EXISTING LIGHTING CIRCUITS.

EXISTING PANEL 480Y/277V 'SHA' LOCATED IN ELECTRICAL ROOM 119 OF THE HEALTH SCIENCES BLDG FEEDS EXTERIOR LIGHTING FIXTURES TO BE RETROFITTED. CONTRACTOR SHALL BYPASS EXISTING LIGHTING CONTROL CONTACTORS FOR EXISTING CIRCUITS TO BE RETROFITTED. CONTRACTOR SHALL FIELD VERIFY EXISTING LIGHTING CIRCUITS.

EXISTING PANEL 480Y/277V '1HB' LOCATED IN ELECTRICAL ROOM 112 OF THE TECHNOLOGY & APPLIED SCIENCE BLDG FEEDS EXISTING LIGHT POLES TO BE RETROFITTED. CONTRACTOR SHALL BYPASS EXISTING LIGHTING CONTROL CONTACTORS FOR EXISTING CIRCUITS FEEDING LIGHT POLES TO BE RETROFITTED. CONTRACTOR SHALL FIELD VERIFY EXISTING LIGHTING CIRCUITS.

REFER TO DETAIL 2/E603 FOR LIGHTING CONTROL DETAIL.
MATCHLINE - SEE SHEET E114

DISCONNECT AND REMOVE EXISTING FIXTURE. PROVIDE AND INSTALL NEW LIGHT FIXTURE, TYPE AS NOTED, AND RECONNECT TO EXISTING CIRCUIT. REFER TO LUMINAIRE SCHEDULE ON SHEET E002 FOR FIXTURE TYPE. FIELD VERIFY POWER SOURCE PRIOR TO INSTALLATION.

GENERAL NOTES

1. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

2. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

3. PROVIDE LABEL FOR ALL STEEL LIGHT FIXTURE POLE. REFER TO DETAIL 5/E603 FOR STEEL POLE LABELING METHOD.
DISCONNECT AND REMOVE EXISTING FIXTURE. PROVIDE AND INSTALL NEW LIGHT FIXTURE, TYPE AS NOTED, AND RECONNECT TO EXISTING CIRCUIT. REFER TO LUMINAIRE SCHEDULE ON SHEET E002 FOR FIXTURE TYPE. FIELD VERIFY POWER SOURCE PRIOR TO INSTALLATION.

PROVIDE AND INSTALL NEW WIRELESS CONTROL MODULE IN EXISTING POLE. EXERGY # XRG-502-XXX-MS-IP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE WIRELESS CONTROL MODULE IN (E) POLE. COORDINATE WITH EXISTING FIELD CONDITION PRIOR TO INSTALLATION. FIELD VERIFY AND REFER TO FIXTURE SCHEDULE ON SHEET E002 FOR VOLTAGE REQUIREMENTS. REFER TO WIRING DIAGRAM 1 ON SHEET E601.

PROVIDE AND INSTALL NEW ANTENNA TO TOP OF LIGHT POLE CAP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE ANTENNA IN (E) POLE. CONNECT ANTENNA TO WIRELESS CONTROL MODULE VIA COAXIAL CABLE PROVIDED BY MANUFACTURER. CONTRACTOR TO FIELD VERIFY AND PROVIDE MANUFACTURER WITH CABLE LENGTH REQUIRED. PROVIDE AND INSTALL NEW CAP WHERE CAP IS MISSING.

EXISTING LIGHTING CONTROL CABINET INSTALLED IN PHASE 1 FOR WIRELESS CONTROL SYSTEM LOCATED IN ELECTRICAL ROOM 362.

GENERAL NOTES

1. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

2. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

3. PROVIDE LABEL FOR ALL STEEL LIGHT FIXTURE POLE. REFER TO DETAIL 5/E603 FOR STEEL POLE LABELING METHOD.
MATCHLINE - SEE SHEET E111

GENERAL NOTES

1. DISCONNECT AND REMOVE EXISTING FIXTURE. PROVIDE AND INSTALL NEW LIGHT FIXTURE, TYPE AS NOTED, AND RECONNECT TO EXISTING CIRCUIT. REFER TO LUMINAIRE SCHEDULE ON SHEET E002 FOR FIXTURE TYPE. FIELD VERIFY POWER SOURCE PRIOR TO INSTALLATION.

2. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

3. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

4. PROVIDE LABEL FOR ALL STEEL LIGHT FIXTURE POLE. REFER TO DETAIL 5/E603 FOR STEEL POLE LABELING METHOD.
GENERAL NOTES

1. New light pole fixtures shall be installed complete with wireless control module such that new fixtures maintain on/off operation on existing lighting control system until commissioning of new wireless control system.


3. Provide label for all steel light fixture pole. Refer to detail 5/E603 for steel pole labeling method.

NOTES

- Disconnect and remove existing fixture. Provide and install new light fixture, type as noted, and reconnect to existing circuit. Refer to luminaire schedule on sheet E002 for fixture type. Field verify power source prior to installation.
- Provide and install new wireless control module in existing pole. Exergy # XRG-502-XXX-MS-IP. Contractor shall provide necessary mounting method to accommodate wireless control module in (E) pole. Coordinate with existing field condition prior to installation. Field verify and refer to fixture schedule on sheet E002 for voltage requirements. Refer to wiring diagram 1 on sheet E601.
- Provide and install new antenna to top of light pole cap. Contractor shall provide necessary mounting method to accommodate antenna in (E) pole. Connect antenna to wireless control module via coaxial cable provided by manufacturer. Contractor to field verify and provide manufacturer with cable length required. Provide and install new cap where cap is missing.
- Existing exterior rated 208Y/120V panel. Feeds existing light poles to be retrofitted. Contractor shall bypass existing lighting control contactors for existing circuits feeding light poles to be retrofitted. Contractor shall field verify existing lighting circuits.

Site Lighting Plan

Lot 44

Lot 48

MATCHLINE - SEE SHEET E117

MATCHLINE - SEE SHEET E115

MATCHLINE - SEE SHEET E121

MATCHLINE - SEE SHEET E121
NOTES

1. DISCONNECT AND REMOVE EXISTING FIXTURE. PROVIDE AND INSTALL NEW LIGHT FIXTURE, TYPE AS NOTED, AND RECONNECT TO EXISTING CIRCUIT. REFER TO LUMINAIRE SCHEDULE ON SHEET E002 FOR FIXTURE TYPE. FIELD VERIFY POWER SOURCE PRIOR TO INSTALLATION.

2. GENERAL NOTES

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2. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

3. PROVIDE LABEL FOR ALL STEEL LIGHT FIXTURE POLE. REFER TO DETAIL 5/E603 FOR STEEL POLE LABELING METHOD.
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PROVIDE AND INSTALL NEW ANTENNA TO TOP OF LIGHT POLE CAP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE ANTENNA IN (E) POLE. CONNECT ANTENNA TO WIRELESS CONTROL MODULE VIA COAXIAL CABLE PROVIDED BY MANUFACTURER. CONTRACTOR TO FIELD VERIFY AND PROVIDE MANUFACTURER WITH CABLE LENGTH REQUIRED. PROVIDE AND INSTALL NEW CAP WHERE CAP IS MISSING.

EXISTING LIGHTING CONTROL CABINET INSTALLED IN PHASE 1 FOR WIRELESS CONTROL SYSTEM LOCATED IN ELECTRICAL ROOM #606. PROVIDE AND INSTALL EXERGY PANEL. REFER TO 3/E601 FOR ADDITIONAL DETAILS.

REFER TO DETAIL 2/E603 FOR LIGHTING CONTROL DETAIL.

GENERAL NOTES

1. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

2. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

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NOTES

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2. PROVIDE AND INSTALL NEW WIRELESS CONTROL MODULE IN EXISTING POLE. EXERGY # XRG-502-XXX-MS-IP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE WIRELESS CONTROL MODULE IN (E) POLE. COORDINATE WITH EXISTING FIELD CONDITION PRIOR TO INSTALLATION. FIELD VERIFY AND REFER TO FIXTURE SCHEDULE ON SHEET E002 FOR VOLTAGE REQUIREMENTS. REFER TO WIRING DIAGRAM 1 ON SHEET E601.

3. PROVIDE AND INSTALL NEW ANTENNA TO TOP OF LIGHT POLE CAP. CONTRACTOR SHALL PROVIDE NECESSARY MOUNTING METHOD TO ACCOMMODATE ANTENNA IN (E) POLE. CONNECT ANTENNA TO WIRELESS CONTROL MODULE VIA COAXIAL CABLE PROVIDED BY MANUFACTURER. CONTRACTOR TO FIELD VERIFY AND PROVIDE MANUFACTURER WITH CABLE LENGTH REQUIRED. PROVIDE AND INSTALL NEW CAP WHERE CAP IS MISSING.

EXISTING EXTERIOR RATED 208Y/120V PANEL. FEEDS EXISTING LIGHT POLES TO BE RETROFITTED. CONTRACTOR SHALL BYPASS EXISTING LIGHTING CONTROL CONTACTORS FOR EXISTING CIRCUITS FEEDING LIGHT POLES TO BE RETROFITTED. CONTRACTOR SHALL FIELD VERIFY EXISTING LIGHTING CIRCUITS.

GENERAL NOTES

1. NEW LIGHT POLE FIXTURES SHALL BE INSTALLED COMPLETE WITH WIRELESS CONTROL MODULE SUCH THAT NEW FIXTURE MAINTAINS ON/OFF OPERATION ON EXISTING LIGHTING CONTROL SYSTEM UNTIL COMMISSIONING OF NEW WIRELESS CONTROL SYSTEM.

2. PROVIDE LABEL FOR CONCRETE LIGHT FIXTURE POLE. REFER TO DETAIL 4/E603 FOR CONCRETE POLE LABELING METHOD.

3. PROVIDE LABEL FOR ALL STEEL LIGHT FIXTURE POLE. REFER TO DETAIL 5/E603 FOR STEEL POLE LABELING METHOD.

MATCHLINE - SEE SHEET E120
MATCHLINE - SEE SHEET E118

AREA OF WORK

LEGEND

KEY PLAN

MISSING CAP

SITE LIGHTING PLAN

1' = 40'
PROVIDE AND INSTALL EXERGY OUTDOOR PHOTOCELL.

PROOF BOX PER MANUFACTURER’S RECOMMENDATIONS. EXERGY # XRG-ANT-7.

PROVIDE (N) ANTENNA AND MOUNT TO SIDE OF WEATHERPROOF OUTLET BOX. INSTALL

PROVIDE AND INSTALL (N) DOUBLE-GANG SURFACE

REFER TO DETAILS 3 AND 6 ON SHEET E602 FOR CONDUIT WAY LIGHTING CONTROL SYSTEM.

PROVIDE CONNECTION FROM EXERGY PANEL TO (E) ROAD

AWG FROM THE CONTROL PANEL TO THE XRG-DIM.

CONNECT TO SPARE 20A, 120V CIRCUIT BREAKER IN

PROVIDE AND INSTALL (N) 3/4"C.- (1) COAXIAL CABLE AND

PROVIDE AND INSTALL (N) 3/4"C-2#12,1#12GND AND

REQUIRED FOR COMPLETE INSTALLATION OF PANEL AND ANTENNA. MOUNT PHOTOCELL TO SIDE OF WEATHERPROOF BOX PER MANUFACTURER’S RECOMMENDATIONS. CONNECT PHOTOCELL TO XRG-DIM VIA CABLE PROVIDED BY MANUFACTURER. EXERGY # XRG-330.

ALL ROOF PENETRATIONS SHALL BE INSTALLED AND

PIPE FLASHING. REFER TO DETAIL 5 ON SHEET E602.

EREQUIRED FOR COMPLETE INSTALLATION OF PANEL AND ANTENNA.

COMPLETE INSTALLATION OF PANEL AND ANTENNA.

SPACING AS REQUIRED PER CODE. REFER TO DETAIL 1

PROVIDE (N) ROOFTOP CONDUIT SUPPORTS WITH

CONDUIT SHALL BE RGS TYPE.

PER THE SPECIFICATION SECTION 074116.

SEALED BY AUTHORIZED GARLAND COMPANY INSTALLER

센터프로젝트 (C) 센터프로젝트 (C)

CONCRETE PAD

STRUCTURE BELOW ROOF

BUILDING ROOF

PROVIDE AND INSTALL EXERGY OUTDOOR PHOTOCELL.

PER THE SPECIFICATION SECTION 074116.

SEALED BY AUTHORIZED GARLAND COMPANY INSTALLER

PER THE SPECIFICATION SECTION 074116.

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Saddleback College

Mission Viejo, CA

Saddleback College
E602

**TYPICAL R-MER LITE PIPE FLASHING BOOT**

- **R-MER LITE PANEL**
- **R-MER LITE BUTYL SEAM TAPE**
- **R-MER LITE SEAM FASTENER**
  @ 1 1/4" O.C.
- **WHITE KNIGHT SEAM COATING**
- **UNDERLAYMENT**
  (E) CONCRETE ROOF DECK

**CONDUIT PENETRATION**

- **WHITE KNIGHT TUBECAFT**
- **1-HOUR FIRE RATED DAMMING MAT.**

**MINIMUM CLEARANCES**

- **INSULATION**
  1"  THICK
  2"  THICK
  3"  THICK

**TYPICAL FIELD SEAM**

- **EQUIPMENT CURBS, ETC.**

**CONDUIT WALL SUPPORT**

- **CONDUIT WALL SUPPORT**

**CONDUIT ROOF SUPPORT**

- **TYPICAL R-MER LITE PIPE ROOF SUPPORT**

- **NOTES**
  1. THIS IS UL STD #49 FOR CONCRETE WALLS OR UL #147 FOR 1HR. GYPSUM BOARD WALL.
  2. THE MAXIMUM ANNULAR SPACE TO BE FILLED IS 2". THE MINIMUM ANNULAR SPACE IS 3/4".
  3. FOR SOLID CONCRETE WALLS, THE CP 25 CAULK MAY BE CENTERED IN THE WALL WITH DAMMING MATERIAL ON BOTH SIDES OF THE GAULK.
  4. USE CP 25S(SELF LEVELING) CAULK ON HORIZONTAL SURFACES WHEN SEALING OPENING FROM ABOVE THE PENETRATION. USE CP25N (NO SAG) CAULK ON VERTICAL SURFACES AND ON HORIZONTAL SURFACES WHEN SEALING OPENINGS FROM BELOW. USE CP 25WB CAULK ON EITHER APPLICATION.
  5. SHRINKAGE OF CP 25 CAULKS IS ACCEPTABLE AFTER INITIAL WET DEPTH INSTALLATION.
  6. THE DEPTH OF THE CP 25 CAULKS DEPENDS ON THE INSULATION THICKNESS.

**BEAD OF GARLAND TUFF STUFF URETHANE SEALANT AROUND TOP OF FLASHING BOOT AND CLAMP.**

**SEAL AT PIPE.**

**STAINLESS STEEL CLAMP**

**R-MER LITE FLEXIBLE FLASHING BOOT**

(SEE DETAIL 4)

**WHITE KNIGHT SEAM COATING**

**UNDERLAYMENT**

(E) CONCRETE ROOF DECK

**R-MER LITE BUTYL SEAM TAPE**

**R-MER LITE SEAM FASTENER**

@ 1 1/4" O.C.

(SEE DETAIL 2)

**WHITE KNIGHT SEAM COATING**

**UNDERLAYMENT**

(E) CONCRETE ROOF DECK

**R-MER LITE BUTYL SEAM TAPE**

**R-MER LITE SEAM FASTENER**

@ 1 1/4" O.C.

(SEE DETAIL 2)
1. WEATHERPROOF OUTLET BOX DETAIL
2. TYPE E1, E2 TYPICAL LIGHTING CONTROL DETAIL
3. LIBRARY LIGHTING CONTROL PANEL
4. TYPICAL CONCRETE POLE LABEL DETAIL
5. TYPICAL STEEL POLE LABEL DETAIL
6. (N) CONDUIT
   (N) OUTDOOR PHOTOCELL
   (N) WEATHERPROOF BOX
   (N) ANTENNA

PROVIDE 3/4" CONDUIT WITH (2) #12 WIRING FROM EXERGY PANEL TO (E) LIGHTING CONTACTOR EXERGY PANEL STREET LIGHTING CIRCUIT 480V STREET LIGHTING CIRCUIT. (TYPE E1 & E2) FIXTURE. (E) LIGHTING CONTROL CONTACTOR CONT. TO CAMPUS RADIO INPUT. COORDINATE W/CAMPUS FOR EXACT LOCATIONS. TERMINATION STRIPS.

EXISTING CONCRETE POLE - TYPE E1 AND E2. ENGRAVED PLASTIC LIGHT POLE TAG W/EPOXY GLUE "RD - XX".

SELF - ADHESIVE LABEL LIGHT POLE WITH YELLOW WORDING AND BLACK BACKGROUND LOCATION. LIGHT POLE NUMBER.
PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Pre-formed metal roof system complete with perimeter and flashing details.

1.2 GENERAL DESCRIPTION

A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.

B. Unless otherwise noted, standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes as of the date of issue of this Project Manual.

C. Referenced Standards:

2. ASTM A446 -Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot Dip Process, Structural (Physical) Quality.
3. ASTM A525 -Specification for General Requirements for Steel Sheet, Zinc Coated (Galvanized) by the Hot Dip Process.
4. ASTM A527 -Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot Dip Process, Lock Forming Quality.
17. FM 4470 -Approval Standard for Class 1 Panel Roofs.
18. ICC-ES AC166 -Test Procedure for Wind Driven Rain Resistance of Metal Roof Coverings.
21. UL 1897 -Uplift Test for Roof Covering Systems.
1.3 SUBMITTALS FOR REVIEW

A. Shop Drawings showing layout of every roof panel and structural supporting member required in the installation with side laps and end laps marked within one percent deviation of their actual location.
   1. Provide details for edge conditions, seams, joints, corners, panel profiles, assemblyanchoring techniques, round and square flashings and counter flashings.

B. LEED Submittals: Provide the following, and comply with applicable requirements and procedures of Section 01 81 13.
   1. Product Data for EQ Credit 4.1: For adhesives and sealants, including printed statement ofVOC content and chemical components.
   2. Product Test Reports for SS Credit 7.2: For roofing materials, indicating that materialscomply with Solar Reflectance Index requirement.

C. Samples illustrating thickness, finish, color and textures of materials.

D. Product Data: Include manufacturer’s detailed material and system description, panel and fieldseam installation instructions, engineering performance and finish specifications. Indicate hatchannel and fastener spacing.

E. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project,identifying the terms and conditions required of the manufacturer and the Owner.

F. Any material submitted as equal to the specified material must be accompanied by a reportsigned and sealed by a professional engineer licensed in the State of California. This reportshall show that the submitted equal meets the Design and Performance criteria in thisspecification. Substitution requests submitted without licensed engineer approval will berejected for non-conformance.

1.4 SUBMITTALS FOR INFORMATION

A. Design and Test Reports: Provide the following certified test reports from an independenttesting laboratory.
   1. Independent laboratory testing report for system design load and seam integrity.
   2. Professional engineer’s documentation that roofing system incorporates sufficientallowance for stress and movement.
   3. A letter from an officer of the manufacturing company certifying that the materialsfurnished for this project are the same as represented in tests and supporting data.
   4. Manufacturer’s verifications that the panels are factory roll formed.
   5. UL 1897: Test report must be submitted for windstorm rating no less than that specified inDesign and Performance Criteria article. The proposed roof system must have approvalover specified substrate with steel framing spaced no further apart than as specified.
   6. FM 4470: Test report must be submitted for windstorm rating no less than that specified inDesign and Performance Criteria article. The proposed roof system must have
approval over specified substrate with steel framing spaced no further apart than as specified.

7. ASTM E108 or similar evidence of Class A Fire Resistance.

8. ASTM E2140: Test report shall show passed ratings for panel type as specified.

9. ICC-ES AC166: Test report shall show passed ratings for panel type as specified.

B. Mill production reports certifying that the steel thicknesses are within allowable tolerances of the nominal or minimum thickness or gauge specified.

C. Design Loads: Submit copy of manufacturer’s minimum design load calculations according to ASCE 7-05, Method 2 for Components and Cladding. In no case shall the design loads be taken to be less than those detailed in Design and Performance Criteria article.

D. Qualification Data for Roofing Installer: Refer to Quality Assurance Article below.

E. Certification of work progress inspection frequency: Refer to Quality Assurance Article below.

F. Pre-installation Roofing Conference Proceedings: Refer to Quality Assurance Article below.

1.5 LEED COMPLIANCE DOCUMENTATION

A. Provide the following, and comply with applicable requirements and procedures of Section 01 81 13, LEED Online Letter Templates, and LEED 2009 BD+C Reference Guide:

1. Product Data for MR Credit 4: For products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating costs for each product having recycled content.

1.6 CONTRACT CLOSEOUT SUBMITTALS

A. General: Comply with Requirements of Division 01.

B. Special Project Warranty: Provide specified warranty for the Project, executed by the authorized agent of the manufacturer.

C. Roofing Maintenance Instructions. Provide a manual of manufacturer’s recommendations for maintenance of installed roofing systems.

D. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

E. Demonstration and Training Schedule: Provide a schedule of proposed dates and times for instruction of Owner’s personnel in the maintenance requirements for completed roofing work. Refer to Part 3 for additional requirements.
1.7 QUALITY ASSURANCE

A. Installer Qualifications: Engage an Installer who has completed the manufacturer’s Approved Roofing Contractor course and is currently certified for the installation, modifications and associated work of this roof system.

B. Fabricator/Installer shall submit work experience and evidence of adequate financial Responsibility. The Owner’s representative reserves the right to inspect fabrication facilities in determining qualifications.

C. Source Limitations: Obtain all components of roof system form a single manufacturer, including roll goods materials if required. Secondary products that are required shall be recommended and approved in writing by the roofing system manufacturer.

1. Upon request of the Architect, Owner, or Owner’s Representative, submit manufacturer’s written approval of secondary components in list form, signed by an authorized agent of the manufacturer.

2. Manufacturer shall have direct authority and control over all fabrication of steel components as well as the raw materials used in their fabrication.

D. Source Quality Control: Manufacturer shall have in place a documented, standardized quality control program such as ISO-9001 approval.

E. Engage the manufacturer’s field representative to conduct required periodic inspections of work in progress as described herein and shall furnish written documentation of all such inspections.

F. Manufacturer shall provide the Owner project with a written statement that they will provide a site inspection every seven days that confirms that the project is being constructed as specified, by an experienced, full time employee of the company.

1.8 DISCREPANCIES

A. Convene a pre-roofing conference approximately two weeks before scheduled commencement of roofing system installation or modification and associated work.

B. Require attendance of installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing which must precede or follow roofing work (including mechanical or electrical work if any), Architect, Owner, Owner’s Representative, or roofing system manufacturer’s representative, and other representatives directly concerned with performance of the Work, including (where applicable) Owner’s insurers, testing agencies and governing authorities.

C. Objectives of conference to include:

1. Review foreseeable methods and procedures related to roofing work, including set up and mobilization areas for stored material and work area.

2. Tour representative areas of roofing substrates, inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work performed by others.

3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
4. Review roofing system requirements (Drawings, Specifications and other Contract Documents).

5. Review required submittals both completed and yet to be completed.

6. Review and finalize construction schedule related to roofing work and verify availability of materials, installer’s personnel, equipment and facilities needed to make progress and avoid delays.

7. Review required inspection, testing, certifying and material usage accounting procedures. The Contractor is responsible to budget for any post installation testing required by Factory Mutual or other insurance agencies where those agencies require such testing. Should the roof fail such post installation testing, all expenses required to bring the roof to successful post installation test results will be the burden of the Contractor.

8. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing.

9. Record discussions of conference including decisions and agreements or disagreements reached and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

10. Review notification procedures for inclement weather or non-working days.

D. The Owner’s Representative will designate one of the conference participants to record the proceedings and promptly distribute them to the participants for record.

E. The intent of the conference is to resolve issues affecting the installation and performance of roofing work. Do not proceed with roofing work until such issues are resolved to the satisfaction of the Owner and Architect or Owner’s Representative. This shall not be construed as interference with the progress of Work on the part of the Owner, Architect, or Owner’s Representative.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Manufacturer’s Responsibilities:

1. All roof panels shall be shipped from the manufacturer with polystyrene or similar cushioned packaging material separating the individual panels to minimize flexing, stressing, scratching or otherwise damaging the material during transit to the job.

2. Fully cover steel with tarpaulins or similar protective cover during transit to prevent dirt and debris from coming in contact with the finished goods.

B. Installer’s Responsibilities:

1. Stack pre-finished materials to prevent twisting, bending, abrasion and denting and elevate one end to facilitate moisture run-off.

2. Unload roof panels using a boom or crane, supporting the panels in at least two locations during lifting, and never lift more than three panels at a time.

3. Protect moisture-sensitive materials and water-based from weather.
4. Inspect materials upon delivery. Reject and remove physically damaged or marred material from project site.

1.10 PROJECT CONDITIONS

A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage and protection requirements for roofing system.

   1. Protection:

      a. Protect completed roofing from subsequent construction operations. Comply with Manufacturer’s recommendations.

      b. Do not overload roof with stored materials.

      c. Support no roof-mounted equipment directly on the roofing system.

B. Ascertain that work of other trades which penetrates the roof or is to be made watertight by the roof is in place and accepted prior to installation of roofing.

1.11 DESIGN AND PERFORMANCE CRITERIA

A. Thermal Expansion and Contraction:

   1. Completed metal roofing and flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, fasteners, or reducing performance ability.

   2. The design temperature differential shall be not less than 200 °F.

   3. A framing system shall be used separating panel seams from the deck so that fasteners anchoring panel seams together may not thermally bridge between interior and exterior temperatures.

B. Uniform Wind Uplift Load Capacity:

   1. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria. Steel framing system shall be installed exactly as spacing specified in this Section.


C. Live Load: 20 psf, or not to exceed original building design.

D. Dead Load: Loading of the roof structure, due to tear off of existing, and/or installation of new roofing materials shall not exceed the present loading due to weight of the existing roof system.

E. System shall be capable of accommodating all expected, normal building movement without any transmittal of expansion or contraction through or along the seam.

F. System shall be capable of installation with all seam and flashing sealants in continuous, full compression.
G. System shall meet all design and performance criteria that are consistent with the Class 1 Roof Covering Section of the Factory Mutual Research Corporation (FMRC) Approval Guide.

H. Underwriters’ Laboratories, Inc., (UL), wind uplift resistance classification: Roof assembly shall be classified as Class 90 as defined by UL 1897.

I. Underwriters’ Laboratories, Inc., (UL) Class A fire rating per UL 790. The steel framing spacing as specified for this project in this Section shall not be greater than the steel framing specified in the UL listing.

J. Factory Mutual Research (FM), wind uplift resistance classification: Roof assembly shall be classified as FM 1-90, as defined by FM 4470. The steel framing spacing as specified for this project in this Section shall not be greater than the steel framing specified in the FM listing.

K. Water penetration in low slope applications: No water penetration or panel movement when subjected to 6 inch head of water for 6 hours when tested in accordance with the ASTM E2140.

L. Resistance to water penetration of exterior metal roof covering systems when specified water spray and wind velocity is applied to outside face of roof cover system: No water penetration or damage to the roof system shall be observed when subjected to water spray and wind velocity as specified by ICC-ES AC166 test procedure.

1.12 MANUFACTURER’S INSPECTIONS

A. When the project is in progress, the roofing system manufacturer will provide the following:

1. Keep Architect or Owner’s Representative and Owner informed as to the progress and equality of the work as observed.

2. Provide periodic job site inspections.

3. Report to the Architect or Owner’s Representative in writing any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor’s attention.

4. Confirm after completion that manufacturer has observed no applications procedures in conflict with the specifications other than those that may have been previously reported or corrected.

1.13 WARRANTIES

A. Manufacturer shall execute a single warranty covering of the following criteria. Multiple-source warranties are not acceptable.

1. Manufacturer’s thirty year No-Dollar Limit watertight warranty, including coverage for all trim, flashings, and penetrations associated with the roof area.

2. Twenty year coverage on finish including checking, crazing, peeling, chalking, fading and/or adhesion.

3. Twenty year material coverage.

4. Warranty shall commence on date of final payment.
5. Installer shall provide manufacturer with five year warranty covering roofing system installation and water-tightness.

6. Provide a single warranty by a single approved manufacturer for standing seam roof areas, membrane roof areas, and transitions between the two material types.

PART 2 - PRODUCTS

2.1 VERIFICATION OF DIMENSIONS

A. Comply with requirements of Division 01.

B. LEED Requirements, Recycled Content:

1. Provide products with post-consumer and pre-consumer recycled content, calculated as percentages of total product weight.

   a. Post-consumer recycled content plus one-half of pre-consumer recycled content shall constitute a part of applicable LEED Credit requirement for recycled content.

C. Basis of Design: Materials, manufacturer’s product designations, and/or manufacturer’s names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.

D. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.

1. Proposals shall be accompanied by a copy of the manufacturer’s standard specification section. That specification section shall be signed and sealed by a professional engineer licensed in the state in which the installation is to take place. Substitution requests containing specifications without licensed engineer certification shall be rejected for nonconformance.

2. Include a list of three projects of similar type and extent, located within a one hundred mile radius from the location of the project. In addition, the three projects must be at least five years old and be available for inspection by the Architect, Owner or Owner’s Representative.

3. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.

4. The Owner’s decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

2.2 ACCEPTABLE MANUFACTURERS


B. Substitutions: Under provisions of Division 01.
2.3 FLAT SEAM ROOFING SYSTEM

A. General:

1. The products, quality, and performance criteria specified shall be regarded as the minimum standard of quality required for the project.

B. Materials:

1. Panel Material: Steel sheet, Aluminum-Zinc Alloy Coated, ASTM A792, Coating Designation AZ-50, in thickness of 0.0157 inch for field panel, 36 inches by coil, chemically treated, commercial, lock-forming quality.


3. Accessory Components: Aluminum-Zinc Alloy Coated, ASTM A792, Coating Designation AZ-50.0336 or 0.0217 inch, chemically treated, commercial, lock-forming quality.

C. Steel Finishes – Roof Membrane:

1. Silicone modified polyester, epoxy primer baked both sides, as approved by finish coat manufacturer.

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D. Accessories:

1. Job Installed In-Seam Sealant: Modified polyisobutylene tape, 3/32 inch thick by 2 inches wide, minimum.
   a. Seaming material shall be a comprised of a pre-formed, non-hardening polyisobutylene rubber based elastic compound designed for use where space tolerance is limited.
   b. Material shall be furnished in a two-sided, moisture-proof, self-adhering tape form that shall accommodate compression, extension, elongation in a form fitting profile without exhibiting memory tendency in order to allow for permanent or semi-permanent surface irregularities or structural expansion/contraction within the system
      1) Elongation: 25 percent maximum.
      2) Recovery: 2 percent maximum.
      3) Solids: 100 percent maximum.
      4) Odor: None.
      5) Cure Time: Non-Curing.
      7) Color: Gray.
      8) Adhesion (Metal): Peel: 151 pounds per linear inch; Shear: 55 pounds per inch.
      9) Seamability: 100 percent cohesion of mating surfaces.
     10) Cold Temperature: Passes -30 degrees F. Flex over 1 inch Mandrel.
     11) Softening Point: 200 degrees F.

2. Factory Applied Sealant:
   a. Sealant must consist of a specified hot melt 100 percent solids thermoplastic material in a 100 percent consistent application to affect a permanent, water-tight seal in a full compression configuration.

3. One component urethane meeting 360 percent elongation per ASTM D412 and Tear Resistance of 140 pounds per inch per ASTM D1004.

4. One component acrylic terpolymer.

5. Framing System Fasteners:
   a. Metal Deck: FM 4470 Pinch point, fluorocarbon coated #14 fastener.
   b. Wood Deck: FM 4470 Pinch point, fluorocarbon coated #14 fastener or wood deck auger type fastener, or peel rivet.
c. Concrete Deck: FM 4470 masonry tip and tread, fluorocarbon coated #14 fastener.
d. Purlin: FM 4470, self tapping, self drilling #10 or #12 screws such as Traxx by Buildex or equivalent by Olympic or Dekfast.

6. Seam Screws: Sheet Metal Fastener size #10 or #12 by 3/4 inch or 1 inch supplied by roof system manufacturer.

7. Wood Nailers, Curbs and Sleepers: California Redwood, #2 grade. No treated wood utilizing salt-base preservatives shall be allowed. Material Safety Data Sheets must be provided to the roofing manufacturer for verification of preserving agents prior to the installation of any pressure treated wood.

8. Miscellaneous Fasteners:
   a. TEK #1 or #4 screws
   b. Expanding fasteners, 1/4 inch minimum.

9. Prefabricated Stack Flashings: Flexible pre-fabricated round stack flashings with integrated pressure ring shall be used for all round pipe flashings as furnished by roof system manufacturer.


11. Unitized Vents: Spun-aluminum, one way moisture vapor relief vents as furnished by roof system manufacturer.

12. Seam Bar: 1 inch x 3/32 inch 6063T aircraft grade aluminum bar with 8 mil white primer coat.

2.4 FABRICATION

A. In order to maximize quality control and conform to inorganic coating manufacturers’ warranty limitations, all roll forming processes shall be done at the manufacturer’s factory. No roll forming will be permitted on the job site.

B. Exercise careful compliance with specified requirements for fabricated profile, dimensional, and structural requirements.

C. Provision shall be made for the roof system to self-ventilate and breathe according to ASTM E241 guidelines.
   1. Ventilation shall be shown to be free-flowing between panels in each contiguous roof area.

D. Roofing system shall be designed to resist capillary action of water at any slope.

E. Tolerances:
   1. Roof system shall be designed to accommodate normal building dimension tolerances without panel distortion or weaving.
2. Panels shall not be shimmed to straighten an out-of-line structure.

3. Follow the correct published panel alignment recommendations of the manufacturer without variation.

2.5 SOURCE QUALITY CONTROL

A. Manufacturer shall furnish written documentation that all roof panels, flashing, trim, seam attachment devices, framing members, weather-exposed accessories, tape, caulking, and sealants were furnished by this single-source company.

B. Manufacturer shall furnish mill production documentation of specifications for steel coil stock used in the fabrication of the roof system, without organic coating per ASTM A792.

PART 3 - EXECUTION

3.1 PREPARATION

A. Design system so that the panel installation may be started and/or terminated at any given point in the area.

1. The ongoing operations of the Owner are of a critical nature as to leak sensitivity. Do not work on more roof area than can be restored completely watertight in one day.

B. Remove existing loose material, dirt and debris from the roof area. All accumulations of asphalt or other repair materials shall be removed to provide a smooth, flat substrate without imperfections that will be evident in the finished work.

1. Existing metal details and other metal accessories specified for re-use that interfere with the installation of the new roof system shall be carefully removed and set aside for re-use.

2. Any metal described above that will come in contact with the new roof shall be checked for type and replaced or protected if galvanic action may be a problem.

C. Strip existing contaminating material from all metal components that are indicated to be re-utilized. Protect these metal components. Replace damaged components with new of similar type and dimension.

D. Replace wood blocks and/or sleepers indicated to be replaced with new pressure-treated wood, redwood, or other form of blocking acceptable to the manufacturer.

1. Do not use pressure-treated wood containing salt-based preservatives or materials corrosive to steel. Provide Material Safety Data Sheets to the roofing manufacturer for verification prior to installation.

E. Remove pipes, conduits or equipment indicated to be abandoned and removed.

F. All curbs, soil stacks, and other interior flashing surfaces shall be extended to a minimum of 8 inches above the new horizontal roof surface or shall be pressure sealed at the top edge.
G. The prepared substrate shall be a minimum 1/2 inch: 12 inch slope prior to the installation of the roof system.

3.2 INSTALLATION

A. Install roof system when the atmospheric dry bulb temperature is minimum 40 degrees F and rising.

B. Install all components of the roof system in exact accordance with the manufacturer’s standard published procedures as applicable to these project conditions and substrates. The roof system shall be installed at no less than 1/2 inch: 12 inch slope.

C. Install all required vapor retarder, air seals and preliminary tapered, insulating substrates required per enclosed specifications.

D. Lay out and anchor all roof framing sections or purlins according to the approved roof plan.

E. Steel framing system installation

1. The steel framing system shall be installed around the entire perimeter of the roof, all curbs and boxes and as closely to the existing edge and vertical walls as possible.

2. The entire roof area shall then be measured and laid out to determine the designed or practical use of the furnished panels. The framing system shall be installed to the roof surface so that the framing system may be fastened through the existing roof and into the roof deck or structured supports with the entire perimeter of all steel panels covering the fastening flange of the metal framing system.

3. Steel framing sections shall be spaced a maximum of 12 feet. A secondary framing system shall be installed at a nominal distance of 48 inches in from all outside perimeters of roof areas. This wind protection frame shall be adjustable 24 inches in either direction, in order to accommodate coincidental field seams that may occur. Steel framing sections shall be installed by fastening to the specified deck type with the deck fastener type specified in this Section. Fasten framing sections every 12 inches on center staggered for 5/8 inch wood deck, 18 inches on center staggered for 22 gauge metal deck, or 24 inches on center staggered for structural concrete.

4. Steel framing sections shall be spaced a maximum of 6 feet as specified by the UL Class 90 wind uplift approval. Steel framing sections shall be installed by fastening to the specified deck type with the deck fastener type specified in this Section. Fasten framing sections every 12 inches on center staggered for wood, steel, and structural concrete decking.

5. Steel framing sections shall be spaced a maximum of 6 feet as specified by the FM 1-90 wind uplift approval. Steel framing sections shall be installed by fastening to the specified deck type with the deck fastener type specified in this Section. Fasten framing sections every 12 inches on center staggered for wood, steel, and structural concrete decking.

6. Steel framing section spacing and framing section fastener spacing shall be determined from fastener pullout test results taken from the existing lightweight deck to be roofed over. If a new deck is specified, then the spacing listed below shall be calculated from the material’s manufacturer’s product data. Steel framing sections shall be installed by fastening to the specified deck type with the deck fastener type specified in this Section.

   a. Steel framing sections shall be spaced a maximum of every 6 feet or 12 feet.
b. Steel framing fasteners shall be spaced a maximum of every 6 inches or 12 inches on center staggered.

7. The steel framing sections shall be anchored to the roof purlins. Install 6 inches wide 20 gauge G-90 galvanized flat sheet through the existing metal roof panel to roof purlins every 12 inches on center. The 6 inches wide sheet sections are installed in the pattern of the steel framing grid. Steel framing sections shall then be installed by fastening to the 6 inches wide 20 gauge sheet with the metal deck fastener type specified in this Section.

a. Steel framing sections shall be spaced according to roof purlin spacing but not exceed and maximum of 6 feet or 12 feet.

b. Steel framing fasteners shall be spaced a maximum of every 6 inches or 12 inches on center staggered to the 6 inch wide 20 gauge flat sheet.

8. A pre-fabricated drain or ridge line framing system shall be installed along the bottom of all valleys, including along the leading edge of crickets and saddles.

9. Frames shall be fitted with thermally specified insulation stripes on non-insulated decks.

10. The adjoining ends of framing sections shall be overlapped. All overlapped adjoining ends shall be fastened to the substrate together. Ends that adjoin or abut the sides of frames shall be lap cut so that there are no gaps between adjoining sections.

F. Install rigid board insulation as specified. Insulation shall be installed to fill all voids between the prepared roof substrate and the roof panel. If installing over an existing metal roof panel, fill all flutes or spaces between panel seams or ribs to create a flat roof surface in the plane or intended roof slope.

G. Steel roof membrane installation: All panels and other components of the work shall be installed and anchored to the framing supports, making provision for the critical concerns specified below:

1. Seam tape shall be applied to the tops of all framing sections occurring in secondary framing systems, or along leading edge of crickets or saddles, centered along the top of the framing sections. The paper seam tape backer shall be removed.

2. The steel roof panels shall be applied over the framing sections, beginning at the valley or lowest point of the roof, assuring that the panels completely cover the tops of the steel framing sections. The steel panel shall be aligned so that it overlaps the preceding panel by approximately 1-1/2 inch but does not extend beyond the edge of the top of the underlying framing section.

3. As steel roof panels are being aligned, factory seams of adjacent panels must be staggered a minimum of 6 inches.

4. Panel surfaces shall be completely clean of all dirt, debris, oils, and moisture prior to the installation of seam tape. 3/32 inch thick by 2 inch wide seam tape shall be applied to the underside of the overlapping portion of adjoining pieces of metal along the scored center line of tape. This will leave 1 inch where necessary. Walk in the seam tape so that tape adheres well to underside and topside of top panel.

5. Remove the underside half of the seam tape paper backer and press the panels together by walking the length of the seam. The topside half of the paper backer is then removed.
6. The compression bar shall be laid on top of the field seam with the lip of the compression bar facing down and setting against the leading edge of the butyl tape exposed on the top side of the roof panel. When laying compression bars a gap of 1/8 inch shall be maintained between each compression bar. The last hole in adjacent compression bars shall be no further than 1 inch center to center.

7. The seam fasteners shall be placed approximately 18 inches on center, beginning at the middle of the panel and working towards the ends, so that all slack is distributed throughout the length of the panels.

8. Installing seam fasteners in every hole of the compression bar shall complete the final seaming; each fastener will be spaced approximately 1 1/4 inches on center. Fastener guns with adjustable clutch shall be used on all fastening panels and accessories. Final seaming is to occur, for all panels installed, at the end of each day.
   a. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.
   b. Final seaming shall not be completed at the wall or vertical surfaces until the wall flashing system is installed.
   c. A seam fastener shall be placed in the corner of every panel.

9. Installing seam fasteners in every hole of the compression bar shall complete the final seaming; each fastener will be spaced approximately 2 inches on center. Fastener guns with adjustable clutch shall be used on all fastening panels and accessories. Final seaming is to occur, for all panels installed, at the end of each day.
   a. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.
   b. Final seaming shall not be completed at the walls or vertical surfaces until the wall flashing system is installed.
   c. A seam fastener shall be placed in the corner of every panel.

10. Blind seams shall be completed after all panels are in place.
    a. All seam screws shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.
    b. Using the marks placed on the panels as a guide to the location of the underlying steel framing section, the installer shall snap a chalk line the entire length of the valley, ridge, or secondary framing section.
    c. The paper backer shall be carefully removed from the seam tape prior to fastening the panel.
    d. The final blind seaming shall be completed by installing seam fasteners as specified between the stabilizing fasteners, assuring that the fasteners penetrate the underlying sealant.

   H. Steel flashings installation at curb and wall:
1. Factory fabricated wall flashing pieces shall be installed so that the leading edge of the deck flange lines up with the top of the underlying framing section.

2. Install seam tape and seam bar as specified for the steel membrane.

3. The wall flashing piece shall press against the vertical wall with a spring tension action.

4. The final seaming along the vertical portion of the metal flashing shall be completed by installing seam fasteners every 1 inch on center.

   a. 3/32 inch x 2 inch Seam tape shall be applied to the underside of the overlapping piece, allowing approximately 1/8 inch of tape to be exposed beyond the leading edge. The paper seam tape backer shall be removed.

   b. The seamed area of metal shall be pressed onto the underlying section at appropriate overlap, beginning at the vertex of the angle, so that there is no gap where the two pieces adjoin.

   c. The first seam fastener shall be installed directly into the angle, securely anchoring this spot, to the underlying flashing.

   d. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.

   e. The heads of the seam fasteners shall never extend beyond the edge of the seam nor occur greater than 1/4 inch away from the edge of the seam. The adjoining sections of metal shall be seamed together with an overlap a minimum of 2 inches.

   f. The inside and outside corners shall be mitered and shall be installed with seam tape and seam fasteners as described above.

I. Flashing installation at pipes, projections, pitch pans and conduits:

1. All soil stacks shall receive new pre-fabricated unitized stack flashings.

   a. The base flange on the unitized flashing shall receive seam tape to the underside of the leading edge of the flange so that approximately 1/8 inch of tape extends beyond the edge of the metal. The paper seam tape backer shall be removed.

   b. The flexible rubber upper portion of the flashing shall be cut to the size of the outside diameter of the pipe, as inscribed on the flashing.

   c. A bead of caulking shall be applied around the pipe, approximately 2 inches above the point where the flexible rubber will terminate. The flashing shall then be slid down over the pipe so that the caulking bead is compressed as full contact with the roof is made.

   d. A stainless steel pipe clamp shall be installed to the upper seal area of the flexible rubber top.

   e. The final seaming shall be completed by installing seam fasteners every 1 inch on center around the base.

   f. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.
g. The heads of the seam fasteners shall never extend beyond the edge of the seam nor occur greater than 1/4 inch away from the edge of the seam.

2. All pitch pans, if required, shall be replaced with new 26 gauge minimum Galvalume or stainless steel sheet metal.

   a. New pans shall be constructed so that a continuous 4 inch flange is in place around the perimeter, with sides a minimum of 3 inches high and hemmed to the outside.

   b. There shall be a minimum of 2 inches clearance, at all points, between the sides of the pan and the projection that it is flashing.

   c. The base flange on the plan shall receive seam tape to the underside of the leading edge of the flange, so that approximately 1/8 inch of tape extends beyond the edge of the metal. The paper seam tape backer shall be removed.

   d. The tapered metal flange shall be aligned so that it overlaps the underlying panel by a minimum of 2 inches on all sides.

   e. The final seaming shall be completed by installing seam fasteners every 1 inch on center around the base.

   f. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.

   g. The heads of the seam fasteners shall never extend beyond the edge of the seam nor occur greater than 1/4 inch away from the edge of the seam.

   h. The pitch pan shall be filled half-full with non-shrink grout, filled full with 100 percent solids pitch pan filter, and tapered in a watershed fashion away from the projection.

3. All conduits and mechanical lines and pipes shall be installed resting on redwood or treated wood weight displacement supports. All copper pipes shall be protected from exposing the roof to galvanic reactions.

   a. The conduit or pipe shall be anchored to the wood block with fasteners and brackets of similar metal to that of the pipe.

   b. Wood blocks shall be of sufficient size and spacing to adequately support the conduit of pipe above the roof membrane, without bowing.

4. All closed top round flashing shall be flashed with a pre-fabricated wrap-around style unitized flashing.

   a. The base flange on the unitized flashing shall receive seam tape to the underside of the leading edge of the flange so that approximately 1/8 inch of tape extends beyond the edge of the metal. The paper seam tape backer shall be removed.

   b. The flexible rubber upper portion of the flashing shall be cut to the size of the outside diameter of the pipe, as inscribed on the flashing.

   c. A bead of caulking shall be applied around the pipe, at the top of the unitized flashing.

   d. A stainless steel pipe clamp shall be installed to the upper seal area of the flexible rubber top.
e. The final seaming shall be completed by installing seam fasteners every 1-1/4 inch on center around the base.

f. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.

g. The heads of the seam fasteners shall never extend beyond the edge of the seam nor occur greater than 1/4 inch away from the edge of the seam.

J. Counter flashing installation:

1. Prefabricated counter flashings shall be installed as required along all perimeter walls and over all interior flashings that do not have a protective flange covering the top of the base flashing.

2. Seam tape or sealant shall be applied to the back side of the fastening flange of the counter flashing piece. The paper seam tape backer shall be removed.

3. The counter flashing shall be installed in place with appropriate, required fasteners placed 6 inches to 12 inches on center through the center of the fastening flange and anchored so that the flange is secured in place in a spring compression situation. The adjoining sections of metal shall overlap a minimum of 1/2 inch and a seam fastener shall be installed through both pieces of metal to anchor them to the wall or substrate.

4. A bead of urethane sealant shall be applied to the top edge of the metal, centered over the edge, and tooled to shed water.

K. Metal edge installation

1. If the roof system has been designed for water to drain away from the edge, the metal edge shall be installed after the roof membrane has been installed; if the roof system has been designed for water to flow over the metal edge, the metal edge shall be installed before the roof membrane is installed.

2. If necessary the steel roof membrane shall be cut to be even with the outside edge of the perimeter steel framing section.

3. Install seam tape and seam bar as specified for the steel membrane.

4. Deck flange on metal edge shall terminate evenly with the inside edge of the top portion of the steel framing section.

5. Metal edge pieces shall be overlapped a minimum of 2 inches, or butted at ends with internal drainage plate or sealed batten cover. Splices and plates shall be sealed with two 1/8 inch beads of high performance urethane caulking.

L. Vent installation:

1. One-way, moisture vapor relief vents shall be installed on the roof area.

2. One vent shall be installed in a central location of every major roof panel, over 200 square feet, and aligned for a consistent appearance.

3. A 4 inch round hole shall be cut at each vent location.
4. 3/32 inch x 2 inch seam tape shall be applied to the underside of the prefabricated vent, allowing approximately 1/8 inch to extend beyond the edge of the metal. The paper seam tape backer shall be removed.

5. The vent shall be pressed to the roof surface and centered over the 4 inch hole.

6. The final seaming shall be completed by installing seam fasteners every 1 inch on center around the base.
   a. All seam fasteners shall be set so that the seam is fully compressed, with caution being taken not to over-torque or under-torque the fasteners.
   b. The heads of the seam fasteners shall never extend beyond the edge of the seam nor occur greater than 1/4 inch away from the edge of the seam.

M. Protective coating installation:
   1. All excess seam tape shall be trimmed away even with the edge of the seam bare on both sides, using a plastic putty knife. Do not use utility knives.
   2. After all work is complete and the roof has been inspected and approved by the material manufacturer and the owner, a protective coating shall be applied to all seam areas in a 2 inch width centered on the fasteners.
   3. Protective coating shall be applied to all inside and outside corner seams, along the tops of seams in projections, and around all sump pan and through wall scupper seams, etc.
   4. Protective coating shall be applied to all field seam, blind seam, and other mechanically fastened areas, and over all caulking applications.
   5. Protective coating is to be applied within 72 hours of completion of seam areas.

3.3 CLEANING
A. Clean installed work in accordance with the manufacturer’s instructions.
B. Inspect roofing work and flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction of completion and furnish copy of list to each party in attendance.

3.4 CONSTRUCTION WASTE MANAGEMENT
A. Remove and properly dispose of waste products generated during roofing procedures. Comply with requirements of authorities having jurisdiction.

3.5 FINAL INSPECTION
A. At completion of roofing installation and associated work, meet with Contractor, Architect, Owner’s Representative, installer, installer of associated work, Owner, roofing system manufacturer’s representative, and other representatives directly concerned with performance of roofing system.
B. Inspect roofing work and flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.
C. Repair or replace deteriorated or defective work found at time above inspection as required to produce an installation which is free of damage and deterioration at time of Project Completion and according to warranty requirements.

D. Notify the Contractor, Architect or Owner’s Representative, and Owner upon completion of corrections.

E. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.

F. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty-four hours, the Owner will exercise rights to correct the Work under the terms of the Conditions of the Contract.

G. Factory Mutual Post Installation Wind Uplift Testing: Contractor will coordinate testing and bare all costs for testing as required by the local FM engineer. Should the roof fail such post installation testing, all expenses required to bring the roof to successful post installation test requirements will be the burden of the Contractor.

3.6 DEMONSTRATION AND TRAINING

A. At a time and date agreed to by the Owner, instruct the Owner’s facility manager, or other representative designated by the Owner, on the following procedures:

1. Roof troubleshooting procedures.

2. Notification procedures for reporting leaks or other apparent roofing problems.

3. Roofing maintenance.

4. The Owner’s obligations for maintaining the roofing warranty in effect and force.

5. The manufacturer’s obligations for maintaining the roofing warranty in effect and force.

END OF SECTION
PART 1 - GENERAL

1.1 SCOPE: Electrical General Requirements specifically applicable to Division 26 Sections, in addition to Division 1 - General Requirements. Work includes but is not necessarily limited to the following:

A. Definitions, guarantees, submittals, clean-up, "As-Builts" and all other applicable requirements of and Division 1 apply to the work of this section.

B. Examine all other sections for work related to those sections which are required to be included as work under this section.

C. Coordinate all work in this Division with related trades.

D. The work includes but is not limited to the following:
   1. Provide underground duct banks, including excavation, shoring, backfill and surface repair;
   2. Provide 8kV cables and 600V cables as detailed on the plans.
   3. Provide low voltage distribution boards as detailed on the plans.
   4. Provide transformers as detailed on the plans;
   5. Provide new panelboards as detailed on the plans;
   6. Provide new light fixtures, outlets and fire alarm systems as detailed on the plans;
   7. Provide a central lighting inverter;
   8. All temporary power and lighting during construction;
   9. All equipment and facilities required to provide temporary and permanent services;
   10. All electrical work for the building power, lighting, signal, control and life safety;
   11. Incidental items not indicated in in the Specifications that belong to the work described, or are required to provide complete and operable systems, as though called out here in every detail.

E. Work related to the mechanical trade as listed below shall be included in this Division of the work. Furnish and install the following:
   1. All conduits, outlets, line voltage wiring and disconnect switches required for the specified operation of the equipment.
   2. Connect all HVAC equipment per equipment installation diagrams.

F. Furnishing and installing of all hangers, anchors, sleeves, chases and supports, for all electrical materials and equipment.

G. Excavation, shoring, backfill and concrete work required to complete items of this section.

H. Cleaning, cutting patching, repairing and painting.

1.2 APPLICABLE PUBLICATIONS: The following publications form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
A. American National Standards Institute, Inc. (ANSI) Publications:
   2. C37.20-81 Switchgear Assemblies, including supp. C37.20A, C37.20B, Interfiled; C37.20D-78

B. State of California Administrative Codes:
   1. Title 8, Industrial Relations
   2. Title 19, State Fire Marshal Regulations
   3. Title 24, Part 2, California Energy Code
   4. Title 24, Part 3, CCR, California Electrical Code
   5. Title 24, Part 9, CCR, California Fire Code

C. National Electrical Manufacturers Association (NEMA) Publication:
   1. ICS6-83 (R86) Enclosures for Industrial Controls and Systems

D. National Fire Protection Association (NFPA) Publications:
   1. 70-2008 National Electrical Code (NEC)
   2. 70B-93 Electrical Equipment Maintenance

E. State of California Public Utilities Commission (Cal. P.U.C.) Publication:
   1. G.O. 128 Rules for Construction of Underground Electrical Supply and Communications Systems

1.3 WORK SEQUENCE

A. Install work in phases to accommodate specified occupancy requirements. During the construction period, coordinate and update electrical outage schedule and operations with the COLLEGE Project Manager on a weekly basis.

B. Contractor shall perform field investigation and document of the existing exterior lighting circuit, voltage, pole type and etc. for maximum of one week prior to submittal process.

1.4 DEFINITIONS: The following definitions apply to terms used in the narrative and in the specifications.

A. The words "work" or "electrical work" herein include products, labor, equipment, tools, appliances, transportation and all related items, directly or indirectly required to complete the specified and indicated electrical installation.

B. The word "concealed" shall mean that the installation will not be visible when all permanent or removable elements of the construction are in place. The word "exposed" shall mean that the installation is visible when all permanent or removable elements of the construction are in place.

C. The word "code" shall mean any and all regulations and requirements of regulatory bodies, public and private, having jurisdiction over the work involved.
D. The word "product" used in Division 16 means all material, equipment, machinery, and/or appliances directly or indirectly required to complete the specified and/or indicated electrical work.

E. The words "standard product" shall mean a manufactured product, illustrated and/or described in catalogs or brochures, which are in general distribution prior to the date of issue of construction documents for bidding. Products will generally be identified by means of a specific catalog number and manufacturer's name.

F. The word "provide" shall mean furnish and install and where applicable shall also mean connect, complete installation and test.

G. The word "remove" shall mean remove and dispose of equipment or material off-site.

H. The words "powered equipment", as used in Division 16, shall mean a complex product converting an electrical energy source to Mechanical power.

I. In each standard referenced to in the technical sections, consider the advisory provisions to be mandatory, as though the word "shall" has been substituted for "should" wherever it appears. Interpret references in these standards to "authority having jurisdiction," or other words of similar meaning, to mean Owner.

J. The word "Authorized" or "Authorization" shall mean authorized or authorization by the COLLEGE Project Manager.

K. Refer to Division 1, General Requirements, for additional definitions of words and phrases used to describe Division 16, Electrical Work.

1.5 DISCREPANCIES

A. Where a conflict in requirements occurs between the specifications and narrative and a resolution is not obtained from the COLLEGE Project Manager before the bidding date, the more expensive alternate will become the contractual requirement.

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

C. The Contractor shall check narrative furnished him immediately upon their receipt and shall promptly notify the COLLEGE Project Manager of any discrepancies.

1.6 CHANGES: The Contractor shall be responsible to make and obtain approval for all necessary adjustments in conduit and equipment layouts as required to accommodate the relocations of equipment and/or devices which are affected by any approved authorized changes or Product substitutions. All changes shall be clearly indicated on the "Record" drawings.

1.7 COOPERATION WITH WORK UNDER OTHER DIVISIONS

A. The arrangement of and connection to equipment shall be shown on design drawings.
B. Cooperate with other trades to facilitate general progress of Work. Allow all other trades every reasonable opportunity for installation of their work.

C. Work under this Division shall follow general building construction closely. Set conduit sleeves and inserts and verify that openings for chases and conduits are provided before concrete is placed or masonry installed.

D. Work with other trades in determining exact location of outlets, conduit, lighting fixtures, and pieces of equipment to avoid interference with lines required to maintain proper installation of work.

E. Make such progress in the work to not delay work of other trades.

1.8 SUBMITTALS: Submit six (6) sets of shop drawings, manufacturer’s data certificates for equipment, materials and finish, and pertinent details for each system where specified in each individual section, and obtain approval before procurement, fabrication, or delivery of the items to the job site. Partial submittals are not acceptable and will be returned without review.

Include the manufacturer’s name, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, project specification and paragraph reference, applicable technical society publication references, and other information necessary to establish contract compliance of each item the Contractor proposes to furnish. Photographs of existing installations and data submitted in lieu of catalog data are not acceptable and will be returned without approval. Contractor shall be responsible for reviewing and certifying submittals as conforming to the narrative and specifications prior to submittal and shall verify conformance of equipment as delivered with final shop submittals, specifications and plans. Contractor shall report to COLLEGE Project Manager any deviations prior to initiation of construction. Contractor is responsible for promptly reporting to COLLEGE Project Manager any news of late equipment delivery which is likely or certain to delay installation.

A. Submit shop drawings and product data grouped and referenced by the technical Section numbers.

B. Proposed Products List: Include Products as required by the individual section in this Division.

C. The Contractor shall be responsible for all equipment ordered and/or installed prior to receipt of shop drawings returned from the COLLEGE Project Manager bearing the stamp of “reviewed”. All corrections or modifications to the equipment as noted on the shop drawings shall be performed and equipment removed from the job site when required by the COLLEGE Project Manager, without additional compensation.

D. Shop Drawings: Drawings shall be a minimum of 8.5 inches by 11 inches in size with a minimum scale of 1/8-inch per foot, except as specified otherwise. Include wiring diagrams and installation details of equipment indicating proposed location, layout and arrangement, control panels, accessories, piping, duct work, and other items that must be shown to assure a coordinated installation. In wiring diagrams, identify circuit terminals and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment. Indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices. If equipment is disapproved, revise drawings to show acceptable equipment and resubmit.

E. Manufacturer’s Data: For each manufactured item, provide current manufacturer’s descriptive literature of cataloged products, equipment drawings, diagrams, performance and characteristic curves if applicable, and catalog cuts.
F. Standard Compliance: When materials or equipment provided by the Contractor must conform to the standards of organizations such as American National Standards Institute (ANSI) or Underwriters' Laboratories (UL), submit proof of such conformance to the COLLEGE Project Manager for approval. If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified. In lieu of the label or listing, submit a certificate from an independent testing organization, which is competent to perform acceptance testing and is approved by the COLLEGE Project Manager. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard.

G. Certified Test Reports: Before delivery of materials and equipment, certified copies of all test reports specified in individual sections shall be submitted for approval.

H. Certificates of Compliance or Conformance: Submit manufacturer's certifications as required on products, materials, finish, and equipment indicated in the technical sections. Certifications shall be documents prepared specifically for this contract. Pre-printed certifications and copies of previously submitted documents will not be acceptable. The manufacturer's certifications shall name the appropriate products, equipment, or materials and the publication specified as controlling the quality of that item. Certification shall not contain statements to imply that the item does not meet requirements specified, such as "as good as"; or "achieve the same end use and results as materials formulated in accordance with the referenced publications"; or "equal or exceed the service and performance of the specified material." Certifications shall simply state that the item conforms to the requirements specified. Manufacturer shall use Form 16010-A for equipment installation certification. Certificates shall be printed on the manufacturer's letterhead and shall be signed by the manufacturer's official authorized to sign certificates of compliance or conformance.

1.9 REGULATORY REQUIREMENTS

A. Electrical: Conform to NFPA 70, CA PUC G.O. 95, CA PUC G.O. 128, ANSI C2, CAC Title 24, and all other utility company requirements, state and local codes.

B. The electrical requirements shall be the minimum acceptable requirements for the work and nothing described in these Specifications or Narrative shall be construed to permit work not conforming to the most stringent of the applicable codes and regulations. When narrative or specifications call for materials or construction of better quality or larger size than required by codes, laws, rules and regulations, the drawings and narrative shall take precedence.

C. Equipment not complying with applicable codes shall be removed and replaced with approved equipment at Contractor's expense. UL listing labels, where applicable, shall be installed prior to shipment from factory.

D. Obtain permits, and request inspections from authority having jurisdiction.

1.10 GUARANTEE

A. Except as may be specified under other sections in the Specifications, guarantee all equipment furnished under the Specifications for a period of one year from date of project acceptance against defective workmanship and material and improper installation. Upon notification of failure, correct deficiency immediately and without cost to the Owner.

B. Standard warranty of manufacturer shall apply for replacement of parts after expiration of the above period. Manufacturer shall furnish replacement parts to the Owner for their service.
agency as directed. Furnish manufacturer's warranties for all equipment furnished under this project.

1.11 PROJECT/SITE CONDITIONS

A. Prepare drawings showing proposed rearrangement of work to meet project conditions, including changes to work specified in other Sections. Obtain approval of design drawings before proceeding with the work.

1.12 OPERATION AND MAINTENANCE MANUAL: Provide operation and maintenance manual of all equipment and lighting fixtures furnished on this project.

1.13 POSTED OPERATING INSTRUCTIONS: Furnish approved operating instructions for systems and equipment indicated in the technical sections for use by operation and maintenance personnel. The operating instructions shall include wiring diagrams, control diagrams, and control sequence for each principal system and equipment. Print or engrave operating instructions and frame under glass or in approved laminated plastic. Post instructions as directed. Attach or post operating instructions adjacent to each principal system and equipment including startup, proper adjustment, operating, lubrication, shutdown, safety precautions, procedure in the event of equipment failure, and other items of instruction as recommended by the manufacturer of each system or equipment. Provide weather-resistant materials or weatherproof enclosures for operating instructions exposed to the weather. Operating instructions shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

1.14 MANUFACTURER'S RECOMMENDATIONS: Where installation procedures or any part thereof are required to be in accordance with manufacturer's recommendations, furnish printed copies of the recommendations prior to installation. Installation of the item shall not proceed until recommendations are received. Failure to furnish recommendations shall be cause for rejection of the equipment or material.

1.15 DELIVERY AND STORAGE: Handle, store, and protect equipment and materials in accordance with the manufacturer's recommendations and with the requirements of NFPA 70B P, Appendix I, titled "Equipment Storage and Maintenance during Construction." Replace damaged or defective items with new items. Refer to Contract General Conditions for additional requirements.

1.16 ELECTRICAL REQUIREMENTS: Furnish internal wiring for components of packaged equipment as an integral part of the equipment.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION
3.1 Obtain and pay for all permits, and inspections, including any independent testing required to verify standard compliance, and deliver certificates for same to COLLEGE Project Manager. All work shall conform to the requirements of NFPA 70, CA PUC G.O. 95, CA PUC G.O. 128, Title 24, California Code of Regulations (CCR) & CBC 2001.

3.2 WORK RESPONSIBILITIES

A. Proper judgment must be exercised in executing the work so as to secure the best possible installation in the available space and to overcome local difficulties due to space limitations or interference with structural conditions. The Contractor is responsible for the correct placing of his work and the proper location and connection of his work in relation to the work of other trades. Advise appropriate trade as to locations of access panels.

B. In the event changes in the indicated locations or arrangements are necessary, due to developed conditions in the building construction or rearrangement of furnishings or equipment, such changes shall be made without extra cost, providing the change is ordered before the conduit runs, etc. and work directly connected to same is installed and no extra materials are required.

C. Where equipment is furnished by others, verify dimensions and the correct locations of this equipment before proceeding with the roughing-in of connections.

D. Do not install light outlets or fixtures until mechanical piping and duct work is installed; then lights shall be installed in locations best suited for equipment arrangement or as directed by the COLLEGE Project Manager.

E. All scaled and figured dimensions are approximate of typical equipment of the class indicated. Before proceeding with any work, carefully check and verify all dimensions, sizes, etc. with the shop drawings to see that the equipment will fit into the spaces without violation of applicable codes.

F. Should any changes to the work in narrative and specifications be necessary in order to comply with the above requirements, notify the COLLEGE project manager immediately until approval for any required modifications to the construction has been obtained from COLLEGE.

G. Be responsible for any cooperative work which must be altered due to lack of proper supervision or failure to make proper provisions in time. Such changes shall be under direction of the COLLEGE Project Manager and shall be made to his satisfaction.

H. Perform all work with competent and skilled personnel.

I. All work, including aesthetic as well as electrical and mechanical aspects of the work, shall be of the highest quality consistent with the best practices of the trade.

J. Replace or repair, without additional compensation, and any work which, in the opinion of the COLLEGE Project Manager, does not comply with these requirements.

3.3 CONTINUITY OF SERVICE

A. No interruption of service to any part of existing facilities will be permitted without express permission in each instance from COLLEGE Project Manager. Request for outages shall state specific date and hours and the maximum duration, with outages kept to these specific date and hours and the maximum duration. Contractor is responsible to provide adequate temporary
power (Portable Generator) for unforeseen cases when the outage period exceeds permitted outage duration at no cost to the COLLEGE.

B. If overtime is necessary, there will be no allowance made by COLLEGE for extra expense for such overtime or shift work, due to maintaining continuity of service herein required.

C. Organize work to minimize duration of power interruption.

3.4 PAINTING OF EQUIPMENT

A. Factory Applied: Electrical equipment shall have factory-applied painting systems which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test, except equipment specified to meet requirements of ANSI C37.20 shall have a finish as specified in ANSI C37.20.

B. Field Applied: Paint electrical equipment as required to touch up, to match finish on other equipment in adjacent spaces or to meet safety criteria.

END OF SECTION
PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Conduit
B. Fittings and Conduit Bodies
C. 600 Volt Wires
D. Boxes
E. Wiring Devices
F. Cabinets and Enclosures
G. Safety Switches
H. Fuses

1.2 RELATED SECTIONS

A. Section 260500 – Electrical General Requirements, applies to this section, with the additions and modifications specified herein.
B. Section 260126 – Electrical Acceptance Testing.
C. Section 260526 – Grounding and Bonding.
D. Section 260553 – Identification for Electrical Systems.

1.3 APPLICABLE PUBLICATIONS: The following publications form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. American National Standards Institute, Inc. (ANSI) Publications:
   1. C80.1 Rigid Steel Conduit, Zinc Coated
   2. C80.3-83 Electrical Metallic Tubing, Zinc Coated
   3. C80.5-77 Specification for Rigid Aluminum Conduit
   4. FB 1 Fitting, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies
   5. OS 1 Sheet-Steel Outlet Boxes, Device Boxes, Covers and Box Supports
   6. OS 2 Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports

B. National Electrical Manufacturers Association (NEMA) Publications:
   1. AB 1 Molded Case Circuit Breakers
   2. ICS 2 Industrial Control Devices, Controllers, and Assemblies
3. ICS6 Enclosures for Industrial Controls and Systems
4. TC 2 Electrical Plastic Tubing and Conduit
5. WD 1 General Purpose Wiring Devices
6. WD 6 Wiring Device Configurations
7. RN 1 PVC Externally Coated Galvanized Rigid Steel Conduit and Electrical Metallic Tubing

C. National Fire Protection Association (NFPA) Publication:
   1. 70-2008 National Electrical Code (NEC)

D. State of California Administrative Codes:
   1. Title 24, Part 3, CCR, California Electrical Code

E. Underwriters Laboratories, Inc. (U.L.) Publications:
   1. 1-85 Standard for Flexible Metal Conduit
   2. 6-81 (R86) Rigid Metallic Conduit
   3. 50-80 Cabinet and Boxes
   4. 83-1983 Thermoplastic Insulated Wires
   5. 198E-82 (R87) Class R Fuses
   6. 360-80 (R86) Liquid-tight Flexible Steel Conduit
   7. 486A-1980 (R86) Wire Connectors and Soldering Lugs, for use with Copper Conductors
   8. 498-86 (R87) Attachment Plugs and Receptacles
   9. 508-84 (R85) Industrial Control Equipment
   10. 510-77 (R82) Insulating Tape
   11. 514A-1983 (R85) Metallic Outlet Boxes
   12. 514B-1982 (R85) Fittings for Conduit and Outlet Box
   13. 651-81 Schedule for 40 & 80 Rigid PVC Conduit
   14. 797-77 Electrical Metallic Tubing
   15. 869-84 Standard for Service Equipment
   16. 1242-83 Standard for Intermediate Metal Conduit

1.4 SUBMITTALS

A. Submit under provisions of Section 260500.

B. Product Data: Provide for:
   1. Conduit and Connectors (all types)
   2. Conductors (all types)
   3. Cabinets, Enclosures and Junction Boxes

C. Test Reports: Provide for:
   1. Insulation resistance tests of low voltage conductors.
   2. Operational tests.

1.5 PROJECT RECORD DOCUMENTS

A. Accurately record actual routing of conduits larger than 1-1/2 inches.
B. Accurately record actual locations and mounting heights of device, outlet, pull and junction boxes.

C. Accurately record actual location of each new receptacle.

1.6 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70 and with all state adopted amendments, except where requirements herein are more stringent.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. or a testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.7 QUALITY ASSURANCE: In each standard referenced to herein, consider the advisory provisions to be mandatory, as though the word “shall” has been substituted for “should” wherever it appears. Interpret references in these standards to “authority having jurisdiction,” or other words of similar meaning, to mean COLLEGE Project Manager.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle Products to site under provisions of Sections 01600 and 260500.

B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

1.9 PROJECT CONDITIONS

A. Verify routing and termination locations of all conduits prior to rough-in.

B. Locate existing site utility lines prior to the excavation.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT: Materials and equipment shall conform to the respective specifications and standards and to the specifications herein. Electrical ratings shall be as indicated. Except where specifically indicated otherwise, provide only new materials having all legally required approvals and/or labels. Items of a similar nature shall be of the same type and manufacturer.

2.2 CONDUIT

A. Rigid Steel Conduit (Zinc-coated): ANSI C80.1, UL 6, hot-dip galvanized, threaded type.

B. Electrical Metallic Tubing: UL 797, ANSI C80.3.

C. Rigid Plastic Conduit: NEMA TC-2, UL 651, PVC Schedule 40, Carlon or approved equal.
D. Liquidtight Flexible Non-Metallic Conduit: UL 1660, Non-metallic, liquid-tight conduit with a polyvinyl chloride reinforced core. Conduit must conform to NEC 351B. Electri-Flex Liquatite® Type LNM-P, Kellems Polytuff I or approved equal.

E. Liquidtight Flexible Metallic Conduit (limited to 6 feet runs only): UL 360, Interlocked steel construction with a polyurethane jacket, Electri-Flex Liquatite® type CEA or approved equal. Limited to 4 feet run only.

F. PVC Coated Metal Conduit: NEMA RN 1, rigid steel conduit with external PVC coating, 40 mil thick.

2.3 FITTINGS


B. Fittings for EMT: Compression type. Split or set-screw couplings are unacceptable.

C. Fittings for Liquidtight Flexible Metallic Conduit: ANSI FB 1.


E. Expansion/Deflection Fittings: Provide fitting capable of a straight line expansion movement of 2” in either direction and a movement of 3/4” from ¾”normal in all other directions, OZ Gedney Type AXDX. Provide complete with grounding and bonding jumpers.

F. Fittings for PVC Coated Metal Conduit: ANSI FB 1; steel fittings with external PVC coating to match conduit.

2.4 CONDUCTORS: Conductors shall bear the date of manufacture imprinted on the insulation with other identification. Wire and cable manufactured more than 6 months before delivery to the job site shall not be used.

A. 600 Volt Wires and Cables: UL 44, ICEA S-66-524, NEMA WC-7. Conductors shall be stranded copper per ASTM B-3 or B-8. Insulation shall be type THHN/THWN unless otherwise noted. Conductors 250 kcmil or larger shall be type XHHW. Conductors installed underground shall be type XHHW.

B. Color Code Conductors in different voltage systems shall be as follows:

<table>
<thead>
<tr>
<th>PHASE</th>
<th>208Y/120 VOLT WYE</th>
<th>480 VOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
<td>Brown</td>
</tr>
<tr>
<td>B</td>
<td>Red</td>
<td>Orange</td>
</tr>
<tr>
<td>C</td>
<td>Blue</td>
<td>Yellow</td>
</tr>
<tr>
<td>Neutral</td>
<td>White</td>
<td>Gray</td>
</tr>
<tr>
<td>Ground</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Isolated Ground</td>
<td>Green w/yellow stripe</td>
<td>N/A</td>
</tr>
</tbody>
</table>

C. Minimum size for branch circuits shall be No. 12 AWG, unless otherwise noted.

D. Use of MC cable is not allowed except for lighting whip, limited to 6 feet runs only.

2.5 JUNCTION BOXES AND PULL BOXES: UL 50.
A. Provide pull and junction boxes of Code gauge steel sized as indicated or required. Provide 16 gauge steel minimum, unless otherwise noted. Indoor enclosures shall conform to NEMA ICS 6 for the Type 12, unless otherwise noted.

B. Size junction and pull boxes to not less than minimum Code requirements. Increase size above Code requirements where necessary to provide space for pulling, racking or splicing enclosed conductors, or where specified or indicated dimensions exceed Code requirements.

C. Fabricate sheet metal junction and pull boxes of galvanized, Code gauge, sheet steel. Include angle iron framing where required for rigidity. Boxes shall not deflect or deform visibly when covers are removed after conduit and conductors are installed, and any deflection occurring shall not prevent the easy installation and removal of cover attachment screws.

D. Do not use single covers for junction and pull boxes having cover length or width dimension exceeding three feet unless so specified, indicated, or approved. Sectionalize covers that exceed three feet in either dimension into two or more sections.

E. Equip metal junction and pull boxes exposed to weather (and not installed in or below grade) with raintight or weatherproof removable covers. Enclosures shall conform to NEMA ICS 6 for the Type 4, unless otherwise noted. Raintight or weatherproof boxes shall be used threaded watertight hubs for top or side entry and may use knockout for bottom entry only. For exterior pull boxes, use a minimum of 14 gage galvanized G-90 grade sheet steel.

F. Use concrete junction and pull boxes for exterior underground conduit unless otherwise specified or indicated. Use non slip steel plate or cast iron covers and rims in no traffic areas, and cast iron covers and rims designed for AASHTO Class H20 wheel loading wherever vehicular traffic will occur.

G. For interior junction and pull boxes located in concrete floors, and 24” square or smaller, use cast iron boxes with integral cast tapped conduit hubs, and having recessed cover flush in the box trim placing all elements of the face of the box flush in the plane of the surrounding floor. Equip boxes with watertight covers where so indicated.

H. For interior pull boxes located in concrete floors and larger than 24” square, use precast concrete boxes or form these boxes at the job site. Equip with angle iron cover rim, and with reinforced steel cover plate set flush with the finish floor plans. Specific plan details shall supersede these general requirements.

I. Equip grade level exterior pull boxes with a sump and with knockouts for conduit on sides and ends. Coordinate requirements for conduit openings with underground conduit requirements. Identify the covers of exterior grade level junction and pull boxes with the work “ELECTRIC” casting or otherwise permanently inscribed in the metal of the cover. Equip exterior grade level pull boxes with pull irons where so indicated.

J. Equip surface sheet metal junction and pull boxes with covers aligning with the sides of the boxes and equip flush boxes with covers extending 3/4” all a ¼”d the perimeter of the back box. Provide sufficient cover attachment screws to ensure that box covers will contact the surface of the box for the entire perimeter of the enclosure. Use galvanized or cadmium-plated screws, or brass screws to attach covers to boxes.

K. Use brass screws to attach junction and pull box covers to interior floor boxes or to boxes located where moisture may be present.

L. Acceptable manufacturers:
3. Concrete junction and pull boxes: Brooks Products Inc., Quickset Co.

2.6 WIRE CONNECTORS AND TERMINALS: For use with copper conductors. UL 486A.

2.7 INSULATING TAPES: UL 510.

PART 3 - EXECUTION

3.1 INSTALLATION: Electrical installation shall conform to requirements of NFPA 70, state and local codes, and to requirements specified herein.

3.2 LOCATIONS

A. The shop drawings shall identify desired locations and arrangements of all electrical components. Coordinate with other trades to secure the best possible installation in the available space and under the developed conditions.

B. Before installing any equipment, conduit, or locating any outlet, examine the complete set of documents, including shop drawings and specifications, and verify all dimensions and space requirements. Make such minor adjustments as may be necessary to fit the building structure and accommodate the work of other trades. Install all electrical work to preserve legal headroom, access, work space, clearances and to keep openings and passage ways clear. Arrange for additional space if required for the servicing, maintenance, and replacement of the electrical equipment.

C. Control devices shall not be mounted more than 48" above the floor.

D. Prior to installation, the COLLEGE Project Manager reserve the right to relocate any outlet or device within six feet of the location indicated on the plans and at no additional cost to the COLLEGE Project Manager.

E. No additional compensation will be allowed for omissions, inadequate space, misunderstandings or rejected work caused by neglect of these requirements.

3.3 CONDUIT

A. Rigid steel conduit shall be used for circuits greater than 600 volts installed above grade and may be used in all locations unless otherwise indicated.

1. Rigid steel conduit shall not be installed below grade in direct contact with earth, it shall be encased in 3" concrete envelope or painted with two coats of black asphalt paint.
2. Provide "DANGER - "HIGH VOLTAGE" labels to exposed conduits containing circuits greater than 600 volts. Refer to Section 260553.
B. Electrical metallic tubing (EMT) may be installed in indoor dry locations only; it shall not be installed lower than six feet above the finished floor. Restrictions applicable to EMT:

1. Do not use in feeder circuits.
2. Do not install below grade.
3. Do not encase in concrete.
4. Do not use in areas subject to severe physical damage (including, but not limited to, mechanical equipment rooms and electrical equipment rooms).
5. Do not use in hazardous areas.
6. Do not use outdoors.

C. PVC Schedule 40 conduit may be used underground within the building perimeter (below 600V):

1. The top of the duct shall not be less than 24 inches below grade.
2. Risers shall be galvanized rigid steel.

D. Refer to Section 260543, "Underground Electrical Work," for site underground duct requirements.

E. Use liquidtight flexible conduit in short lengths not to exceed 4 feet for final connections to lighting fixtures in accessible ceilings, motors, transformers and other vibration type equipment, or with the approval of the COLLEGE Project Manager, where absolutely necessary due to structural conditions. Provide green ground conductor in all flexible conduit.

F. Install conduit in accordance with NECA "Standard Installation." Determine actual material and hardware requirements and verify all dimensions by field inspection.

G. Arrange supports to prevent misalignment during wiring installation.

H. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.

I. Group related conduits; support using conduit rack. Construct rack using steel channel provide space on each for 25 percent additional conduits.

J. Arrange conduit to maintain headroom and present neat appearance.

K. Route exposed conduit parallel and perpendicular to walls.

L. Maintain adequate clearance between conduit and piping.

M. Maintain 12 inch clearance between conduit and surfaces with temperatures exceeding 104 degrees.

N. Cut conduit square using saw or pipe cutter; de-burr cut ends.

O. Bring conduit to shoulder of fittings; fasten securely.

P. Provide pull fittings in all overhead conduit runs exceeding 200 feet of straight conduit, or having more than the equivalent of three 90 degree bends. Each 90 degree bend shall be considered the equivalent of 50 feet of straight run. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one-shot bender to fabricate or factory elbows for bends in metal conduit larger than 2 inch size.
Q. Where conduit passes from one type of construction to another, or where there is a possibility of dissimilar movements, an expansion/deflection device or a suitable loop of sealtight flexible conduit shall be installed. Looped sealtight flexible conduit shall consist of 18" minimum length of looped conduit with a junction box at one or both ends, wherever conduit crosses building seismic joints.

R. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.

S. Provide 1/8" diameter polyethylene pull line in each new empty conduit except sleeves and nipples.

T. Conduit which penetrates fire walls, fire partitions, or floors shall be metallic on both sides of fire walls, fire partitions, or floors for minimum distance of 6 inches. Restore fire rating integrity at conduit penetration. All holes created to extend electrical systems through fire rated floors and walls shall be sealed by the electrical Contractor with an intumescent material capable of expanding up to 8 to 10 times when exposed to temperatures beginning at 250°F. It shall be UL Classified and have I.C.B.O., B.O.C.A.I. and S.B.C.C.I. (NRB 243) approved ratings to three hours per ASTM E-814 (UL 1479).


U. Where conductors of No. 4 AWG or larger are to be installed in a conduit, or where any conductors are to be deflected more than 30 degrees when leaving a conduit, terminate the conduit with an insulating bushing.

V. Conduit bending radius shall not be less than 10 times conduit diameter.

W. Ground and bond conduit under provisions of Section 260526.

X. All wires shall be run in conduit or approved wire ways. No exposed wire will be allowed.

3.4 600 VOLT CONDUCTORS

A. Splices:

1. Splices in conductors #8 AWG and smaller shall be made with "Scotchlok" insulated connectors or equal of proper size for conductors being spliced.
2. Splices in conductors #6 AWG and larger shall be made with pressure type solderless connectors. The splice area shall be tapered to provide equal or greater insulation than the original. Tape run back over the original insulation shall extend 3 to 5 overall diameters of the insulated wire.

B. Connectors and terminal lugs shall be used for terminating stranded conductors #6 AWG and larger and shall be T&B, Ilsco, or approved equal solderless connectors.

C. Wire in panels, cabinets, pull boxes and wiring gutters shall be neatly grouped, strapped together with T&B Model Tyrap cable strap or laced with #12 stranded lacing twine and fanned out to the terminals.

D. Neutral conductor shall be continuous in outlet boxes and shall not be broken by addition or removal of devices.

E. Wiring methods in return air plenum spaces shall comply with NEC 300-22.
3.5 FITTINGS

A. Use threaded fittings for rigid metal conduit and compression fittings for tubing.

B. Use cement-on fittings for plastic conduit.

C. Fittings for flexible conduit shall be of the threadless hinged clamp type. Do not use fittings threaded internally into the flexible conduit ends.

D. Use fittings made of the same material as the raceway except:
   
   1. Malleable iron and steel are interchange fittings may be used for flexible steel conduit and for factory manufactured offsets.
   2. Use aluminum fittings only with aluminum conduit.
   3. Use plastic insulated bushings for conduit sizes larger than 1”.
   4. Use "insulated throat connectors for electrical metallic tubing.

3.6 WIRING DEVICES

A. Use products of a single manufacturer for each type of wiring device. Different manufacturers may be used for different type devices, if the requirements of the specification are fulfilled.

B. Use the products of a single manufacturer for all device plates. Obtain prior approval for any variations from this requirement except that plate variations are allowed for the following devices:

   1. Where the selected plate manufacturer does not manufacture a suitable finish plate.
   2. For heavy-duty receptacles rated at more than 30 amperes.
   3. Where the raceway system enclosure employs a non-standard finish plate.
   4. Where non-standard plates are specified or indicated.

C. Where pilot lights are indicated, use incandescent lamp and jewel type lens mounted in the same outlet as the switch, with common finish plate. Pilot lights shall be "on" when "on" rolled load is "on".

D. Substitute key operations for toggle where locking switches are indicated. Provide not less than two keys for each such switch, except not more than ten keys of the same pattern for the total project. Use only keys that are compatible with key system established for site.

E. Position receptacles so that the ground contact in grounding type receptacles is on the bottom of parallel prongs.

F. Install adjacent devices of the same type and with the same mounting height in a common outlet box.

G. Prior to installation of switch outlets, examine Architectural plans and verify locations. Place switches in the wall at the latch side of the door.

H. All counter top receptacles shall be mounted 4” above the finish surface.

I. Coordinate the electrical work with the work of other trades to ensure that wiring device flush outlets are positioned with box openings aligned with the face of the surrounding finish material. Pay special attention to installations in cabinet work, and in connection with specialty building equipment requiring very exact electrical rough-in.
3.7 BOXES, OUTLETS AND SUPPORTS: Provide boxes in wiring or raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be cast-metal, hub-type when located in wet locations, when surface mounted on outside of exterior surfaces, when installed exposed up to 7 feet above interior floors, when installed under raised floor or when installed in hazardous areas. Boxes in other areas shall be sheet steel. Each box shall have volume required by NFPA 70 for number of conductors enclosed in the box. Provide gaskets for cast-metal boxes installed in wet locations.

3.8 JUNCTION AND PULL BOXES
   A. Wherever possible use outlet boxes for junction and pull boxes.
   B. Locate interior junction and pull boxes in machine rooms, equipment rooms, storage rooms, electrical rooms and similar utility spaces unless otherwise indicated or approved. Where junction or pull boxes must be used in finished areas, use flush boxes only equipped with prime finished sheet metal plates. Fasten plates to boxes with countersunk flat head screws. Provide plates with 3/4" trim ¾" around.
   C. Do not use sectionalized boxes unless specified. Do not mix feeder and branch circuit conductors in a common pull or junction box.
   D. Where more than one circuit passes through a common junction or pull box, tag conductors to indicate circuit number and panel designation.

3.9 OPENINGS, CHASES AND SLEEVES
   A. Provide openings, chases, cutting, patching, sleeves and other products, necessary to permit the electrical raceways and cables to pass through the structure.
   B. Establish locations for openings, chases and sleeves sufficiently in advance of construction to avoid cutting and patching. Perform any required cutting and patching for electrical work and obtain approval for cutting from COLLEGE Project Manager prior to work being done.
   C. Repair damages to finished work and surfaces caused by cutting, to the satisfaction of COLLEGE Project Manager.
   D. Install sleeves wherever raceways of any type pass through walls or floors above grade, except that sleeves are not required for drywall construction or laid up masonry construction used for interior partitions and not fire rated.
   E. Use pipe or sheet steel sleeves for interior dry locations.
   F. Install sleeves with both ends flush with wall surfaces and with upper ends 3" above floor surfaces. Install bottom end of floor sleeves flush with slabs if not concealed by ceiling system. Use steel pipe sleeves through floors.
   G. Furnish galvanized steel 24 gauge roof jacks and pitch dams for roof penetrations. Size roof jacks to extend 6" out on roof and 8" up conduit above roof. Solder or braze a flashing collar to conduits passing through roof jacks. Size pitch dams to extend 6" above roof and 6" beyond roof opening.
   H. Core drill existing concrete walls or slabs to pass new runs of conduit or tubing. Seal core drilled openings as described for sleeves.
I. For exterior walls below grade conduit entries, use manufacturer fabricated wall entrance seals.

3.10 MOUNTING HEIGHTS: Mount disconnecting switches so height of operating handle at its highest position is maximum 78 inches above floor or platform. When installing switch next to existing switch, match mounting height of existing switch.

3.11 FIELD TESTS: Refer to Section 260126, "Electrical Acceptance Testing," for additional requirements. As an exception to requirements that may be stated elsewhere in the contract, the Inspector shall be given minimum 5 working days notice prior to each test. The Contractor shall provide all test equipment and personnel and submit written copies of all test results.

A. Distribution Conductors, 600 Volt Class: Test all conductors #8 AWG and larger to verify that no short circuits or accidental grounds exist. Tests shall be made using an instrument which applies a voltage of approximately 500 volts and provides a direct reading of resistance in ohms. Resistance readings of "infinite" value will not be accepted. Insulation resistance, corrected to 60°F, shall not be less than the following values:

<table>
<thead>
<tr>
<th>Conductor Size</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>250-750 kcmil</td>
<td>50 megohms</td>
</tr>
<tr>
<td>4-4/0 AWG</td>
<td>50 megohms</td>
</tr>
<tr>
<td>8-6 AWG</td>
<td>100 megohms</td>
</tr>
</tbody>
</table>

Record resistance readings, temperature and weather conditions on the test form.

B. Operational Tests: Demonstrate the operation of each switch, relay and other item of electrical control with the system fully energized and operating. Each shall be demonstrated three times. Any faulty or defective Contractor furnished materials and workmanship found during the tests shall be replaced or corrected by the Contractor at no additional cost to the COLLEGE Project Manager.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY
A. Section Includes:
   1. Grounding materials.
   2. Electric service grounding electrode.
   3. Feeder and branch circuit grounding.
   4. Raceway and enclosure grounding.
   5. Equipment grounding.
   6. Receptacle grounding.
B. Related Sections:
   1. Section 260126, Electrical Acceptance Testing
   2. Section 260519, Basic Material and Methods
   3. Section 262702, Equipment Wiring Systems

1.2 SYSTEM DESCRIPTION
A. Provide grounding and bonding of electrical service, circuits, equipment, signal and communications systems.
B. Performance Requirements: Supplement the grounded neutral of the secondary distribution system with an equipment grounding system to properly safeguard the equipment and personnel. Install equipment grounding such that all metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment and other conductive items in close proximity with electrical circuits operate continuously at ground potential and provide a low impedance path for possible ground fault currents.

1.3 SUBMITTALS
A. Provide Shop drawings and product data for the grounding material.

1.4 REGULATORY REQUIREMENTS
A. Conform to requirements of the CEC, latest adopted version
B. Furnish products listed by UL or other testing firm acceptable to AHJ.

1.5 SEQUENCING AND SCHEDULING
A. Building Ground Electrode: Coordinate placement of ground rods and grounding electrode conductor in base of building footing prior to placement of concrete. Coordinate bonding of rebar with rebar installer prior to rough-in.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Ground Rods: Copperclad steel, 3/4 inch diameter, 10 feet long, tapered point, chamfered top. Manufacturers: Weaver, Thomas & Betts, Talley, or approved.

B. Grounding Connectors: Hydraulic compression tool applied connectors or exothermic welding process connectors or powder actuated compression tool applied connectors. Mechanical type of connectors are not acceptable. Manufacturers: Burndy Hyground Compression System, Erico/Cadweld, Amp Aimpact Grounding System or approved.

C. Pipe Grounding Clamp: Mechanical ground connector with cable parallel or perpendicular to pipe. Burndy GAR Series, O-Z Gedney, Thomas & Betts or approved.

D. Telecommunications Grounding Bar (TGB): 1/4-inch thick by 4-inch high by 12-inch long copper ground bar with insulators. Manufacturers: CPI, Hargar, Lyncole XIT or approved equal.

E. Telecommunications Main Ground Bus Bar (TMGB): 1/4-inch thick by 4-inch high by 18-inch long copper ground bar with insulators. Manufacturers: CPI, Hargar, Lyncole XIT or approved equal.

F. Grounding Electrode Conductor: Bare copper stranded conductor.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Concrete Encased Ground Electrode:
   1. From the service equipment ground bus install grounding electrode conductor to footing foundation rebar.
   2. Bond the grounding electrode conductor to three independent steel rebars. Each rebar minimum length is 20 feet.
   3. Protect grounding electrode conductor extension from footing/foundation to service equipment with rigid PVC conduit. Do not use metal conduit for grounding electrode conductor protection.

B. Ground Rod Electrode:
   1. Install 60 feet of No. 4/0 stranded bare copper conductor in base of perimeter footing.
   2. Layout conductor to provide maximum exposure to earth in the perimeter footing. Do not fold conductor.
   3. Bond to driven ground rods at 20 feet o.c.
4. Tap at center ground rod and extend ground electrode conductor to service ground bus. Install ground electrode conductor extension in rigid PVC conduit for physical protection.

C. Water Service Grounding: Bond building ground electrode and water service pipe to service ground bus. Connect to water pipe on utility side of isolating fittings or meters, bond across water meters.

D. Raceways:
   1. Ground all metallic raceway systems. Bond to ground terminal with code size jumper except where code size or larger grounding conductor is included with circuit, use grounding bushing with lay-in lug.
   2. Connect all metal raceways, which terminate within an enclosure but without mechanical connection to the enclosure, by grounding bushings and ground wire to the grounding bus.
   3. Where equipment supply conductors are in flexible metallic conduit, install stranded copper equipment grounding conductor from outlet box to equipment frame.
   4. Install equipment grounding conductor, code size minimum unless noted otherwise, in all nonmetallic and metallic raceway systems.

E. Feeders and Branch Conduits:
   1. Install continuous insulated equipment copper ground conductors within the following circuits; feeders, circuits for computer systems and other circuits as indicated on design Drawings.
   2. Where installed in a continuous solid metallic raceway system and larger sizes are not detailed, provide insulated equipment ground conductors for feeders and branch circuits sized in accordance with Table 250-122.
   3. Install isolated ground conductors for electrically sensitive equipment. Install isolated grounding conductors isolated from the equipment ground system except at the common ground connection at the service equipment. Provide isolated ground bus in panelboards isolated from the equipment ground system.

F. Boxes, Cabinets, Enclosures and Panelboards:
   1. Bond grounding conductors to enclosure with specified conductors and lugs. Install lugs only on thoroughly cleaned contact surfaces.
   2. Bond all sections of service equipment enclosure to service ground bus.

G. Motors, Equipment and Appliances: Install code size equipment grounding conductor from outlet box to (motor) equipment frame or manufacturer's designated ground terminal.

H. Receptacles: Connect ground terminal of receptacle to equipment ground system by No. 14 conductor bolted to outlet box except isolated grounds where noted. Self grounding nature of receptacle devices does not eliminate conductor bolted to outlet box.

I. Telecommunications Backboard: provide telecommunications grounding bar at each telecommunications backboard. Bond the grounding bar to service grounding bar in the main service equipment with a 6AWG copper equipment grounding conductor.

J. Separately Derived Systems: Ground each separately derived system.

END OF SECTION
PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Contractor shall provide electrical demolition required for work noted on drawings.

B. The Contractor may consider salvage value of all removed equipment and material part of demolition, unless otherwise noted on the construction drawings.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. Environmental Protection Agency (EPA) Regulations:
   1. 40 CFR 261 Regulations Identifying Hazardous Waste
   2. 40 CFR 262 Regulations for Hazardous Waste Generators
   3. 40 CFR 263 Regulations for Hazardous Waste Transporters
   4. Hazardous Waste Facilities

B. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) Regulation:
   1. 29 CFR 1910.94 Subpart G, Occupational Health and Environmental Control

C. Department of Transportation (DOT):
   1. 49 CFR 178 Regulations for Shipping Container Specifications

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work: As specified in individual Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify field measurements and circuiting arrangements are as shown on Drawings.

B. Verify that abandoned wiring and equipment serve only abandoned facilities.

C. Demolition drawings are based on casual field observation and existing record documents. Report discrepancies to Engineer before disturbing existing installation.
D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

A. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.

B. Coordinate electrical outages with the College.

C. Provide temporary wiring and connections to maintain existing systems in-service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Demolish and extend existing electrical work under provisions of this Section and as indicated on the drawings.

B. Remove, relocate, and extend existing installations to accommodate new construction.

C. Remove abandoned wiring to source of supply unless otherwise indicated.

D. Remove exposed abandoned conduit. Cut conduit flush with walls and floors, and patch surfaces.

E. Disconnect and remove abandoned distribution equipment.

F. Repair adjacent construction and finishes damaged during demolition and extension work.

G. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.

H. Extend existing installations using materials and methods as specified in Section 260519, "Basic Materials and Methods."

3.4 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and other documentation provided with this Specification apply.

1.2 SUMMARY
A. The intent of this specification is to define a complete, functional, distributed intelligence, networked lighting control system providing individual addressability LED lighting sources compatible with existing exterior lighting system in the campus.

1.3 DEFINITIONS
A. DALI: Digitally Addressable Lighting Interface. An international standard for bi-directional communication between smart addressable lighting equipment such as fluorescent ballasts, motion sensors, and wall switches. Relies on a polarity-insensitive two-wire bus running between all devices. Wire may be run in conduit with power or free in plenum with appropriately rated wire. Each DALI bus is powered by either a Digital Control Cabinet or a standalone DALI power supply.

B. Hybrid system: A system that is composed of both wired and wireless communications components, supporting both indoor and outdoor control of lighting using wires where appropriate and wireless where appropriate, all from the same control base station.

C. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling and power-limited circuits. All devices considered low voltage must utilize DC power only.

D. Mesh network: A robust and highly reliable method of communicating between wireless devices. Designed to withstand failures of individual nodes by routing around the issue. Used to communicate between:
   *Digital Control Cabinets (where an Ethernet connection between cabinets is not possible)
   *Remote devices controlling individual fixtures (both indoor and outdoor) or stand-alone wired DALI communications busses.

   Each device in the network is able to “route” or “rebroadcast” wireless traffic such that a given device need only contain a transmitter powerful enough to reach its neighbor nodes.

E. Monitoring: Acquisition, processing, communication, and display of equipment status data including current light level of each fixture, calculated electrical parameter values, event and alarm signals, tabulated reports, graphical visualizations, and event logs.

F. PC: Personal computer; sometimes plural as "PCs."

G. ZigBee: An international standard for bi-directional wireless mesh network communication. Works at the unlicensed 2.4GHz frequency and uses secure 128-bit encryption for all traffic. A total of 16 channels shall be available for use by each device, and frequency-agile radio technology shall ensure resilience in noisy wireless environments.
H. 0-10V: An industry-standard interface for controlling dimmable lighting loads where the signal voltage from 0 to 10 volts is proportional to the light output of the lamp being controlled.

1.3 Existing Condition

A. Contractor shall be familiarized with the existing Exergy lighting control system installed in Phase one. The lighting control system integrator shall re-program and configure the existing lighting control system such that the new lighting control system will function homogeneously with the existing lighting control system,

1.4 SUBMITTALS

Manufacturer submittal package shall include, but not be limited to, the following informational requirements. Submittals that do not contain all the information listed below will not be considered for approval. All information must be provided in both printed and electronic formats. Manufacturer must receive design team approval of complete system (components and operation) prior to beginning manufacture of equipment.

A Product Data Sheets: Data sheets must be provided for all devices required to provide full system functionality.

B Shop Drawings: Submittals shall include detailed drawings showing integration of all required components assembled to accomplish specific system design intent.

1. Outline Drawings: Indicate dimensions, arrangement of components, and clearance and access requirements.

2. Block Diagram: Show interconnections between components specified in this section and devices furnished with interrelated system. Indicate data communication paths and identify networks, data buses, and other devices to be used. Describe characteristics of network and required data communication lines.

3. Wiring Diagrams: Provide drawings which clearly indicate power, signal, and control wiring.

C. Coordination Drawings: Submit evidence that lighting controls are compatible with connected monitoring and control devices and systems specified in other Sections.

1. Show interconnecting signal and control wiring and interfacing devices that support compatibility of inputs and outputs.

2. Provide drawings that shows contractor’s pole name and pole wireless IP mac address.

D. Software and Firmware Operational Documentation:

1. Manuals: Provide software operating and upgrade manuals.

2. Program Software Backup: On magnetic media, USB drive, or compact disc, supply initial commissioning tables complete with data files.

3. Device address list.

E. Field quality-control test reports.

F. Software licenses: Provide names and ownership certifications of all software required by and installed for operation and programming of digital and analog devices.

G. Operation Data: Provide “Sequence of Operations” for established lighting scenes including all normal and emergency modes of operation.

H. Warranty: Specify warranty for all hardware and software elements covered in this Section.

1.5 QUALITY ASSURANCE
A. Electrical Components, Devices, and Accessories: All Components must be listed and labeled by a recognized testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Factory Assembly: All relays, controllers, enclosures, switch stations, photo sensors, occupancy sensors and miscellaneous components shall be factory assembled and tested. All system components shall arrive at the job site completely pre-wired and ready for installation, requiring only the connection of lighting circuits, control circuits, and network terminations. Systems that require field assembly shall not be acceptable.

C. Component Testing: All system components and assemblies shall be individually tested prior to assembly. Once assembled, all finished products shall be tested for proper operation of all control functions per specifications prior to shipment.

D. NEC Compliance: All system components shall comply with all applicable sections of the National Electrical Code (NEC) as required.

E. UL Approval: All applicable equipment shall be tested to and listed under UL standard 508 and/or UL 916 and shall bare labels to indicate compliance.

F. FCC Emissions: All applicable equipment shall comply with FCC emissions standards specified in Part 15, subpart B.

G. Title 24: All applicable system components and the system as a whole shall be certified as complying with Title 24 requirements.

1.6 WARRANTY

A. Special Warranty: Manufacturer’s standard form in which manufacturer agrees to repair or replace components of lighting controls that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Failure of software input/output to execute switching or dimming commands.
   b. Failures of hardware to execute switching or dimming commands.

2. Warranty Period: One year from date of Substantial Completion.

1.7 SOFTWARE SERVICE AGREEMENT

A. Technical Support: Provide remote software support for one year (requires system internet access) from date of Substantial Completion.

B. Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available with one year from date of Substantial Completion. Upgrade shall include new or revised licenses for use of the software.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Exergy Controls, LLC

2. Approved Equal
2.2 SYSTEM REQUIREMENTS

A. Performance Requirements: Individually addressable devices are operated via digital signals transmitted and received through a two-wire DALI-based network and/or a wireless mesh network. Network control is achieved via wired Ethernet connection to the Internet (requiring no extra gateway or translator equipment aside from a CAT5 cable) and/or ZigBee transceiver – both communication technologies integrated into each Digital Control Cabinet. System shall support simultaneous wired and wireless bidirectional communication between Digital Control Cabinet and each wired/wireless device. The system shall therefore be capable of controlling both interior and exterior lighting fixtures in a cost-effective manner.

B. Systems that do not provide both indoor and outdoor lighting control from a single control cabinet, shall not meet requirements.

C. Summary of required system features. System shall:
   • Be based on the international DALI standard, the ZigBee wireless mesh network standard, and the ubiquitous Ethernet communication standard.
   • All wireless components shall operate at the internationally-unlicensed 2.4GHz frequency. Wireless systems utilizing the 900 MHz frequency range are not acceptable.
   • Consist of one or more digital control cabinets that act as base stations for the DALI and wireless network
   • Provide a digital control cabinet to be mounted indoors with an Internet connection via a 10/100 Base-T Ethernet line that allows remote monitoring and control of the entire system without requiring a dedicated telephone line to the system.
   • Provide individually-addressable, bi-directional communication between each control device in the system. Controllers and ballasts shall respond appropriately to status queries.
   • Support grouping of ballasts into as many as 16 different groups per DALI bus.
   • Support up to 16 different preset scenes per DALI ballast.
   • Utilize industry-standard 256-bit AES encryption for Ethernet communication and 128-bit AES encryption for wireless communication
   • Come standard with PC-based control software allowing users to control and monitor the system at no additional cost. System operational history (energy used) shall be logged and be retrievable via software so performance can be measured.
   • Provide a robust scheduling system based on an astronomical time clock and/or photocell allowing individual fixture control
   • Come with a no-additional-cost 1-year support contract. Extended yearly support available at competitive rates

2.3 CONTROL BASE STATION

A. The system is controlled via a network of Digital Control Cabinets. The control cabinet(s) provides the base station for the wireless network as well a wired Ethernet connection for communication with any Internet-enabled device. Any number of Digital Control Cabinets may be added to the system as needed.

Each control cabinet shall be capable of providing four wired DALI busses as well as providing a wireless base station for the network.
2.4 MATERIALS

Electrical contractor shall provide and install a complete Digital System (Control Cabinets, Switches, Sensors and all ancillary devices) of the types and quantities shown on the drawings and specified herein to complete a comprehensive and fully functioning system to meet the design intent.

A. Digital Control Cabinet:

Base station for simultaneous wired and wireless digital communication between fixtures, devices, other system Digital Control Cabinets and the Internet

1. Hybrid system connectivity
   a. Multiple DALI networks can be linked together using wireless ZigBee or Ethernet communication
   b. Seamless communication between DALI networks
   c. Mesh networked wireless digital communications
   d. Allows integration of multiple control cabinets into one unified system
   e. Control cabinet can be used as an independent element or multiple control cabinets can be combined into a robust network with Ethernet or wireless connectivity between nodes.
   f. Supported external communication protocols including Internet standards such as XML, SOAP, http, plus RS-232 and others.

2. Wired communication
   a. Each control cabinet supports up to 4 DALI digital control busses, with up to 64 fixtures (50 fixtures recommended to allow for future expansion) on each bus.
   b. Up to 2 programmable-function dry-contact inputs per cabinet
   c. 128-bit hardware-assisted AES encryption for all wireless traffic
   d. Makes full use of a Local Area Network (LAN) connection to provide wired connectivity between control cabinets
   e. Autosensing 10/100 Base-T LAN and Internet connectivity directly into cabinet

3. Comprehensive web server interface for configuration of network parameters

   Two externally-visible ports forwarded to each XRG-1000 Digital Control Cabinet are required for Internet-based system monitoring, control, data logging, and remote troubleshooting features. Local port 80 and local port 2727 must be made externally accessible for each Digital Control Cabinet in the system.

   Software-based control is considered an optional system feature and will not function without providing Internet access (by others) and open ports as required.

4. Automatic network discovery of peer cabinets on LAN

5. Wireless communication
   a. IEEE 802.15.4-based standard
   b. Supports up to 250 wireless devices per wireless network. A virtually unlimited number of wireless networks can be combined into a unified system using Ethernet connections.
   c. Spread spectrum frequency agile wireless communication
   d. Secure bi-directional wireless mesh network
   e. Cellular-technology based communication systems are not acceptable.

6. Maintenance, monitoring, control, and remote access
   a. System shall not rely on the continuous use and proper operation of an on-site PC (personal computer) server, blade or rack-mounted server, or other “PC-like”
solutions for basic system operation. All on-site lighting control hardware including the base station shall be built using rugged embedded computer equipment. If IT issues require it, a noncritical PC may be provided to facilitate cross-subnet Intranet communication.

b. Allows remote troubleshooting by authorized manufacturer personnel to review system operation and aid in commissioning activities

c. Real-Time System Status: True two-way communication between cabinet, ballasts and all devices allows current status of all components and knowledge of any device failures.

d. Generation of work-orders and/or emails to the same effect can be generated by the system as problems are detected.

7. Certifications

a. All control components meet or exceed Title 24 efficiency standards and are listed with the California Energy Commission, where appropriate

8. Construction:

a. Each lighting control panel shall be manufactured of continuously welded steel

1) 16 GA for housing and covers

2) 18 GA or thicker for all internal (non-structural) covers/elements.

b. Finish: Control Cabinets shall be primed and painted with a powder coat finish. Unpainted or galvanized enclosures are not acceptable.

c. Computer circuitry fully enclosed in tamper-resistant compartment with 16 GA steel cover

d. Power Supply: Listed Dual 120/277 VAC, 60Hz, 40VA MAX Class II transformer

e. Connections: All connections shall be made to clearly and permanently labeled termination points.

9. Computer Hardware: Digital circuit design will incorporate a motherboard capable of:

a. Providing back-up storage of ballast and device settings for all elements supported by its control circuits

b. Coordinating communication between all internal and external digital circuits comprising the complete system

c. Incorporating removable circuit cards providing

1) 1 to 4 digital communication busses, providing expansion as needed

2) Wireless communication via 2.4GHz ZigBee protocol

3) Additional slot for future expansion or technological improvements

B. Lighting Control Software:
Powerful post-installation data logging and system support

1. Individual user control via simple-to-use Windows taskbar icon

2. Comprehensive system control and monitoring for building managers

3. Ability to change settings and light levels on the fly

4. Track ballast and lamp life down to the minute to take advantage of warranties

5. Track history of power usage with detail down to a single fixture

6. Integrated Demand Response over the internet

7. Flexibility to set schedules base on what a user wants

8. Create maintenance reports automatically and email someone daily/weekly/monthly…

Two externally-visible ports forwarded to each XRG-1000 Digital Control Cabinet are required for Internet-based system monitoring, control, data logging, and remote troubleshooting features. Local port 80 and local port 2727 must be made externally accessible for each Digital Control Cabinet in the system.
Software-based control is considered an optional system feature and will not function without providing Internet access (by others) and open ports as required.

Indoor only controls to be provided where applicable:

C. Occupancy sensor
   2. 450, 1000, and 2000 square foot coverage options, with 180° or 360° patterns
   3. Powered by direct connection to DALI bus
      a. No power pack required
   4. 4.5" Diameter, 1.5" high for ceiling mount sensors; standard decora-style form factor for wall sensors.
   5. Ceiling or wall mountable
   6. Supports sensitivity and time delay adjustment

D. Photo sensor
   1. Robust light level input options from 1FC to 10000 FC
   2. Direct connection to the DALI bus. No additional wiring required.
   3. Can control up to 64 fixtures per photocell
   4. Interchangeable lens covers to support any environmental conditions
   5. Low-profile design, approx. 1" diameter, 2" tall with lens

E. 5-button Wall switch
   1. The 5-button switch is made up of two primary parts:
      a. Cover plate and backbox containing the control circuitry
      b. Two wires for connection to a DALI bus
   2. Simple to label and relabel with protective plastic cover
   3. Screwless cover
   4. Designed for installation into a single-gang box
   5. Dimensions: 2.75" x 4.5" x .94" (69.8mm x 114.3mm x 23.9mm)
   6. Can call up to 16 different lighting scenes
   7. Button function can be locked-out based on time schedule

F. 5-button Wall switch with raise/lower paddle
   1. Fits conventional decorator switch openings
   2. Simple two-wire connection to a DALI loop.
   3. No extra wiring required
   4. Dimensions: 2.65" x 1.75" x 1.98" (67.1mm x 44.5 mm x 50.3mm) = L x W x D;
      a. Depth in wall = 1.65" (41.9mm)
   5. Designed for installation into a single-gang box with any Decora-style faceplate.
   6. Comes with dim up/dim down functionality and ability to call up to 16 scenes
   7. Elegant look and reliable operation for areas that demand fine-grained adjustment

G. Wireless controls
   1. All wireless controllers come standard with the following features:
      ▪ Communicates via a secure bidirectional wireless link to all other wireless devices at the site, allowing individual control of each fixture, providing seamless 24/7 access to the fixture with the reliability of a wired system
      ▪ 128-bit hardware-assisted AES encryption for all wireless traffic
      ▪ ZigBee IEEE 802.15.4-based open standard at 2.4 GHz
      ▪ Spread-spectrum frequency agile wireless communication for interference-free operation
Supports up to 250 wireless devices per wireless network. A virtually unlimited number of wireless networks can be combined into a unified system using Ethernet connections.

- System shall support an in-pole mounted wireless controller wherein the controller is completely hidden within the pole except for an externally-mounted antenna.
- System shall support an in-fixture mounted wireless controller wherein the controller is completely hidden within the fixture except for an externally-mounted antenna.
- For pole-mounted devices, a trouble-free mounting system designed to slide within standard 4” to 6” (inner diameter) poles is provided. The controller is housed within a damp-location rated extruded aluminum housing. Integral wires make system installation a snap.
- Low profile antenna options mean the system is almost invisible to the naked eye. No externally-visible pole-mounted or fixture-mounted equipment is acceptable with the exception of antennas. Antenna length shall be limited to 3 inches or shorter.
- All wireless controllers shall support up to two integral 0-10V control signal power supplies that do not require an additional or otherwise secondary dimming control module. Systems that require an “add-on” for 0-10V control are not acceptable.
- Photocell control for a given area shall be achieved via a single remotely-mounted photocell that relays brightness information via Ethernet to a Digital Control Cabinet. Systems that require pole-mounted or fixture-mounted photocells are not acceptable.
- All wireless control devices are able to measure the instantaneous current consumption of their loads.
- Open-air wireless range with an optional high-power transmitter at each shall be up to one mile.

2. Available wireless control options include the following:
   - Wirelessly-controlled 0-10V with line voltage switching
     - Designed to be easily mounted in the pole of a parking lot light fixture, providing easy access to existing circuits for retrofit situations.
     - Able to line-voltage switch up to four circuits independent of one another from a single wireless controller, allowing precise control over each head of a multi-head pole.
     - Provides up to two industry standard 0-10VDC outputs to dim any type of fluorescent, HID, LED, and HPS source accepting a 0-10V input. A flexible wiring scheme allows each of the two 0-10V outputs to control one or more fixtures as needed. Simple bi-level or continuous dimming is available from the same wireless device.
     - Provides robust, zero-crossover line voltage switching using all solid-state components for improved switching life. No bulky contactors with life-limited moving parts are used.
   - Wirelessly-controlled Standalone DALI power supply board
     - Provides power to a single DALI digital communications bus with a robust wireless communication front-end.
     - Allows the installation of a DALI control bus in remote locations where home-runs back to an Digital Control Cabinet would be impractical.
     - Supports a complete array of DALI functionality including up to 64 fixtures, 250mA of device load, and bidirectional communication with the larger lighting control network.

PART 3 - EXECUTION

3.1 WIRING INSTALLATION

A. Comply with NECA 1.
3.2 MANUFACTURER’S SERVICES

A. Installation Assistance: During the installation process, the manufacturer shall provide, at no cost, technical support via a toll-free telephone line to the installing contractor or Owner’s representative to answer questions and supply additional information when required.

B. System Start-Up: The system manufacturer shall provide a factory authorized field engineer to the project site after installation has been completed and prior to system energization for the purpose of testing and adjustment of the system. Factory field engineer shall test and verify all system functions and ensure proper operation of the new system components in accordance with the specifications and on-site existing lighting control system. The system manufacturer shall also re-assign and program existing lighting control system such that the complete lighting control system function homogeneously with the existing wireless lighting control system. The installing contractor shall notify the system manufacturer in writing that the system is completely wired and ready to be energized and tested 2 weeks prior to scheduling a field engineer for start-up of the system. Should the field engineer arrive on the job site and find the installation incomplete, the installing contractor shall pay the cost of any future visits by the field engineer required to complete the system start-up.

C. On-Site Programming: During the start-up procedure, the factory field engineer shall provide programming assistance and guidance to the building operating personnel in order to program the systems for initial operation.

D. Instruction: During the start-up procedure, the factory field engineer shall provide training to the building operating personnel in the operation, programming and maintenance of the lighting control system.

3.3 SOFTWARE INSTALLATION

A. Install and program software with initial settings of adjustable values. Make backup copies of software and user-supplied values.

3.4 REMOTE ASSISTANCE

A. Remote Support: The system manufacturer shall provide remote programming assistance (via Internet Access provided by others) for changes to system settings or reconfiguration of spaces for a period of one year from date of substantial completion. This support is intended to assist the owner with minor changes to the facilities operation and does not cover a complete redesign or recommissioning of system operation and/or function.

Two externally-visible ports forwarded to each XRG-1000 Digital Control Cabinet are required for Internet-based system monitoring, control, data logging, and remote troubleshooting features. Local port 80 and local port 2727 must be made externally accessible for each Digital Control Cabinet in the system.

Software-based control is considered an optional system feature and will not function without providing Internet access (by others) and open ports as required.

END OF SECTION
SECTION 265600
EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY
A. This Section includes the following:
1. Exterior luminaires and retrofit luminaires with LEDs and drivers.

1.2 SUBMITTALS
A. Product Data: For each luminaire, arranged in the order of lighting unit designation. Include data on features, accessories, finishes, and the following:
1. Physical description of fixture, including dimensions and verification of indicated parameters.
2. Luminaire dimensions, effective projected area, details of attaching luminaires, accessories, and installation and construction details.
3. Luminaire materials.
4. Lamps.
5. Electrical and energy-efficiency data for drivers including maximum power in watts.
B. Shop Drawings: Anchor-bolt templates keyed to specific poles and certified by manufacturer.
C. Wiring Diagrams: Power, signal, and control wiring.
D. Coordination Drawings: CAD file and PDF drawing with the following information:
   1. Label of each lighting pole,
   2. Motion sensor, exergy control mounting and connection details,
   3. CAD file and PDF drawings drawn to scale, for exterior luminaries.
E. Samples for Verification: For exterior luminaires designated for sample submission in the Exterior Luminaire Schedule.
   1. Lamps: Specified units installed.
   2. Driver: 120-V models of specified driver types.
   3. Finishes: For each finished metal used in support components.
F. Field quality-control test reports. Luminaire shall be tested per IESNA LM 79-08.
G. Operation and Maintenance Data: For luminaires to include in maintenance manuals.
H. Warranties: Special warranties specified in this Section.
I. L80 in hours, when extrapolated for the worse case operating temperature. TM21 report shall be submitted to demonstrate this.
II. Contractor shall perform field verification to ensure the voltage and circuit with one week prior to submittal process.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.


C. Comply with NFPA 70.


G. IESNA LM-80-08 IESNA - Approved Method for Measuring Lumen Maintenance of LED Light Sources.


I. UL 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products

J. OSHA 29CFR1910.7 - luminaires shall be listed by national recognized testing laboratory approved by United Stated Department of Labor, Occupational Safety and Health Administration (OSHA).

1.4 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace luminaires or components of luminaires and lamps that fail in materials or workmanship; corrode; or fade, stain, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.

1. Warranty Period for Luminaires (LEDs and driver): Five years.
   a. Warranty Period for Metal Corrosion: Five years.
   b. Warranty Period for Color Retention: Five years.

1.5 BIDDING PROCEDURE FOR SUBSTITUTIONS

Bidders’ attention is called to the following procedure to be followed in submitting their bids for the Lighting section of the Electrical Work:
A. Bidders wishing to obtain approval on brands other than those specified by name and catalog number on the drawings, shall submit their requests with their proposal during the bidding process. Approval will be in the form of an addendum to the indicating that the additional brand or brands are approved as equal to those specified as far as the requirements of the project are concerned. If the bidders do not elect to obtain prior approval during the time so specified, the owner has no obligation to review or consider any such article after the contract award.

B. If the bidder wishes to substitute fixtures from alternate manufacturers, refer to 2.2, 2.3, and 2.4 of this section of the specifications. Note that the dimensions of visible parts of many fixtures, (for example, the aperture diameters of recessed fixtures) are binding to the bidder and cannot be changed without prior approval by the Engineer.

C. Request for approval shall be accompanied with the name and location of at least one completed project where each proposed substitute has been in operation for a period of at least six (6) months, as well as the names and addresses of the Owner, the Architect and the Engineer of record.

D. Photometric Data: Submit photometric data for all substitute luminaries, including optical performance, rendered by NVLAP approved laboratory developed according to the methods of the Illuminating Engineering Society of North America. Submit electronically, in IESNA LM-63 standard format.

E. Substitutions shall include complete photometric data as outlined in paragraph D above, and point by point calculations for the specific conditions on the project.

F. Working samples of all substitutions: Samples shall be 120 volt with cord and plug attached, and shall include specified LEDs and all modifications necessary to meet the requirements specified in the Contract Documents.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.

2.2 LUMINAIRES, GENERAL

A. Complying with UL 1572, 1598 and listed for installation in wet locations.

B. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.

C. Metal Parts: Free of burrs and sharp corners and edges.

D. Sheet Metal Components: Corrosion-resistant aluminum, unless otherwise indicated. Form and support to prevent warping and sagging.
E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.

F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.

G. Exposed Hardware Material: Stainless steel.

H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

I. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

J. LED Sources
   1. LEDs shall be manufactured by, Nichia, Samsung, LG, Osram, Phillips or Cree.
   2. Lumen output shall not decrease by more than 20% over the minimum operational life of 50,000 hours.
   3. Individual LEDs shall be connected such that a catastrophic loss or the failure of one LED will not result in the loss of the entire luminaire.
   4. LED boards shall be upgradeable and replaceable.
   5. Color shift over 6,000 hours shall be <0.007 change in u’ v’ as demonstrated in IES LM80 report.
   6. Lumen output – minimum initial lumen output of the luminaire shall be as follows for the lumens exiting the luminaire in the 0-90 degree zone - as measured by IESNA Standard LM-79-08 in an accredited lab. Exact tested lumen output shall be clearly noted on the shop drawings.

K. Power Supply and Driver
   1. Driver shall be suitable for full-range dimming. The luminaire shall be capable of continuous dimming without perceivable flicker over a range of 100% to 5% of rated lumen output with a smooth shut off function. Dimming shall be controlled by a 0-10V signal.
   2. Driver disconnect shall be provided where required to comply with codes.
   3. The electronics/power supply enclosure shall be internal to the SSL luminaire and be accessible per UL requirements.
   4. The surge protection which resides within the driver shall protect the luminaire from damage and failure for transient voltages and currents as defined in ANSI/IEEE C64.41 2002 for Location Category A, where failure does not mean a momentary loss of light during the transient event.
   5. Surge Suppression: The luminaire shall include surge protection to withstand high repetition noise and other interference.

L. Thermal Management
   1. The thermal management (of the heat generated by the LEDs) shall be of sufficient capacity to assure proper operation of the luminaire over the expected useful life.
   2. The LED manufacturer’s maximum junction temperature for the expected life shall not be exceeded at the average operating ambient.
3. The LED manufacturer’s maximum junction temperature for the catastrophic failure shall not be exceeded at the maximum operating ambient.
4. The driver manufacturer’s maximum case temperature shall not be exceeded at the maximum operating ambient. Thermal management shall be passive by design. The use of fans or other mechanical devices shall not be allowed.

M. Luminaire

1. Products:
   a. Provide fixture as shown on fixture schedule on Sheet E002.
2. Nominal Luminaire Dimensions: As shown on plans.
3. Lamps: As shown on plans.
4. Driver Types and Features: As indicated on fixture schedule.
5. Lens: As shown on plans.
6. Reflector: As indicated on fixture schedule.
8. IESNA Lateral Distribution Class: III.
9. IESNA Cutoff Category: Cutoff.
10. Luminaire shall be DLC Certified (Design Lights Consortium).

2.3 FACTORY FINISHES

A. Field Painting Finish: Manufacturer's standard prime-coat finish ready for field painting.
B. Finish: Coordinate finish with fixture schedule show on sheet E002.
C. Factory-Painted Finish for Steel Luminaires: Comply with NAAMM's "Metal Finishes Manual for Campus’s Representative and Metal Products" for recommendations for applying and designating finishes.
   1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
   2. Interior Surfaces: Apply one coat of bituminous paint on interior of pole, or otherwise treat to prevent corrosion.
   3. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.
D. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Campus’s Representative and Metal Products" for recommendations for applying and designating finishes.
   1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
   2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20; and seal aluminum surfaces with clear, hard-coat wax.
   3. Class I, Clear Anodic Finish: AA-M32C22A41 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Campus’s representative Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
4. Class I, Color Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Campus’s Representative Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
   a. Color: as specified on fixture schedule on sheet E002.

5. Gold Anodic Finish: AA-M32C22A43 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Campus’s Representative Class I, impregnated color coating 0.018 mm or thicker) complying with AAMA 611.

2.4 SOURCE QUALITY CONTROL

A. Provide services of a qualified, independent testing and inspecting agency to factory test luminaires with drivers and LEDs; certify results for iso footcandle curves, zonal lumen, average and minimum ratios, and electrical and energy-efficiency data for drivers.

B. Factory test fixtures with drivers and LEDs; certify results for iso footcandle curves, zonal lumen, average and minimum ratios, and electrical and energy-efficiency data for ballasts.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install lamps in each fixture.

B. Luminaire Attachment: Fasten to indicated structural supports.

C. Adjust luminaires that require field adjustment or aiming.

D. Provide outdoor rated, self-adhesive, heavy duty, waterproof, fade resistant, self-laminating polyester labels, preprinted with lighting pole identification for all the lighting poles in the project. Coordinate with owner for pole naming convention prior to printing and installation.

3.2 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.3 FIELD QUALITY CONTROL

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Tests and Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IESNA testing guide(s):

1. IESNA LM-5.
2. IESNA LM-50.
3. IESNA LM-52.
4. IESNA LM-64.
5. IESNA LM-72.

C. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

END OF SECTION