CONTRACT FOR DESIGN AND CONSTRUCTION
(GOVERNMENT CODE § 4217.10 ET SEQ.)

THIS CONTRACT is entered into and effective June 15, 2016 ("Contract" or "Agreement"), by and between **SunPower Corporation Systems** ("Designer/Builder") and **San Jose Unified School District** ("District" or "Customer") (individually, a "Party", and collectively, the "Parties").

RECITALS

WHEREAS, District owns and/or operates certain public facilities specifically described as:

	School Site Name	Address
1	Almaden Elementary School	1295 Dentwood Dr., San Jose, CA, 95118
2	Anne Darling Elementary School	333 N. 33rd St., San Jose, CA, 95133
3	Bachrodt Elementary School	102 Sonora Ave., San Jose, CA, 95110
4	Booksin Elementary School	1590 Dry Creek Rd, San Jose, CA, 95125
5	Canoas Elementary School	880 Wren Dr., San Jose, CA, 95125
6	Carson Elementary School	4245 Meg Dr., San Jose, CA, 95136
7	Empire Gardens Elementary School	1060 E. Empire St., San Jose, CA, 95112
8	Galarza Elementary School	1610 Bird Ave., San Jose, CA, 95125
9	Gardner Elementary School	502 Illinois Ave., San Jose, CA, 95125
10	Grant Elementary School	470 Jackson Ave., San Jose, CA, 95112
11	Graystone Elementary School	6982 Shearwater Dr., San Jose, CA, 95120
12	Hacienda Elementary School	1290 Kimberly Dr., San Jose, CA, 95118
13	Horace Mann Elementary School	55 N 7th St., San Jose, CA, 95112
14	Los Alamitos Elementary School	6130 Silberman Dr., San Jose, CA, 95120
15	Lowell Elementary School	625 S 7th St., San Jose, CA, 95112
16	Olinder Elementary School	890 E William St., San Jose, CA, 95116
17	Reed Elementary School	1524 Jacob Ave., San Jose, CA, 95118
18	River Glen Middle School	1088 Broadway Ave., San Jose, CA, 95125
19	Schallenberger Elementary School	1280 Koch Ln, San Jose, CA, 95125
20	Simonds Elementary School	6515 Grapevine Way, San Jose, CA, 95120
21	Terrell Elementary School	3925 Pearl Ave., San Jose, CA, 95136
22	Trace Elementary School	651 Dana Ave., San Jose, CA, 95126
23	Washington Elementary School	100 Oak St., San Jose, CA, 95110
24	Williams Elementary School	1150 Rajkovich Way, San Jose, CA, 95120
25	Willow Glen Elementary School	1425 Lincoln Ave., San Jose, CA, 95125

("Facilities" or "School Site(s)" or "Premises") and District wants to reduce its Facilities' energy costs and improve the Facilities' energy quality/reliability by contracting to procure and to implement certain new and upgraded energy system related equipment and materials; and

WHEREAS, Designer/Builder is a full-service energy services company with the technical capabilities to provide services to the District including, but not limited to, energy and energy system auditing, engineering, design, procurement, construction management, installation, construction, financing, training, monitoring and verification, maintenance, operation, and repair; and

WHEREAS, District desires that Designer/Builder design, install, maintain and operate, and Designer/Builder desires to design, install, maintain and operate, solar systems to be located on the School Sites;

WITNESSETH, that for and in consideration of the mutual covenants herein contained, the Parties hereto agree as follows:

CONTRACT

1. Scope of Contract.

a. The Designer/Builder shall furnish the Services or Work described herein to the District for a total price of the following amounts ("Contract Price"):

ITEM	COST
Solar PV System and data acquisition system at School Sites	$14,686,055
Allowances (See Assumptions, Exhibit "B")	
Increased Labor Cost for Off-Hours Work	$100,000
PG&E ("Utility") Application Fee	$20,000
Utility Upgrades or Additions	$100,000
Site and Road Repair	$100,000
Hazardous Material Handling	$50,000
Re-Roofing	$250,000
ADA allowance not in scope	$100,000
Playground Equipment Removal/Replacement Allowance	$40,000
Tree/Plant Removal/Replacement Allowance, for Trees Not in Scope.	$20,000
Total	**$15,466,055**

b. The Contract Price shall be Designer/Builder's total compensation to perform the following services ("Services" or "Work"). Designer/Builder's performance of all of the Services as further described in this Contract and Exhibits is the "Project," and is general described as follows:

i. **The assessment, engineering, design, permitting, procurement, construction management, installation, construction, of PV systems with Expected Energy Production of six million four hundred sixty five thousand seven hundred and five kilowatt-hours (6,465,705 kWh) of energy in year one of system operation, produced through the following systems:**

Site	System Size (kWdc)	System Type (e.g., Roof-Top, Parking, etc.)	Expected 1st year PV Output (kWh) ("Expected Energy")
Almaden Elementary School	169.65	Shade	293,164
Anne Darling Elementary School	158.06	Rooftop, Shade	267,769
Bachrodt Elementary School	143.55	Shade	240,353
Booksin Elementary School	156.60	Shade	234,977
Canoas Elementary School	169.65	Shade	294,246
Carson Elementary School	117.45	Shade	198,946
Empire Gardens Elementary School	124.11	Rooftop, Shade	211,345

Galarza Elementary School	221.85	Shade	372,969
Gardner Elementary School	152.86	Rooftop, Shade	249,319
Grant Elementary School	156.60	Shade	260,030
Graystone Elementary School	156.60	Parking, Shade	271,518
Hacienda Elementary School	143.55	Shade	246,233
Horace Mann Elementary School	176.58	Rooftop	249,686
Los Alamitos Elementary School	156.60	Shade	269,889
Lowell Elementary School	125.57	Rooftop	208,585
Olinder Elementary School	182.70	Shade	304,064
Reed Elementary School	117.45	Shade	190,067
River Glen Middle School	154.13	Rooftop, Shade	260,409
Schallenberger Elementary School	130.50	Shade	226,883
Simonds Elementary School	156.78	Rooftop, Shade	266,701
Terrell Elementary School	130.50	Shade	222,364
Trace Elementary School	169.65	Shade	276,633
Washington Elementary School	210.86	Rooftop, Shade	351,512
Williams Elementary School	130.50	Shade	219,140
Willow Glen Elementary School	169.65	Shade	278,902
TOTAL	**3,882.00**		**6,465,705**

ii. A data acquisition system with monitoring capability with password-protected internet access via SunPowerMonitor.com

2. Work shall be completed within the time specified **in Exhibit "C"** ("Contract Time") from the date specified in the District's Notice(s) to Proceed, as indicated in the Schedule in **Exhibit "C,"** attached hereto and incorporated herein by this reference.

3. **Liquidated Damages for Non-Production**. Designer/Builder agrees that if the Work is not completed within the Contract Time and/or pursuant to the Project schedule, construction schedule, or project milestones developed pursuant to provisions of the Contract, including the Schedule in **Exhibit "C,"** as may be amended in accordance with the terms of this Contract, it is understood, acknowledged, and agreed that the District will suffer damage that is not capable of being calculated including, without limitation, damage related to non-production of energy (inclusive of the impacts of delays of solar system performance for meters utilizing the PG&E A6 Rate Tariff) and disruption of use of the Site. Pursuant to Government Code section 53069.85, Designer/Builder shall forfeit to the District, as fixed and liquidated damages for these incalculable damages, the sum of **Two Thousand Dollars ($2,000)** per MWdc per day for each and every calendar day of delay beyond the date of the "Designer/Builder Requests Permission to Operate Letter From Utility" specified in **Exhibit "C"** for each Site, provided that Designer/Builder's submission of a Request for Permission to Operate Letter From Uility shall not be effective under this paragraph unless the Project or portion thereof is presently in the condition reasonably necessary to obtain the Permission to Operate Letter From Uility. Notwithstanding any other provision of the Contract, the maximum liability for liquidated damages as provided herein shall not exceed an amount equal to fifty percent (50%) of the Contract Price.

4. Designer/Builder shall prepare a detailed schedule of values for all of the Work that must include quantities and prices of items by site aggregating the Contract Price and must subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. This schedule of values must be approved by the District prior to it being used as a basis for payment.

5. The Designer/Builder shall not commence the Work under this Contract until the Designer/Builder has submitted and the District has approved the endorsement(s) of insurance required under the Terms and Conditions and the District has issued a Notice(s) to Proceed. The Designer/Builder shall not commence the procurement, installation, and construction portions of the Work under this Contract until the Designer/Builder has submitted and the District has approved the performance bond and the payment (labor

and material) bond(s).

6. The District is seeking federal funds and/or federal bond authority to fund the Project and is performing its compliance with the California Environmental Quality Act ("CEQA"). The Parties acknowledge that construction of the Project shall not commence until the District's Board of Education has approved the Project as satisfying the requirements under CEQA. Therefore, the District reserves its right to suspend and/or terminate the Project as allowable herein if federal funds and/or federal bond authority do not equal or exceed the amounts that the District expects and/or the District's Board of Education does not approve the Project under CEQA and/or exempts the Project from CEQA. The District's issuance of Notice(s) to Proceed shall be conditioned upon satisfaction of this aforementioned condition precedent. See **Exhibit "C"** for information regarding the Project's Schedule and the intended timing of the District's issuance of a Notice(s) to Proceed.

7. This Contract incorporates by this reference the Terms and Conditions attached hereto. The Designer/Builder, by executing this Contract, agrees to comply with all the Terms and Conditions.

8. The Contract includes only the following documents ("Contract Documents"), as indicated:

X	Terms and Conditions to Contract	X	Exhibit "A" (Scope of Work)
X	Noncollusion Declaration	X	Exhibit "B" [Designer/Builder Assumptions]
X	Prevailing Wage Certification	X	Exhibit "C" (Detailed Construction Schedule or "Project Schedule" for Each Site)
X	Workers' Compensation Certification	X	Exhibit "D" (Contract Price Breakdown Payment Schedule)
X	Criminal Background Investigation Certification	X	Exhibit "E" (Schedule of Values)
X	Drug-Free Workplace / Tobacco-Free Environment Certification	X	Exhibit "F" [RESERVED]
X	Asbestos & Other Hazardous Materials Certification	X	Exhibit "G" [RESERVED]
X	Lead-Product(s) Certification	X	Exhibit "H" (Warranties)
X	Insurance Certificates and Endorsements	X	Exhibit "J" (Additional Contract – Documents)
X	Performance Bond (District's Form)		
X	Payment Bond (District's Form)		

9. Designer/Builder hereby acknowledges that the Division of the State Architect ("DSA") and the District's DSA Project Inspector(s) ("Inspector" or "IOR") have authority to approve and/or stop Work if the Designer/Builder's Work does not comply with the requirements of the Contract, Title 24 of the California Code of Regulations, and all applicable laws. The Designer/Builder shall be liable for any delay caused and extra work required by its non-compliant Work. Designer/Builder shall not be liable for delay to the extent caused by the District.

10. Inspection and acceptance of the Work shall be performed by the District's Project Inspector(s) with whom the District will contract and the District's staff or construction manager. District shall ensure that the Project Inspector(s) reasonably perform their services in a timely manner to avoid unreasonable delay in the Project.

11. Designer/Builder recognizes that the District has obtained the services of a construction manager for this Project. The construction manager is authorized to give Designer/Builder Services authorizations, and issue written approvals and notices on behalf of District. The District reserves the right to designate a different construction manager at any time. Any task, including, but not limited to, reviews or approvals that the District may perform pursuant to this Contract may be performed by the construction manager, unless that task indicates it shall be performed by the governing board of the District.

12. Unless otherwise indicated herein for a longer period of time, the Designer/Builder shall guarantee all labor and material used in the performance of this Contract for a period of one year from the date of the District's written approval of the Work.

13. Designer/Builder shall perform all Work related to its design to the standard of care of professional engineers performing similar work for California school districts in or around the same geographic area of the District, and all Work related to its installation and construction to the standard of care of contractors performing similar work for California school districts in or around the same geographic area of the District.

14. By signing this Contract, Designer/Builder certifies, under penalty of perjury, that all the information provided in the Contract is true, complete, and correct, to the best of its knowledge.

15. Information regarding Designer/Builder:

Type of Business Entity:
____ Individual
____ Sole Proprietorship
____ Partnership
____ Limited Partnership
__X__ Corporation
____ Limited Liability Company
____ Other: _____

Fed. ID (FEIN) #: 20-8245962
Employer Identification and/or Social Security Number
NOTE: United States Code, title 26, sections 6041 and 6109 require non-corporate recipients of $600 or more to furnish their taxpayer identification number to the payer. The United States Code also provides that a penalty may be imposed for failure to furnish the taxpayer identification number. In order to comply with these rules, the District requires your federal tax identification number or Social Security number, whichever is applicable.

ACCEPTED AND AGREED on the date indicated below:

Dated: June 15, 2016

San Jose Unified School District

Signature: Steve Adamo
Steve Adamo for
Print Name: Stephen McMahon
Print Title: CBO
Address: _____
Telephone: _____
E-Mail: _____

Dated: June 15, 2016

SunPower Corporation Systems

Signature: Bruce Dickinson
Print Name: BRUCE DICKINSON
Print Title: Director, Public & Education Sales
Cal. Contractor License No.: 890895
Civil Engineer License: _____
Address: 1414 Harbour Way S.
Richmond CA 94804
Telephone: 510.260.8200
E-Mail: bruce.dickinson@sunpowercorp.com

Notice. Any notice required or permitted to be given under this Contract shall be deemed to have been given, served, and received if given in writing and either personally delivered or sent by overnight delivery service addressed to the above individuals. Any notice personally given shall be effective upon receipt. Any notice sent by overnight delivery service shall be effective the business day next following delivery thereof to the overnight delivery service.

TERMS AND CONDITIONS TO CONTRACT

1. **NOTICE(S) TO PROCEED:** District shall provide Notice(s) to Proceed to Designer/Builder pursuant to the Contract at which time Designer/Builder shall proceed with the Work. The District reserves the right to issue multiple Notices to Proceed related to the Project, either by scope and/or by Site.

2. **SITE EXAMINATION:**

   2.1. The District will provide all information available to it to the extent the information relates to Designer/Builder's scope of work. This information may include, without limitation, the following

      2.1.1. Physical characteristics;

      2.1.2. Legal limitations and utility locations for the Project site(s);

      2.1.3. Written legal description(s) of the Project site(s);

      2.1.4. Grades and lines of streets, alleys, pavements, and adjoining property and structures;

      2.1.5. Adjacent drainage;

      2.1.6. Rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, and boundaries and contours of the Project site(s);

      2.1.7. Locations, dimensions and necessary data with respect to existing buildings, other improvements and trees;

      2.1.8. Information concerning available utility services and lines, mechanical and other services, both public and private, above and below grade, including inverts and depths;

      2.1.9. Surveys, reports, as-built drawings;

      2.1.10. Subsoil data, chemical data, and other data logs of borings;

      2.1.11. DSA Numbers for all buildings, as necessary to obtain DSA approval of plans to be submitted by Designer/Builder under the contracted scope of work.

      2.1.12. The location and physical characteristics of existing utility lines, telephone, water, sewage, storm drains and other lines on or around or relating to the Project.

   2.2. Designer/Builder will Visually Verified the existence of the conditions identified by this information to the extent determinable by the documents provided by the District ("Site Examination"). Designer/Builder will rely on its Site Examination in clarifying its scope of Work or Services.

   2.3. "Visually Verified" (or "Verify") means confirmed by diligent physical inspection without any destructive or invasive action.

   2.4. If there are any variations to the scope of Work or Services resulting from conditions not determinable from such Visually Verified information, the Designer/Builder shall submit to the District a potential change order ("PCO") based on those conditions with a detailed explanation based on the current Scope of Work and how it requires a revision based on Designer/Builder's Visual Verification and the Site Examination.

   2.5. No claim for allowance of time or money will be allowed as to any other undiscovered condition on the Site that could and should have been discovered through these site examination activities. Notwithstanding the aforementioned, should the Designer/Builder discover any latent or unknown conditions, which will materially affect the performance of the Work hereunder, Designer/Builder shall immediately inform the District of such fact in writing and shall not proceed until written instructions are received from the District. This written notice may take the form of a PCO.

3. **EQUIPMENT AND LABOR:** The Designer/Builder shall furnish all tools, equipment, apparatus, facilities, transportation, labor, and material necessary to furnish the Services herein described, the Services to be

performed at such times and places as directed by and subject to the approval of the authorized District representative indicated in the Work specifications attached hereto.

4. **SUBCONTRACTORS:** Subcontractors, if any, engaged by the Designer/Builder for any Service or Work under this Contract shall be subject to the approval of the District, which shall not be unreasonably withheld. Designer/Builder agrees to bind every subcontractor by the terms of the Contract as far as such terms are applicable to subcontractor's work, including, without limitation, all indemnification, insurance, bond, and warranty requirements. If Designer/Builder shall subcontract any part of this Contract, Designer/Builder shall be fully responsible to the District for acts and omissions of its subcontractor and of persons either directly or indirectly employed by itself. Nothing contained in the Contract shall create any contractual relations between any subcontractor and the District.

5. **TERMINATION / SUSPENSION:**

5.1. If Designer/Builder fails to perform Designer/Builder's material duties as required by this Contract, or if Designer/Builder fails to fulfill in a timely and professional manner Designer/Builder's material obligations under this Contract, or if Designer/Builder shall violate any of the material terms or provisions of this Contract, and any such failure is not excused by the terms of this Contract, the District shall have the right to terminate this Contract, in whole or in part, unless either

5.1.1. Such failures and violations are caused by the District or

5.1.2. Such failures and violations are cured by Design/Builder to the District's reasonable satisfaction within twenty-one (21) days of written notice by the District thereof to the Designer/Builder; provided, that if a cure cannot be effected within such fourteen (14) days and Design/Builder has commenced a cure within such period of time and continues diligent pursuit of such cure, the Design/Builder shall have a reasonable period to complete such cure to the District's reasonable satisfaction.

In the event of a termination pursuant to this subdivision, Designer/Builder may invoice District for all Services performed until the notice of termination, but District shall have the right to withhold payment and deduct any amounts equal to the District's costs because of Designer/Builder's actions, errors, or omissions that caused the District to terminate the Designer/Builder.

5.2. District shall have the right in its sole discretion to terminate the Contract, in whole or in part, for its own convenience. In the event of a termination for convenience, Designer/Builder may invoice District and District shall pay all undisputed invoice(s) for recoverable costs for Work performed until the date of termination that Designer/Builder cannot mitigate with diligent efforts. In the event that District terminates this Contract as provided in this subsection and there are no known potential claims related to Designer/Builder's Work, District shall, within twenty-one (21) days after the date of termination, release the Performance and Payment Bonds, although the Surety on Performance and Payment Bonds shall remain liable as indicated herein for all Designer/Builder's Work performed until the date of termination.

5.3. Except as indicated in this Article, termination shall have no effect upon any of the rights and obligations of the Parties arising out of any transaction occurring prior to the effective date of such termination.

5.4. The Designer/Builder has the right to terminate this Contract if the District does not fulfill its material obligations under this Contract unless either

5.5. Such failures and violations are caused by the Designer/Builder or

5.5.1. Such failures and violations are cured by District within twenty-one (21) days of written notice by the Designer/Builder thereof to the District; provided, that if a cure cannot be effected within twenty-one (21) days and District has commenced a cure within such period of time and continues diligent pursuit of such cure, the District shall have a reasonable period to complete such cure.

Designer/Builder may invoice District and District shall pay all undisputed invoice(s) for Services performed until the Designer/Builder's notice of termination.

5.6. The District has the right to suspend, in whole or in part, the Project. If the District suspends the Project for more than one hundred and twenty (120) consecutive days, the Designer/Builder shall be compensated for Services performed prior to notice of that suspension. When the Project is resumed, the Project Schedule shall be adjusted and the Designer/Builder's compensation shall be equitably adjusted to provide for expenses incurred associated with the suspension and in the resumption of the Designer/Builder's Services. If the District suspends the Project for more than two (2) years, the Designer/Builder may terminate this Contract by giving written notice.

6. SAFETY AND SECURITY: Designer/Builder is responsible for maintaining safety in the performance of this Contract. Designer/Builder shall be responsible to ascertain from the District the rules and regulations pertaining to safety, security, and driving on school grounds, particularly when children are present, as per **Exhibit "J."** In the event that the aforementioned rules conflict with the terms of this Contract, the terms of this Contract shall prevail.

7. CHANGE IN SCOPE OF WORK:

7.1. There shall be no change whatsoever in the Services or Work, or any architectural enhancements, without an executed Change Order or Construction Change Directive as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Services or Work except pursuant to a Change Order or Construction Change Directive. Except as provided elsewhere in this Contract, no extension of time for performance of the Work shall be allowed hereunder unless duly adjusted in writing in the Change Order. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Work or Services.

7.2. Designer/Builder shall perform all Work that has been authorized by a fully executed Change Order in the timeframe set forth therein.

7.3. Should any Change Order result in an increase in the Contract Price, the cost of that Change Order shall be agreed to in the Change Order. Except as provided elsewhere in this Contract, if Designer/Builder proceeds with any change in Work without a Change Order, Designer/Builder waives any claim of additional compensation or time for that additional work.

7.4. Designer/Builder understands, acknowledges, and agrees that the reason for District authorization is so that District may have an opportunity to analyze the Work and decide whether the District shall proceed with the Change Order or alter the Project so that a change in Work becomes unnecessary.

7.5. **Change Orders.** A Change Order is a written instrument prepared and issued by the District and signed by the District (as authorized by the District's governing board) and the Designer/Builder, and approved by the Project Inspector (if necessary) and DSA (if necessary), stating their agreement regarding all of the following:

7.5.1. A description of a change in the Work or Services;

7.5.2. The amount of the adjustment in the Contract Price, if any; and

7.5.3. The extent of the adjustment in the Contract Time, if any.

("Change Order")

7.6. **Price Request.** A Price Request ("PR") is a written request prepared by the District requesting the Designer/Builder to submit to the District an estimate of the effect of a proposed change in the Work on the Contract Price and the Contract Time. A Price Request shall contain adequate information, including any necessary Work or Services, to enable Designer/Builder to provide the cost breakdowns required herein.

7.7. **Proposed Change Order.** A Proposed Change Order ("PCO") is a written request prepared by the Designer/Builder requesting that the District issue a Change Order based upon a proposed change to the Work or Services. A PCO shall include breakdowns pursuant to the revisions herein to validate any change in Contract Price.

7.7.1. Changes in Time. A PCO shall also include any changes in time required to complete the

Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in the Contract Documents. If Designer/Builder fails to request a time extension in a PCO, then the Designer/Builder is thereafter precluded from requesting time and/or claiming a delay, except as otherwise provided in this Contract.

7.7.2. Unknown and/or Unforeseen Conditions. If Designer/Builder submits a PCO requesting an increase in Contract Price and/or Contract Time that is based at least partially on Designer/Builder's assertion that Designer/Builder has encountered condition(s) on the Project that it could not have discovered in performing its "Site Examination" duties herein, then Designer/Builder shall base the PCO on visually verifiable information that demonstrates that the hitherto unknown and/or unforeseen condition(s) actually exist. If not, the District may deny the PCO and the Designer/Builder shall complete the Project without any increase in Contract Price and/or Contract Time based on that PCO.

7.8. **Format for Proposed Change Order.** The following format shall be used as applicable by the District and the Designer/Builder (e.g. Change Orders, PCO's) to communicate proposed additions and deductions to the Contract, supported by attached documentation.

	SUBCONTRACTOR PERFORMED WORK	ADD	DEDUCT
(a)	**Material** (attach itemized quantity and unit cost plus sales tax)		
(b)	**Add Labor** (attach itemized hours and rates, fully encumbered)		
(c)	**Add Equipment** (attach suppliers' invoice)		
(d)	**SUBTOTAL**		
(e)	**Add Subcontractor's overhead and profit,** not to exceed ten percent (10%) of **item (d)**		
(f)	**SUBTOTAL**		
(g)	**Add Designer/Builder's fee, overhead, profit & general conditions**, not to exceed ten percent (10.0%) of the sum of **item (f)**		
(h)	**SUBTOTAL**		
(i)	**Add Bond and Insurance,** not to exceed one and one half percent (1.5%) of **Item (h)**		
(j)	**TOTAL**		
(k)	**Time**	**_____ Days**	

	DESIGNER/BUILDER PERFORMED WORK	ADD	DEDUCT
(a)	**Material** (attach itemized quantity and unit cost plus sales tax)		
(b)	**Add Labor** (attach itemized hours and rates, fully encumbered)		
(c)	**Add Equipment** (attach suppliers' invoice)		
(d)	**SUBTOTAL**		
(e)	**Add Designer/Builder's fee, overhead, profit & general conditions**, not to exceed ten percent (10.0%) of the sum of **item (d)**		
(f)	**SUBTOTAL**		
(i)	**Add Bond and Insurance,** not to exceed one and one half percent (1.5%) of **item (f)**		
(j)	**TOTAL**		
(k)	**Time**	**_____ Days**	

7.9. **Change Order Certification.** All Change Orders and PCOs must include the following certification by

the Designer/Builder: *The undersigned Designer/Builder approves the foregoing as to the changes, if any, and the Contract Price specified for each item and as to the extension of time allowed, if any, for Project Completion, and agrees to furnish all labor, materials, and service, and perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of sums which have no basis in fact or which Designer/Builder knows are false are at the sole risk of Designer/Builder and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq. It is understood that the changes herein to the Contract shall only be effective when approved by District staff with delegated authority, and will be ratified by the governing board of the District. It is expressly understood that the value of the extra Work or changes expressly includes any and all of the Designer/Builder's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Any costs, expenses, damages, or time extensions not included are deemed waived.*

7.10. **Determination of Change Order Cost.** The amount of the increase or decrease in the Contract Price from a Change Order, if any, shall be determined in one or more of the following ways as applicable to a specific situation and at the District's discretion:

7.10.1. District acceptance of a PCO;

7.10.2. By amounts contained in Designer/Builder's schedule of values, if applicable;

7.10.3. By agreement between District and Designer/Builder.

7.11. **Construction Change Directives / Unilateral Change Orders.** A Construction Change Directive (or Unilateral Change Order) is a written order prepared and issued by the District and signed by the District, directing a change in the Work. The District may as provided by law, by Construction Change Directive and without invalidating the Contract, order changes in the Work consisting of additions, deletions, or other revisions. The District may only issue a Construction Change Directive in the absence of agreement on the terms of a Change Order, and the Designer/Builder shall track its time and material costs that it may use as the basis for dispute or a claim pursuant to the "Disputes" provisions herein.

8. TRENCH SHORING: If this Contract is in excess of Twenty Five Thousand Dollars ($25,000) and is for the excavation of any trench deeper than five (5) feet, Designer/Builder must submit and obtain District acceptance and approval, in advance of excavation, of 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 the plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

9. EXCAVATIONS OVER FOUR FEET: If this Contract includes excavations over four (4) feet, Designer/Builder shall promptly, and before the following conditions are disturbed, notify the District, in writing, of any: (1) Material that the Designer/Builder believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; (2) Subsurface or latent physical conditions at the site differing from those indicated; or (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. 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 Designer/Builder's cost of, and/or the time required for, performance of any part of the Work shall issue a change order under the procedures described in the Contract. In the event that a dispute arises between the District and the Designer/Builder whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Designer/Builder's cost of, or time required for, performance of any part of the work, the Designer/Builder shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all Work to be performed under the contract. The Designer/Builder shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the Parties.

10. LEAD-BASED PAINT: Pursuant to the Lead-Safe Schools Protection Act (Education Code Section 32240 et seq.)

and other applicable law, no lead-based paint, lead plumbing and solders, or other potential sources of lead contamination shall be utilized on this Project, and only trained and state-certified contractors, inspectors and workers shall undertake any action to abate existing risk factors for lead. Designer/Builder must execute the Lead-Based Paint Certification, if applicable.

11. **WORKERS:** Designer/Builder shall at all times enforce strict discipline and good order among its employees and the employees of its subcontractors and shall not employ or work any unfit person or anyone not skilled in work assigned to him or her. Any person in the employ of the Designer/Builder or a subcontractor whom the District may deem incompetent or unfit shall be dismissed from the Site and shall not again be employed at Site without written consent from the District.

12. **CORRECTION OF ERRORS:** Designer/Builder shall perform, at its own cost and expense and without reimbursement from the District, any work necessary to correct errors or omissions which are caused by the Designer/Builder's failure to comply with the Contract requirements and the standard of care required herein.

13. **SUBSTITUTIONS:** No substitutions of material from those specified in the approved final design shall be made without the prior written approval of the District, which the District shall complete as diligently as possible and which the District shall not reasonably withhold. Notwithstanding the above, all requests for substitution shall be deemed granted if not objected to within fourteen (14) calendar days.

14. **DESIGNER/BUILDER SUPERVISION:** Designer/Builder shall provide competent supervision of personnel employed on the job Site, use of equipment, and quality of workmanship.

15. **CLEAN UP:** Debris shall be removed from the Premises by the Designer/Builder. The Site shall be in order at all times when work is not actually being performed and shall be maintained in a reasonably clean condition.

16. **ACCESS TO WORK:** District shall provide to Designer/Builder uninterrupted access to the Premises and to a reasonably sufficient staging area, as further detailed in **Exhibit "J**." District representatives shall at all times have access to the Work wherever it is in preparation or in progress. Designer/Builder shall provide safe and proper facilities for such access. Without diminishing the District's obligation to provide access as required herein, the Parties acknowledge that Designer/Builder intends to install the Generating Facilities at the Sites in accordance with the Project Schedule and within the parameters as further detailed in **Exhibit "J"** and that the Contract Price and Contract Time are based on those parameters.

17. **PROTECTION OF WORK AND PROPERTY:** The Designer/Builder shall erect and properly maintain at all times, as required by conditions and progress of the Work, all necessary safeguards, signs, barriers, lights, and security persons for protection of workers and the public, and shall post danger signs warning against hazards created by the Work. In an emergency affecting life and safety of life or of Work or of adjoining property, Designer/Builder, without special instruction or authorization from District, is permitted to act at his discretion to prevent such threatened loss or injury.

18. **OTHER CONTRACTS/CONTRACTORS**: District reserves the right to let other contracts, and/or to perform work with its own forces, in connection with other work at the School Sites. Designer/Builder shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly coordinate and connect Designer/Builder's Work with the work of other contractors. In addition to Designer/Builder's obligation to protect its own Work, Designer/Builder shall protect the work of any other contractor that Designer/Builder encounters while working on the Project. Nothing herein contained shall be interpreted as granting to Designer/Builder exclusive occupancy of the Site, the Premises, or of the Project. Designer/Builder shall not cause any unnecessary hindrance or delay to the use and/or school operation(s) of the Premises and/or to District or any other contractor working on the Project. If simultaneous execution of any contract or school operation is likely to cause interference with performance of Designer/Builder's Contract, Designer/Builder shall coordinate with those contractor(s), person(s), and/or entity(s) and shall submit to the District a PCO based on such coordination if that coordination is different than as indicated in **Exhibit "J**."

19. **ASSIGNMENT OF CONTRACT:** The Designer/Builder shall not assign or transfer in any way any or all of its rights, burdens, duties, or obligations under this Contract without the prior written consent of the District. This provision shall not limit the Designer/Builder's right to subcontract portions of its Work to other entities and assign this Contract and all related contracts without the consent of the District (i) to direct affiliate of

Designer/Builder; (ii) to an entity that is controlled by, controls, or is under common control with Designer/Builder; or (iii) pursuant to a merger, consolidation, transfer of substantially all its assets, or by operation of law. This Contract will be binding on, enforceable by, and inure to the benefit of, the Parties and their respective successors and permitted assigns. Any assignment made in contravention of this clause shall be void and unenforceable.

20. COMPLETION:

20.1. **Walk-Through as Prerequisite to Determination of Completion**. When the Designer/Builder believes that the Work is complete except for minor corrective items, it shall so notify the District. Promptly thereafter, the District shall schedule a final walk-through of the Project by the Designer/Builder, the Inspector and the District to determine whether and to what extent the Work is complete. Any erroneous claims of completion by the Designer/Builder resulting in a premature walk-through shall be at the Designer/Builder's sole cost and expense, and the District shall be entitled to reduce its payments to the Designer/Builder under the Contract by an amount equal to any costs incurred by the District due to the erroneous claims by the Designer/Builder that the Project is complete. Minor corrective (or "punch-list") items shall be identified in the final walk-through of the Project. Notwithstanding the provisions listed prior, the District shall accept as complete the different scope of work as each is completed, at different dates, as opposed to waiting for the entire Work to be completed prior to issuance of its Acceptance of Work.

20.2. **District's Acceptance of Work**. The District, in its sole discretion, may either (a) accept the Work as complete notwithstanding the need to complete minor corrective items (as distinguished from incomplete items), if the Work has otherwise been completed to the satisfaction of the District and the Inspector, or (b) refrain from accepting the Work as complete until the entire Work and all portions thereof, including all punch-list items, have been completed to the satisfaction of the District and the Inspector. The Work shall only be accepted as complete by an action of the District's School Board ("**Completion**").

20.3. **Notice of Completion**. Once the District has accepted the Work as indicated herein, the District shall thereafter cause a Notice of Completion to be recorded in the County Recorder's Office.

20.4. **Designer/Builder's Failure to Correct Punch-List Items**. If the Designer/Builder 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 owing to the Designer/Builder under the Contract an amount equal to 150% the estimated cost, as determined by the District, of each item until such time as the item is completed.

20.5. **Time Is of the Essence:** Time is of the essence in the performance of and compliance with each of the provisions and conditions of this Contract.

21. BENEFICIAL USE: District reserves the right to receive beneficial use of the Work before formal Contract completion and upon receipt of Permission to Operate Letter and/or Permission to Interconnect from the Utility. Beneficial use shall not constitute final acceptance or approval of any part of the Work covered by this Contract, nor shall beneficial use extend the date specified for Completion of the Work.

22. FORCE MAJEURE CLAUSE:

22.1. The term "Force Majeure" shall mean those events caused beyond the control of the affected Party and which by the exercise of due diligence such Party could not reasonably avoid and which it has been unable to overcome, including acts of God and public enemy; fire; epidemics, landslides, volcanic activity, terrorism, strike; loss or shortage of transportation facilities; lock-out; commandeering of materials, product, plant, or facilities by the government; relocation or construction of transmission facilities or the shutdown of such facilities for the purpose of necessary repairs; work by local utility directly impacting the Project; flood; earthquaketornado; severe storm; civil disobedience; sabotage; restraint by court order or public authority (whether valid or invalid); which is beyond the control of the affected Party and which by the exercise of due diligence such Party could not reasonably have been expected to avoid and which it has been unable to overcome.

22.2. Neither party shall be considered to be in default in the performance of any material obligation hereunder during the time and to the extent that it is prevented from obtaining delivery or performing by a Force Majeure event. Neither Party shall be relieved of its obligation to perform if such failure is due to causes arising out of its own negligence or due to removable or remediable causes which it fails to remove or remedy with the exercise of diligent efforts within a reasonable time period. Either Party rendered unable to fulfill any of its obligations under this Contract by reason of an event of Force Majeure shall give prompt written notice of such fact to the other Party. Notwithstanding a Force Majeure event, the party claiming such an event must provide satisfactory evidence that the event caused the delay or lack of performance and was not due to the fault or neglect of the party claiming a Force Majeure event.

22.3. Designer/Builder is aware that governmental agencies and utilities, including, without limitation, the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, and other agencies ("Review Agencies") may have to approve Designer/Builder -prepared drawings or approve a proposed installation. Designer/Builder has included in the Project Schedule, time for possible review of its drawings and for reasonable delays and damages that may be caused by such agencies. Designer/Builder is entitled to additional time in the Project Schedule for review of Designer/Builder's drawings or other approvals from the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, and other agencies, if all of the following conditions have been satisfied:

22.3.1. The time for this review is in excess of the time expressly allocated for this review in the Project Schedule;

22.3.2. If Designer/Builder has diligently pursued approval from the Review Agencies;

22.3.3. Designer/Builder's drawings and proposed installation are consistent with IR 16-8 as of the date of this Contract; and

22.3.4. Designer/Builder's drawings and proposed installation are consistent with Designer/Builder's pre-check(ed) ("PC") design as of the date of this Contract, where applicable, except as modified at the District's request.

23. INDEMNIFICATION / HOLD HARMLESS CLAUSE: To the furthest extent permitted by California law, Designer/Builder shall defend, indemnify, and hold harmless the District, its trustees, members, agents, representatives, officers, consultants, employees, and volunteers (the "indemnified parties") from any and all demands, losses, liabilities, claims, suits, and actions (the "claims") of any kind, nature, and description, including, but not limited to, reasonable attorneys' fees and costs, directly or indirectly arising from third party claims of personal or bodily injury, wrongful death, property damage, or otherwise arising out of, connected with, or resulting from the performance of this Contract to the extent the claims are caused by the negligence, recklessness, or willful misconduct of Designer/Builder; any failure by Designer/Builder to comply with any provision of law; any failure by Designer/Builder to timely and properly fulfill all of its obligations under the Contract in strict accordance with their terms; and, without limitation, any stop payment notice actions or liens, including liens by the California Department of Labor Standards Enforcement.

23.1. With regard to Design/Builder's duty to defend, the District shall have the right to accept or reject any legal representation that Designer/Builder proposes to defend the District. However, such acceptance shall not be unreasonably withheld.

23.2. In addition, to the extent the District recovers any payments from the District's insurance carrier related to the defense of claims or damages caused by claims, the District shall pay to the Designer/Builder that amount of those payments if (1) the Designer/Builder has expended monies to defend against those same claims or for those same damages and (2) the Designer/Builder diligently seeks but does not receive payment or reimbursement from its own insurance carrier to defend against those same claims or for those same damages.

24. LIMITATION OF DESIGN/BUILDER LIABILITY:

24.1. Waiver of consequential damages: Except as otherwise indicated in this Contract, Design/Builder will

not be liable to the District under this Contract for indirect, incidental, special, consequential or exemplary damages arising out of or related to this Contract, including but not limited to lost profits or business interruption, even if the parties have been advised of the possibility of such damages. Notwithstanding the above, this waiver of indirect, incidental, special, consequential or exemplary damages shall not apply to, and shall not waive or limit Design/Builder's liability for:

24.1.1. Liquidated damages payable under the provisions of this Contract;

24.1.2. Claims made by, damages incurred by, or amounts payable pursuant to Design/Builder's indemnity obligations under this Contract; or

24.1.3. Claims arising out of Design/Builder's fraud, willful misconduct, recklessness or negligence.

24.2. Maximum total liability: Notwithstanding any other provision of this Contract, and regardless of whether any action or claim is based on warranty, contract, and tort or otherwise, under no circumstances shall Design/Builder's total liability arising out of or related to this Contract exceed twenty-five million dollars ($25,000,000); provided, that Design/Builder's total liability for claims other than claims for property damage shall not exceed an amount equal to one hundred percent (100%) of the Contract Price. Notwithstanding the above, the limitation of liability specified herein shall not apply to, and shall not waive or limit design/builder's liability for:

24.2.1. Claims made by, damages incurred by, or amounts payable pursuant to Design/Builder's indemnity obligations under this Contract; or

24.2.2. Claims arising out of Design/Builder's fraud, willful misconduct, recklessness or negligence.

25. PAYMENT:

25.1. On a monthly basis, Designer/Builder shall submit a draft ("pencil copy") of an application for payment based upon the estimated value for materials delivered or Services performed under the Contract as of the date of submission ("Application for Payment") and consistent with the information in **Exhibit "D,"** and invoiced separately for each School Site.

25.2. At a mutually-agreeable time and manner (e.g., in person, via phone, etc.), the Parties shall discuss that pencil copy Application for Payment and in good faith attempt to agree on the content of what can be in the formal Application for Payment. This discussion will occur within ten (10) days of the District's receipt of that pencil copy Application for Payment.

25.3. After the Parties' discussion of the pencil copy Application for Payment, Design/Builder may issue its formal Application for Payment. Within ten (10) days after receipt of Design/Builder's Application for Payment, District shall notify Design/Builder in writing, if the District disputes any portion of the Application for Payment. The District may deduct from any payment an amount necessary to protect the District from loss because of: (1) liquidated damages which have accrued as of the date of the application for payment; (2) any sums expended by the District in performing any of Designer/Builder's obligations under the Contract which Designer/Builder has failed to perform or has performed inadequately; (3) defective Work not remedied; (4) stop notices as allowed by state law; (5) reasonable doubt that the Work can be completed for the unpaid balance of the Total Contract price or by the scheduled completion date; (6) unsatisfactory prosecution of the Work by Designer/Builder; (7) unauthorized deviations from the Contract; (8) failure of the Designer/Builder to maintain or submit on a timely basis proper and sufficient documentation as required by the Contract or by District during the prosecution of the Work; (9) erroneous or false estimates by the Designer/Builder of the value of the Work performed; (10) any sums representing expenses, losses, or damages, as determined by the District, incurred by the District for which Designer/Builder is liable under the Contract; and (11) any other sums which the District is entitled to recover from Designer/Builder under the terms of the Contract or pursuant to state law, including section 1727 of the California Labor Code. The failure by the District to deduct any of these sums from a progress payment shall not constitute a waiver of the District's right to such sums. The District shall retain 5% from all amounts owing as retention. Retention shall be paid pursuant to Public Contract Code sections 7107 and 7200.

25.4. Within thirty (30) days after District's receipt of the Application for Payment, Designer/Builder shall be paid a sum equal to ninety-five percent (95%) of the undisputed value of the Work performed (Assuming the value of the Work performed is verified by Inspector and certified by Designer/Builder) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld.

25.5. Payment for material stored on or off the School Sites is allowed at the sole discretion of the District. If allowed, proof of off-site material purchases (invoices and checks and/or bills of lading) and appropriate insurance coverage will be required. The Designer/Builder shall furnish to the District written consent from the Surety approving the advanced payment for materials stored off site. The maximum prepayment allowed by the District shall be one hundred (100%) percent of the actual value of the item being considered, less retention as indicated above. The District shall be the sole judges of fair market value. The Designer/Builder shall protect stored materials from damage. Damaged materials, even though paid for, shall not be incorporated into the Work.

25.6. For its Application for Payment to be due, owing and payable, the Designer/Builder must submit an updated Project Schedule with its Application for Payment.

25.7. **Allowances.** For any allowances identified herein, Designer/Builder shall be permitted to charge its time, materials, and other items in the identical structure as a Change Order. Designer/Builder shall invoice only for components of the Work encompassed by the allowance description. Any unused allowance or unused portion thereof shall be deducted from the Contract Price. However, if Designer/Builder's costs exceed the allowance, the District shall reimburse Designer/Builder for such excess if approved in advance in a Change Order.

26. PERMITS, APPROVALS, AND LICENSES:

26.1. The Designer/Builder and all of its employees, agents, and subcontractors shall secure and maintain in force, at Designer/Builder's sole cost and expense, all licenses and permits as are required by law, in connection with the furnishing of materials, supplies, or Services herein listed with the exception of any mitigation measures required to obtain or maintain CEQA compliance.

26.2. Designer/Builder is responsible for obtaining on behalf of the District and at Designer/Builder's expense, all permits and approvals (including DSA approval), required for the building, installation, and start-up of the Work hereunder which are required to complete the Project.

26.3. District will cooperate fully with and assist Designer/Builder's obtaining all permits and approvals required under this Contract.

26.4. Notwithstanding the above, the application fee for the Utility will be paid pursuant to the identified Allowance herein.

27. INDEPENDENT CONTRACTOR STATUS: While engaged in carrying out the Services of this Contract, the Designer/Builder is an independent contractor, and not an officer, employee, agent, partner, or joint venture of the District. Designer/Builder shall be solely responsible for its own Worker's Compensation insurance, taxes, and other similar charges or obligations. Designer/Builder shall be liable for its own actions, including its negligence or gross negligence, and shall be liable for the acts, omissions, or errors of its agents or employees.

28. [RESERVED]

29. [RESERVED]

30. PAYMENT BOND AND PERFORMANCE BOND: The Designer/Builder shall not commence the Work until it has provided to the District, in a form acceptable to the District, a Payment (Labor and Material) Bond and a Performance Bond, each in an amount equivalent to one hundred percent (100%) of the Contract Price issued by a surety admitted to issue bonds in the State of California and otherwise acceptable to the District All performance bond liability will cease one (1) year from the completion date of the work of this Contract. The balance of any warranty or guarantee beyond one year required by District shall continue to be guaranteed solely by Designer/Builder. The payment bond liability will cease at the termination of any time required by law.

31. DESIGNER/BUILDER'S INSURANCE: Designer/Builder has in force, and during the term of this Contract shall maintain in force with the minimum indicated limits, the following insurance. All policies shall contain waivers of subrogation against the District. All of Designer/Builder's insurance shall be with insurance companies with an A.M. Best rating of no less than **A: VII.**

31.1. **Commercial General Liability Insurance.** Coverage to be written on an occurrence form. Coverage to be at least as broad as ISO form CG 002 (07/98), without endorsements that limit the policy terms with respect to: (1) the definition of an Insured Contract, (2) provisions for severability of interest, (3) explosion, collapse, underground hazard:

- $2,000,000 per occurrence for Bodily Injury and Property Damage
- $4,000,000 General Aggregate - other than Products/Completed Operations
- $4,000,000 Products/Completed Operations Aggregate
- $1,000,000 Personal & Advertising Injury
- $500,000 Fire Damage

31.2. **Automobile Liability.** Coverage to be written on an occurrence form. Coverage for any auto, including all owned, hired and non-owned vehicles: combined single limit of $1,000,000;

31.3. **Excess Liability Insurance**. Coverage to be written on a claims-made form and must continue to maintain insurance for a period of 3 years after termination of this contract. Coverage terms and limits to apply excess of the per occurrence and/or aggregate limits provided for Commercial General Liability, and Auto Liability. Coverage terms and limits to also apply in excess of those required for Employers Liability:

- $10,000,000 each occurrence
- $10,000,000 aggregate

31.4. **Professional Liability insurance.** Coverage to be written on an occurrence-made form. Designer-Builder shall continue to maintain this insurance for a period of 3 years after the Completion of the Work.

- $1,000,000 per claim
- $2,000,000 aggregate

31.5. **Workers Compensation**: Statutory limits; and

31.6. **Employers' Liability**: $1,000,000.

- Bodily Injury by accident $1,000,000 each accident
- Bodily Injury by disease $1,000,000 each employee
- Bodily Injury by disease $1,000,000 policy limit

Commercial General Liability, Automobile Liability, Workers Compensation, and Employer's Liability limits may be reached through a combination of primary and umbrella/excess policies. The Designer/Builder shall provide to the District certificate(s) of insurance and endorsements satisfactory to the District. The policy(ies) shall not be amended or modified and the coverage amounts shall not be reduced without thirty (30) days written notice to the District prior to cancellation. Except for worker's compensation insurance and professional liability insurance, the District, shall be named as an additional insured on all policies. The Designer/Builder's policy(ies) shall be primary; any insurance carried by the District shall only be secondary and supplemental. The Designer/Builder shall not allow any subcontractor, employee, or agent to commence work on this Contract or any subcontract until the insurance required of the Designer/Builder of the subcontractor, or agent has been obtained.

31.7. Builder's Risk Insurance: Builder's Risk "All Risk" Insurance. Designer/Builder shall procure and maintain, during the life of this Contract, Builder's Risk (Course of Construction), or similar first party property coverage acceptable to the District, issued on a replacement cost value basis. The cost shall

be consistent with the total replacement cost of all insurable Work included within the Contract Documents. Coverage is to insure against all risks of accidental physical loss and shall include without limitation the perils of vandalism and/or malicious mischief (both without any limitation regarding vacancy or occupancy), sprinkler leakage, civil authority, theft, sonic disturbance, earthquake, flood, collapse, wind, fire, lightning, smoke, and rioting. Coverage shall include debris removal, demolition, increased costs due to enforcement of all applicable ordinances and/or laws in the repair and replacement of damaged and undamaged portions of the property, and reasonable costs for the design and engineering services and expenses required as a result of any insured loss upon the Work and Project, including completed Work and Work in progress, to the full insurable value thereof.

32. **WARRANTY/QUALITY:** Unless a longer warranty is called for elsewhere in the Contract, the Designer/Builder, manufacturer, or their assigned agents shall guarantee the workmanship, product or service performed against defective workmanship, defects or failures of materials for a minimum period of one (1) year from date when District achieves Beneficial Use.

33. **CONFIDENTIALITY:** To the extent permitted by applicable law, the Parties shall maintain the confidentiality of all information, documents, programs, procedures, and all other items that the Parties encounter during the Project and/or pursuant to the Contract. This requirement shall be ongoing and shall survive the expiration or termination of this Contract and specifically includes all student, parent, and disciplinary information.

34. **CONFLICT OF INTEREST:** Designer/Builder understands that its professional responsibility is solely to the District. Designer/Builder warrants that it and its employees and/or subcontractors presently have no interest and will not acquire any direct or indirect interest that would conflict with its performance under this Contract, including, without limitation, any direct and/or indirect interest with: (a) entity(ies) performing construction in the same discipline and in competition with any contractor on a District project; (b) entity(ies) connected or related to a trade union or joint labor management committee; (c) the District.

35. **COMPLIANCE WITH LAWS:** Designer/Builder shall give all notices and comply with all laws, ordinance, rules and regulations bearing on conduct of the Work as indicated or specified, including all "Interpretation(s) of Regulations" issued by DSA on or before the date of this Contract. If Designer/Builder observes that any of the Work required by this Contract is at variance with any such laws, ordinance, rules or regulations, Designer/Builder shall notify the District, in writing, and, at the sole option of the District, any necessary changes shall be made and this Contract shall be appropriately amended in writing, or this Contract shall be terminated effective upon Designer/Builder's receipt of a written termination notice from the District. If Designer/Builder performs any work that is in violation of any laws, ordinances, rules or regulations, without first notifying the District of the violation, Designer/Builder shall bear all costs arising therefrom.

36. **DISTRICT'S RIGHT TO AUDIT**: District retains the right to review and audit, and the reasonable right of access to Designer/Builder's and any sub-consultant's premises to review and audit the Designer/Builder's compliance with the provisions of this Contract ("District's Right"). The District's Right includes the right to inspect, photocopy, and to retain copies, outside of the Designer/Builder's premises, of any and all Project-related records and other information with appropriate safeguards, if such retention is deemed necessary by the District in its sole discretion. The District shall keep this information confidential, as allowed by applicable law.

    36.1. The District's Right includes the right to examine any and all books, records, documents and any other evidence of procedures and practices that the District determines are necessary to discover and verify that the Designer/Builder is in compliance with all requirements of this Contract.

    36.2. If there is a claim for additional compensation or for extra Services, the District's Right includes the right to examine books, records, documents, and any and all other evidence and accounting procedures and practices that the District determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred.

    36.3. The Designer/Builder shall maintain complete and accurate records in accordance with generally accepted accounting practices in the industry. The Designer/Builder shall make available to the District for review and audit, all Project-related accounting records and documents, and any other

financial data. Upon District's request, the Designer/Builder shall submit exact duplicates of originals of all requested records to the District.

36.4. The Designer/Builder shall include audit provisions in any and all of its subcontracts, and shall ensure that these sections are binding upon all sub-consultants.

36.5. The Designer/Builder shall retain all Project-related records and other information with appropriate safeguards during the Term of this Contract and for a minimum of five (5) years thereafter.

37. Designer/Builder shall comply with these provisions within fifteen (15) days of the District's written request to review and audit any or all of Designer/Builder's Project-related records and information.

38. DISPUTES: In the event of a dispute between the Parties as to performance of the Work, the interpretation of this Contract, or payment or nonpayment for work performed or not performed, the Parties shall attempt to resolve the dispute by those procedures set forth in Public Contract Code section 20104 et seq., if applicable. Pending resolution of the dispute, Designer/Builder agrees it will neither rescind the Contract nor stop the progress of the Work, but will allow determination by the court of the State of California, in the county in which the District's administration office is located, having competent jurisdiction of the dispute. All claims of over $375,000, which are outside the scope of Public Contract Code section 20104, et seq., may be determined by independent arbitration if mutually agreeable, otherwise by litigation.

38.1. Notice of the demand for arbitration of a dispute shall be filed in writing with the other party to the Contract.

38.2. The demand for arbitration of any claim of over $375,000 shall be made within a reasonable time after written notice of the dispute has been provided to the other party, but in no case longer than ninety (90) days after initial written notice, and the demand shall not be made later than the time of Designer/Builder submission of the request for final payment.

38.3. Prior to Designer/Builder's initiation of any litigation or proceeding to recover any money damages under this Contract, Design/Builder must first comply with the claims presentation requirements set forth in California Government Code Section 900 et seq.

39. LABOR, WAGE & HOUR, APPRENTICE AND RELATED PROVISIONS

39.1. **Designer/Builder & Subcontractor Registration**

39.1.1. Designer/Builder shall comply with the registration and compliance monitoring provisions of Labor Code section 1771.4, including furnishing its CPRs to the Labor Commissioner of California and complying with any applicable enforcement by the Department of Industrial Relations. Labor Code section 1771.1(a) states the following:

> "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 this chapter, 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."

39.1.2. Designer/Builder acknowledges that, for purposes of Labor Code section 1725.5, all or some of the Work is a public work to which Labor Code section 1771 applies. Designer/Builder shall comply with Labor Code section 1725.5, including without limitation the registration requirements. Additionally, all Contractor's Subcontractors shall comply with Labor Code section 1725.5 to 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 the Contract. Designer/Builder represents that all of its Subcontractors are registered pursuant to Labor Code section 1725.5.

39.1.3. The Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Designer/Builder shall post job site notices, as prescribed by regulation. Designer/Builder shall comply with all requirements of Labor Code section 1771.4, except the requirements that are exempted by the Labor Commissioner for the Project.

39.2. **Wage Rates, Travel and Subsistence**

39.2.1. Pursuant to the provisions of article 2 (commencing at section 1770), chapter 1, part 7, division 2, of the Labor Code of California, 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 to execute this Contract are on file at the District's principal office and copies will be made available to any interested party on request. Designer/Builder shall obtain and post a copy of these wage rates at the job site.

39.2.2. 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. The holidays upon which those rates shall be paid need not be specified by the District, but shall be all holidays recognized in the applicable collective bargaining agreement. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code.

39.2.3. Designer/Builder 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 of the Department of Industrial Relations ("DIR") ("Director"), regardless of any contractual relationship which may be alleged to exist between Designer/Builder or any Subcontractor and such workers.

39.2.4. If during the period this bid is required to remain open, the Director determines that there has been a change in any prevailing rate of per diem wages in the locality in which the Work under the Contract is to be performed, such change shall not alter the wage rates in the Notice to Bidders or the Contract subsequently awarded.

39.2.5. Pursuant to Labor Code section 1775, Designer/Builder shall, as a penalty to District, forfeit the statutory amount, (currently not to exceed two hundred dollars ($200) for each calendar day, or portion thereof), for each worker paid less than the prevailing rates, as determined by the District and/or the Director, for the work or craft in which that worker is employed for any public work done under Contract by Designer/Builder or by any Subcontractor under it.

39.2.5.1. The amount of the penalty shall not be less than forty dollars ($40) for each calendar day, or portion thereof, unless the failure of Designer/Builder was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of Contractor.

39.2.5.2. The amount of the penalty shall not be less than eighty dollars ($80) for each calendar day or portion thereof, if Designer/Builder has been assessed penalties within the previous three (3) years for failing to meet Contractor's prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.

39.2.5.3. The amount of the penalty may not be less than one hundred twenty dollars ($120) for each calendar day, or portion thereof, if the Labor Commissioner determines the Designer/Builder willfully violated Labor Code section 1775.

39.2.5.4. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by Contractor.

39.2.6. Any worker employed to perform Work on the Project, which Work is not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the

classification which most nearly corresponds to Work to be performed by him, and such minimum wage rate shall be retroactive to time of initial employment of such person in such classification.

39.2.7. Pursuant to Labor Code section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time, subsistence pay, and apprenticeship or other training programs authorized by section 3093, and similar purposes.

39.2.8. Designer/Builder shall post at appropriate conspicuous points on the Site of Project, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned. In addition, Designer/Builder shall post a sign-in log for all workers and visitors to the Site, a list of all subcontractors of any tier on the Site, and the required Equal Employment Opportunity poster(s).

39.3. **Hours of Work**

39.3.1. As provided in article 3 (commencing at section 1810), chapter 1, part 7, division 2, of the Labor Code, eight (8) hours of labor shall constitute a legal days work. The time of service of any worker employed at any time by Designer/Builder or by any Subcontractor on any subcontract under this Contract upon the Work or upon any part of the Work contemplated by this Contract shall be limited and restricted by Designer/Builder to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of Designer/Builder 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.

39.3.2. Designer/Builder 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 Designer/Builder in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of District and to the Division of Labor Standards Enforcement of the DIR.

39.3.3. Pursuant to Labor Code section 1813, Designer/Builder shall as a penalty to the District forfeit the statutory amount (believed by the District to be currently twenty five dollars ($25)) for each worker employed in the execution of this Contract by Designer/Builder 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 forty (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.

39.3.4. Any Work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to the District.

39.4. **Payroll Records**

39.4.1. If requested by the District, Designer/Builder shall provide to the District and shall cause each Subcontractor performing any portion of the Work to provide the District and an accurate and certified payroll record ("CPR(s)"), 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 the Designer/Builder and/or each Subcontractor in connection with the Work.

39.4.1.1. In addition to any other requirements pursuant to Labor Code sections 1770, et seq., the CPRs enumerated hereunder shall be certified.

39.4.2. All CPRs shall be available for inspection at all reasonable hours at the principal office of Designer/Builder on the following basis:

39.4.2.1. A certified copy of an employee's CPR shall be made available for inspection or furnished to the employee or his/her authorized representative on request.

39.4.2.2. CPRs shall be made available for inspection or furnished upon request to a representative of District, Division of Labor Standards Enforcement, Division of Apprenticeship Standards, and/or the Department of Industrial Relations.

39.4.2.3. CPRs shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested CPRs have not been provided pursuant to the provisions herein, the requesting party shall, prior to being provided the records reimburse the costs of preparation by 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 Contractor.

39.4.3. The form of certification for the CPRs shall be as follows:

I, _____ (Name-Print), the undersigned, am the _____ _____ (Position in business) with the authority to act for and on behalf of _____ _____ (Name of business and/or Designer/Builder), 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 actual disbursements by way of cash, check, or whatever form to the individual or individual named, and (b) we have complied with the requirements of sections 1771, 1811, and 1815 of the Labor Code for any work performed by our employees on the Project.

Date: _____ Signature: _____

(Section 16401 of Title 8 of the California Code of Regulations)

39.4.4. Designer/Builder and all Subcontractors shall file a certified copy of the CPRs with the entity that requested the records within ten (10) days after receipt of a written request.

39.4.5. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by District, Division of Apprenticeship Standards, or 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 Designer/Builder awarded Contract or performing Contract shall not be marked or obliterated.

39.4.6. Designer/Builder shall inform District of the location of the records enumerated hereunder, including the street address, city, and county, and shall, within five (5) working days, provide a notice of change of location and address.

39.4.7. In the event of noncompliance with the requirements of this section, Designer/Builder shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Designer/Builder must comply with this section. Should noncompliance still be evident after the ten (10) day period, Designer/Builder shall, as a penalty to District, forfeit one hundred dollars ($100) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of Division of Apprenticeship Standards or Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

39.4.8. It shall be the responsibility of Designer/Builder to ensure compliance with the provisions of Labor Code section 1776.

39.5. **Apprentices**

39.5.1. Designer/Builder acknowledges and agrees that, if this Contract involves a dollar amount greater than or a number of working days greater than that specified in Labor Code section 1777.5, then this Contract is governed by the provisions of Labor Code Section 1777.5. It shall be the responsibility of Designer/Builder to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticeship occupations.

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

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

39.5.4. Only apprentices, as defined in section 3077 of the Labor Code, 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. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he/she is training.

39.5.5. Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Designer/Builder and any Subcontractors employing workers in any apprenticeable craft or trade in performing any Work under this Contract shall apply to the applicable joint apprenticeship committee for a certificate approving the Designer/Builder or Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

39.5.6. Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Designer/Builder and any Subcontractor may be required to make contributions to the apprenticeship program.

39.5.7. If Designer/Builder or Subcontractor willfully fails to comply with Labor Code section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:

39.5.7.1. Be denied the right to bid on any subsequent project for one (1) year from the date of such determination;

39.5.7.2. Forfeit as a penalty to District the full amount as stated in 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 and under the authority of the Chief of the Division of Apprenticeship Standards.

39.5.8. Designer/Builder and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

39.5.9. Designer/Builder 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, San Francisco, California 94102.

39.5.10. Designer/Builder shall ensure compliance with all certification requirements for all workers on the Project including, without limitation, the requirements for electrician certification in Labor Code sections 108, et seq.

39.6. **Non-Discrimination**

39.6.1. It is the policy of the District that in connection with all work performed under contracts there be no discrimination against any employee engaged in the work because of race, national origin, ancestry, religion, age, physical or mental disability, sex, or sexual orientation

of such person, and therefore the Designer/Builder agrees to comply with applicable Federal and California laws including, but not limited to the California Fair Employment Practice Act beginning with Government Code Section 12900 and Labor Code Section 1735. In addition, the Designer/Builder agrees to require like compliance by all its subcontractor(s).

39.6.2. Special requirements for Federally Assisted Construction Contracts: During the performance of this Contract, Designer/Builder agrees to incorporate in all subcontracts the provisions set forth in Chapter 60-1.4(b) of Title 41 published in Volume 33 No. 104 of the Federal Register dated May 28, 1968.

39.7. **Labor First Aid**

Designer/Builder 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. § 651 et seq.) the California Occupational Safety and Health Act of 1973, and all related regulations, including without limitation section 330 et seq. of Title 8 of the California Code of Regulations.

40. ANTI-TRUST CLAIM: Designer/Builder and its subcontractor(s) agree to assign to the District all rights, title, and interest in and to all causes of action they may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract or a subcontract. This assignment shall be made and become effective at the time the District tenders final payment to the Designer/Builder, without further acknowledgment by the Parties.

41. GOVERNING LAW: This Contract shall be governed by and construed in accordance with the laws of the State of California with venue of any action in a County in which the District administration office is located.

42. PROVISIONS REQUIRED BY LAW DEEMED INSERTED: Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and this Contract shall be read and enforced as though it were included therein.

43. BINDING CONTRACT: This Contract shall be binding upon the Parties and upon their successors and assigns, and shall inure to the benefit of said parties and their successors and assigns.

44. DISTRICT WAIVER: District's waiver of any term, condition, covenant or waiver of a breach of any term, condition or covenant shall not constitute the waiver of any other term, condition or covenant or the waiver of a breach of any other term, condition or covenant.

45. INVALID TERM: If any provision of this Contract is declared or determined by any court of competent jurisdiction to be illegal, invalid or unenforceable, the legality, validity or enforceability of the remaining parts, terms and provisions shall not be affected thereby, and said illegal, unenforceable or invalid part, term or provision will be deemed not to be a part of this Contract.

46. ENTIRE CONTRACT: This Contract sets forth the entire Contract between the Parties and fully supersedes any and all prior agreements, understanding, written or oral, between the Parties pertaining to the subject matter thereof. This Contract may be modified only by a writing upon mutual consent.

47. OWNERSHIP OF CERTAIN PROPRIETARY PROPERTY RIGHTS: District shall not, by virtue of this Contract, acquire any interest in any formulas, patterns, devices, secret inventions or processes, copyrights, patents, other intellectual or proprietary rights, or similar items of property which are or may be used in connection with the equipment. Designer/Builder shall grant to District a perpetual, irrevocable royalty-free license for any and all software or other intellectual property rights necessary for District to continue to operate, maintain, and repair the equipment in a manner that will yield maximum energy production and/or energy consumption reductions.

48. OWNERSHIP OF ANY EXISTING EQUIPMENT: Ownership of any equipment and materials presently existing at the Facilities at the time of execution of this Contract shall remain the property of the District even if it is replaced or its operation made unnecessary by work performed by Designer/Builder pursuant to this Contract. If applicable, Designer/Builder shall advise District in writing of all equipment and materials that will be replaced at the Facilities and District shall, within five (5) business days of Designer/Builder' notice, designate in writing to Designer/Builder which replaced equipment and materials that should not be disposed of off-site

by Designer/Builder (the "Retained Items"). It is understood and agreed to by both Parties that District shall be responsible for and designate the location and storage for the Retained Items. Designer/Builder shall be responsible for the disposal of replaced equipment and materials, except for the Retained Items. Designer/Builder shall use commercially reasonable efforts to remove the Retained Items in such a manner as to avoid damage thereto, or if it is unreasonable to avoid damage altogether, to minimize the damage done.

49. UTILITY WORK: District expressly understands and agrees that the definition "Force Majeure" above also includes any Interconnection Facilities work that may need to be performed by the local Utility ("Utility") in order for Designer/Builder to fully implement the Project. "Interconnection Facilities" shall mean any distribution or transmission lines and other facilities that may be required to connect equipment supplied under this Contract to an electrical distribution/transmission system owned and maintained by the Utility. Any Interconnection Facilities work that may be required will be performed by the Utility under a separate contract between District and the Utility. Designer/Builder shall prepare all Interconnection Facilities documentation, and collect all Interconnection Facilities information in a time frame to ensure maximum benefit to the District and to comply with all requirements. Designer Builder shall also cooperate and assist the District in facilitating the Interconnection Facilities work.

50. ENERGY CREDITS: District shall own all right, title, and interest associated with or resulting from the development, construction, installation and ownership of the any facilities installed on the Project ("Generating Facilities"). This ownership includes the production, sale, purchase or use of the energy output including, and includes without limitation:

50.1. All Environmental Incentives associated in any way with the Generating Facilities. "Environmental Incentives" means all rights, credits (including tax credits), rebates, benefits, reductions, offsets and allowances and entitlements of any kind, howsoever entitled or named (including carbon credits and allowances), whether arising under federal, state or local law, international treaty, trade association membership or the like arising from the Generating Facilities or the energy produced or otherwise from the development, construction, installation or ownership of the Generating Facilities or the production, sale, purchase, consumption or use of the energy produced from the Generating Facilities. Without limiting the forgoing, "Environmental Incentives" includes green tags, renewable energy credits, tradable renewable certificates, portfolio energy credits, the right to apply for (and entitlement to receive) incentives under the California Solar Initiative or other incentive programs offered by the State of California and the right to claim federal income tax credits under Section 45 or 48 of the Code as such credits are available arising from the Environmental Attributes of the Generating Facilities or the energy produced from the Generating Facilities or the production, sale, purchase, consumption or use of the energy produced from the Generating Facilities.

50.2. All rights and interests in performance based incentive payments to be made under the California Solar Initiative.

50.3. All reporting rights and the exclusive rights to claim that the District is responsible for the delivery of the energy from the Generating Facilities.

50.4. The District is responsible for the reductions in emissions of pollution and greenhouse gases resulting from the generation of the energy and the delivery thereof to each Energy Delivery Point.

50.5. The District is entitled to all credits, certificates, registrations, etc., evidencing or representing any of the foregoing.

50.6. District shall be the owner of and shall be entitled to all: (i) carbon reduction tonnes as defined under the California Action Reserve or such similar definition as enacted by the State of California or the U.S. Federal Government; and (ii) "renewable energy credits," as such term is defined in Section 399.12(h)(2) of the California Public Utilities Code, associated with the Generating Facilities, and Designer/Builder shall take such steps as District shall reasonably request to confirm District's ownership of such renewable energy credits.

50.7. Design/Builder is not responsible for compliance, certification, reporting, or other requirements associated with the sale, ownership, rights, or certifications for these energy credits, but Design/Builder will provide advice and consultation to the District as requested.

50.8. Design/Builder will use its best efforts so that the data collection of the system will be sufficient to take advantage of the energy credit market.

51. REBATE PROGRAMS: On behalf of the District, Designer/Builder shall prepare and submit to the applicable agencies all applications and documentation necessary for all available energy production and/or energy efficiency rebate(s), incentive(s), and/or loan program(s) ("Incentive Funds"). This shall include actions necessary to ensure compliance with the Utility's net metering program and all interconnection agreements and related documents for the District's participation and utilization of the benefits of that program. While Designer/Builder has extensive experience in assisting Districts with procuring Incentive Funds for school districts, Designer/Builder cannot guarantee that these Incentive Funds will be received by the District. Procurement, or lack thereof, of these Incentive Funds will not alter the Contract Amount of this Contract, or payment timeline associated with standard progress invoicing and payments.

52. RESPONSIBILITIES OF THE DISTRICT

52.1. The District shall examine the documents submitted by the Designer/Builder and shall render decisions so as to avoid unreasonable delay in the process of the Designer/Builder's Services.

52.2. The District shall verbally or in writing advise the Designer/Builder if the District becomes aware of any fault or defect in the Project, including any errors, omissions or inconsistencies in the Designer/Builder's documents. Failure to provide such notice shall not relieve Designer/Builder of its responsibility therefore, if any.

52.3. Unless the District and the Designer/Builder agree that a hazardous materials consultant shall be a consultant of the Designer/Builder, the District shall furnish the services of a hazardous material consultant or other consultants when such services are requested in writing by Designer/Builder and deemed necessary by the District or are requested by the District. These services shall include: asbestos and lead paint survey; abatement documentation; and specifications related to said matters which are to be incorporated into bid documents prepared by Designer/Builder. If the hazardous materials consultant is furnished by the District and not a consultant of the Designer/Builder, the specifications shall include a note to the effect that they are included in the Designer/Builder's bid documents for the District's convenience and have not been prepared or reviewed by the Designer/Builder. The note shall also direct questions about the specifications to its preparer.

52.4. District personnel and/or its designated representatives shall coordinate with Designer/Builder as may be requested and desirable for the coordination or management of work related to the Project.

52.5. The District shall provide to the Designer/Builder all relevant information it knows it possesses regarding the Project that the Designer/Builder needs to perform its Services. The District shall provide this information and its decisions required under this Contract in a timely manner and to avoid unreasonable delay in the Project.

52.6. The District will pay for all fees associated with any rebate programs for programs the District wishes to participate in.

53. LIABILITY OF DISTRICT

53.1. Other than as provided in this Contract, District's financial obligations under this Contract shall be limited to the payment of the compensation provided in this Contract. Notwithstanding any other provision of this Contract, in no event shall District be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of or in connection with this Contract for the Services performed in connection with this Contract.

53.2. District shall not be responsible for any damage to persons or property as a result of the Designer/Builder's use, misuse or failure of any equipment used by Designer/Builder, or by its employees, even though such equipment be furnished or loaned to Designer/Builder by District.

NONCOLLUSION DECLARATION
(Public Contract Code § 7106)

The undersigned declares:

I am the Director, Public + Education Sales [PRINT YOUR TITLE]

of SunPower Corporation Systems [PRINT FIRM NAME],

the party making the foregoing Contract.

The Contract is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Contract is genuine and not collusive or sham. The Designer/Builder has not directly or indirectly induced or solicited any other entity to put in a false or sham bid or proposal. The Designer/Builder has not directly or indirectly colluded, conspired, connived, or agreed with any other designer/builder or anyone else to put in a sham bid or proposal, or to refrain from proposing. The Designer/Builder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Contract Price of the Designer/Builder or any other entity, or to fix any overhead, profit, or cost element of the Contract Price, or of that of any other entity. All statements contained in the Contract are true. The Designer/Builder has not, directly or indirectly, submitted his or her Contract 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 or proposal, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Designer/Builder 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 Designer/Builder.

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 the following date:

Date: June 15, 2016
Proper Name of Designer/Builder: SunPower Corporation Systems
Signature: Bruce Dickinson
Print Name: BRUCE DICKINSON
Title: Director, Public + Education Sales

PREVAILING WAGE CERTIFICATION

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

Date: June 15, 2016
Proper Name of Designer/Builder: SUNPOWER CORPORATION Systems
Signature: Bruce Dickinson
Print Name: BRUCE DICKINSON
Title: DIRECTOR, PUBLIC + Education Sales

WORKERS' COMPENSATION CERTIFICATION

Labor Code section 3700 in relevant part provides:

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

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

Date: June 15, 2016
Proper Name of Designer/Builder: SUNPOWER CORPORATION SYSTEMS
Signature: Bruce Dickinson
Print Name: BRUCE DICKINSON
Title: Director, Public & Education Sales

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

FINGERPRINTING/CRIMINAL BACKGROUND INVESTIGATION CERTIFICATION

The undersigned does hereby certify to the governing board of the District that:

(1) He/she is a representative of the Designer/Builder,
(2) He/she is familiar with the facts herein certified,
(3) He/she is authorized and qualified to execute this certificate on behalf of Designer/Builder; and
(4) That the information in this Criminal Background Investigation / Fingerprinting Certification is true and correct.

1. **Education Code.** Designer/Builder has taken at least one of the following actions with respect to the Project (check all that apply):

_____ The Designer/Builder has complied with the fingerprinting requirements of Education Code section 45125.1 with respect to all Designer/Builder's employees and all of its subcontractors' employees who may have contact with District pupils in the course of providing services pursuant to the Contract, and the California Department of Justice ("DOJ") has determined (per the DOJ process for Applicant Agencies described more fully on its website, located at: http://oag.ca.gov/fingerprints/agencies) that none of those employees have been convicted of a felony, as that term is defined in Education Code section 45122.1. A complete and accurate list of Designer/Builder's employees and of all of its subcontractors' employees who may come in contact with District pupils during the course and scope of the Contract is attached hereto; and/or

_____ Pursuant to Education Code section 45125.2, Designer/Builder has installed or will install, prior to commencement of work, a physical barrier at the Project site, that will limit contact between Designer/Builder's employees and District pupils at all times; and/or

_____ Pursuant to Education Code section 45125.2, Designer/Builder certifies that all employees will be under the continual supervision of, and monitored by, an employee of the Designer/Builder who the California Department of Justice has ascertained has not been convicted of a violent or serious felony. The name and title of the employee who will be supervising Designer/Builder's employees and its subcontractors' employees is:

Name: Pat Dalton

Title: SR. Project Manager

~~_____ The Work on the Contract is at an unoccupied school site and no employee and/or subcontractor or supplier of any tier of Contract shall come in contact with the District pupils.~~

2. **Megan's Law (Sex Offenders).** I have verified and will continue to verify that the employees of Designer/Builder that will be on the Project site and the employees of the Subcontractor(s) that will be on the Project site are **not** listed on California's "Megan's Law" Website (http://www.meganslaw.ca.gov/).

Date: June 15, 2016
Proper Name of Designer/Builder: Sunpower Corporation Systems
Signature: Bruce Dickinson
Print Name: Bruce Dickinson
Title: Director Public Education & Sales

DRUG-FREE WORKPLACE / TOBACCO-FREE ENVIRONMENT CERTIFICATION

Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990, requires that every person or organization awarded a contract or grant for the procurement of any property or service from any state agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract or grant awarded by a state agency may be subject to suspension of payments or termination of the contract or grant, and the contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred. The District is not a "state agency" as defined in the applicable section(s) of the Government Code, but the District is a local agency and public school district under California law and requires all contractors on District projects to comply with the provisions and requirements of Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. Contractor shall certify that it will provide a drug-free workplace by doing all of the following:

1 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;

2 Establishing a drug-free awareness program to inform employees about all of the following:
   a. The dangers of drug abuse in the workplace.
   b. The person's or organization's policy of maintaining a drug-free workplace.
   c. The availability of drug counseling, rehabilitation, and employee-assistance programs.
   d. The penalties that may be imposed upon employees for drug abuse violations.

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

I 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 termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of section 8350 et seq.

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.

In addition, and pursuant to, without limitation, 20 U.S.C section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq. and District Board Policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school owned vehicles and vehicles owned by others while on District property. I acknowledge that I am aware of the District's policy regarding tobacco-free environments and hereby certify that I will adhere to the requirements of that policy and not permit any of my firm's employees, agents, subcontractors, or my firm's subcontractors' employees or agents to use tobacco and/or smoke on the Project site

Date: June 15, 2016
Proper Name of Designer/Builder: SunPower Corporation, Systems
Signature: Bruce Dickinson
Print Name: Bruce Dickinson
Title: Director Public Education & Sales

ASBESTOS & OTHER HAZARDOUS MATERIALS CERTIFICATION

Designer/Builder hereby certifies that no Asbestos, or Asbestos-Containing Materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations "New Material Hazardous", shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Designer/Builder's work on the Project for District.

Designer/Builder further certifies that it has instructed its employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

Asbestos and/or asbestos-containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Any or all material containing greater than one-tenth of one percent (.1%) asbestos shall be defined as asbestos-containing material.

Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the District's determination. The costs of any such tests shall be paid by Designer/Builder if the material is found to be New Hazardous Material.

All Work or materials found to be New Hazardous Material or Work or material installed with "New Hazardous Material" containing equipment will be immediately rejected and this Work will be removed at Designer/Builder's expense at no additional cost to the District.

Designer/Builder has read and understood the document Hazardous Materials Procedures & Requirements, and shall comply with all the provisions outlined therein.

Date: June 15, 2016
Proper Name of Designer/Builder: Sunpower Corporation, Systems
Signature: Bruce Dickinson
Print Name: Bruce Dickinson
Title: Director Public Education & Sales

LEAD-PRODUCT(S) CERTIFICATION

California Occupational Safety and Health Administration (CalOSHA), Environmental Protection Agency (EPA), California Department of Health Services (DHS), California Department of Education (CDE), and the Consumer Product Safety Commission (CPSC) regulate lead-containing paint and lead products.

Because the Designer/Builder and its employees will be providing services for the District, and because the Designer/Builder's work may disturb lead-containing building materials, **DESIGNER/BUILDER IS HEREBY NOTIFIED** of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to 1993 are presumed to contain some lead-based paint until sampling proves otherwise.

The CDE mandates that school districts utilize DHS lead-certified personnel when a lead-based hazard is identified. Examples of lead-certified personnel include: project designers, inspectors, and abatement workers. Furthermore, since it is assumed by the district that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Designer/Builder, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials **(Including Title 8, California Code of Regulations, Section 1532.1).** Any and all Work which may result in the disturbance of lead-containing building materials must be coordinated through the District.

The California Education Code also prohibits the use or import of lead-containing paint, lead plumbing and solders, or other potential sources of lead contamination in the construction of any new school facility or in the modernization or renovation of any existing school facility. The Designer/Builder shall provide the District with any sample results prior to beginning Work, during the Work, and after the completion of the Work. The District may request to examine, prior to the commencement of the Work, the lead training records of each employee of the Designer/Builder. If failure to comply with these laws, rules, and regulations results in a site or worker contamination, the Designer/Builder will be held solely responsible for all costs involved in any required corrective actions, and shall defend, indemnify and hold harmless the District, pursuant to the indemnification provisions of the Contract, for all damages and other claims arising therefrom. If lead disturbance is anticipated in the Work, only persons with appropriate accreditation, registrations, licenses and training shall conduct this Work.

It shall be the responsibility of the Designer/Builder to properly dispose of any and all waste products, including but not limited to, paint chips, any collected residue, or any other visual material that may occur from the prepping of any painted surface. It will be the responsibility of the Designer/Builder to provide the proper disposal of any hazardous waste by a certified hazardous waste hauler. This company shall be registered with the Department of Transportation (DOT) and shall be able to issue a current manifest number upon transporting any hazardous material from any school site within the District.

THE UNDERSIGNED HEREBY ACKNOWLEDGES, UNDER PENALTY OF PERJURY, THAT HE OR SHE HAS RECEIVED NOTIFICATION OF POTENTIAL LEAD-BASED MATERIALS ON THE OWNER'S PROPERTY, AS WELL AS THE EXISTENCE OF APPLICABLE LAWS, RULES AND REGULATIONS GOVERNING WORK WITH, AND DISPOSAL OF, SUCH MATERIALS WITH WHICH IT MUST COMPLY. THE UNDERSIGNED ALSO WARRANTS THAT HE OR SHE HAS THE AUTHORITY TO SIGN ON BEHALF OF AND BIND THE DESIGNER/BUILDER.

Date: June 15, 2016
Proper Name of Designer/Builder: SunPower Corporation, Systems
Signature: Bruce Dickinson
Print Name: Bruce. Dickinson
Title: Director Public & Education Sales

ROOFING CONTRACT FINANCIAL INTEREST CERTIFICATION
(Public Contract Code § 3006)

I, Bruce Dickinson, Sun Power Corporation Systems
Name / Name of Designer/Builder

certify that I have not offered, given, or agreed to give, received, accepted, or agreed to accept, any gift, contribution, or any financial incentive whatsoever to or from any person in connection with the roof project contract or subcontract on the Project. As used in this certification, "person" means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Furthermore, I Bruce Dickinson, Sun Power Corporation Systems
Name / Name of Designer/Builder

certify that I do not have, and throughout the duration of the Contract, I will not have, any financial relationship in connection with the performance of the Contract with any architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor that is not disclosed below.

I, Bruce Dickinson, Sun Power Corporation Systems
Name / Name of Designer/Builder

have the following financial relationships with an architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor, or other person in connection with the following roof project contract:

Name of firm ("Firm"): Sun Power Corporation Systems

Mailing address: _____

Address of branch office used for this Project: _____

If subsidiary, name and address of parent company: Sun Power Corporation

I certify that to the best of my knowledge, the contents of this disclosure are true, or are believed to be true.

Date: June 15, 2016
Proper Name of Designer/Builder: Sunpower Corporation, Systems
Signature: Bruce Dickinson
Print Name: Bruce Dickinson
Title: Director Public Education & Sales

IRAN CONTRACTING ACT CERTIFICATION
(Public Contract Code § 2204)

Pursuant to Public Contract Code (PCC) section 2204, an Iran Contracting Act certification is required for solicitations of goods or services of one million dollars ($1,000,000) or more.

Designer/Builder shall complete **ONLY ONE** of the following two paragraphs. s

☐ 1. Designer/Builder's Proposal is less than one million dollars ($1,000,000).

OR

☒ 2. Designer/Builder's Proposal is one million dollars ($1,000,000) or more, but Designer/Builder is **not** on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code § 2203(b), and Designer/Builder is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

OR

☐ 3. Designer/Builder's Proposal is one million dollars ($1,000,000) or more, but the District has given prior written permission to Designer/Builder to submit a proposal pursuant to PCC 2203(c) or (d). **A copy of the written permission from the District is included with this Contract**.

I certify that I am duly authorized to legally bind the Designer/Builder to this certification, that the contents of this certification are true, and that this certification is made under the laws of the State of California.

Date: June 15, 2016
Proper Name of Designer/Builder: SunPower Corporation, Systems
Signature:
Print Name: Bruce Dickinson
Title: Director Public Education & Sales

END OF DOCUMENT

PERFORMANCE BOND
(100% of Contract Price)

(Note: Designer/Builder must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the **San Jose Unified School District,** ("District") and _____, **Inc.** ("Principal)" have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

_____ (Project Name)
("Project" or "Contract")

which Contract dated _____, 20___, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract;

NOW, THEREFORE, the Principal and _____ ("Surety") are held and firmly bound unto the Board of the District in the penal sum of _____ _____ DOLLARS ($_____), lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

- Perform all the work required to complete the Project; and

- Pay to the District all damages the District incurs as a result of the Principal's failure to perform all the Work required to complete the Project.

The condition of the obligation is such that, if the above bounden Principal, his or its 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 the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warrantees of materials and workmanship for one (1) year from the completion date of the work of this Contract, and shall indemnify and save harmless the District, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for one (1) year from the completion date of the work of this Contract, during which time Surety's obligation shall continue if Designer/Builder shall fail to make full, complete, and satisfactory repair, replace and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. Nothing herein shall limit the District's rights or the Designer/Builder's or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15 during the bond term.

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

Any claims under this bond may be addressed to the Surety at the following address. This cannot be the Designer/Builder's broker for this bond, but must be an employee of the Surety or the Surety's legal counsel:

_____

_____

Attention: _____

Telephone No.: (_____) _____-_____

Fax No.: (_____) _____-_____

E-mail Address: _____

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20___.

(Affix Corporate Seal)

_____**, Inc.**_____
Principal

_____
By

_____
Surety

_____
By

_____
Name of California Agent of Surety

_____
Address of California Agent of Surety

_____
Telephone Number of California Agent of Surety

Designer/Builder must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

PAYMENT BOND
Contractor's Labor & Material Bond
(100% of Contract Price)

(Note: Designer/Builder must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the **San Jose Unified School District**, (or "District") and **_____, Inc.**, ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to

_____ (Project Name)
("Project" or "Contract")

which Contract dated _____, 20___, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to 100 percent (100%) of the Contract price, to secure the claims to which reference is made in sections 3179 through 3214 and 3247 through 3252 of the Civil Code of California, and division 2, part 7, of the Labor Code of California.

NOW, THEREFORE, the Principal and_____, ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of _____ _____ Dollars ($_____), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

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

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under sections 3179 through 3214 and 3247 through 3252 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

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

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

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20___.

(Affix Corporate Seal)

_____**, Inc.**
Principal

_____
By

_____
Surety

_____
By

_____
Name of California Agent of Surety

_____
Address of California Agent of Surety

_____
Telephone Number of California Agent of Surety

Designer/Builder must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

Exhibit "A"

SCOPE OF WORK

Article 1. **ASSESSMENT**. Designer/Builder shall prepare an analysis of the site and suggest the best option, in its professional opinion, for photovoltaic (PV) panel design and installation at the Sites.

Article 2. **DESIGN SERVICES**

2.1. During the Design and Construction Phases of the Project, Designer/Builder will meet with District to review equipment, scope of work, and installation plans that relate to the design and construction of the Project.

2.2. During the course of the Work, and at least weekly, Designer/Builder will provide reports to the District of the general status and progress of the Work.

2.3. Although the Parties acknowledge that the Designer/Builder's Services are not completely severable between design, procurement, installation, construction, commissioning, and training, the following scopes of services will be generally referred to as the Services that the Designer/Builder shall perform during the design phase of the Work for the scopes of work for which Designer/Builder is designing the Project, which are the following portions of the Project:

Design, Installation, and Construction of a 3,882 kWdc (first year energy production of 6,465,705 kilowatt hours) Photovoltaic Entire System at the Sites, as further described herein below, and similar in size, appearance, and structure as indicated in Exhibit "F":

Site	System Size (kWdc)	System Size (kWac)	Expected 1st Year Energy	Expected 25 Year Energy	Mounting Type	Meter #
Almaden ES	169.65	156.36	293,164	7,113,394	Shade	1009541906
Anne Darling ES	158.06	138.24	267,769	6,497,200	Rooftop, Shade	X63132
Bachrodt ES	143.55	132.30	240,353	5,831,975	Shade	1009584934
Booksin ES	156.60	144.36	234,977	5,701,531	Shade	1004778738
Canoas ES	169.65	156.36	294,246	7,139,636	Shade	1008844745
Carson ES	117.45	108.24	198,946	4,827,270	Shade	1006717056
Empire Gardens ES	124.11	105.12	211,345	5,128,118	Rooftop, Shade	06163R
Galarza ES	221.85	204.48	372,969	9,049,780	Shade	1004777565
Gardner ES	152.86	152.18	249,319	6,049,519	Rooftop, Shade	1009509756
Grant ES	156.60	144.30	260,030	6,309,422	Shade	1009585120
Graystone ES	156.60	144.30	271,518	6,588,164	Parking, Shade	1008819256
Hacienda ES	143.55	132.30	246,233	5,974,641	Shade	1009509812
Horace Mann ES	176.58	140.00	249,686	6,058,415	Rooftop	1004576555
Los Alamitos ES	156.60	144.36	269,889	6,548,629	Shade	X20547
Lowell ES	125.57	105.00	208,585	5,061,152	Rooftop	1009512082
Olinder ES	182.70	168.42	304,064	7,377,863	Shade	1009541874
Reed ES	117.45	108.24	190,067	4,611,813	Shade	1009584923
River Glen MS	154.13	134.18	260,409	6,318,606	Rooftop, Shade	1009504631
Schallenberger ES	130.50	120.24	226,883	5,505,141	Shade	1009585015
Simonds ES	156.78	132.18	266,701	6,471,288	Rooftop, Shade	100439113
Terell ES	130.50	120.30	222,364	5,395,475	Shade	1005720410
Trace ES	169.65	156.36	276,633	6,712,262	Shade	1009514378

Washington ES	210.86	209.06	351,512	8,529,141	Rooftop, Shade	1009584999
Williams ES	130.50	120.30	219,140	5,317,247	Shade	1009504297
Willow Glen ES	169.65	156.36	278,902	6,767,340	Shade	1009501295
TOTAL	**3,882.00**	**3,533.54**	**6,465,705**	**156,885,020**		

System locations are shown on the array layout for each site.

Modules: All modules are Sunpower E-Series Commercial Solar Panels. Model# E20-435-COM. Module counts by site are shown on array layouts. A specification sheet for the proposed modules is found on the following page.

SunPower® E-Series Commercial Solar Panels | E20-435-COM

More than 20% Efficiency

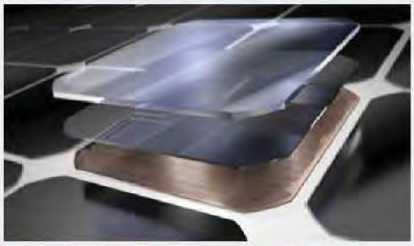
Captures more sunlight and generates more power than conventional panels.

High Performance

Delivers excellent performance in real-world conditions, such as high temperatures, clouds and low light.[1,2,4]

Utility Grade

Optimized to maximize returns, the E-Series panel is a bankable solution for large-scale power plants.



Maxeon® Solar Cells: Fundamentally better
Engineered for performance, designed for reliability.

Engineered for Peace of Mind

Designed to deliver consistent, trouble-free energy over a very long lifetime. [3,4]

Designed for Reliability

The SunPower Maxeon Solar Cell is the only cell built on a solid copper foundation. Virtually impervious to the corrosion and cracking that degrade conventional panels. [3]

#1 Rank in Fraunhofer durability test.[9]
100% power maintained in Atlas 25+ comprehensive durability test.[10]

High Performance & Excellent Reliability

SPR-E20-435-COM

E20 SERIES

High Efficiency[5]

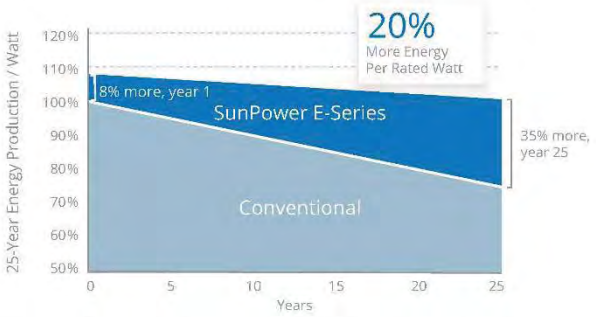
Generate more energy per square foot

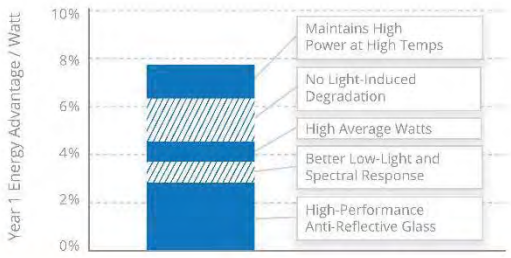
E-Series commercial panels convert more sunlight to electricity by producing 31% more power per panel[1] and 60% more energy per square foot over 25 years.[1,2,3]

High Energy Production[6]

Produce more energy per rated watt

More energy to power your operations. High year-one performance delivers 7–9% more energy per rated watt.[2] This advantage increases over time, producing 20% more energy over the first 25 years to meet your needs.[3]





SunPower® E-Series Commercial Solar Panels | E20-435-COM

SunPower Offers The Best Combined Power And Product Warranty

More guaranteed power: 95% for first 5 years, −0.4%/yr. to year 25 [7]

Combined Power and Product defect 25-year coverage that includes panel replacement costs [8]

Electrical Data

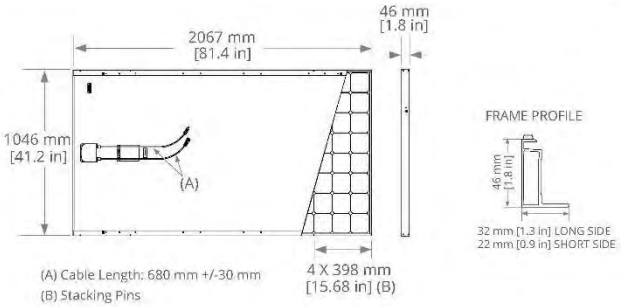
	SPR-E20-435-COM	SPR-E19-410-COM
Nominal Power (Pnom)[11]	435 W	410 W
Power Tolerance	+/– 5%	+/– 5%
Avg. Panel Efficiency[1,2]	20.3%	19.1%
Rated Voltage (Vmpp)	72.9 V	72.9 V
Rated Current (Impp)	5.97 A	5.62 A
Open-Circuit Voltage (Voc)	85.6 V	85.3 V
Short-Circuit Current (Isc)	6.43 A	6.01 A
Max. System Voltage	1000 V UL & 1000 V IEC	
Maximum Series Fuse	15 A	
Power Temp Coef.	–0.38% / ° C	
Voltage Temp Coef.	–235.5 mV / ° C	
Current Temp Coef.	3.5 mA / ° C	

Tests And Certifications

Standard Tests[13]	UL1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Quality Certs	ISO 9001:2008, ISO 14001:2004
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH SVHC-163, PV Cycle
Sustainability	Cradle to Cradle (eligible for LEED points)[14]
Ammonia Test	IEC 62716
Desert Test	10.1109/PVSC.2013.6744437
Salt Spray Test	IEC 61701 (maximum severity)
PID Test	Potential-Induced Degradation free: 1000 V[9]
Available Listings	UL, CEC, TUV, CSA, FSEC

Operating Condition And Mechanical Data

Temperature	–40° F to +185° F (–40° C to +85° C)
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Appearance	Class B
Solar Cells	128 Monocrystalline Maxeon Gen II
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-65, 680 mm cables / MC4 Compatible
Weight	56 lbs (25.4 kg)
Max. Load	Wind: 50 psf, 2400 Pa, 244 kg/m² front & back Snow: 112 psf, 5400 Pa, 550 kg/m² front
Frame	Class 2 silver anodized; stacking pins



(A) Cable Length: 680 mm +/-30 mm
(B) Stacking Pins

Please read the safety and installation guide.

REFERENCES:
1 All comparisons are SPR-E20-327 vs. a representative conventional panel: 250 W, approx. 1.6 m², 15.3% efficiency.
2 Typically 7–9% more energy per watt, BEW/DNV Engineering "SunPower Yield Report," Jan 2013.
3 SunPower 0.25%/yr degradation vs. 1.0%/yr conv. panel. Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, Feb 2013; Jordan, Dirk "SunPower Test Report," NREL, Q1 2015.
4 "SunPower Module 40-Year Useful Life" SunPower white paper, May 2015. Useful life is 99 out of 100 panels operating at more than 70% of rated power.
5 Second highest, after SunPower X-Series, of over 3,200 silicon solar panels, Photon Module Survey, Feb 2014.
6 8% more energy than the average of the top 10 panel companies tested in 2012 (151 panels, 102 companies), Photon International, Feb 2013.
7 Compared with the top 15 manufacturers. SunPower Warranty Review, May 2015.
8 Some restrictions and exclusions may apply. See warranty for details.
9 5 of top 8 panel manufacturers tested in 2013 report, 3 additional panels in 2014. Ferrara, C., et al. "Fraunhofer PV Durability Initiative for Solar Modules: Part 2". Photovoltaics International, 2014.
10 Compared with the non-stress-tested control panel. Atlas 25+ Durability test report, Feb 2013.
11 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage.
12 Based on average of measured power values during production.
13 Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.
14 See salesperson for details.

See www.sunpower.com/facts for more reference information.
For more details, see extended datasheet: www.sunpower.com/datasheets.

Document # 505699 Rev G /LTR_US

SUNPOWER®

Inverter: All inverters are SMA string inverters. There are three models found in the project scope: SMA Sunny Tripower 12kW, 24kW, and 30kW. The number of inverters at each site, by inverter size, are shown on the array layouts. A specification sheet for the proposed inverters is found on the following page.

Design flexibility
- 1000 V DC or 600 V DC
- Two independent DC inputs
- 15° to 90° mounting angle range
- Detachable DC Connection Unit

System efficiency
- 98% CEC, 98.5% Peak
- 1000 V DC increases system efficiency
- OptiTrac advanced MPPT
- OptiTrac Global Peak MPPT

Enhanced safety
- Integrated DC AFCI
- Floating system with all-pole sensitive ground fault protection
- Reverse polarity indicator

Future-proof
- Cluster Controller, WebConnect/ Speedwire
- Bi-directional Ethernet communications
- Complete grid management feature set
- Ability to satisfy future utility requirements

SUNNY TRIPOWER
12000TL-US / 15000TL-US / 20000TL-US / 24000TL-US

The ultimate solution for decentralized PV plants

SMA's new Sunny Tripower TL-US is raising the level of performance for decentralized commercial PV plants. This three-phase transformerless inverter is UL listed for up to 1000 V DC maximum system voltage and has peak efficiency above 98 percent, while OptiTrac Global Peak minimizes the effects of shade for maximum energy production. The Sunny Tripower delivers a future-proof solution with full grid management, and communications and monitoring features. The Sunny Tripower is also equipped with all-pole ground fault protection and integrated AFCI for a safe, reliable solution. It offers unmatched flexibility with a wide input voltage range and two independent MPP trackers. Suitable for both 600 V DC and 1,000 V DC applications, the Sunny Tripower allows for flexible design and a lower levelized cost of energy.

ENGINEERED IN GERMANY
ASSEMBLED IN THE USA

THE TOTAL PACKAGE

The Sunny Tripower TL-US is engineered to optimize design, production, and reliability—reducing a project's levelized cost of energy and improving its financial returns.

Unmatched flexibility
Available in four power classes, the Sunny Tripower TL-US features a wide operating window, two MPP trackers, and 600 V DC or 1,000 V DC operation, making it ideal for any decentralized project. System engineering is made simple and repeatable, resulting in a shortened design cycle.

Easy to transport and install, the Sunny Tripower can be mounted in a variety of ways from vertical to nearly horizontal. Concrete pads usually required by central inverters are unnecessary, preserving site real estate.

Enhanced power production
Leading efficiency and SMA's proprietary OptiTrac Global Peak MPP tracking means owners benefit from superior power production and improved economics. When operated at 1,000 V DC, balance of system costs can also be significantly reduced.

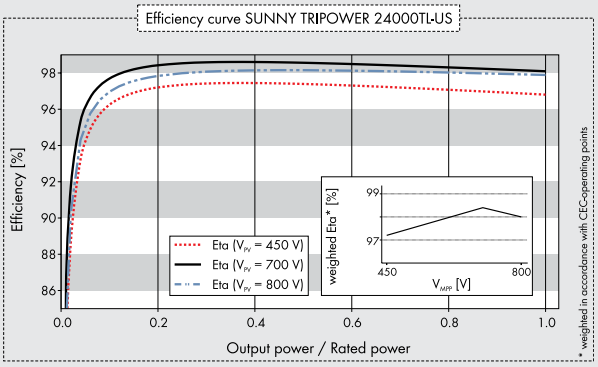
The Sunny Tripower TL-US also features advanced diagnostics, including a reverse polarity indicator via the Connection Unit 1000-US.

Future proof
The Sunny Tripower TL-US includes a number of technologies designed to meet tomorrow's requirements. Full grid management functionality is available, as are cutting edge communication options like SMA's Cluster Controller and Speedwire.

SMA Service can also simplify long-term planning with comprehensive packages covering inverters through plant-wide operations and maintenance (O&M). And, as a decentralized technology, inverter-level O&M is reduced from the beginning compared to centralized architecture.

Optimized cost
The Sunny Tripower TL-US allows integrators to optimally use real estate, shorten design and installation time, and produce more power. Inverter-level O&M is reduced through string technology and long-term support is made simple through SMA's service organization, making the Sunny Tripower TL-US the ultimate solution for decentralized PV.

Technical data	Sunny Tripower 12000TL-US	Sunny Tripower 15000TL-US	Sunny Tripower 20000TL-US	Sunny Tripower 24000TL-US
Input (DC)				
Max. recommended PV power (@ module STC)	15000 W	18750 W	25000 W	30000 W
Max. DC voltage*	1000 V	1000 V	1000 V	1000 V
Rated MPPT voltage range	300 V...800 V	300 V...800 V	380 V...800 V	450 V...800 V
MPPT operating voltage range	150 V...1000 V	150 V...1000 V	150 V...1000 V	150 V...1000 V
Min. DC voltage / start voltage	150 V / 188 V	150 V / 188 V	150 V / 188 V	150 V / 188 V
Number of MPP tracker inputs	2	2	2	2
Max. input current / per MPP tracker input	66 A / 33 A	66 A / 33 A	66 A / 33 A	66 A / 33 A
Output (AC)				
AC nominal power	12000 W	15000 W	20000 W	24000 W
Max. AC apparent power	12000 VA	15000 VA	20000 VA	24000 VA
Output phases / line connections	3 / 3-N-PE			
Nominal AC voltage	480 / 277 V WYE			
AC voltage range	244 V...305 V			
Rated AC grid frequency	60 Hz			
AC grid frequency / range	50 Hz, 60 Hz / 44 Hz...65 Hz			
Max. output current	14.4 A	18 A	24 A	29 A
Power factor at rated power / adjustable displacement	1 / 0.8 leading...0.8 lagging			
Harmonics	< 3 %			
Efficiency				
Max. efficiency	98.2 %	98.2 %	98.5 %	98.5 %
CEC efficiency	97.5%	97.5%	97.5%	98.0%
Protection devices				
DC reverse polarity protection	●	●	●	●
Ground fault monitoring / Grid monitoring	●	●	●	●
All-pole sensitive residual current monitoring unit	●	●	●	●
DC AFCI compliant to UL 1699B	●	●	●	●
AC short circuit protection	●	●	●	●
Protection class / overvoltage category	I / IV	I / IV	I / IV	I / IV
General data				
Dimensions (W / H / D) in mm (in)	665 / 690 / 265 (26.1 / 27.1 / 10.4)			
Packing dimensions (W / H / D) in mm (in)	780 / 790 / 380 (30.7 / 31.1 / 15.0)			
Weight	55 kg (121 lbs)			
Packing weight	61 kg (134.5 lbs)			
Operating temperature range	-25°C...+60°C			
Noise emission (typical)	51 dB(A)			
Internal consumption at night	1 W			
Topology	Transformerless			
Cooling concept	OptiCool			
Electronics protection rating	NEMA 3R			
Features				
Display / LED indicators (Status / Fault / Communication)	– / ●	– / ●	– / ●	– / ●
Interfaces: Speedwire / RS485	●/○	●/○	●/○	●/○
Mounting Angle Range	15°...90°	15°...90°	15°...90°	15°...90°
Warranty: 10 / 15 / 20 years	●/○/○	●/○/○	●/○/○	●/○/○
Certifications and approvals (pending)	UL 1741, UL 1998, UL 1699B, IEEE 1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1			
NOTE: US inverters ship with gray lids				
*Suitable for 600 V DC max. systems				
Type designation	STP 12000TL-US-10	STP 15000TL-US-10	STP 20000TL-US-10	STP 24000TL-US-10



Accessories

RS485 interface
DM-485CB-US-10

SMA Cluster Controller
CLCON-10

● Standard features ○ Optional features – Not available
Data at nominal conditions

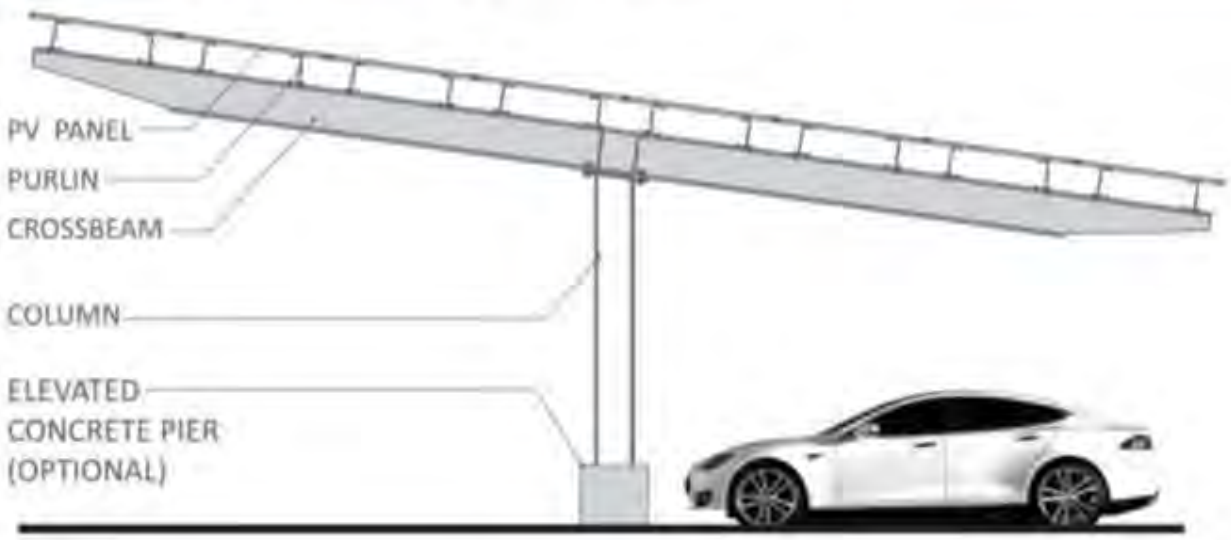
CONNECTION UNIT 1000-US

The Connection Unit is an optional system component of the Sunny Tripower TL-US series and includes combiner box and disconnect functionality in one convenient housing. Its integrated reverse polarity indicator supports safe installation.

Technical data	Connection Unit 1000 V	
Input (DC)		
Max. DC voltage	1000 V	
Number of input source circuits (strings)	8 (4 + 4)	
Input conductor size	#12 to #6 AWG	
Max. fuse size	20 A	
Output (DC)		
Output circuits	2	
Output conductor size	#12 to #2 AWG	
Max. rated continuous current / per output circuit	66 A / 33 A	
Protection devices		
Touchsafe fuse holders	●	
Reverse polarity indicator	●	
Load-break rated output disconnect	●	
General data		
Dimensions (W / H / D) in mm (in)	500 / 380 / 140 (19.7 / 15.0 / 5.5)	
Packing dimensions (W / H / D) in mm (in)	520 / 420 / 200 (20.5 / 16.5 / 7.9)	
Weight	5.5 kg (12 lbs)	
Packing weight	6.0 kg (13 lbs)	
Protection rating	NEMA 3R	
Features		
Certificates and permits (pending)		
● Standard features ○ Optional features – Not available		
Type designation	CU 1000-US-10	

Structure: All carport (shade) structures are fixed tilt dual-cantilever and single-cantilever Sunpower Helix Carport structures, DSA Pre-Checked Design A04-113859, or better. Structures have a minimum clearance of 10 feet on the low end and 13.5 feet on the high end, with a pier depth of 11 feet. Degree azimuth and degree tilt are provided on the individual structure are provided on the array layouts. A specification sheet for the proposed carport structures is found on the following page.

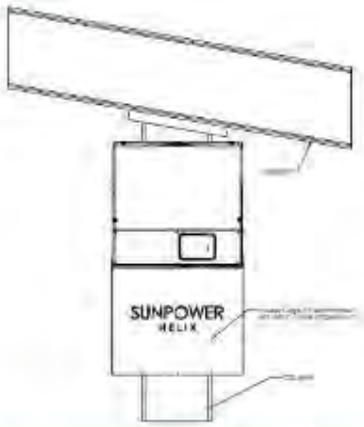
HELIX Carport Structure Datasheet



DSA Pre-Checked Design	A 04-113859
Clearance at low end	80" minimum
Tilt	7.4 or 10 degrees
Column Spacing	34.6'
Cantilever	Up to 8.6' on either side
Concrete Pier	Optional
Foundations	Cast-in-place or rebar reinforced concrete or spread footings or CIDH piles
Columns	ASTM A500 Grade B structural steel
Girders	ASTM A992 Grade 50 structural steel
C-purlins	ASTM A653 Grade 55 structural steel
Structural hardware	A325 and A307
Structural assembly	Bolting (no field welding)
Finish Options	Galvanization, shop painting, or powder coating
Optional features	Fascia, snow guard, EV charging stations, security cameras, rain management, branding, decking
Warranty	1 year labor warranty, 20 year product warranty

SUNPOWER®

HELIX Carport Power Station and Electrical BOS Datasheet



General	
Operating temp.	–4°F to +140°F (–20°C to +60°C)
Components	• Helix plug-and-play SMA Tripower Inverter • Helix plug-and-play AC Combiner • Helix plug-and-play DC Harness • Helix plug-and-play AC Whip • Helix eBOS Mount • Helix Cable Clip
Warranty	10 year factory warranty (Extension available up to 20 years)

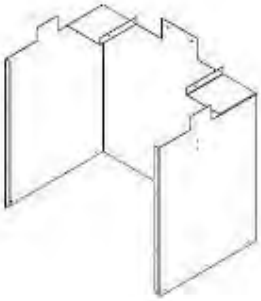
Inverter	
Model	Helix *plug-and-play* SMA Tripower (STP-US)
AC power ratings	12, 20, 24, 30 kW AC
Rated grid voltage	480 V / 277 V WYE
Max. DC input voltage	1000V
Dimensions (w x h x d)	665 x 690 x 265 mm (26.2 x 27.2 x 10.4 in.)
Weight	55 kg (121 lbs.)
Enclosure rating	NEMA 3R
DC connector	H4-UTX-XL
AC connector	APP Mid-Power SPEC Pak®
Communications connector	RJ45
Communications protocol	Modbus TCP-IP
Dual DC/AC disconnect	NEMA 4

AC Combiner	
Model	Helix *plug-and-play* AC Combiner
Rated amperage	250 A
Inverter input options	2 to 6 inverter input configurations
Inverter input max. amperage	50 A
Optional auxiliary input rated amperage	15 A
Dimensions (w x h x d)	610 x 762 x 279 mm (26.2 x 27.2 x 10.4 in.)
Enclosure rating	NEMA 4X non-metallic
AC connector	APP Mid-Power SPEC Pak®

HELIX Carport Power Station and Electrical BOS

DC Harness	
Model	Helix *plug-and-play* DC Harness
Conductor size	#12 AWG to #6 AWG
Conductor insulation rating	Sunlight-resistant PV Wire
Voltage rating	2000 VDC
Fusing	15A
Connector	String side: Tyco PV4 Solarlock Combined side: Amphenol H4-UTX-XL

AC Whip	
Model	Helix *plug-and-play* AC Combiner
Length	Varies
Conductor size	#8 AWG 5-strand multiconductor
Conductor insulation rating	Sunlight-resistant TC-ER
Voltage rating	600V
AC connector type	APP Mid-Power SPEC Pak®



eBOS Mount	
Mounting structure model	Helix Carport eBOS Mount
Mounting structure material	5052 H32 Aluminum
Cover	Integrated AC/DC disconnect cover

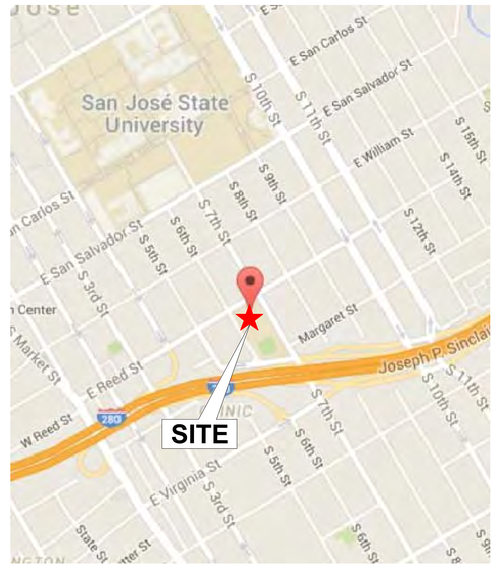
Cable Clip	
Clip type	Heyco HEYClip™ SunRunner®
Clip material	304 Stainless Steel
Dimensions	24.6 x 12.7 x 9.9 mm (.97 x .50 x .39 in)
Capacity	Up to two 8 gauge wires

SUNPOWER

Array Layouts for each site can be found on the following pages:

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.251751°

LONGITUDE: -121.884371°

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL POLE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	30	1	18	180	78.30	3		-18°	10°	4	104.21	4274.18
2	6	35	1	21	210	91.35	3	1	-18°	10°	4	121.58	4984.71
TOTAL				39	390	169.65	6	1			8	226	9259

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
ALMADEN ELEMENTARY SCHOOL
1295 DENTWOOD DR
SAN JOSE, CA 95118

HELIX CARPORT
ARRAY LAYOUT

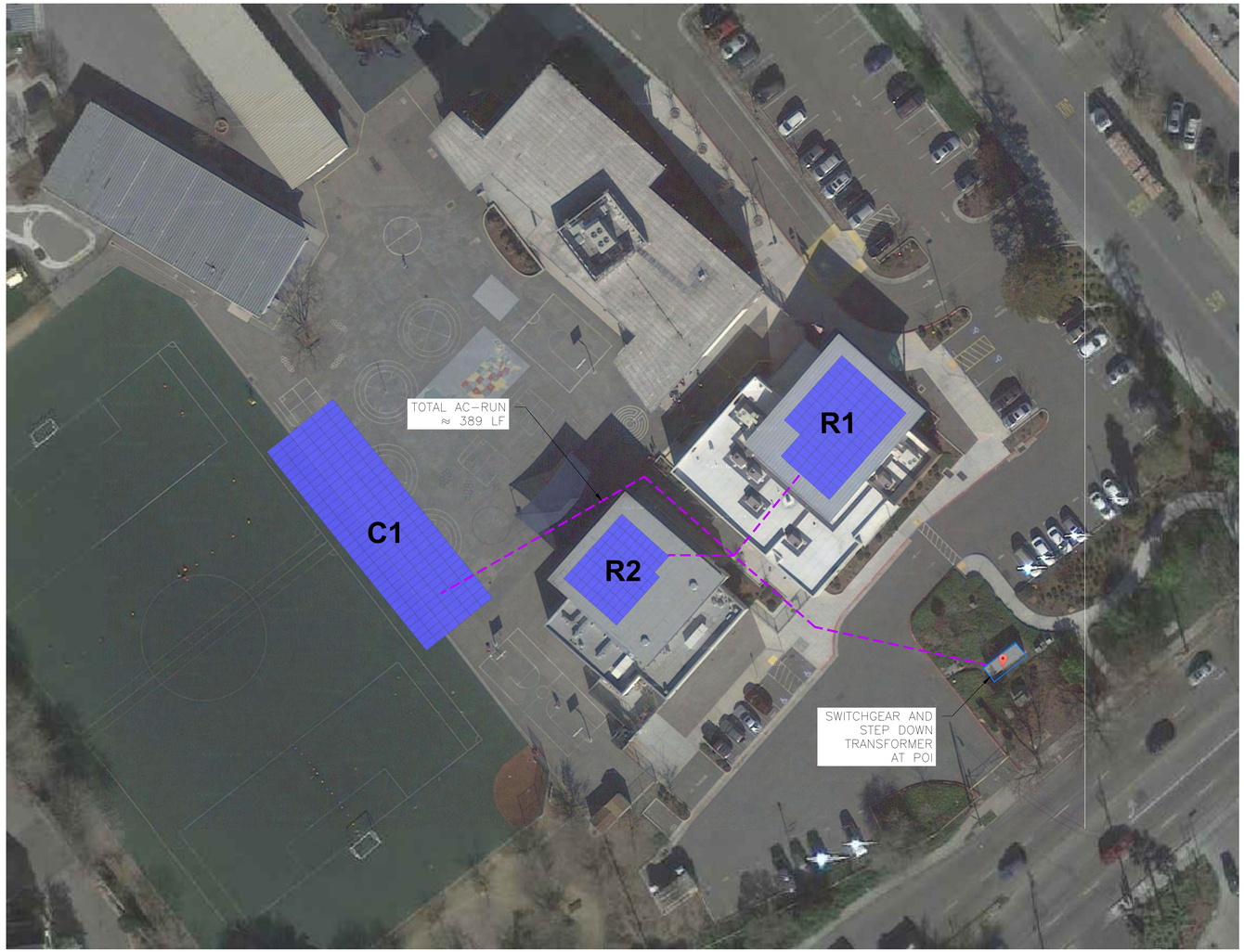
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB
A	D-0079599	PROPOSAL	05-06-16	AV
B	D-0079920	RELOCATE ARRAY	06-09-16	RA
				JC

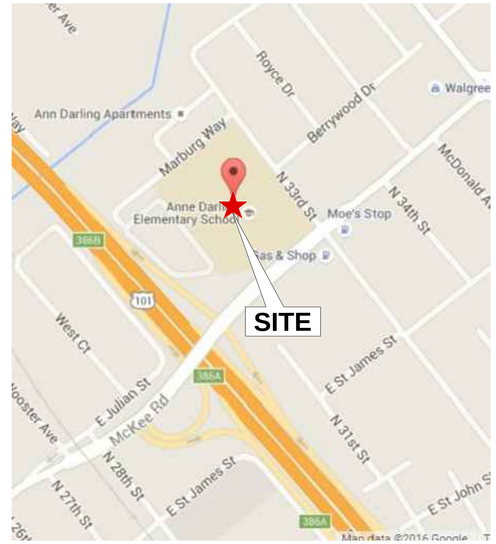
OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-06-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



N 1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.356583°

LONGITUDE: -121.865544°

SUNPOWER® | HELIX™

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	30KW INV.	24KW INV.	AZI	TILT	#OF COL	LF	SF
C1	6	35	1	21	210	91.35		3	51.2°	10°	4	121.58	4984.71
R1	12	10	1	10	120	39.24	1		41.9°	15°			
R2	12	7	1	7	84	27.47		1	-49°	15°			
TOTAL				38	414	158.06	1	4			4	121.58	4984.71

PROPOSED SYSTEM SPECIFICATIONS:

HELIX CARPORT:
(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

RMR SOLAR ROOF TILE:
(327W) MODULES
12 MODULES/STRING

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER®
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
ANNE DARLING ELEMENTARY SCHOOL
333 N 33RD ST.
SAN JOSE, CA 95133

RMR & HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB
A	D-0079600	PROPOSAL	05-06-16	AV JC
B	D-0079912	CHANGE SYSTEM SIZE	06-09-16	AV JC

OPPORTUNITY 0001194369

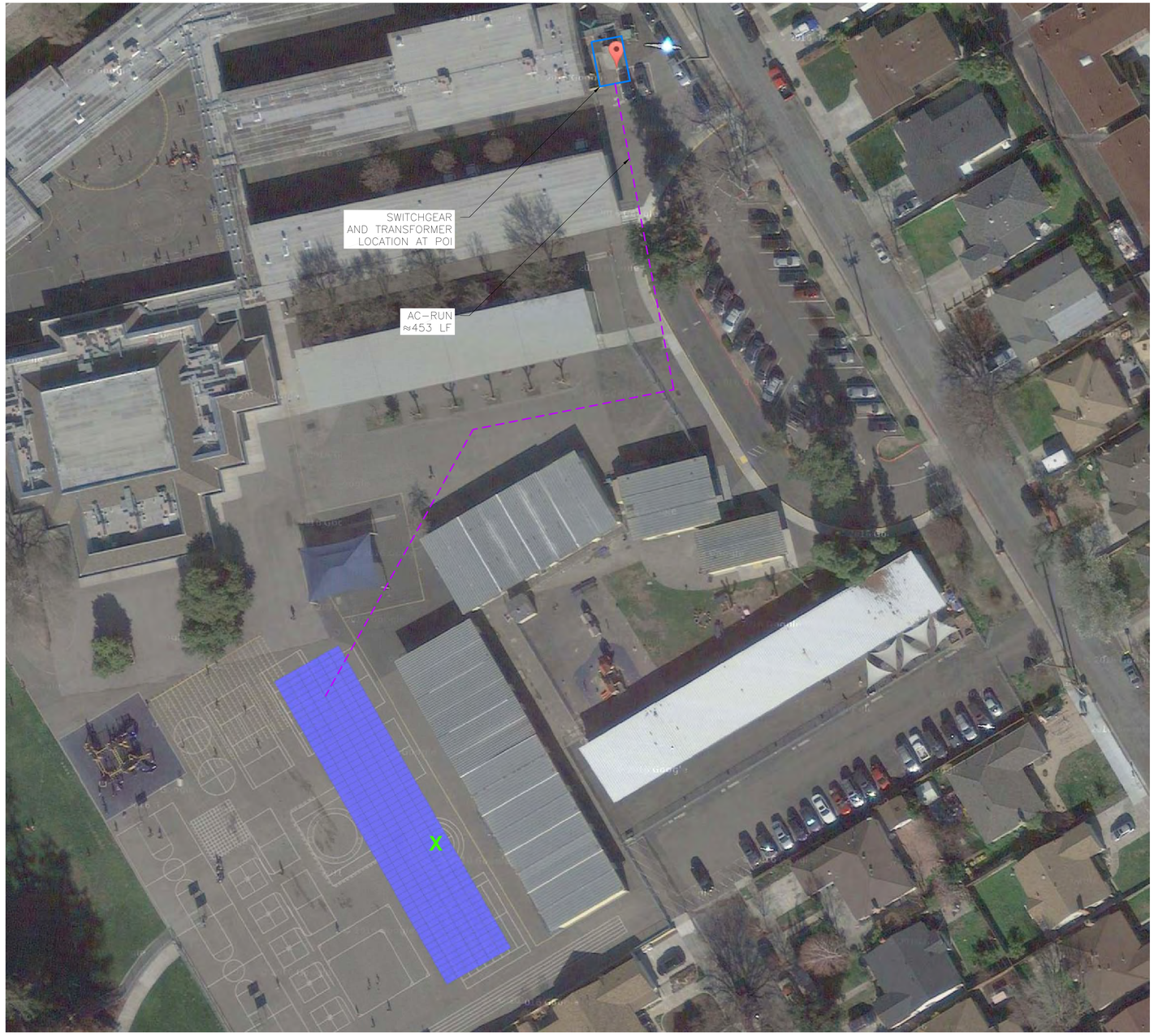
PROJECT

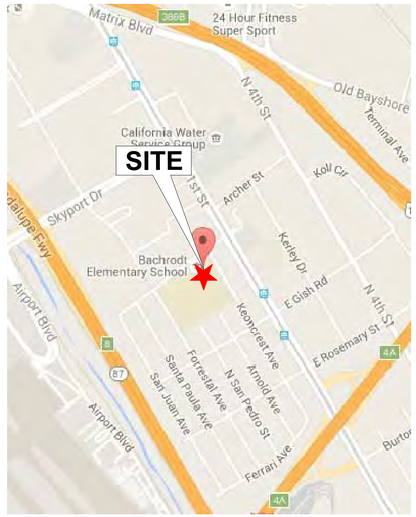
DATE DRAWN 05-06-16

DRAWN BY AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1





VICINITY MAP:

LATITUDE: 37.362893°

LONGITUDE: -121.912400°

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

LEGEND:

X	PROPOSED TREE REMOVAL
X	PROPOSED TETHER BALL POLE REMOVAL
- - -	PROPOSED AC RUN
	PROPOSED EQUIPMENT PAD
	PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	55	1	33	330	143.55	5	1	60°	10°	6	191.08	7814.50

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF TETHER BALL POLES TO BE REMOVED: 1
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
BACHRODT ES
102 SONORA AVE.,
SAN JOSE, CA 95110

HELIX CARPORT
ARRAY LAYOUT

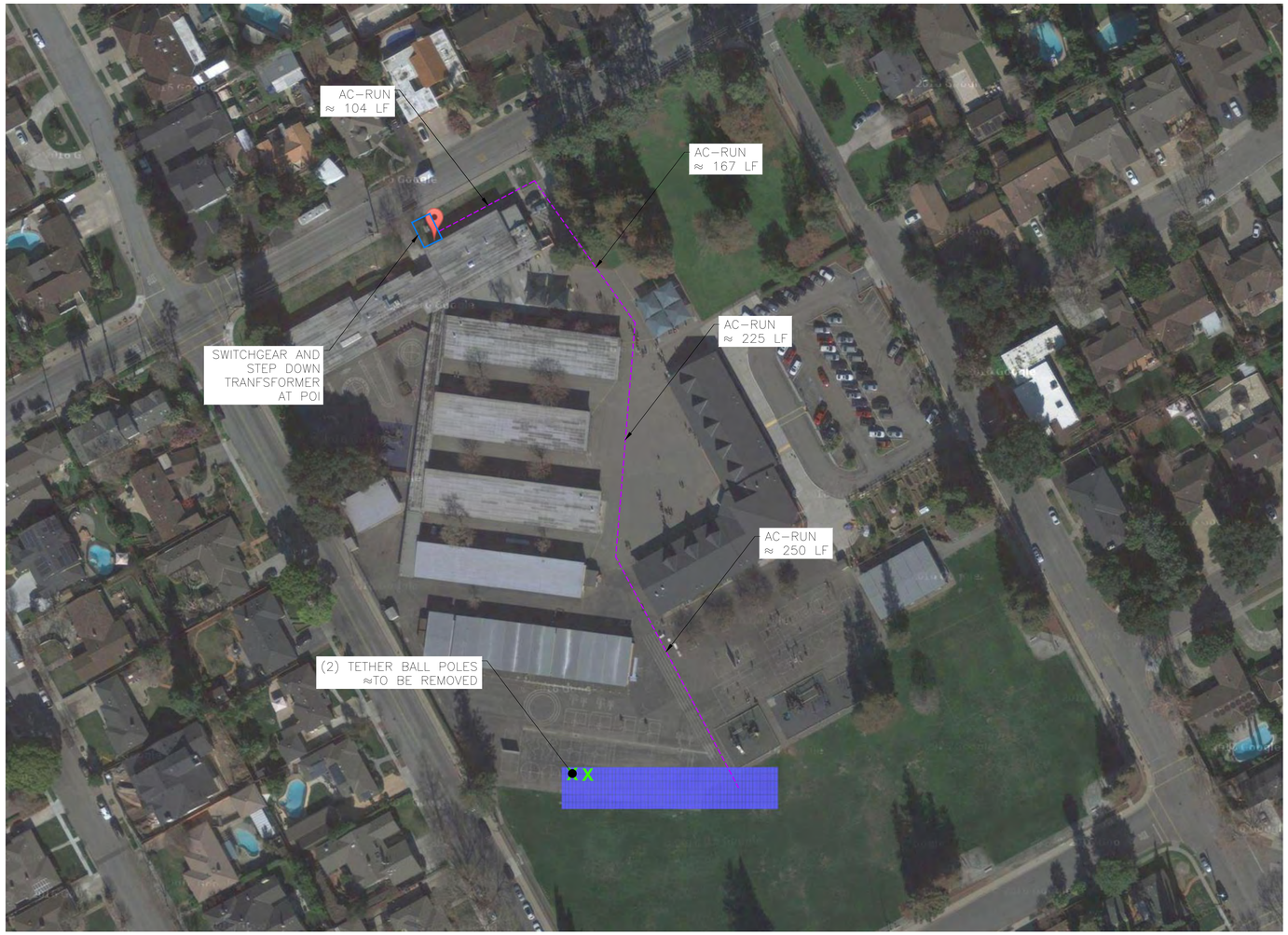
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079601	PROPOSAL	05-10-16	RA	JC
B	D-0079919	CHANGE SYSTEM SIZE	06-09-16	RA	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	RA

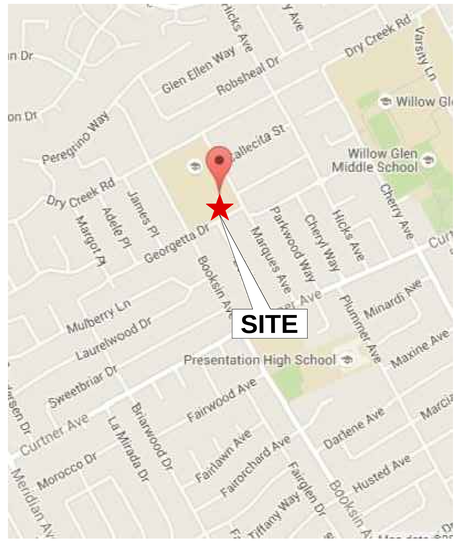
0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



N

1 ARRAY LAYOUT
SCALE: 1/64" = 1'–0"



VICINITY MAP:

LATITUDE: 37.287761°

LONGITUDE: –121.904933°

SUNPOWER® | H E L I X™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	AZI	TILT	#OF COL	LF	SF
PR	6	60	1	36	360	156.60	6	0°	10°	7	208.46	8537.34

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER®
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
BOOKSIN ELEMENTARY SCHOOL
1590 DRY CREEK RD
SAN JOSE, CA 95125

HELIX CARPORT
ARRAY LAYOUT

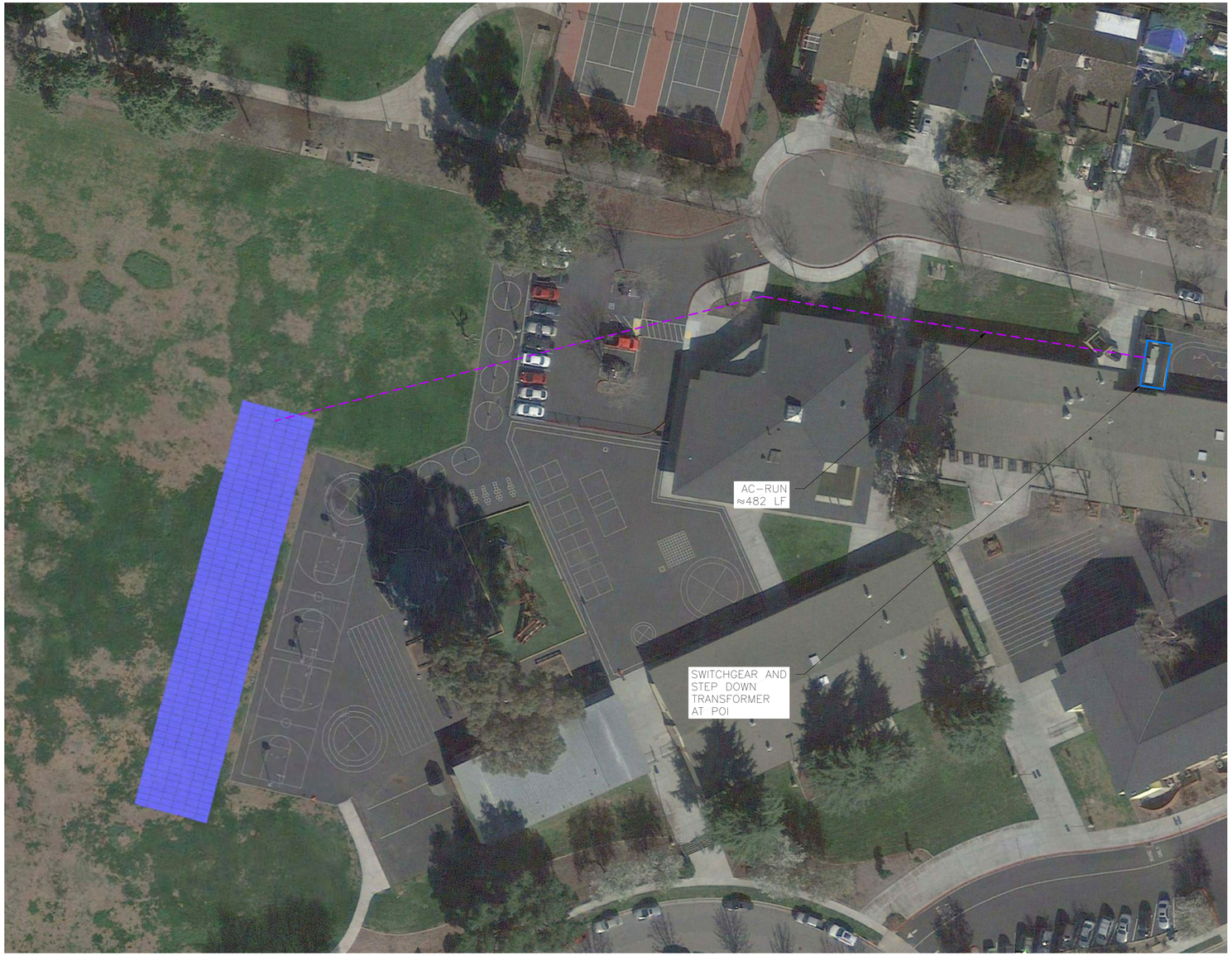
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D–0079602	PROPOSAL	05–06–16	AV	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05–06–16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



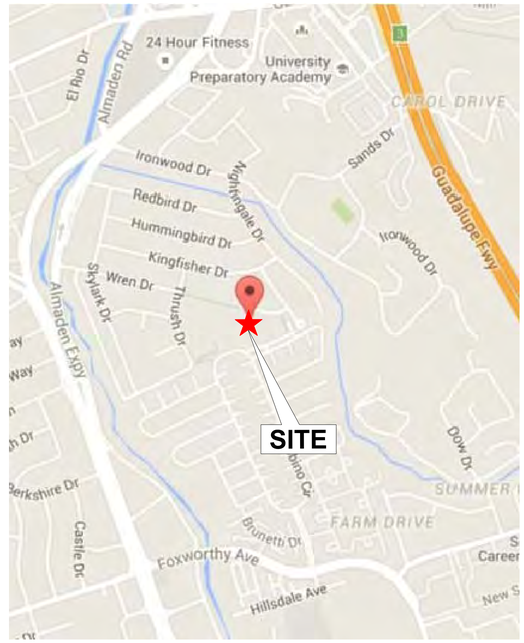
N 1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- - - - PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION



VICINITY MAP:

LATITUDE: 37.284353°

LONGITUDE: -121.878044°

SUNPOWER® | HELIX™

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	65	1	39	390	169.65	6	1	-75°	10°	7	208.46	8537.34

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
CAOAS ELEMENTARY SCHOOL
880 WREN DR.
SAN JOSE, CA 95125

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

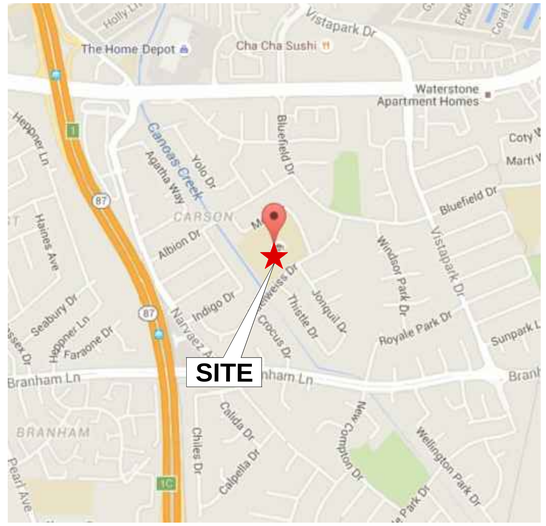
REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079583	PROPOSAL	05-10-16	AV	JC
B	D-0079918	CHANGE SYSTEM SIZE	06-09-16	RA	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

25FT TREE HEIGHTS TO BE MAINTAINED PRUNING BY DISTRICT



VICINITY MAP:

LATITUDE: 37.269733°

LONGITUDE: −121.854977°

SUNPOWER® | H E L I X™

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'−0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7−10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- X — PROPOSED TETHER BALL REMOVAL
- PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	AZI	TILT	#OF COL	LF	SF
PR	6	45	1	27	270	117.45	6	−30°	10°	5	156.30	6405.76

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER®
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
CARSON ELEMENTARY SCHOOL
4245 MEG DR
SAN JOSE, CA 95136

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

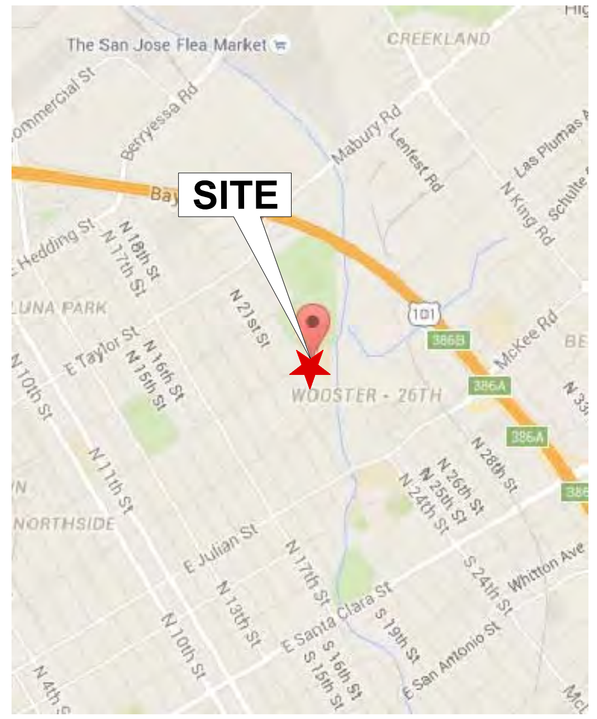
REV	DESCRIPTION	DATE	DB CB
A	PROPOSAL	05-06-16	AV JC

DESIGN # D-0079584

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-06-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



VICINITY MAP:

LATITUDE: 37.354653°

LONGITUDE: -121.875532°

SUNPOWER® | HELIX™

SUNPOWER® | HELIX™

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	30KW INV.	24KW INV.	15KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
C1	6	25	1	15	150	65.25		2		1	-13°	10°	3	86.83	3551.12
R1				10	120	39.24	1				-39°	15°			
R2				5	60	19.62			1		61°	15°			
TOTAL				30	330	124.11	1	2	1	1			3	87	3551

PROPOSED SYSTEM SPECIFICATIONS:

HELIX CARPORT:
(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

RMR SOLAR ROOF TILE:
(327W) MODULES
12 MODULES/STRING

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
EMPIRE GARDENS ES
1060 E. EMPIRE ST.,
SAN JOSE, CA

RMR & HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB
A	D-0079603	PROPOSAL	05-10-16	RA JC
B	D-0079911	CHANGE SYSTEM SIZE	06-09-16	CP JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	RA

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

VICINITY MAP:

LATITUDE: 37.302637°

LONGITUDE: −121.885202°

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE												
ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	85	1	51	510	221.85	8	1	0°	10°	9	295.33	12077.89

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
GALARZA ELEMENTARY SCHOOL
1610 BIRD AVE.
SAN JOSE, CA 95125

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079604	PROPOSAL	05-10-16	RA	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	RA

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

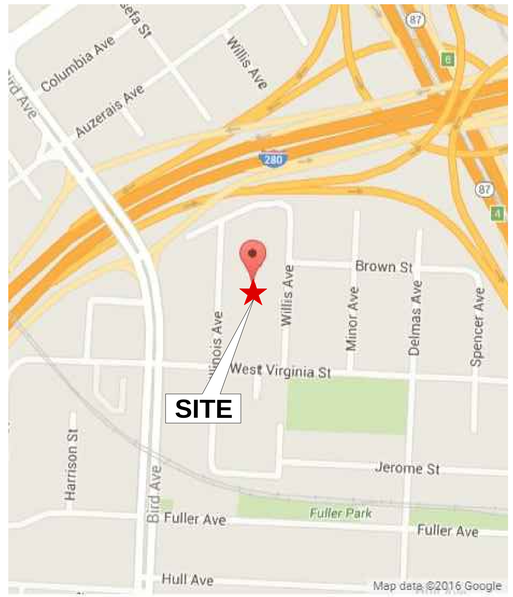
SHEET 1

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.



VICINITY MAP:

LATITUDE: 37.3212649°

LONGITUDE: -121.895809°

SUNPOWER® | HELIX™

SUNPOWER® | HELIX™

ARRAY SUMMARY TABLE

ARRAYS	TYPE	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	30KW INV.	24KW INV.	20KW INV.	15KW INV.	AZI	TILT	#OF COL	LF	SF
C1	CARPORT	6	20	1	12	120	52.20		2			0°	10°	3	69.46	2840.62
C2	CARPORT	4	15	1	6	60	26.10		1			90°	10°	2	52.08	1419.27
R1	HST				10	84	27.47			1	1	2°	10°			
R2	RMR				5	144	47.09	1			1	-88°	15°			
TOTAL					33	408	152.86	1	3	1	2			5	122	4260

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL POLE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

RMR SOLAR ROOF TILE:
(327W) MODULES
12 MODULES/STRING

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER®
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
GARDNER ELEMENTARY SCHOOL
502 ILLINOIS AVE,
SAN JOSE, CA 95125

RMR & HELIX CARPORT
ARRAY LAYOUT

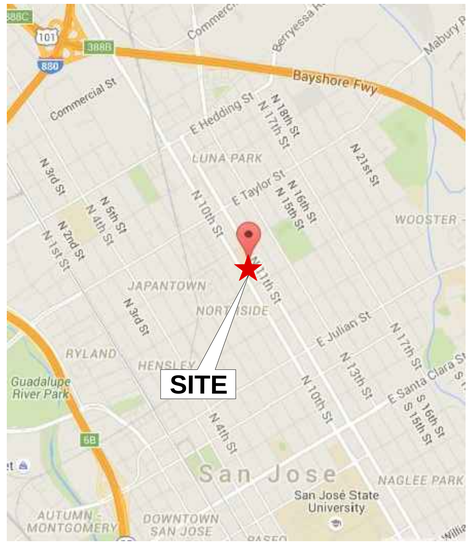
REVISIONS

REV	DESCRIPTION	DESIGN #	DATE	DB
A	PROPOSAL	D-0079590	05-06-16	AV
B	CHANGE SYSTEM SIZE	D-0079910	06-09-16	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-06-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



VICINITY MAP:

LATITUDE: 37.350647°

LONGITUDE: –121.88775°

N 1 ARRAY LAYOUT
SCALE: 1/32" = 1'–0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL REMOVAL

– – – PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	35	1	21	210	91.35	3	1	–31°	10°	4	121.58	4984.71
2	6	25	1	15	150	65.25	2	1	–31°	10°	3	86.83	3563.66
TOTAL				36	360	156.60	5	2			7	208	8548

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
GRANT ELEMENTARY SCHOOL
470 JACKSON ST.
SAN JOSE, CA 95112

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079606	PROPOSAL	05-09-16	AV	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-09-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

N

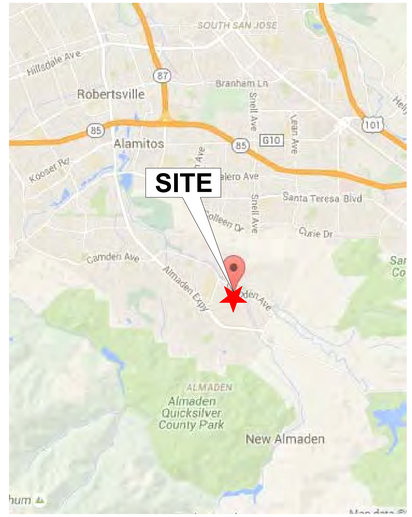
1 ARRAY LAYOUT
SCALE: 1/32" = 1'–0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- X — PROPOSED TETHER BALL POLE REMOVAL
- – – – PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION



VICINITY MAP:

LATITUDE: 37.211436°

LONGITUDE: –121.837230°

SUNPOWER® | HELIX™

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	35	1	21	210	91.35	3	1	–5°	10°	4	121.58	4972.25
2	5	30	1	15	150	65.25	2	1	–5°	10°	4	97.26	3550.68
TOTAL				36	360	156.60	5	2			8	219	8523

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF TEHTER BALL POLES TO BE REMOVED: 1
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
GRAYSTONE ES
6982 SHEARWATER DR.
SAN JOSE, CA 95120

HELIX CARPORT
ARRAY LAYOUT

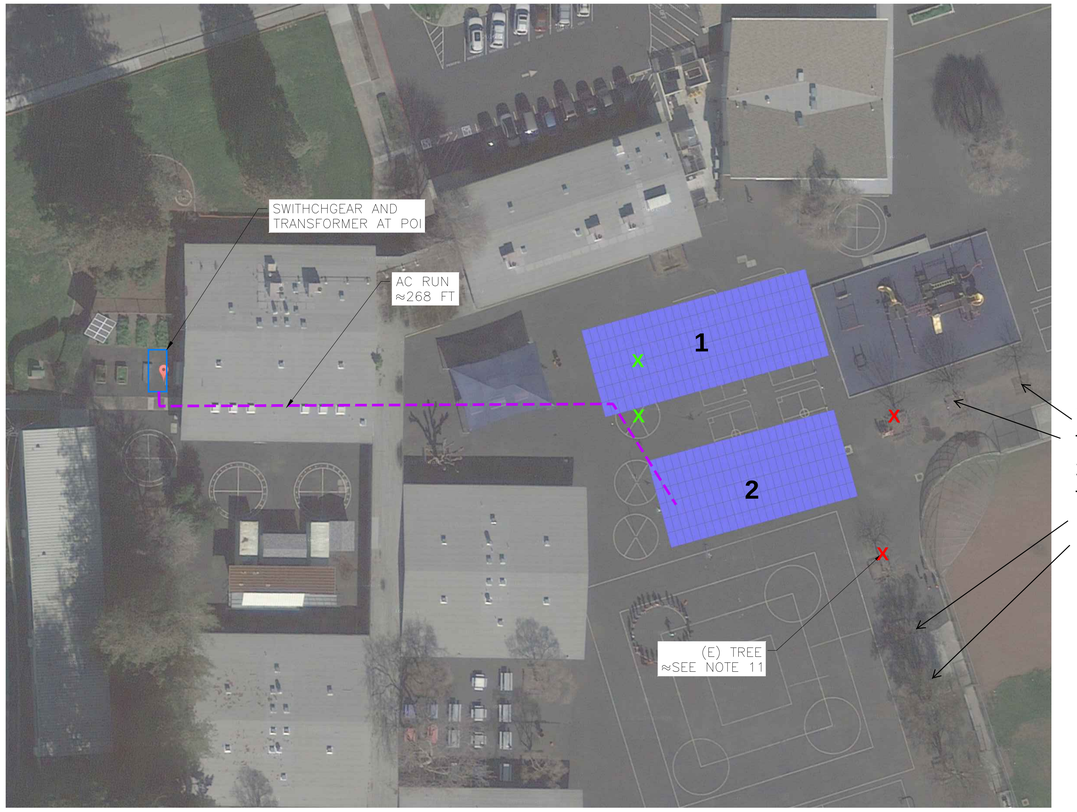
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079607	PROPOSAL	05-10-16	RA	JC
B	D-0079917	RELOCATION OF ARRAYS	06-09-16	RA	JC

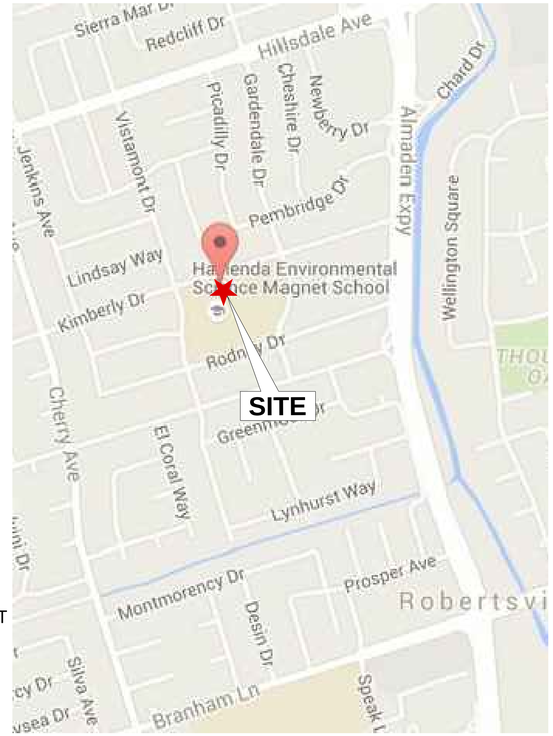
OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	RA

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



N 1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.269534°

LONGITUDE: -121.883232°

SUNPOWER® | H E L I X™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- X — PROPOSED TETHER BALL POLE REMOVAL
- - - - PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	30	1	18	180	78.30	3	0	-15°	10°	4	104.20	4261.7
2	6	25	1	15	150	65.25	2	1	-15°	10°	3	86.80	3551.1
TOTAL				33	330	143.55	5	1			7	191	7813

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
HACIENDA ELEMENTARY SCHOOL
1290 KIMBERLY DR.
SAN JOSE, CA 95118

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

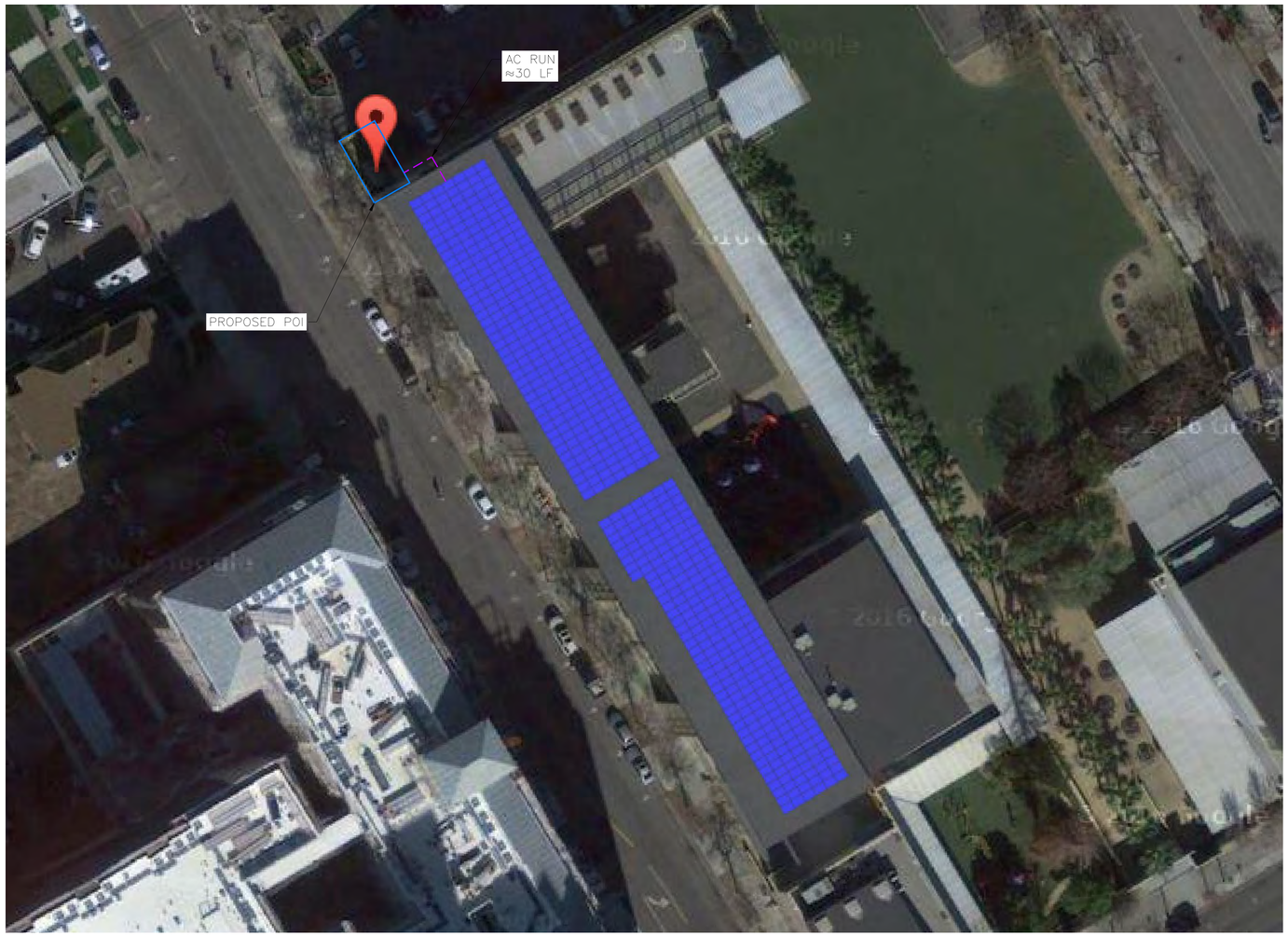
REV	DESCRIPTION	DATE	DB	CB
A	PROPOSAL	05-06-16	CP	JC

DESIGN # D-0079608

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-05-16
DRAWN BY	cp

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



VICINITY MAP:

LATITUDE: 37.339475°

LONGITUDE: −121.885184°

LEGEND:

- X — PROPOSED TREE REMOVAL
- PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

NOTES:

1. LAYOUT ASSUMES THAT ADDITION OF ARRAY WILL NOT INCREASE THE DEMAND/CAPACITY RATIO OF ANY MEMBER IN THE BUILDING'S LATERAL FORCE RESISTING SYSTEM BY MORE THAN 10%, RELATIVE TO ORIGINAL CONSTRUCTION, PER IBC/CBC 3404.4.
2. 110 MPH WIND ZONE (ASCE 7-10), EXPOSURE TYPE B, OCCUPANCY CATEGORY II.
3. POINT OF INTERCONNECTION & METER # TBD.
4. ARRAY SHOWN ON AERIAL IMAGE.
5. NO. OF INVERTERS:
   5.1. 30 kWac: [4] 108 MODULES EACH
   [1] 96 MODULES
6. NO. OF AC PANELBOARD: [2]
7. POWER STATION LOCATIONS TBD
8. ROOF EDGE SETBACK: 6'

PROPOSED SYSTEM SPECIFICATION

TOTALS:

172.656 kWp

528 HIGH EFF. (327W) MODULES

12 MODULES/STRING, 44 STRINGS

ROOF HEIGHT: ASSUMED 25'

ROOF PITCH: ASSUMED FLAT

AZIMUTH: 60°

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
HORACE MANN ES
55 N 7TH ST.
SAN JOSE, CA 95112

RMR SOLAR ROOF TILE
ARRAY LAYOUT

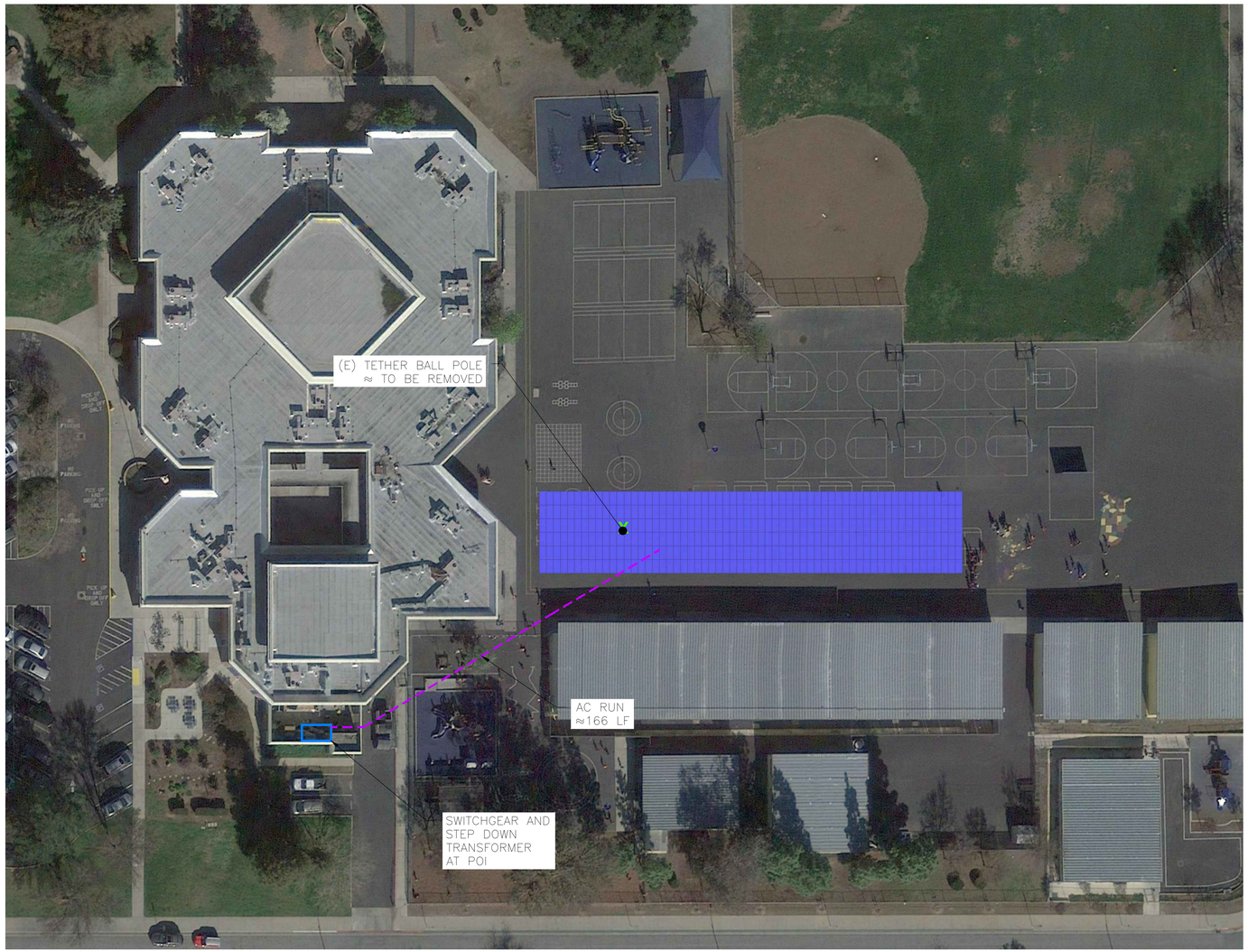
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-00796I7	PROPOSAL	05-06-16	CP	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-17-16
DRAWN BY	CP

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

VICINITY MAP:

LATITUDE: 37.228332°

LONGITUDE: −121.880213°

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	60	1	36	360	156.60	6	0°	10°	7	208.46	8525.07

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF TETHER BALL POLES TO BE REMOVED: 1
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
LOS ALAMITOS ES
6130 SILBERMAN DR.
SAN JOSE, CA 95120

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESCRIPTION	DATE	DB	CB
A	PROPOSAL	05-05-16	RA	JC

DESIGN # D-0079609

OPPORTUNITY 0001194369

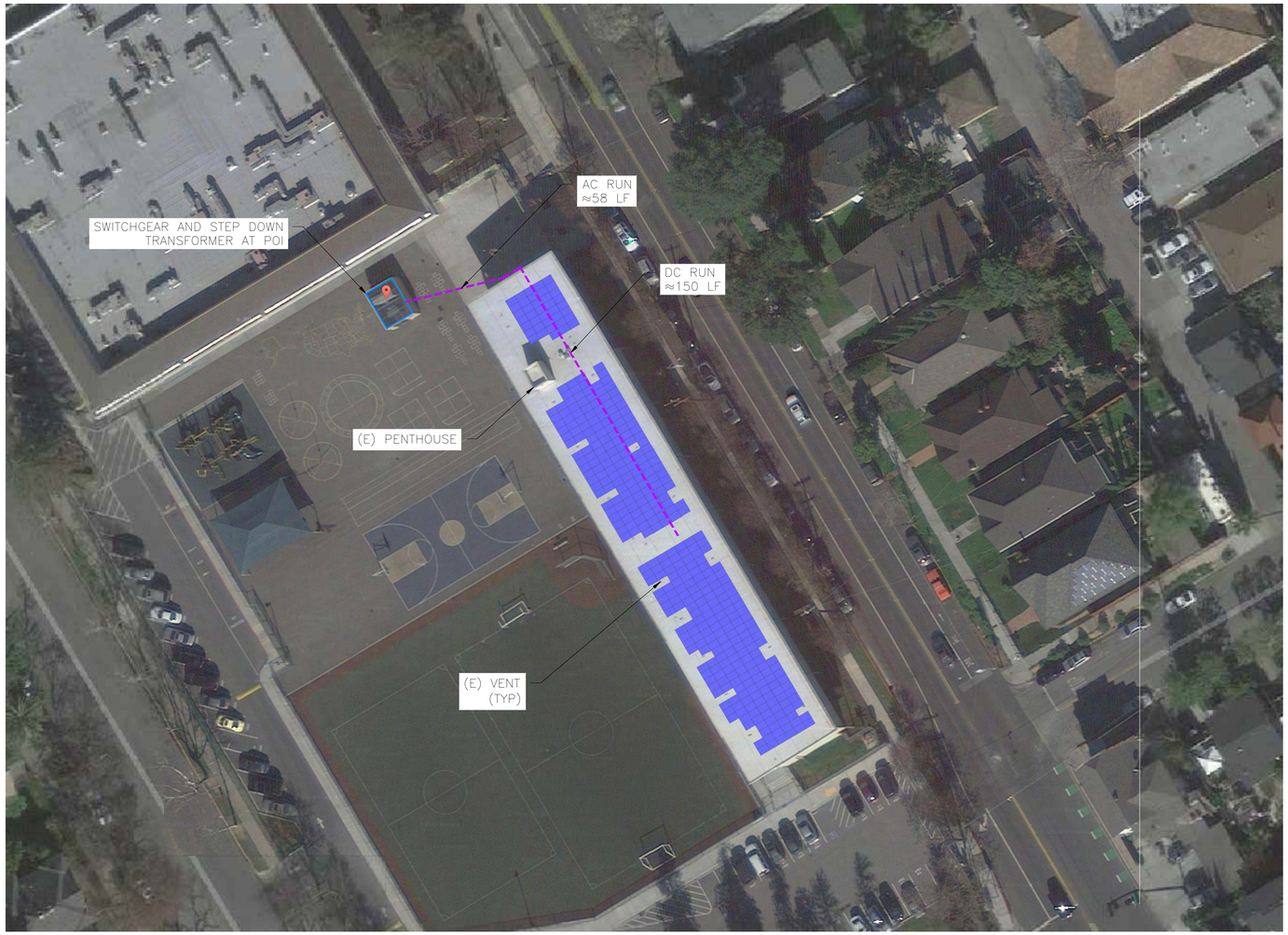
PROJECT

DATE DRAWN 05-05-16

DRAWN BY RA

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"

VICINITY MAP:

LATITUDE: 37.329041°

LONGITUDE: -121.877307°

LEGEND:

- X — PROPOSED TREE REMOVAL
- PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

NOTES:

1. LAYOUT ASSUMES THAT ADDITION OF ARRAY WILL NOT INCREASE THE DEMAND/CAPACITY RATIO OF ANY MEMBER IN THE BUILDING'S LATERAL FORCE RESISTING SYSTEM BY MORE THAN 10%, RELATIVE TO ORIGINAL CONSTRUCTION, PER IBC/CBC 3404.4.
2. 110 MPH WIND ZONE (ASCE 7-10), EXPOSURE TYPE C, OCCUPANCY CATEGORY II.
3. POINT OF INTERCONNECTION & METER # TBD.
4. ARRAY SHOWN ON AERIAL IMAGE.
5. NO. OF INVERTERS:
   5.1. 30 kWac: [4] 96 MODULES EACH
6. NO. OF AC PANELBOARD: [1]
7. POWER STATION LOCATIONS TBD
8. ROOF EDGE SETBACK: 6'

PROPOSED SYSTEM SPECIFICATION

TOTALS:

125.568 kWp

384 HIGH EFF. (327W) MODULES

12 MODULES/STRING, 32 STRINGS

ROOF HEIGHT: ASSUMED 25'

ROOF PITCH: ASSUMED FLAT

AZIMUTH: 60°

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
LOWELL ELEMENTARY SCHOOL
625 S 7TH ST.
SAN JOSE, CA 95112

RMR SOLAR ROOF TILE
ARRAY LAYOUT

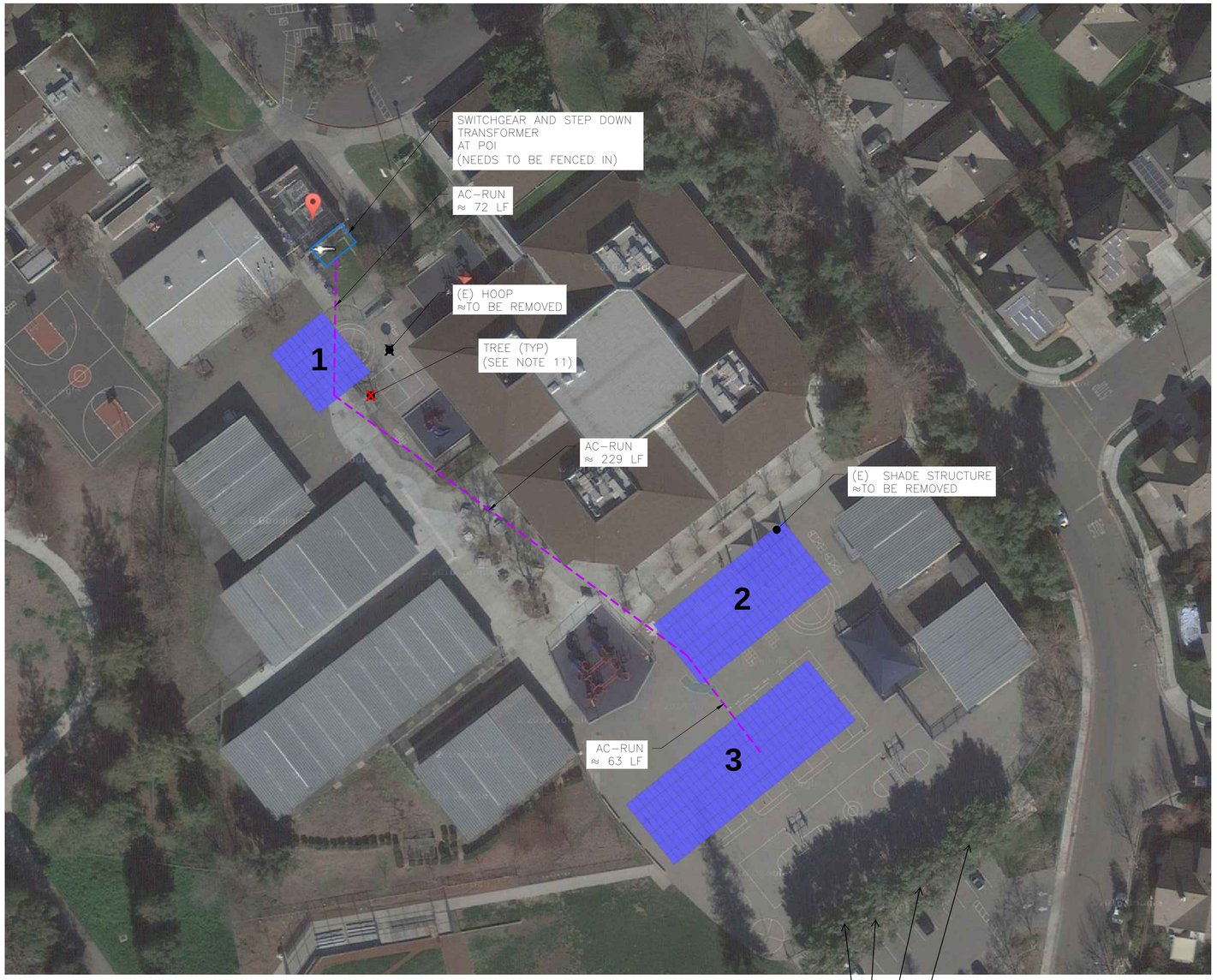
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079598	PROPOSAL	05-06-16	AV	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-06-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'–0"

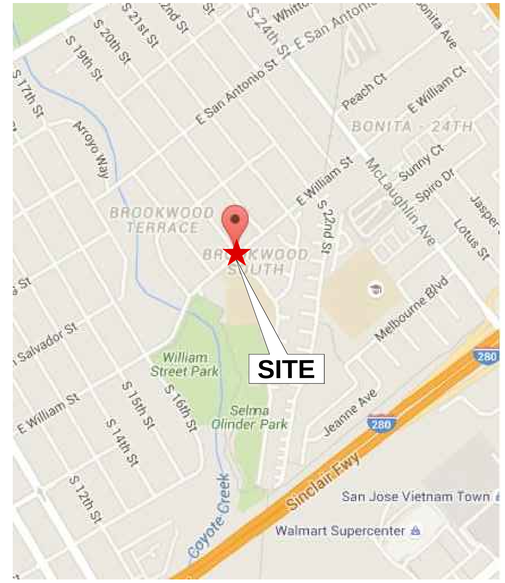
25FT TREE HEIGHTS TO BE MAINTAINED
PRUNING BY DISTRICT

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- X — PROPOSED TETHER BALL POLE/HOOP REMOVAL
- – – – PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION



VICINITY MAP:

LATITUDE: 37.338523°

LONGITUDE: –121.866536°

SUNPOWER® | H E L I X™

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	10	1	6	60	26.10	1	–	39°	10°	2	34.71	1432.08
2	6	25	1	15	150	65.25	2	1	39°	10°	3	86.83	3563.66
3	6	35	1	21	210	91.35	3	1	39°	10°	4	121.58	4984.71
TOTAL				42	420	182.70	6	2			9	243	9980

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
OLINDER ELEMENTARY SCHOOL
895 E WILLIAM ST.
SAN JOSE, CA 95116

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D–0079585	PROPOSAL	05–10–16	AV	JC

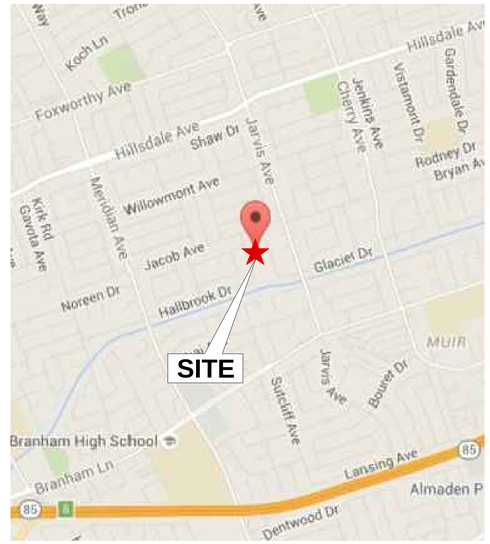
OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05–10–16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

N

1 ARRAY LAYOUT
SCALE: 5/256" = 1'-0"



VICINITY MAP:

LATITUDE: 37.263272°

LONGITUDE: -121.894418°

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL & BASKETBALL HOOP REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	45	1	27	270	117.45	4	1	72°	10°	5	156.3	6405.76

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER

1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
REED ELEMENTARY SCHOOL
1524 JACOB AVE.
SAN JOSE, CA 95118

HELIX CARPORT
ARRAY LAYOUT

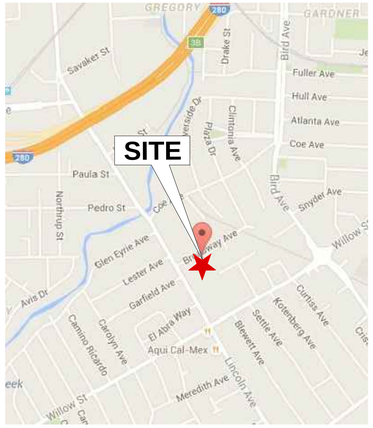
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079610	PROPOSAL	05-09-16	AV	JV

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-09-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



VICINITY MAP:

LATITUDE: 37.311011°

LONGITUDE: −121.901460°

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'−0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7−10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- X — PROPOSED VOLLEY BALL POLE REMOVAL
- PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	30KW INV.	24KW INV.	20KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
C1	6	35	1	21	210	91.35		3		1	60.4°	10°	4	121.58	4984.71
R1	12	10	1	10	120	39.24	1				−29.5°	15°			
R2	12	6	1	6	72	23.54			1		60.8°	15°			
TOTAL				37	402	154.13	1	3	1	1			4	121.58	4984.71

PROPOSED SYSTEM SPECIFICATIONS:

HELIX CARPORT:
(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

RMR SOLAR ROOF TILE:
(327W) MODULES
12 MODULES/STRING

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
RIVER GLEN ES
1088 BROADWAY AVE.,
SAN JOSE, CA 95125

RMR & HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB
A	D-0079611	PROPOSAL	05-05-16	RA
B	D-0079914	CHANGE SYSTEM SIZE	06-09-16	AV

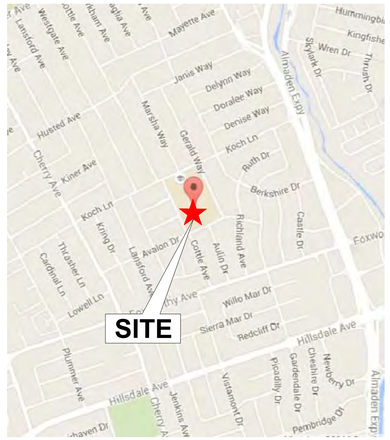
JC	JC
OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-05-16
DRAWN BY	RA

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.279265°

LONGITUDE: −121.88721°

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	24KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	25	1	15	150	65.25	2	1	−25°	10°	3	86.83	3563.66
2	6	25	1	15	150	65.25	2	1	11°	10°	3	86.83	3563.66
TOTAL				30	300	130.50	4	2			6	174	7127

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
SCHALLENBERGER ELEMENTARY SCHOOL
1280 KOCH LN
SAN JOSE, CA 95125

HELIX CARPORT
ARRAY LAYOUT

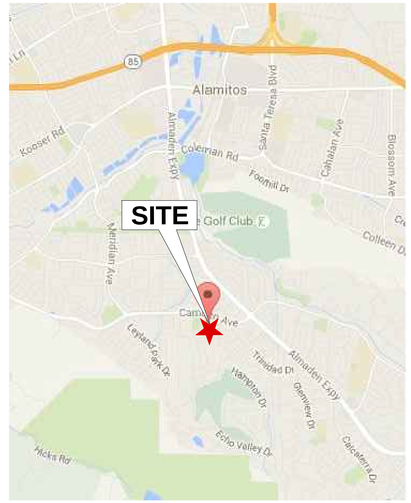
REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-007961 2	PROPOSAL	05-10-16	AV	JC
B	D-007991 6	RELOCATION OF ARRAYS	06-09-16	RA	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1



VICINITY MAP:

LATITUDE: 37.220449°

LONGITUDE: –121.869096°

SUNPOWER® | HELIX™

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

N

1 ARRAY LAYOUT
SCALE: 1/16" = 1'–0"

LEGEND:

X PROPOSED TREE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	30KW INV.	24KW INV.	AZI	TILT	#OF COL	LF	SF
C1	6	30	1	18	180	78.30	0	3	27.4°	10°	4	104.21	4274.18
R1	12	20	1	20	240	78.48	2	0	28.7°	10°			
TOTAL				38	420	156.78	2	3			4	104.21	4274.18

PROPOSED SYSTEM SPECIFICATIONS:

HELIX CARPORT:
(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

HELIX SINGLE TILT:
(327W) MODULES
12 MODULES/STRING

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
SIMONDS ES
6151 GRAPEVINE WAY
SAN JOSE, CA 95120

CARPORT & HELIS SINGLE TILT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D–0079613	PROPOSAL	05–10–16	RA	JC
B	D–0079913	CHANGE SYSTEM SIZE	06–09–16	AV	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05–10–16
DRAWN BY	RA

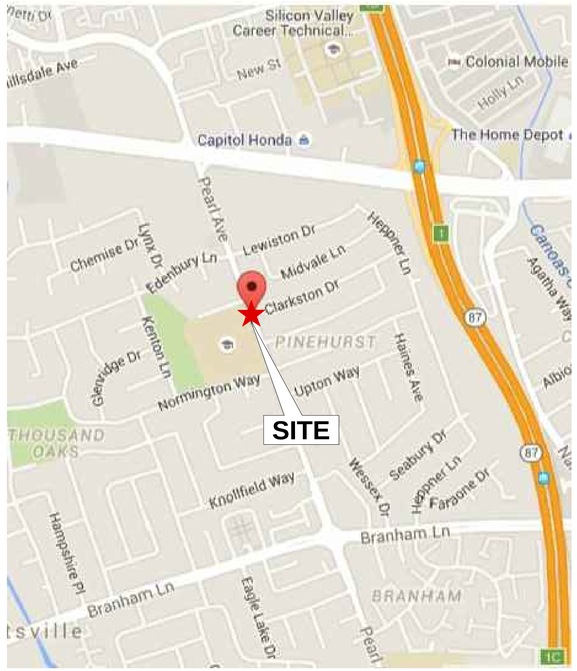
0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

TREE HEIGHTS TO BE MAINTAINED
PRUNING BY DISTRICT

N

1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.270976°

LONGITUDE: -121.8685501°

SUNPOWER® | HELIX™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE												
ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	50	1	30	300	130.50	5	–	-20°	10°	6	173.71	7116.29

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
TERRELL ELEMENTARY SCHOOL
3925 PEARL AVE.
SAN JOSE, CA 95136

HELIX CARPORT
ARRAY LAYOUT

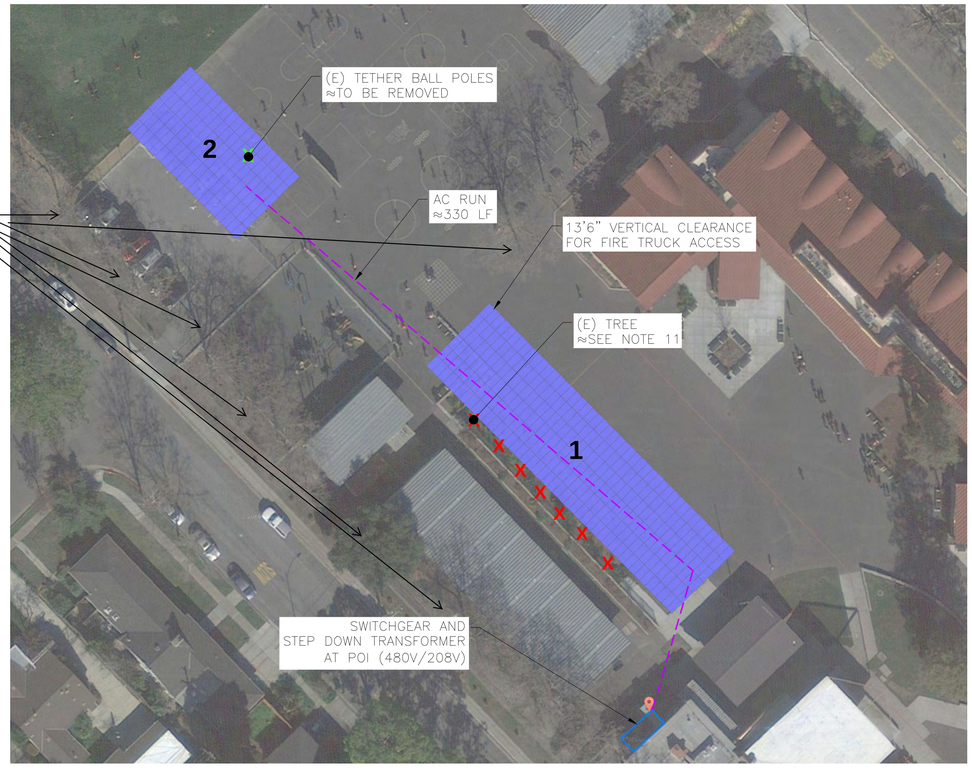
REVISIONS				
REV	DESIGN #	DESCRIPTION	DATE	DB
A	D-0079614	PROPOSAL	05-10-16	AV JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	AV

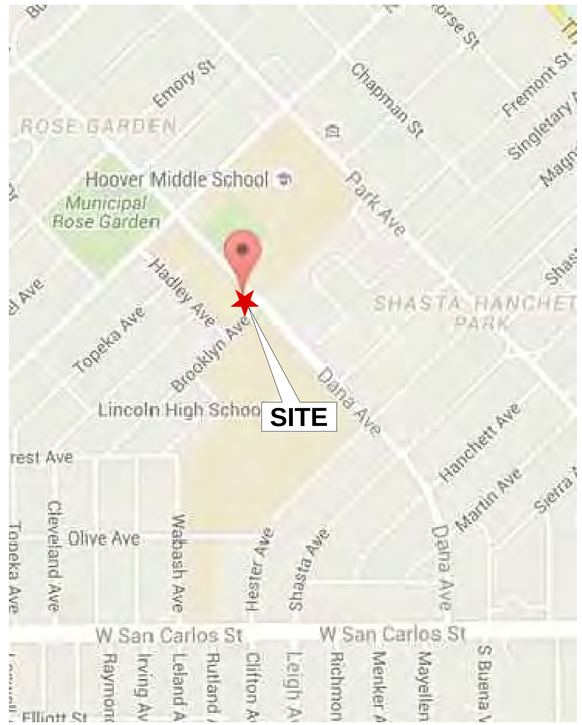
0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

30 FT TREE HEIGHTS
TO BE MAINTAINTED
TREE PRUNING BY DISTRICT



N 1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.3301221°

LONGITUDE: -121.925160°

SUNPOWER® | HELIX™

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	45	1	27	270	117.45	4	1	45°	10°	5	156.30	6405.8
2	6	20	1	12	120	52.20	2	0	45°	10°	3	69.46	2853.1
TOTAL				39	390	169.65	6	1			8	226	9259

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

X PROPOSED TETHER BALL POLE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF TETHER BALL POLES TO BE REMOVED: 1
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
TRACE ELEMENTARY SCHOOL
651 DANA AVE.
SAN JOSE, CA 95126

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D-0079586	PROPOSAL	05-06-16	CP	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-05-16
DRAWN BY	CP

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

N

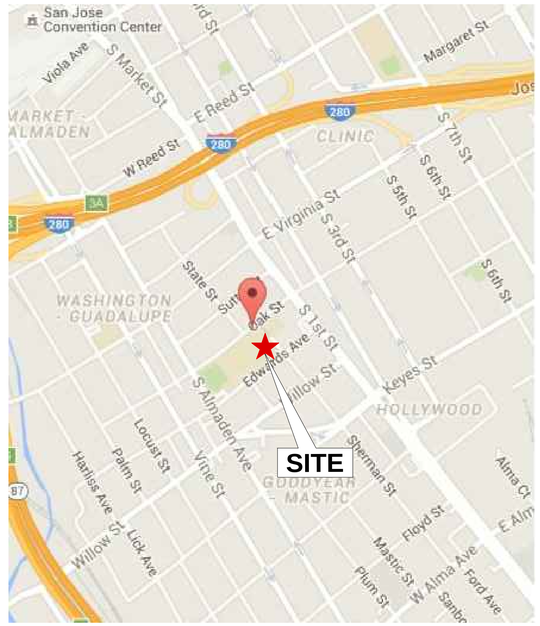
1 ARRAY LAYOUT
SCALE: 1/32" = 1'–0"

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE B
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

- X — PROPOSED TREE REMOVAL
- X — PROPOSED TETHER BALL POLES & BASKETBALL HOOP REMOVAL
- – – – PROPOSED AC RUN
- PROPOSED EQUIPMENT PAD
- PROPOSED POINT OF INTERCONNECTION



VICINITY MAP:

LATITUDE: 37.3217653°

LONGITUDE: –121.881576°

SUNPOWER® | HELIX™

SUNPOWER® | HELIX™

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	30KW INV.	24KW INV.	20KW INV.	15KW INV.	AZI	TILT	#OF COL	LF	SF
C1	4	20	1	8	80	34.80			2		57°	10°	3	69.46	1900.76
C2	4	20	1	8	80	34.80			2		57°	10°	3	69.46	1900.76
R1	12	5	1	6	60	19.62				1	–37.5°	15°			
R2	12	5	1	6	60	19.62				1	52.1°	15°			
R3	12	7	1	8	84	27.47		1			–38.6°	10°			
R4	12	9	1	11	108	35.32	1				–38.6°	15°			
R6	12	3	1	4	36	11.77				1	53.4°	15°			
R7	12	3	1	4	36	11.77				1	53.4°	15°			
R8	12	4	1	5	48	15.70				1	53.4°	10°			
TOTAL				59	592	210.86	1	1	4	5			6	139	3802

PROPOSED SYSTEM SPECIFICATIONS:

HELIX CARPORT:
(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

RMR SOLAR ROOF TILE:
(327W) MODULES
12 MODULES/STRING

HELIX SINGLE TILT:
(327) MODULES
12 MODULES/STRING

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER®
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
WASHINGTON ELEMENTARY SCHOOL
100 OAK ST.
SAN JOSE, CA 95110

RMR, HELIX CARPORT & HELIX SINGLE TILT
ARRAY LAYOUT

REVISIONS

REV	DESCRIPTION	DATE	DB	CB
A	PROPOSAL	05–09–16	AV	JC
B	CHANGE SYSTEM SIZE	06–09–16	AV	JC

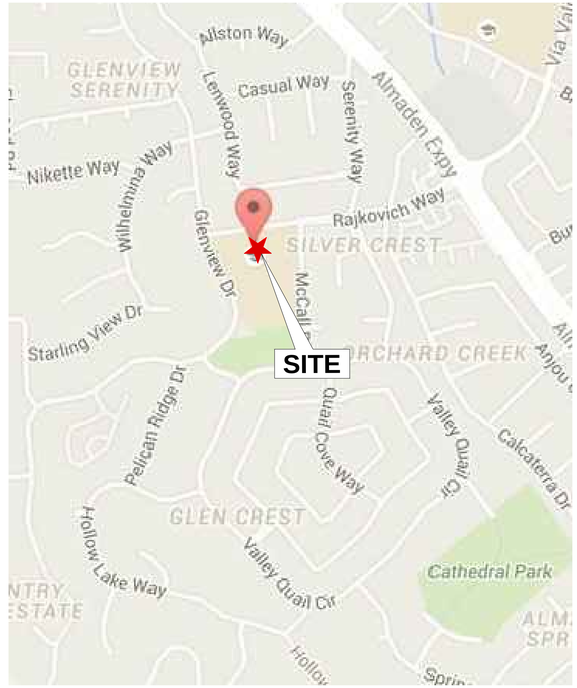
DESIGN #
D–0079587
D–0079921

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05–09–16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

N 1 ARRAY LAYOUT
SCALE: 1/32" = 1'-0"



VICINITY MAP:

LATITUDE: 37.207798°

LONGITUDE: -121.851533°

SUNPOWER® | H E L I X™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7-10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X	PROPOSED TREE REMOVAL
X	PROPOSED TETHER BALL POLE REMOVAL
- - -	PROPOSED AC RUN
▭	PROPOSED EQUIPMENT PAD
▭	PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAY	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	55	1	33	330	143.55	5	1	-32°	10°	6	191.08	7826.8

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER
1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
WILLIAMS ELEMENTARY SCHOOL
1150 RAJKOVICH WAY
SAN JOSE, CA 95120

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESCRIPTION	DESIGN #	DATE	DB	CB
A	PROPOSAL	D-0079588	05-10-16	CP	JC

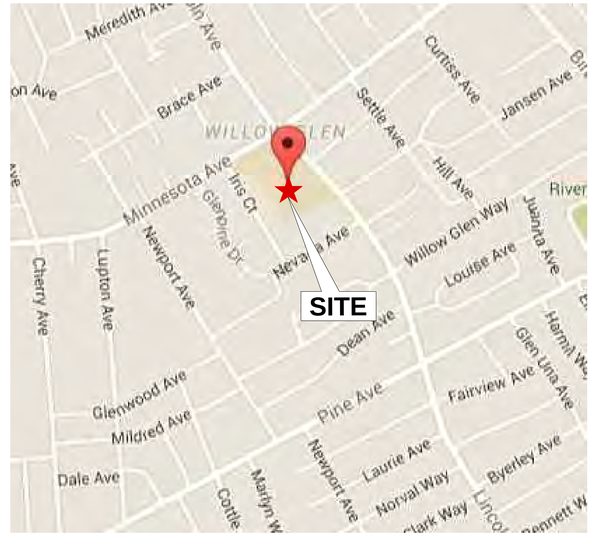
OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05-10-16
DRAWN BY	CP

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

N

1 ARRAY LAYOUT
SCALE: 1/64" = 1'–0"



VICINITY MAP:

LATITUDE: 37.302346°

LONGITUDE: –121.897039°

SUNPOWER® | H E L I X™

NOTES:

1. 110 MPH WIND ZONE (ASCE 7–10) CATEGORY II, EXPOSURE C
2. CORROSION RATE: [1.1um/yr],[C2: 7%, C3: 99%]
3. METER #TBD
4. ARRAY SHOWN ON AERIAL IMAGE
5. ARRAY MOUNTING STRUCTURE HELIX CARPORT
6. MINIMUM VERTICAL CLEARANCE: 10' PROVIDED FOR STANDARD VEHICLES
7. BUILDING CODE REQUIRES 20' MIN. CLEARANCE FROM EXISTING BUILDINGS
8. FIRE DEPARTMENT REQUIRES 20' MIN. CLEARANCE ALONG EMERGENCY ACCESS ROUTES
9. THIS DESIGN ASSUMES THAT SITE PREPARATION WILL BE COMPLETED AS REQUIRED TO MEET ALL TOLERANCES OF THE PROPOSED ARRAY, UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO TREE REMOVAL AND TREE TRIMMING.
10. ALL LIGHT POLES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED PRIOR TO INSTALLATION. NEW LIGHTING TO BE PROVIDED ONLY UNDER THE CARPORT PER IES STANDARDS.
11. ALL TREES WITHIN ARRAY BOUNDARY, AND THOSE WHICH WILL SHADE THE ARRAY, NEED TO BE REMOVED OR TRIMMED PRIOR TO INSTALLATION.
12. REMOVAL OF PARKING SPACES MAY BE REQUIRED AT EQUIPMENT PAD LOCATION.
13. DSA PROJECTS: REQUIRE ACCESSIBLE STALLS TO BE SHADED TO THE SAME PERCENTAGE AS REGULAR STALLS. ACCESSIBILITY UPGRADES AND RESTRIPING IS NOT INCLUDED IN THIS DESIGN.

LEGEND:

X PROPOSED TREE REMOVAL

PROPOSED AC RUN

PROPOSED EQUIPMENT PAD

PROPOSED POINT OF INTERCONNECTION

ARRAY SUMMARY TABLE

ARRAYS	PV UP	PV ACRS	#OF BLOCK	STRING	#OF PV	KWP	24KW INV.	12KW INV.	AZI	TILT	#OF COL	LF	SF
1	6	35	1	21	210	91.35	3	1	–29°	10°	4	121.58	4984.71
2	6	30	1	18	180	78.30	3		–29°	10°	4	104.21	4274.18
TOTAL				39	390	169.65	6	1			8	226	9259

PROPOSED SYSTEM SPECIFICATIONS:

(435W) MODULES
10 MODULES/STRING
TOTAL OF LIGHT POLES TO BE REMOVED: TBD

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY, TYPE AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER.

TIER 1

SUNPOWER®

1414 HARBOUR WAY SOUTH
RICHMOND, CA 94804 USA
(510) 540-0550

ENGINEER'S STAMP

SAN JOSE USD
WILLOW GLEN ELEMENTARY SCHOOL
1425 LINCOLN AVE.
SAN JOSE, CA 95125

HELIX CARPORT
ARRAY LAYOUT

REVISIONS

REV	DESIGN #	DESCRIPTION	DATE	DB	CB
A	D–0079589	PROPOSAL	05–06–16	AV	JC

OPPORTUNITY	0001194369
PROJECT	
DATE DRAWN	05–06–16
DRAWN BY	AV

0 ½" 1"
IF BAR IS NOT ONE INCH, DRAWING IS NOT TO SCALE

SHEET 1

2.4. **Scope, Responsibilities, and Services of Designer/Builder**

2.4.1. Designer/Builder shall provide Services that shall comply with professional architectural standards, recognized industry standards for professional skill and judgment, and applicable requirements of federal, state, and local law.

2.4.2. Designer/Builder acknowledges that all California school districts are now obligated to develop and implement storm water requirements.

2.4.3. Designer/Builder shall contract for or employ at Designer/Builder's expense, consultant(s) to the extent deemed necessary for completion of its Services on the Project including, but not limited to, architects, mechanical, electrical, structural, civil engineers, landscape architects, low voltage, data, and telephone consultants as necessary, licensed as required by the State of California. Nothing in the foregoing procedure shall create any contractual relationship between the District and any consultant employed by the Designer/Builder under terms of the Contract.

2.4.4. The District shall provide to Design/Builder information and documentation that the District currently has related to the School Sites including geotechnical reports, topographic surveys, and related items. If Designer/Builder determines that the information or documentation the District provides is insufficient for purposes of design or if the Designer/Builder believes it needs additional information, including a topographical survey; geotechnical report; structural, mechanical, and/or chemical tests; tests for air and/or water pollution; test borings; test pits; determinations of soil bearing values; determinations of the location of all subsurface utilities; percolation tests; ground corrosion tests; resistivity tests; tests for hazardous materials; and/or tests for anticipating subsoil conditions, the Designer/Builder shall procure those items, at its expense, that it determines are required to complete the Project.

2.4.5. Designer/Builder shall coordinate with District personnel and/or its designated representatives as may be requested and desirable, including with other professionals employed by the District for the design, coordination or management of other work on the School Sites.

2.4.6. Designer/Builder shall identify the regulatory agencies that have jurisdiction over essential building and design elements and coordinate with and implement the requirements of the regulatory agencies or their authorized agents, including, without limitation, California Department of Education (CDE), the Office of Public School Construction (OPSC), the Department of General Services (DGS), DSA Fire/Life Safety, DSA Access Compliance Section, DSA Structural Safety, State Fire Marshal, County and City Health Inspectors and any regulatory office or agency that has authority for review and supervision of school district construction projects.

2.4.6.1. Construction Documents must be reviewed and approved by the DSA. Designer/Builder shall be responsible for obtaining all DSA approvals and shall account for DSA requirements in their system designs, project pricing, and schedule. Designer/Builder represents to the District that it has a complete and accurate understanding of DSA requirements.

2.4.7. Designer/Builder shall be held solely responsible for obtaining approvals from the District, including revising designs as necessary until they are given approval by the District and all other required entities and organizations. System design shall comply with all applicable laws, statutes, ordinances, codes, rules, and regulations for construction projects of jurisdictions with authority over the District. Designer/Builder is responsible for providing designs approved by professionals of all necessary disciplines, each duly licensed in the State of California. Designer/Builder's designs shall conform to the District's deterimination of aesthetics, and the designs must not conflict with any current District operations.

2.4.8. Designer/Builder shall provide Services required to obtain local agencies' approval for off-site work related to the Project including review by regulatory agencies having jurisdiction over the Project, if applicable.

2.4.9. Designer/Builder shall coordinate with the District's DSA Project Inspector(s).

2.4.10. Designer/Builder shall provide pictures downloaded to computer files, updated as requested by the District that the District may use on its website. Pictures shall be limited to Designer/Builder's Project scope.

2.4.11. As part of the basic Services pursuant to this Contract, Designer/Builder is NOT responsible for the following, however, it shall coordinate and integrate its work with any of the following information and/or services provided by District:

2.4.11.1. Ground contamination or hazardous material analysis.

2.4.11.2. Any asbestos and/or lead testing, design or abatement.

2.4.11.3. Compliance with the California Environmental Quality Act ("CEQA"), except that Designer/Builder agrees to coordinate its work with that of any CEQA consultants retained by the District, to provide current elevations and schematic drawings for use in CEQA compliance documents at no additional cost to the District. If the District and/or its CEQA consultant does not provide mitigation measures to the Designer/Builder when reasonably required for incorporation into the Project design, the Designer/Builder may invoice the District for the work required to incorporate those mitigation measures as a change order.

2.4.11.4. Historical significance report.

2.4.11.5. Re-zoning: it is assumed that the proposed locations are zoned for solar electric installations and no delays will occur due to zoning issues.

2.4.11.6. Easement adjustments: it is assumed that no roads, bridges, utility power lines, local CC&R's, etc., will be of such a nature as to disrupt the solar installation and no delays will occur due to easement issues.

2.5. **Designer/Builder Staff**

2.5.1. The Designer/Builder has been selected to perform the Services herein because of the skills and expertise of key individuals.

2.5.2. The Designer/Builder shall not change any of the key personnel without prior written approval by District, unless said personnel cease to be employed by Designer/Builder. In either case, District shall be allowed to interview and approve replacement personnel. Such approval shall not be unreasonably withheld.

2.5.3. If any designated lead or key person fails to perform to the reasonable satisfaction of the District, then upon written notice the Designer/Builder shall have five (5) days to remove that person from the Project and replace that person with one reasonably acceptable to the District.

2.5.4. Designer/Builder shall comply with Education Code section 17302(a) and agrees that any plans and/or specifications included in the Services shall be prepared under the supervision of licensed personnel, and that licensed personnel shall be in "responsible charge" of persons who observe the construction.

2.6. **Ownership of Data**

2.6.1. Pursuant to Education Code section 17316, this Contract creates a non-exclusive and perpetual license for District to use, at its discretion, all plans, including, but not limited to,

record drawings, specifications, and estimates that the Designer/Builder or its consultants, prepares or causes to be prepared pursuant to this Contract, limited to this Work.

2.6.2. The Designer/Builder retains all rights to all copyrights, designs and other intellectual property embodied in the plans, record drawings, specifications, estimates, and other documents that the Designer/Builder or its consultants prepares or causes to be prepared pursuant to this Contract.

2.6.3. The Designer/Builder shall perform the Services and prepare all documents under this Contract with the assistance of Computer Aided Design Drafting (CADD) (e.g., AutoCAD) Technology. The Designer/Builder shall deliver to the District, on request, by tape, "thumb" drive, compact disc and/or Box file hosting service (at the District's option), and compatible with AutoCAD 2006 and/or Adobe Portable Document Format (at the District's option).

2.6.4. In order to document exactly what CADD information was given to the District, Designer/Builder and District shall each sign a "hard" copy of reproducible documents that depict the information at the time Designer/Builder produces the CADD information. District agrees to release Designer/Builder from all liability, damages, and/or claims that arise due to any changes made to this information by anyone other than the Designer/Builder or Consultant(s) subsequent to it being given to the District.

2.6.5. Following the termination of this Contract, for any reason whatsoever, the Designer/Builder shall promptly deliver to the District upon written request the following items (hereinafter "Instruments of Service") in electronic format (Microsoft Word), unless otherwise indicated, assuming the District has made all payments to Designer/Builder as required by the termination provisions in this Contract.

2.6.5.1. One set of the Contract, including the bidding requirements, specifications, and all existing cost estimates for the Project, in hard copy, reproducible format.

2.6.5.2. One set of fixed image CADD files in DXF format of the drawings that are part of the Contract.

2.6.5.3. One set of non-fixed image CADD drawing files in DXF and/or DWG format of the site plan, floor plans (architectural, plumbing, structural mechanical and electrical), roof plan, sections and exterior elevations of the Project.

2.6.5.4. All finished or unfinished documents, studies, reports, calculations, drawings, maps, models, photographs, technology data and reports prepared by the Designer/Builder under this Contract.

2.6.6. In the event the District changes or uses any fully or partially completed documents without the Designer/Builder's knowledge and participation, the District agrees to release Designer/Builder of responsibility for such changes, and shall indemnify, defend and hold the Designer/Builder harmless from and against any and all claims, liabilities, suits, demands, losses, costs and expenses, including, but not limited to, reasonable attorneys' fees, on account of any damages or losses to property or persons, including injuries or death, or economic losses, arising out of that change or use except to the extent the Designer/Builder is found to be liable in a forum of competent jurisdiction. In the event District uses any fully or partially completed documents without the Designer/Builder's full involvement, the District shall remove all title blocks and other information that might identify the Designer/Builder and the Designer/Builder's consultants.

2.7. **Certificate Of Designer/Builder**

2.7.1. Designer/Builder certifies that the Designer/Builder is properly certified and licensed under the laws and regulations of the State of California to provide the professional Services that it has herein agreed to perform.

Article 3. DESIGN SERVICES BY PHASE

3.1. **Early Design Phase(s).** Designer/Builder agrees to provide the services described below:

3.2. Designer/Builder shall be responsible for the professional quality and technical accuracy of all studies, reports, projections, master plans, designs, drawings, specifications and other services furnished by Designer/Builder under the Contract as well as coordination with all Master plans, studies, reports and other information provided by District. Designer/Builder shall, without additional compensation, correct or revise any errors or omissions in its studies, reports, projections, master plans, design, drawings, specifications and other services.

3.3. **Schematic Design / Design Development Phase [30% Design].** The Designer/Builder shall prepare for the District's review a design report, containing the following items if applicable to the Project scope, as follows:

3.3.1. Prepare and review with District staff a scope of work list and work plan identifying specific tasks including, but not limited to: concepts and schematic design preparation and estimating that are part of the work of the Project. Also identified will be specific task responsibilities of the Designer/Builder, required completion times necessary for the review and approval by the District and by pertinent regulatory agencies and additional definition of deliverables.

3.3.2. Solar structure layout at the School Sites.

3.3.3. **Structural**

3.3.3.1. Structural drawing with all major members located and sized.

3.3.3.2. Layout structural and identify structural systems

3.3.3.3. Identify foundation requirement (including fill requirement, piles) with associated soil pressure, water table and seismic center.

3.3.4. **Landscape and Hardscape**

3.3.4.1. Landscape and hardscape plans, as necessary to return sites to presentable condition, for each site for areas under and around each new structure, fencing, and parking lot areas.

3.3.4.2. Trees to be removed within the construction area will be identified. Designer/Builder will assist the District in identifying other potential trees it may be required to remove to prevent shading that will impact power generation of the System(s) in areas outside the construction area

3.3.5. **Presentation.** Designer/Builder shall present and review with the District the detailed design information and deliverables for this phase. The Parties agree that review shall occur throughout design development but shall require that at 30% design documents, Designer/Builder shall thoroughly review all design documents for all sites with the District.

3.4. **Construction Documents Phase [90% Design].** Upon District's acceptance of Designer/Builder's work in the previous Phase and assuming District has not delayed or terminated the Contract, the Designer/Builder shall prepare from the accepted deliverables from the previous design phase a set of 100% complete construction documents for submission to DSA, and which will consist of the following for each proposed System within Designer/Builder's scope of work:

3.4.1. **Architectural**

3.4.1.1. Completed site plan.

3.4.1.2. Architectural details completed.

3.4.1.3. Site utility plans completed.

3.4.1.4. Fixed equipment details and identification completed.

3.4.2. **Structural**

3.4.2.1. Structural calculations completed.

3.4.3. **Mechanical**

3.4.3.1. Complete energy production calculations and report.

3.4.4. **Landscape and Hardscape**

3.4.4.1. Unless agreed to in writing in advance by the District, Designer/Builder shall complete all landscape and hardscape plans for each site for areas under and around each new structure, fencing, and parking lot areas as necessary to return sites to practical, presentable and functional condition(s), consistent with the surrounding area. This includes, unless inappropriate, paving where surrounding areas are paved and planting where surrounding areas have planting, but excludes replanting of trees and plants removed to allow construction of the System.

3.4.4.2. Designer/Builder shall identify trees and plants within the construction area and shall notify the District in advance of the trees and plants that Designer/Builder intends to be removed so the District can determine whether it wishes Designer/Builder to replace the tree(s) or plant(s) at a one to one ratio (1:1) at Designer/Builder's cost replace them with tree bark, both at Designer/Builder's cost.

3.4.5. **Presentation.**

3.4.5.1. Designer/Builder shall present and review with the District the detailed design information and deliverables for this phase. The Parties agree that review shall occur throughout the Construction Document Phase, but shall require that at 90% construction documents, Designer/Builder shall thoroughly review all construction documents for all sites with the District.

3.4.5.2. Designer/Builder shall provide to the District a copy of all documents that (1) Designer/Builder submits to the DSA at the time Designer/Builder provides those documents to DSA for review and (2) that Designer/Builder receives back from DSA with an approval stamp.

3.4.6. **Deliverables and Numbers of Copies**

3.4.6.1. Designer/Builder shall provide to the District a hard copy of the following items produced in this phase, together with one copy of each item in electronic format:

3.4.6.1.1. Two copies of reproducible copies of working drawings;

3.4.6.1.2. Two copies of engineering calculations;

3.4.6.1.3. Two copies of statement of requirements for testing and inspection of service for compliance with applicable codes;

3.4.6.1.4. Two copies of DSA file including all correspondence, meeting, back check comments, checklists to date.

3.4.7. **Record Drawings.** During construction, Designer/Builder shall incorporate all information on all As-Builts, sketches, details, and clarifications, and prepare one set of final Record Drawings for the District. The Record Drawings shall incorporate onto one set of electronic drawings, all changes from all As-Builts, sketches, details, and clarifications. The

Designer/Builder shall deliver the Record Drawings to the District at completion of the construction and it shall be a condition precedent to the District's approval of the Designer/Builder's final payment.

3.4.8. **O&M Manuals / Warranties.** Designer/Builder shall review equipment, operation and maintenance manuals, and a complete set of warranty documents for all equipment and installed systems, to ensure that they meet the requirements of the plans and specifications. The Designer/Builder shall deliver the O&M Manuals / Warranties to the District at completion of the construction and it shall be a condition precedent to the District's approval of the Designer/Builder's final payment.

Article 4. DESCRIPTION OF WORK AND SERVICES BY SCOPE

4.1. **General.** Designer/Builder shall design, install, and construct the Work at the School Sites. The Entire System shall be installed to conform to National Electric Code, Division of the State Architect ("DSA") requirements, the Utility's interconnection agreements, and City and County access requirements. Designer/Builder's Work shall include:

4.1.1. Meetings and discussions as needed with DSA, Fire Department, Utlity and others as needed to achieve project approval.

4.1.2. Criteria for beneficial use as defined in the Contract,

4.1.3. Installation of elevated solar structures allowing parking below and traffic circulation between canopies, that shall provide a minimum of ten (10) feet clearance beneath each canopy. Structures shall be limited to the areas generally indicated on the site plans provided in **Exhibit "F",** unless changes to locations are mutually agreed upon by the District and Designer/Builder.

4.1.4. Installation of electrical equipment pad and utility tie-ins shall be limited to the areas generally indicated on the site plans provided in **Exhibit "F",** unless changes to locations are mutually agreed upon by the District and Designer/Builder. To the extent practical, the selection of the final location will consider methods to block the view of the electrical equipment from offsite public areas.

4.1.5. **Lighting.**

4.1.5.1. Removal of light standards in areas with solar structure(s) and replacement with lighting attached to the underside of the solar structure(s). Existing lighting circuits can be re-used for PV Array support structures lighting system and those existing circuits have ample current carrying capacity to provide required lighting at PV Array support structures.

4.1.5.2. Lighting design and/or installation beyond the PV Array support structures is not included in this agreement.

4.1.5.3. No lighting is required under PV Arrays that are above playgrounds.

4.2. **Utility Requirements.**

4.2.1. Designer/Builder shall ensure that all Work shall comply with all requirements of the Utility.

4.2.2. Even though there are no California Solar Initiative rebates available to the District, the Utility may institute a rebate or incentive program in the future. Therefore, Designer/Builder shall ensure that all of the Work, as required, complies with all requirements, including the metering and monitoring requirements, outlined in the California Solar Initiative Program Handbook.

4.3. **DSA Approvals & Permits**

4.3.1. Designer/Builder, its designers and contractors shall provide documentation required for all

approvals by DSA.

4.3.2. Designer/Builder shall notify the District and the District's Project Inspector(s) of required inspections and shall provide reasonable access and accommodations for inspections.

4.4. **Monitoring**

4.4.1. Install a data acquisition system, which provides access by unlimited individuals to data via the internet, which shall include options for display of daily energy generation by site. This will include a system that will monitor and log the Entire System performance on a daily basis by School Site. This information can be reviewed on a daily basis by District personnel. This information can be used to establish an operational baseline operation.

4.5. **Protection of Existing Structures and Utilities**

4.5.1. The School Sites have above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Designer/Builder shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Designer/Builder's expense and made to the District's satisfaction.

4.5.2. Designer/Builder shall be alert to the possibility of the existence of additional structures and utilities. If Designer/Builder encounters additional structures and utilities, Designer/Builder will immediately report to the District for disposition of same as indicated in the Contract Documents.

4.5.3. Landscape and Hardscape

4.5.3.1. Designer/Builder shall perform all landscape and hardscape work at each site for areas under and around each new structure, fencing, and parking lot areas as necessary to return sites to practical, presentable and functional condition(s), consistent with the surrounding area. This includes, unless inappropriate, paving where surrounding areas are paved and planting where surrounding areas have planting. Planting includes re-seeding grass or re-planting trees.

4.5.4. Designer/Builder shall ensure that none of the undergrounding power lines it installs will create the potential for electrolytic corrosion of any other underground utilities near such power lines. Where the potential for electrolytic corrosion exists, Designer/Builder shall design and install either (1) a cathodic protection system to protect such utilities or (2) another protection system approved by the District.

4.6. **Site Access**

4.6.1. No new access roads are planned; however, should the need arise, District and Designer/Builder shall agree upon reasonable accommodations and compensation. Designer/Builder shall return existing surfaces to a preconstruction condition.

4.6.2. District and Designer/Builder shall provide 24/7 unrestricted access to existing electric utility meter and the utility lockable disconnect location

4.6.3. District to permit using on site water and power as available for construction at no charge to Designer/Builder, with the exception of fire hydrants

4.6.4. District to permit use of a temporary diesel generator onsite during construction activities, subject to local ordinances.

4.7. **Specific Requirements:**

4.7.1. **General Considerations.** All documentation and components furnished by Designer/Builder shall be developed, designed, and/or fabricated using high quality design, materials, and workmanship meeting the requirements of the District and all applicable industry codes and standards. Designer/Builder shall perform the Work in accordance with all standards within these Specific Requirements. The installations shall comply with at least, but not limited to, the latest approved versions of the International Building Code (IBC), National Electrical Code (NEC), the Utility's Interconnection Requirements, and all other federal, state, and local jurisdictions having authority.

4.7.2. **Electrical Design Standards.** All Work shall comply with at least, but not limited to, the following electrical industry standards, wherever applicable:

4.7.2.1. Electronic Industries Association (EIA) Standard 569

4.7.2.2. Illumination Engineering Society of North America (IESNA) Lighting Standards

4.7.2.3. Institute of Electrical and Electronics Engineers (IEEE) Standards

4.7.2.4. National Electrical Manufacturers Association (NEMA)

4.7.2.5. National Electric Code (NEC)

4.7.2.6. Insulated Power Cable Engineers Association (IPCEA)

4.7.2.7. Certified Ballast Manufacturers Association (CBMA)

4.7.2.8. Underwriters Laboratories, Inc. (UL)

4.7.2.9. National Fire Protection Association (NFPA)

4.7.2.10. Pacific Gas and Electric Utility Requirements

4.7.2.11. American National Standards Institute (ANSI)

4.7.2.12. Occupational Health and Safety Administration (OSHA)

4.7.2.13. American Disabilities Act (ADA)

4.7.2.14. American Society for Testing and Materials (ASTM)

4.7.2.15. National Electrical Contractors Association (NECA)

4.7.2.16. National Electrical Testing Association (NETA)

4.7.2.17. International Building Code (IBC)

4.7.2.18. All other authorities having jurisdiction

4.7.3. **Modules.** The District has facilities located in and around residential areas and glare from panels that reflects into nearby residences must be minimized. During the Schematic Design / Design Development Phase, the Designer/Builder shall submit to the District an analysis of the glare from installed modules, showing the extent that glare is likely to reach adjacent residential structures at all times throughout the year. In addition to other applicable standards, the PV modules provided by Designer/Builder shall comply with at least, but not limited to, the following:

4.7.3.1. IEEE 1262 "Recommended Practice for Qualifications of Photovoltaic Modules".

4.7.3.2. Modules shall be new, undamaged, fully warranted without defect.

4.7.3.3. Modules shall comply with the State of California SB1 Guidelines for Eligibility, listed at: http://www.gosolarcalifornia.org/equipment/pv_modules.php

4.7.3.4. Modules shall have minimum maintenance requirements and high reliability, have a minimum 25-year design life, and be designed for normal, unattended operation.

4.7.3.5. Acceptable mounting methods for unframed modules provided by the manufacturer. Bolted and similar connections shall be non-corrosive and

include locking devices designed to prevent twisting over the 25-year design life of the PV system.

4.7.3.6. The environmental impact of any hazardous material in the PV modules must be disclosed to the District, including any special maintenance requirements and proper disposal/recycling of the modules at the end of their useful life.

4.7.4. **Inverters.** In addition to other applicable standards, inverters provided by Designer/Builder must comply with at least, but not limited to the following:

4.7.4.1. Inverters shall be suitable for grid interconnection and shall be compliant with all Utility interconnection requirements.

4.7.4.2. Inverters shall comply with the State of California SB1 Guidelines for Eligibility, listed at: http://www.gosolarcalifornia.org/equipment/inverters.php

4.7.4.3. IEEE 929-2000 – "Recommended Practice for Utility Interface of Photovoltaic Systems".

4.7.4.4. Inverters must automatically reset and resume normal operation after a power limiting operation.

4.7.4.5. The inverter shall be capable of continuous operation into a system with voltage variation of plus or minus 10% of nominal. The inverter shall operate in an ambient temperature range of -20°C to +50°C.

4.7.4.6. Inverters shall include all necessary self-protective features and self-diagnostic features to protect the inverter from damage (in the event of component failure or from parameters beyond normal operating range due to internal or external causes). The self protective features shall not allow the inverters to be operated in a manner which may be unsafe or damaging.

4.7.4.7. Inverters shall be true sine wave high frequency PWM with galvanic isolation.

4.7.4.8. Inverters shall be sized to provide maximum power point tracking for voltage and current range expected from PV array for temperatures and solar insolation conditions expected for Project conditions.

4.7.4.9. Inverters shall be capable of adjusting to "sun splash" from all possible combinations of cloud fringe effects without interruption of electrical production.

4.7.4.10. Isolation transformers shall be provided.

4.7.4.11. Inverters shall be UL 1741 and IEEE 1547 compliant.

4.7.4.12. Inverters shall have a THD < 5%.

4.7.4.13. Enclosures shall be rated NEMA 3R within an appropriate shelter.

4.7.4.14. Power factor shall be 0.99 or higher.

4.7.4.15. Inverter selection shall take into account anticipated noise levels produced and minimize interference with District activities.

4.7.5. **Mounting Systems.** The mounting systems shall be designed and installed with reliable components proven in similar projects, and the PV modules may be fixed or tracking. The mounting systems shall be designed to resist dead load, live load, corrosion UV degradation, wind loads, and seismic loads appropriate to the geographic area over the expected 25-year lifetime. Designer/Builder shall submit an analysis of each structure impacted by the Project, and Designer/Builder shall submit all supporting evidence, calculations, and documentation. The analysis shall demonstrate that existing structures are not compromised or adversely

impacted by the installation of PV systems, equipment, or other activity related to the Work. Mounting systems must also meet the following requirements at a minimum:

4.7.5.1. All structural components, including array structures, shall be designed in a manner commensurate with attaining a minimum 25-year design life. Design of structural components shall account for the prevention of corrosion at the connections between dissimilar metals.

4.7.5.2. Thermal loads caused by fluctuations of component and ambient temperatures shall be accounted for in the design and selection of mounting systems such that neither the mounting system nor the surface on which it is mounted shall degrade or be damaged over time.

4.7.5.3. Each PV module mounting system must be certified by the module manufacturer as (1) an acceptable mounting system that shall not void the module warranty, and as (2) a conforming mounting system per the module manufacturer's mounting parameters.

4.7.5.4. Final coating and paint color shall be reviewed and approved by the District during Design Review.

4.7.5.5. Painting or other coatings must not interfere with the grounding and bonding of the array.

4.7.6. **Corrosion Control.**

4.7.6.1. Each PV system and associated components must be designed and selected to withstand the environmental conditions of the site (e.g., temperatures, winds, rain, flooding, etc.) to which they will be exposed.

4.7.6.2. Particular attention shall be given to the prevention of corrosion at the connections between dissimilar metals.

4.7.6.3. A Corrosion control plan must be submitted by Designer/Builder during the Shematic Design / Design Development Phase for District approval which will include at a minimum the analysis of the corrosion risk and mitigation measures.

4.7.7. **Roofing Requirements.** The installation of PV modules, inverters and other equipment shall provide adequate room for access and maintenance of the existing building and existint fixtures. A minimum of three feet of clearance will be provided between PV equipment and existing mechanical equipment and other equipment mounted on the roof. A minimum of four feet of clearance shall be provided between PV equipment and the edge of the roof. Clearance guidelines of the DSA as well as the local fire marshal shall be followed. The installation of solar systems of roof tops will be reviewed by the DSA for code compliance by adherence to the State Fire Marshal Solar Photovoltaic Installation Guideline. The PV equipment shall not be installed in a way that obstructs air flow into or out of building systems or equipment. Proposed roof top mounted systems may be ballasted or penetrating systems and must meet or exceed the following requirements:

4.7.7.1. Systems shall not exceed the ability of the existing structure to support the entire solar system and withstand increased wind uplift and seismic loads. The capability of the existing structure to support proposed solar systems shall be verified by Designer/Builder prior to design approval.

4.7.7.2. All racking systems shall allow for the District staff to perform roof inspection, cleaning, and maintenance operations with minimal obstructions from the racking; maintenance activities include, but are not limited to, leak identification, or repair once the solar system is installed.

4.7.7.3. Roof penetrations, if part of the mounting solution, shall be kept to a minimum.

4.7.7.4. Designer/Builder shall perform all work so that existing roof warranties shall not be voided, reduced, or otherwise negatively impacted.

4.7.7.5. No work shall compromise roof drainage, cause damming or standing water or cause excessive soil build-up.

4.7.7.6. All materials and/or sealants must be chemically compatible.

4.7.7.7. Thermal movement that causes scuffing to the roof must be mitigated as part of the mounting solution.

4.7.7.8. All roof penetrations shall be waterproofed.

4.7.7.9. The Designer/Builder shall not create a roof penetratration until, as part of system design review and approval, Designer/Builder submits detail(s) for the sealing of that roof penetrations, and the detail(s) are approved in writing by the District and the manufacturer of the existing roofing system. The District will make available the roofing manufacturer for each building for consultation with Designer/Builder as part of the design process.

4.7.7.10. All roofing work shall be performed by a licensed roofing contractor who is certified by the roofing materials manufacturer for the specific materials or systems comprising each roof upon which a solar system will be installed. The roofing contractor shall also be safety prequalified by the District.

4.7.7.11. As part of the design submittals, Designer/Builder shall include signed certificates from the roofing manufacturer stating:

4.7.7.12. The roofing contractor is certified installer of the complete roofing system.

4.7.7.13. The manufacturer's Technical Representative is qualified and authorized to approve the complete roofing system.

4.7.7.14. Project plans and specifications meet the requirements of the warranty of the complete roofing system for a minium twenty-five (25) year period.

4.7.7.15. Existing warranty incorporates the new roofing work and flashing work.

4.7.7.16. Any damage to roofing material during installation of PV systems must be remedied by the Designer/Builder.

4.7.7.17. The installation of PV modules, inverters and other equipment on building roofs will be designed to minimize visibility of the equipment from the ground.

4.7.8. **Shade Structure Requirements.** Designer/Builder is responsible for incorporating the following elements in the design and construction of the Project:

4.7.8.1. Minimum height: all shade structures shall be designed to have a minimum clear height of ten(10) feet.

4.7.8.2. All shade structures shall be designed to have a bollard at each low corner point.

4.7.8.3. All shade structures shall be installed with fascia surrounding the exposed edge of the structure's purlins.

4.7.8.4. Shade structures located in parking lots shall have a protective concrete surrond / base installed on support posts.

4.7.8.5. Shade structure columns, beams, and fascia shall be painted or finished to be the color selected by the District.

4.7.8.6. Shade structures and all attached equipment shall be designed and installed so as to minimize the ability to climb structures

4.7.8.7. Shade structures shall be installed such that the finished height of the array is uniform and is subject to the District's approval at design submittal.

4.7.9. **Ancillary Equipment Enclosures.** Designer/Builder will be responsible for incorporating the following elements in the design and construction of the Project:

4.7.9.1. All ancillary equipment be grouped to a single location per site and shall be surrounded by a fence to prevent students, vandals, and trespassers from gaining access. The fence shall be a six (6) foot high chain link fence with vinyl privacy slats. If the system is a ground mount design, ancillary equipment shall be located within the fenced array area.

4.7.9.2. All ancillary equipment shall be located in a manner that minimizes its impact to normal District operations and minimizes resulting visual impacts.

4.7.10. **Infrastructure for Ground Mount Systems (NOT IN THIS CONTRACT).**

4.7.11. **Lightning and Surge Protection**

4.7.11.1. Designer/Builder shall utilize lightning arrestors to protect appropriate equipment from lightning strikes.

4.7.11.2. Designer/Builder shall utilize surge suppressors to protect the appropriate equipment from electrical surges. [*SunPower will provide surge arrestors in the AC combiner boxes. SunPower excludes "lighting arrestors" and "surge suppressors"*]

4.7.12. **Short Circuit Coordination Study**

4.7.12.1. The Designer/Builder shall conduct a short-circuit and coordination study (SCCS) that includes all of the overcurrent protective devices installed on the project (AC/DC fuses and AC/DC circuit breakers). This study will ensure that the devices installed as part of a PV system are coordinated with the rest of a site's distribution, preventing an unintentional outage due to an isolated PV system fault.

4.7.12.2. The study shall be submitted, with calculations, for District review as part of design review.

4.7.13. **Wiring and Cabling Runs**

4.7.13.1. Designer/Builder shall layout and install all AC conductors AC conductors using Multiconductor Metal clad cable from inverter to panel board.

4.7.13.2. Conduit buried underground shall be suitable for the application and compliant with all applicable codes. PVC shall be constructed of a virgin homopolymer PVC compound and be manufactured according to NEMA and UL specifications. All PVC conduit feeders shall contain a copper grounding conductor sized per NEC requirements and continuity shall be maintained throughout conduit runs and pullboxes. Pullboxes shall be traffic rated with lockable lids. Minimum conduit size shall be ¾". A tracing/caution tape must be installed in the trench over all buried conduit. All underground conduits placed in trenches, buried under roadways, or swales shall be encased with red dyed concrete slurry cap.

4.7.13.3. Conduit installed using horizontal directional boring (HDB), shall include tracer tape or traceable conduit. The minimum depth of the conduit shall be per NEC 2011 Article 300.5. The Designer/Builder is responsible for demonstrating that

all conduits installed utilizing horizontal boring meets the minimum depth requirement and is solely responsible for any remediation costs and schedule impacts if the specification is not met. Designer/Builder must provide documentation of final depth and routes of all conduit installed in horizontal bores.

4.7.13.4. Conduit installed on building roofs shall not be installed near roof edges or parapets to reduce visibility. Any conduit penetrations through roof surfaces shall not be made within five (5) feet of the roof edge to reduce visibility. If conduit is installed on the exterior face of any building, it shall be painted to match the existing building color. In all cases, the visible impact of conduit runs shall be minimized and the design and placement of conduit shall be reviewed and approved by the District as part of Design Review.

4.7.13.5. Electro-metallic tubing (EMT) shall be used for wiring or cabling indoors, above grade locations, and where conduit needs to be protected from damage. EMT shall not be installed underground, outdoors, or embedded in concrete. EMT shall be cold-rolled zinc coated steel and be manufactured to UL and ANSI standards. Fittings shall be watertight and malleable gripping ring compression type. Pressure cast material for nuts of compression ring type fittings and set-screw type connections are not acceptable.

4.7.13.6. Galvanized Rigid Conduit (GRC) shall be used where subject to physical damage in exposed areas. Electric Metallic Tubing (EMT) or Multiconductor metal clad (MC) cable shall be used otherwise on structure above 8'. GRC shall be continuous hot-dipped galvanized manufactured per UL and ANSI requirements. Rigid aluminum conduit is not acceptable. Conduit bodies for use with steel conduit, rigid or flexible, shall be manufactured per UL requirements and shall be cast metal with gasketed closures. Fittings for GRC conduit shall be malleable iron or forged steel with cadmium or zinc coating. Union couplings for joining rigid conduit at intermediate runs shall be of the same material as the conduit. Couplings shall be threaded concrete-tight to permit completing conduit runs when neither conduit can be turned and to permit breaking the conduit run at the union. Set screw connectors are not acceptable.

4.7.13.7. Minimum conduit size shall be ¾".

4.7.13.8. All conduits, boxes, enclosures, etc. shall be secured per NEC 690 requirements.

4.7.13.9. All conductors shall be insulated copper rated for 1000V, maximum. DC conductors shall be USE-2 1000V UL Listed Sunlight resistant wire.

4.7.13.10. All items shall be U.L. listed and shall bear the U.L. label.

4.7.13.11. All spare conduits shall be cleaned, mandrelled, and provided with a pullwire. Spare conduits shall be required for security cameras for ground mount systems.

4.7.13.12. All feeders and branch circuits shall be sized to minimize voltage drop and losses and shall be in compliance with NEC requirements.

4.7.13.13. Designer/Builder shall furnish, install, and connect combiners and recombiners as necessary to complete the System. Enclosures for combiners and recombiners shall be NEMA 4 or 4X rated.

4.7.13.14. All systems, conduit, boxes, components, etc. shall be grounded and bonded

per NEC requirements and in accordance with Section 1.3.6.14.

4.7.13.15. Designer/Builder will be responsible for locating, identifying and protecting existing underground utilities conduits, piping, substructures, etc. and ensuring that no damage is inflicted upon existing infrastructure.

4.7.13.16. Designer/Builder shall install the exposed string cable homeruns along the beams or structure where the combiner box is installed.

4.7.13.17. All exposed string wiring must be installed above the lower surface of the structural purlins and beams. Wire loops under framing members are not acceptable.

4.7.14. **Grounding and Bonding**

4.7.14.1. Module ground wiring splices shall be made with irreversible crimp connectors.

4.7.14.2. All exposed ground wiring must be routed above the lower surface of any structural framing.

4.7.14.3. For shade structure installations, grounding electrode conductors shall be bonded to structure columns either just below grade or below the top surface of concrete bollards.

4.7.15. **System Security Requirements**

4.7.15.1. Designer/Builder shall utilize tamper-resistant PV module to rack fasteners for all PV module mounting.

4.7.15.2. Designer/Builder shall utilize tamper-resistant fasteners for all electrical fittings, pull boxes and other enclosures.

4.7.16. **Meters**

4.7.16.1. Designer/Builder shall supply and install Utility approved a Net Generation Output Meter (NGOM) for each PV system.

4.7.16.2. Generation Meters shall use Internet Protocol (IP) communication and shall not require a custom network for connection.

4.7.16.3. Generation Meters shall have the capability to store metered data (including instantaneous kW, kWh, voltage, current, and phase information) in fifteen (15) minute intervals and retain such information for at least seven (7) days.

4.7.17. **Shade Structure Lighting**

4.7.17.1. Installation of PV systems in parking lots shall include the installation of new security high efficiency lighting. Installation of shade structure PV systems shall include the removal of existing security light poles, foundations, and fixtures that are no longer effective.

4.7.17.2. Lighting shall be LED lighting or other similar energy efficient lighting system.

4.7.17.3. New parking lot fixtures shall be installed to provide parking lot illumination compliant with IESNA requirements or recommendations for illumination and safety.

4.7.17.4. Minimum horizontal illuminance of one (1) foot-candle shall be maintained at ground level with a uniformity ratio (maximum to minimum) of 15:1.

4.7.17.5. The new lighting is required to illuminate the entire parking area and adjacent pedestrian walkways affected by the removal of existing lights, not just the area under the PV modules.

4.7.17.6. A photometric illumination plot must be submitted for each parking lot showing all existing lighting and proposed new SSS canopy lighting.

4.7.17.7. Submit California Title 24 Outdoor Lighting calculations with all lighting drawings and show evidence of compliance.

4.7.18. Photocell controls shall be used in conjunction with a lighting control system for all exterior lighting and energize lighting when ambient lighting levels fall below two (2) foot-candles measured horizontally at ground level. The lighting control system shall also be able to function based on time clock control adjustable by District staff. Lighting shall also be permitted to operate manually without regards to photocell or time clock input. Replacement parking lot lighting shall be served from an existing parking lot lighting circuit and any existing circuits and existing control function shall be maintained, or if replaced, done so at the approval of the District.

4.7.19. **Monitoring System, DAS, and Reporting.** Designer/Builder shall design, build, activate and ensure proper functioning of Data Acquisition Systems (DAS) that enable the District to track the performance of the PV Systems as well as environmental conditions through an online web-enabled graphical user interface and information displays. Designer/Builder shall provide equipment to connect the DAS via existing Wi-Fi network or cellular data network at all locations. The means of data connection will be determined during design. The District will pay for the cost of cellular data service if needed, but not for the modem or other equipment needed to connect to the cellular network.

4.7.19.1. The DAS(s) shall provide access to at least the following data:

4.7.19.1.1. Inverter and System Level Instantaneous AC system output (kW)

4.7.19.1.2. Inverter and System Level PV System production (kWh) over pre-defined intervals that may be user configured

4.7.19.1.3. Inverter and System Level AC and DC voltage

4.7.19.1.4. Horizontal and in-plane irradiance (at least two (2) sensors for each, at different positions in the array)

4.7.19.1.5. System availability

4.7.19.2. Environmental data (temperatures, wind speed, and irradiance) shall be collected via weather station located in the area

4.7.19.3. Data collected by the DAS shall be presented in an online web interface, accessible from any computer through the Internet with appropriate security (e.g., password controlled access). The user interface shall allow visualization of the data at least in the following increments: 15 minutes, hour, day, week, month, and year. The interface shall access data recorded in a server that may be stored on-site or remotely with unfettered access by the District for the life of the Project, 25 years after the issuance of the Permission to Operate Letter from the Utility. The online interface shall enable users to export all available data in Excel or ASCII comma-separated format for further analysis and data shall be downloadable in at least 15 minute intervals for daily, weekly, monthly and annual data.

.

4.7.20. **Other Considerations**

4.7.20.1. All Balance of Systems (wiring, components, conduits, and connections) must be suited for conditions for which they are to be installed.

4.7.20.2. Local DC and AC disconnects shall be located in accessible locations near

inverters.

4.7.20.3. Outdoor enclosures shall be rated NEMA 3R, NEMA 4, or NEMA 4X.

4.7.21. **Federal Aviation Administration (FAA) Requirements.** Designer/Builder shall be responsible to submit the appropriate FAA Form 7460-1, along with any other required forms and documentation, for all proposed PV systems within the approach or takeoff paths or on the property of airports as defined by the Code of Federal Regulations Title 14 Part 77.9.

4.7.22. **Interconnection.** Designer/Builder is responsible for obtaining all necessary Utility interconnection approvals for each PV system being installed. Designer/Builder must comply with all interconnection requirements, such as California Public Utilities Commission (CPUC) rules for the Utility service territory. Designer/Builder is responsible for the proper planning and scheduling of interconnection approvals and any potential interconnection study. Systems installed as part of this Project will take advantage of Net Energy Metering (NEM). Designer/Builder shall be responsible for ensuring the system design and interconnection qualifies for NEM.

4.7.23. **Production Modeling.** Production modeling of the PV systems shall be performed using PVSYST or equivalent modeling software using TMY3 weather data for the San Jose International Airport or weather data from reliable sources closer to each array. The simulations shall accurately simulate energy production for proposed system layouts, sizes, and orientation. It is critical that PV production models are accurate with all methodology and assumptions described. The District will independently verify production models are accurate to the designed systems and utilize simulation results for economic evaluations. Designer/Builder shall be responsible for updating the production models each time changes are made to the proposed system designs that will impact production.

4.7.24. **Shading**

4.7.24.1. Designer/Builder shall adhere, when possible, to the following requirements in order to avoid excessive shading on modules. For any object near an array that is higher than the lowest point of that array by height H, Designer/Builder shall locate the array farther from the object than:

4.7.24.1.1. 3H to the North of the object

4.7.24.1.2. 3H to the East or West of the object

4.7.24.1.3. 3H to any non-cardinal direction of the object

4.7.24.2. Any Designer/Builder whose system design does not adhere to these rules shall perform a shading analysis justifying the basis for their design, including any proposed tree removal, and explaining why shading does not create an adverse performance and/or economic impact.

4.7.24.3. Any trees that are in the footprint of systems to be installed by the Designer/Builder and all trees identified as being removed in the array layouts in **Exhibit A**, shall be removed by the Designer/Builder at their expense, subject to the approval of the District. A tree shall be considered to be in the footprint of a system if its canopy would extend over any part of the system, including structural components or modules. The District will remove or prune, at its discretion, trees planted outside of the work area that shade PV systems (at present time or in the foreseeable future), provided the Designer/Builder identifies these trees during the design process. The Designer/Builder shall be responsible for any required tree remediation efforts resulting from tree removal, Including compliance with all applicable tree removal ordinances, laws and regulations.

4.7.24.4. Pass through manufacturer warranties as indicated in **Exhibit H.**

Exhibit "B"
Designer/Builder Assumptions

Contract Assumptions for Shade Structures and Rooftops

The Contract Price is based upon SunPower's visual observations of the site; and review of all documents provided prior to execution of the Contract; and includes the following assumptions. Should any of the assumptions or conditions vary based on District directive, latent conditions, or a more detailed engineering analysis, the Contract Price and the Project Schedule may be subject to change. If there is an inconsistency between these assumptions and the other terms of the Contract, the terms of the Contract shall control.

Labor

Overtime and special shift requirements

Overtime and special shift requirements are included as an allowance for up to $100,000 for work at off-hours over the weekends for the following school sites: Lowell ES, Horace Mann ES, Anne Darling ES, Empire Gardens ES, Gardner ES, River Glen ES, Simonds ES, and Washington ES. Sunpower represents this allowance to be an adequate NTE amount for the work based on the current scope for each of the named sites and the schedule at the time of execution of the Contract. All other overtime and special shift requirements are excluded from the Contract Price, except as determined by Designer/Builder to reasonably mitigate disruption to the school and to meet milestones or Project completion.

Indirect Construction Costs

Permits and Regulatory Fees

Except as specifically excluded in the Contract, procurement of all permits and approvals necessary for the solar installations are included. An allowance will be provided for interconnection application fees up to $20,000. District will pay incremental DSA fees as may be associated with District approved change orders.

System Design & Scope

Solar Electrical Equipment and Conductors

AC feeder length from Panel Board to solar switchboard location shall be Aluminum and from the switchboard to the interconnection shall be Copper.

Electric Metallic Tubing (EMT) or Multiconductor metal clad (MC) cable shall be used, unless where exposed to weather or where subject to physical damaged in exposed areas in which case Galvanized Rigid Conduit will be used. DC array wiring will be neatly secured to PV modules and/or racking system and free from exposure to damage from typical playground mischief e.g. a soccer ball kicked intentionally into the array. PV source circuit conductors must meet or exceed specifications as listed in NEC section 690.35 (D)

DC array bonding is achieved by use of SunPower proprietary grounding clip and/or rivet; or S5 clamp attachment.

Design includes rigid conduit for underground transitions and in areas subject to vehicle damage; and PVC for all other underground conduit.

Galarza ES & Horace Mann ES will require 480V:12kV_Dry-type, all other sites will require 480:208v_Dry-Type (size of transformer will be dependent on system size) transformers by `manufacturer of SunPower's choosing. All transformer installations must meet all applicable codes.

Design will include bollards below each low point on the parking lot canopies only (excludes shade structures to minimize the ability to climb structures), low clearance signage in parking lots, bird spikes on the underside of canopies and shade structures and installation of protection from baseballs for the following eleven sites: Almaden

ES, Anne Darling ES, Booksin ES, Galarza ES, Gardner ES, River Glen MS, Schallenberger ES, Trace ES, Washington ES, Williams ES, Willow Glen ES.

Utility Interconnection

Coordination of shutdown may be required with District and local Utility. Interconnection is scheduled for minimum 4 hours and is assumed to be performed on off hours with prior written approval from District. Additional shutdowns may be required in order to assess physical condition of the District's switchgear.

The Utility will have 24/7 access to existing electric utility meters and the utility lockable disconnect locations for all electrical interconnections related to this project.

Utility Requirements

Contract assumes all utility-owned electrical equipment serving the sites electrical distribution system has adequate capacity to handle the photovoltaic system output. No utility required electrical equipment upgrade or replacement is included in this Contract, including design and coordination thereof. Specifically, we need verification at each site that the Utility Transformers are properly sized to handle the added PV load. If the transformers are undersized – it will be the responsibility of the District to replace transformer with an adequate sized transformer from the utility, Sunpower to assist in the replacement from an oversight perspective only.

Any costs associated with unforeseen utility interconnection requirements, including but not limited to utility-owned equipment upgrades or additions, relay protection equipment external to the inverters, system impact studies, or telemetry requirements and interconnection studies, substation upgrade requirements are not included in this Contract. An allowance of $100,000 will be provided for the items descrbed in this section.

Facility Equipment

It is assumed that the system will interconnect with the facility at District's existing panels and the panel is rated at the main meter voltage level provided per the RFP (Appendix B: Site Maps) with ample current capacity to accept the PV system or as otherwise listed in the RFP.

The existing panels are assumed to have provisions to accept cable connections on the primary side of the main service breaker, or adequate space and capacity for a new breaker. Panel or bus bar reconfiguration and/or District distribution equipment re-listing certification is not included.

Contract includes Short Circuit Coordination Study for this project as requested per the Solar Contract (pg 51 – section 4.7.30). SunPower will provide overcurrent settings that will be coordinated with District overcurrent settings.

Contract also includes Glare Analysis and Corrosion Control as requested in the Solar Contract (pg 47 - section 4.7.21; and pg 48; section 4.7.24)

Contract excludes Cirtcuit Breaker Coordination Study for this project.

Solar system includes all standard interconnection related equipment on the District side of the meter, including panel circuit breakers, utility and/or visible utility lockable disconnect switches, solar metering, conduit, and wiring. Additional District-side protection required by the utilities above that provided by the certified inverters is not included.

If harmonic data of the site is not available, SunPower shall assume that the Harmonic data are within the acceptable limits of the Institute for Electrical and Electronics Engineers (IEEE) Standard 519.

Shade Structure Design

The shade structure heights will have a minimum clearance of 10--foot, and 13.5-foot where noted in the array layout. The design is based on SPWR propriety DSA pre-check drawings.

Painting

Shade structures columns, beams and fascia will be painted with SP6, Prime- (1) Coat Zinc Clad III HS 100, Mid Coat- (1) Coat Macropoxy 646-100, Top Coat- (1) Coat Hi Solids Polyurethane, Color TBD. For rooftop, all exposed wall conduit will be painted and installed to minimize visual impact.

Fencing

A 6-0' galvanized, 9 gauge, 2" mesh fencing and chain link fence-with gate and vinyl private slats around perimeter electrical equipment pad locations is included. Special provisions for special hardware, lock sets, small fabric, etc. are not included. Bollards are included only in areas subject to vehicle impact or as required by an AHJ.

Site & Construction Conditions

Access

SunPower will be provided a sufficient area for staging materials and locating temporary facilities such as construction trailers, portable toilets and dumpsters.

SunPower will provide 6 foot chain link perimeter with posts and fabric screen around construction area.

Existing roads will be capable of handling all required construction equipment such as drilling rigs, concrete trucks, delivery trucks, cranes, and all other equipment necessary to complete the work. SunPower will ensure a standard of care is practiced throughout the project to avoid unnecessary damages to site surfaces including proper sizing of equipment to accomplish the work. The District will pay for repairs to surfaces so long as reasonable care was taken. An allowance of $100,000 will be included for this purpose.

Use of Facilities

On-site water and power will be available for construction with no restrictions and at no charge to SunPower.

Special handling of site materials

Testing for removal and disposal of any existing hazardous waste materials, contaminated soils, or any other unforeseen site conditions that require special handling are not included, except for Empire Gardens ES, where an allowance of $50,000 had been included to cover the costs associated with implementing the Site Management Plan provided with the Addendum #3 of the RFP.

Site utilities and hazards

Changes resulting from utilities, right of ways, easements, and/or hazards—underground or above ground—or any undocumented building upgrades are not included.

Documented utilities and building upgrades are considered as part of this Contract if as-builts are provided to SunPower prior to Contract execution in order to confirm locations of these possible hazards. District shall supply SunPower with a current Title Report with plotted easements, encumbrances, and right-of-ways at all project site locations upon request and as may reasonably be required.

Soil Conditions

Existing site soil is assumed to have the following characteristics:

- IBC or UBC Table 1804A.2, Class 3 or equivalent Non-hazardous, sandy gravel and/or gravel
- Allowable foundation pressure greater than or equal to 2000 psf Lateral Bearing strength below grade equal to 200 (Lbs./Sq. Ft./Ft. of depth)
- Lateral sliding coefficient of friction greater than or equal to 0.35. No sub-grade rocks or rock formations
- Adequate drainage
- No seismic-related hazards (e.g. faults, liquefaction, seismically-induced settlement, lateral spreading) Limited expansiveness
- Low to moderate corrosiveness (PH is less than 5.5, electrical resistivity is more than 1000 OHM-cm, chloride is less than 500 ppm, sulfate is less than 2000 ppm)
- Depth to start of passive pressure is 0.5 feet.

- Assumes existing soil conditions are such that a normal foundation drill rig can be used and there is no need for special dewatering, baker tanks, slurry fill or cased holes, and the site is free from substantial underground obstructions.

Roof Conditions (As Applicable)

Assumes installation is on existing DSA certified roofs and roofs are in reasonably good condition. SunPower reserves the right to inspect the roofs to verify its condition. Based on these assumed conditions, SunPower's work includes installation methods which will result in sustainable, low-maintenance systems per industry standards. In addition, SunPower may offer recommendations to the District on modifications to the roof system to improve its serviceability. Modifications of roof systems fall into three categories:

- Modifications to improve roof condition / serviceability / useful life.
- Modifications required by roofing manufacturer prior to installation of PV system on their roof system. (e.g. slip sheets, strapping, etc.)
- Modificaciones required by Sunpower to make the roof a suitable substrate for the installation of PV. (e.g. air seals, batten bars, etc.)

An allowance of $250,000 will be provided for re-roofing or other improvements at the District's discretion.

The District will seek a written confirmation from roof manufacturer when warranty of roof is in place and supply a copy to SunPower, if received.

If in District's possession, District will provide to SunPower as-builts, roof reports, structural drawings, roof maintenance history, and roof warranty information to validate the location of rooftop PV at Horace Mann ES and Lowell ES, Anne Darling ES, Empire Gardens ES, Gardner ES, River Glen ES, Simonds ES, and Washington ES .

SunPower assumes the building structure will support the added live and dead loads from the photovoltaic installation and rooftop equipment, or to resist added lateral or seismic loads based on reasonable assumptions applicable to like projects. Modifications to the roof system's design and construction of supports, upgrades to the building structure or platforms are not included.

For metal standing seam roofs SunPower will need to complete pull tests prior to design to confirm they are in compliance with DSA 16-8 requirements. If the roof loading causes failure SunPower will work with District to correct exisiting roof / obtain alternate capacity or decommit as necessary.

Security and Lighting

Contract assumes all parking lot light standards in direct conflict with installation of photovoltaic shade structures/parking canopies will be removed by SunPower. Contract also assumes that the existing lighting circuits, for those removed parking lot light standards, can be re-used for photovoltaic parking canopies lighting system and that those existing circuits have ample current carrying capacity to provide required lighting at shade structures/parking canopies, per jurisdictional code requirements. Contract includes LED fixtures for lighting parking canopies only and not at any shade structures.

New lighting circuit installation is excluded from this Contract as well as any required timing circuit reconfiguration, lighting controllers, relays, or new panel boards. Lighting design and/or installation beyond the photovoltaic parking canopies is not included in this Contract.

Tamper-resistant PV module fasteners to rack fasteners for all PV module mounting and all electrical fittings, pull boxes and other enclousures are included as requested in the Solar Contract (pg 53 – section 4.7.33.1 and 33.2). Additional security systems or infrastructure are not included in this Contract. We also exclude lighting arrestors and surge supressors.

Special Conditions

SunPower contemplates (15) weekdays at elementary school sites and (20) weekdays at intermediate school sites, if required by the District, under which SunPower shall not be permitted to perform any work on site.

Contract assumes modifications and/or reconfiguration of the existing parking lots will not be required to accommodate installation of SunPower's photovoltaic shade structure/Carport.

An allowance of $40,000 to cover costs and work required for relocating play equipment amd/or game restripe is included.

An allowance of $20,000 to cover tree/plant removal and replacement for trees not in scope is included.

Special care will be taken to locate existing underground utilities (underground survey) and locate carport structures with minimum conflicts. Relocation of existing underground utilities due to carport foundations is not included.

With the exception of the areas around the photovoltaic arrays, ADA accessibility upgrades and accessibility design underneath the areas covered by Shade structure (e.g., changed path of travel, and ADA signage) as required is included. Grading/Paving to accommodate playground/Parking lot path of travel percentage slope (if required) is excluded and is payable under an ADA allowance of $100,000.

Contract excludes design or installation of any required additional fire hydrants or fire protection apparatuses as required by local first responders or Fire, Life/Safety professionals responsible for review and approval of the design for this project.

All shade structures will be installed with fascia surrounding the exposed edge of the structure's purlins. Other architectural enhancements to the photovoltaic shade /carport structures and roof arrays and mounting systems are not included in this Contract.

Contract assumes preliminary array layouts will meet the min /max requirements of foundations per PC in regards to the topography of the exiting parking lots.

Schedule is subject to change and will be finalized 30 days prior to mobilization upon approval of the District.

Contract includes training in emergency operations of the systems and of associated online monitoring. It also include manual of operating procedures, module serial numbers and flash-test results, inverter owner's manual, as-built engineering documents, warranties, commissioning results, and permission to operate letter from the utility.

Project doesn't include met and or weather stations installation.

Commissioning and Monitoring

Commissioning

Contract assumes commissioning requirements for this project is for the Photovoltaic portion of the project only as outlined on the Solar Contract (pg 123). Contract does not include other building system commissioning cost not related to our work (i.e. HVAC, Plumbing, Fire Alarm, etc.).

Monitoring

SunPower will provide equipment to connect the DAS via existing Wi-Fi network or cellular data network at all locations. The means of data connection will be determined during design. The District will pay for the cost of cellular data service if needed, but not for the modem or other equipment needed to connect to the cellular network.

SJUSD Playground Equipment Removal and Replacement

	Site	Tether ball	Basketball court	Volleyball court
1	Almaden Elementary School	4	0	0
2	Anne Darling Elementary School	2	0	0
3	Bachrodt Elementary School	0	0	0
4	Booksin Elementary School	3	0	0
5	Canoas Elementary School	0	0	0
6	Carson Elementary School	3	0	0
7	Empire Gardens Elementary School	0	0	0
8	Galarza Elementary School	0	0	0
9	Gardner Elementary School	0	0	0
10	Grant Elementary School	3	0	0
11	Graystone Elementary School	0	0	0
12	Hacienda Elementary School	2	0	0
13	Horace Mann Elementary School	0	0	0
14	Los Alamitos Elementary School	1	0	0
15	Lowell Elementary School	0	0	0
16	Olinder Elementary School	1	1	0
17	Reed Elementary School	4	1	0
18	River Glen Middle School	0	0	0
19	Schallenberger Elementary School	0	0	0
20	Simonds Elementary School	0	0	0
21	Terrell Elementary School	0	0	0
22	Trace Elementary School	1	0	0
23	Washington Elementary School	0	0	1
24	Williams Elementary School	0	0	0
25	Willow Glen Elementary School	0	0	0
	TOTAL	**24**	**2**	**1**

Exhibit "C"

Detailed Construction Schedule for Each Site

Designer/Builder shall provide within thirty (30) days of receipt of a Notice to Proceed a detailed CPM construction schedule that meets all the milestones in following Project Schedule.

Form for Project Schedule per Phase

MILESTONES	PHASE I	PHASE II	PHASE III
	1,344 kWdc	1,122 kWdc	1,416 kWdc
	Sites included (8 sites): Bachrodt, Canoas, Galarza, Grant, Olinder, Trace, Willow, and Williams	Sites included (8 sites): Almaden, Booksin, Carson, Graystone, Hacienda, Reed, Schallenberger, and Terrell	Sites included (9 sites): Anne Darling, Empire Gardens, Gardner, Horace Mann, Los Alamitos, Lowell, River Glen, Simonds, and Washington
	DATE	DATE	DATE
Notice to Proceed	24-Jun-16	24-Jun-16	24-Jun-16
Design & Permitting Begins	TBD	TBD	TBD
DSA Approval	TBD	TBD	TBD
Construction Begins	TBD	TBD	TBD
Request Permission to Operate	TBD	TBD	TBD
Obtained Permission to Operate	27-Jan-17	17-Mar-17	30-Jul-2017
Completion			

Designer/Builder acknowledges the District's Instructional Calendar that has already been provided and shall coordinate its work to not disrupt, in any way, District activities, including testing, at each Site. At the time of execution of this Contract, the District's school site test calendars with the exact dates of testing activities are still being prepared. Those will be provided to Designer/Builder as soon as they are ready.

Designer/Builder shall include in its construction schedule at least fifteen (15) weekdays at elementary school sites and at least twenty (20) weekdays at intermediate school sites and high school sites when Designer/Builder shall not be permitted to perform any work at the site.

Exhibit "D"

Contract Price Breakdown Payment Schedule

Designer/Builder has provided the following cost breakout for each site. The cost breakout below does not include the allowances in the Contract section above.

Project Cost by Site	
Site	**Site Cost**
Almaden Elementary School	$587,080
Anne Darling Elementary School	$656,216
Bachrodt Elementary School	$531,032
Booksin Elementary School	$599,937
Canoas Elementary School	$595,379
Carson Elementary School	$459,841
Empire Gardens Elementary School	$617,337
Galarza Elementary School	$782,333
Gardner Elementary School	$674,707
Grant Elementary School	$564,588
Graystone Elementary School	$534,397
Hacienda Elementary School	$530,649
Horace Mann Elementary School	$579,475
Los Alamitos Elementary School	$526,439
Lowell Elementary School	$510,033
Olinder Elementary School	$653,742
Reed Elementary School	$452,584
River Glen Middle School	$593,005
Schallenberger Elementary School	$578,932
Simonds Elementary School	$625,496
Terrell Elementary School	$477,744
Trace Elementary School	$598,930
Washington Elementary School	$838,273
Williams Elementary School	$493,703
Willow Glen Elementary School	$624,203
TOTAL	**$14,686,055**

Exhibit "E"

SCHEDULE OF VALUES (DRAFT)

Form of Schedule of Values for Each Site

Designer/Builder shall prepare a detailed schedule of values for all of the Work that must include quantities and prices of items aggregating the Contract Price and must subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. This schedule of values must be approved by the District prior to it being used as a basis for payment.

Schedule of Values Activity Name		Percent of Total
Notice to Proceed		0%
Preconstruction Work		
	Bonds & Insurance	1%
	Design Development	2%
	100% Design completed	4%
	DSA Approval	4%
Construction	Mobilization & Temporary Facilities	2%
	Demolotion & Foundations	5%
	Structural Install	20%
	PV Delivery & Install	20%
	Equipment Delivery	10%
	Electrical installation	20%
	Interconnection	3%
	Commissioning	3%
	Testing	1%
Final Completion	Training	1%
	Punch List	2%
DSA Close out	DSA Certification	2%
		100%

Exhibit "F"
INITIAL LAYOUT AND STAGING DOCUMENTS AND LIST OF PLANS AND SPECIFICATIONS

Initial Layout and Staging Rendering –
_____ School
List of Plans and Specifications

Designer/Builder shall provide the following plans and specifications upon DSA approval:

[SAMPLE]

SHEET NO.	SHEET NAME
S0.0	TITLE SHEET
S1.0	GENERAL NOTES
S1.0A	GENERAL NOTES
S1.1	SPECIFICATIONS
S1.1A	SPECIFICATIONS
S1.1B	SPECIFICATIONS
S2.0	STANDARD AND FOUNDATION DETAILS
S2.1	FOUNDATION DETAILS
S2.2	FOUNDATION DETAILS
S3.0	STANDARD DOUBLE ARRAY OPTION FOUNDATION AND ROOF FRAMING PLAN
S3.0A	STANDARD DOUBLE ARRAY OPTION SPREAD FOOTING / GRADE BM FOUNDATION PLAN
S3.1	STANDARD SLOPE UP ARRAY OPTION FOUNDATION AND ROOF FRAMING PLAN
S3.1A	STANDARD SLOPE UP ARRAY OPTION SPREAD FOOTING / GRADE BM FOUNDATION PLAN
S3.2	STANDARD SLOPE DOWN ARRAY OPTION FOUNDATION AND ROOF FRAMING PLAN
S3.2A	STANDARD SLOPE DOWN ARRAY OPTION SPREAD FOOTING / GRADE BM FOUNDATION PLAN
S3.3	SPECIAL DOUBLE ARRAY OPTION FOUNDATION AND ROOF FRAMING PLAN
S3.4	SPECIAL SLOPE UP ARRAY OPTION FOUNDATION AND ROOF FRAMING PLAN
S3.5	SPECIAL SLOPE DOWN ARRAY OPTION FOUNDATION AND ROOF FRAMING PLAN
S4.0	FRAME ELEVATION AND DETAILS
S4.1	FRAME ELEVATIONS
S4.2	DETAILS

PLANS / DRAWINGS

Sheet number	File number	Description

[**LIST ALL PLANS AND/OR DRAWINGS FOR PROJECT**]

SPECIFICATIONS

Specification Description	Specification Number

[**LIST ALL SPECIFICATIONS FOR PROJECT**]

Exhibit "G"
[RESERVED]

Exhibit "H"

WARRANTIES

The following warranties are the standard warranties from the manufacturers of components of the System. Designer/Builder is assigning these warranties to the District and these warranties shall not, in any way, reduce or limit any additional warranty terms or durations indicated in the Contract.

Photovoltaic Module Warranty
25-year

Inverter Warranty
20-year

Designer/Builder shall provide Owner with an extended manufacturer's warranty for the inverters for an additional ten (10) years (for a total inverter(s) warranty period to the District of twenty (20) years) under the same terms as the following terms of the initial twenty (20) year warranty from the manufacturer.

SUNPOWER®

SunPower Limited Product and Power Warranty for Commercial PV Modules

This Limited Warranty is effective for SunPower® photovoltaic modules for commercial installation with "SPR" and "COM" in the product model number and sold after January 1, 2015.

1. Limited Warranty

SunPower Corporation ("SunPower") warrants that for 25 years beginning on the Warranty Start Date[1] (the "Warranty Period"), its photovoltaic modules specified above, which may include factory-integrated electronics, ("PV Module(s)"), shall be free from defects in materials and workmanship under normal application, installation, use and service conditions, and the DC power of the PV Modules will be at least 95% of the Minimum Peak Power[2] rating for the first 5 years, and declining by no more than 0.4% per year for the following 20 years, so the power output at the end of the final year of the 25 year warranty period will be at least 87% of the Minimum Peak Power rating.

If any PV Module fails to conform to this Limited Warranty and provided that any loss in power is determined by SunPower (in its sole discretion) not to have resulted from one of the excluded events set forth in Section 3 below, then for the Warranty Period, SunPower will repair, replace (new or refurbished) or refund the defective PV Modules as set forth herein. SunPower will make all reasonable efforts to repair or replace the PV Module with an electrically and mechanically compatible PV Module with an equal or greater power rating. If this is not commercially feasible, then SunPower will refund the purchase price of the defective PV Module as paid by the customer. The repair, replacement or refund remedy provided herein shall be the sole and exclusive remedy. Limited Warranty for any repaired or replaced PV Module shall not extend beyond the Warranty Period. In the case of a valid claim for PV Modules installed by SunPower, an affiliate of SunPower or an authorized SunPower installer, the Limited Warranty covers:

(i) reasonable and customary transportation costs for return of the PV Modules;
(ii) reshipment of any repaired or replaced PV Modules; and
(iii) costs associated with installation, removal or reinstallation of the PV Modules.

2. General Conditions for Warranty Claims

a) Warranty claims must in all events be filed within the Warranty Period.
b) Warranty claims may only be made by, or on the behalf of (i) the original end customer, as named in the certificate of guarantee or invoice, as applicable, and (ii) any subsequent title holder of the PV Modules upon satisfactory proof of succession or transfer from the original end customer as named in the certificate of guarantee or invoice, as applicable.
c) When PV Modules are used on a mobile platform of any type, such as a vehicle, the Warranty Period shall be limited to 12 years.
d) In cases of PV Module replacement, any replaced PV Module shall pass into the ownership of SunPower.

3. Exclusions and Limitations

The Limited Warranty does not apply to any of the following:

a) PV Modules subjected to: misuse, abuse, neglect or accident; alteration, improper installation, application or removal (including but not limited to installation, application or removal by any party other than SunPower, a SunPower authorized dealer or technician approved by SunPower in writing); non-observance of the applicable SunPower installation, users and/ or maintenance instructions or

[1] *"Warranty Start Date" is the earlier of (i) date of array interconnection and (ii) 6 months following the date of SunPower delivery. If the delivery date cannot be verified, manufacturing date will be used in its place.*
[2] *"Minimum Peak Power" is defined as Peak Power minus peak power tolerance or the minimum rated power, as shown on the label. Peak Power is defined as the watt peak at Standard Test Conditions (1000W/m^2 irradiance, AM1.5, 25C. SOMS current, LACCS FF and Voltage from NREL calibration), as described in IEC61215, measured per IEC60904, and accounting for tolerances per EN50380. SunPower modules shall, in any event, require a sweep rate of no less than 200ms to ensure an accurate power measurement. SunPower can provide a detailed testing procedure or a list of recognized testing agencies upon request.*

non-compliance with national and local electric codes; repair or modifications by someone other than an approved service technician of SunPower; conditions exceeding the voltage, wind, or snow load specifications; power failure surges, lightning, flood, or fire; damage from persons, insects, animals, or industrial chemical exposure; glass breakage from impact or other events outside SunPower's control.

b) Cosmetic effects stemming from normal wear and tear of PV Module materials or other cosmetic variations which do not cause power output lower than what is guaranteed by the Limited Warranty. Normal wear and tear of PV Module materials can include, but is not limited to, fading of frame color, weathering of glass coatings, and areas of discoloration around or over individual solar cells or any part of the PV Module.
c) PV Modules installed in locations, which in SunPower's absolute judgment may be subject to direct contact with bodies of salt water.
d) PV Modules for which the labels containing product type or serial number have been altered, removed or made illegible.
e) PV Modules which have been moved from their original installation location without the express written approval of SunPower.
f) PV Modules that include factory-integrated electronics where such factory-integrated electronics exhibit defects that do not materially impact power output.
g) PV Modules which have been installed on single-family homes or semi-detached homes, including but not limited to duplexes and townhomes. For clarity, apartment and condominiums are not excluded.

SunPower shall not be held responsible or liable to the customer or any third-party arising out of any non-performance or delay in performance of any terms and conditions of sale, including this Limited Warranty, due to acts of God, war, riots, strikes, fire, flood or any other cause or circumstance beyond the reasonable control of SunPower.

4. Limitation of Warranty Scope

SUBJECT TO THE LIMITATIONS UNDER APPLICABLE LAW, THE LIMITED WARRANTY SET FORTH HEREIN IS EXPRESSLY IN LIEU OF AND EXCLUDE ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR PARTICULAR PURPOSE, USE, OR APPLICATION, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF SUNPOWER, UNLESS SUCH OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES ARE EXPRESSLY AGREED TO IN WRITING, SIGNED AND APPROVED BY SUNPOWER. SUNPOWER SHALL HAVE NO RESPONSIBILITY OR LIABILITY WHATSOEVER FOR DAMAGE OR INJURY TO PERSONS OR PROPERTY OR FOR OTHER LOSS OR INJURY RESULTING FROM ANY CAUSE WHATSOEVER ARISING OUT OF OR RELATED TO THE PV MODULES, INCLUDING, WITHOUT LIMITATION, ANY DEFECTS IN THE PV MODULE, OR FROM USE OR INSTALLATION. UNDER NO CIRCUMSTANCES SHALL SUNPOWER BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, HOWSOEVER CAUSED. LOSS OF USE, LOSS OF PROFITS, LOSS OF PRODUCTION, LOSS OF REVENUES ARE THEREFORE SPECIFICALLY BUT WITHOUT LIMITATION EXCLUDED. SUNPOWER'S AGGREGATE LIABILITY, IF ANY, IN DAMAGES OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID TO SUNPOWER BY THE CUSTOMER, FOR THE UNIT OF PRODUCT OR SERVICE FURNISHED OR TO BE FURNISHED, AS THE CASE MAY BE, WHICH GAVE RISE TO THE WARRANTY CLAIM. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR THE EXCLUSION OF DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

IF ANY PROVISION OF THIS LIMITED WARRANTY IS HELD UNENFORCEABLE OR ILLEGAL BY A COURT OR OTHER BODY OF COMPETENT JURISDICTION, SUCH PROVISIONS SHALL BE MODIFIED TO THE MINIMUM EXTENT REQUIRED SUCH THAT THE REST OF THIS LIMITED WARRANTY WILL CONTINUE IN FULL FORCE AND EFFECT.

5. Obtaining Warranty Performance

If you feel you have a justified claim covered by this Limited Warranty, immediately notify (a) the seller and installer of the PV Modules, or (b) any authorized SunPower installer, or (c) contact SunPower Corporation directly at the contacts shown below. Your installer, or SunPower will give advice on handling the claim, which shall include, without limitation, the provision of the warranty card, online warranty registration information, invoice, and/or evidence of the date of delivery of the PV Module, serial number and product number of affected modules, and evidence of claim. The return of any PV Modules will not be accepted unless prior written authorization has been given by SunPower.

SMA America LLC Factory Warranty

Note: this description of SMA Solar Technology America's limited factory warranty is effective on April 1, 2015 and supersedes all prior warranty descriptions.

10 Year Warranty

A ten year warranty applies to the following products:
SBXXX-US, SBXXXX-US, SBXXXXHF-US, SBXXXXXTL-US, STPXXXXXTL-US, WBXXXX-US, Multigate-US, MG-XT-XX-US, SMA Connect and Disconnect units when installed with SMA inverters.

5 Year Warranty

A five year warranty applies to the following products:
STP60-US-10, MLX60 UL, SMA Inverter Manager, SIXXXXU, SIXXXX-US, SBXXXXU, SWRXXXXU, ST6US, SMA Cluster Controller, Smartformer for Sunny Island, Multicluster Box for Sunny Island, SMA Fuel Saver Controller, Webconnect Data Module, Sunny Beam with *Bluetooth*®, Sunny WebBox, Sunny WebBox with *Bluetooth*®, Sunny SensorBox, SB Combiner Boxes. A five year warranty also applies to accessories and other items sold by SMA America LLC that are related to the inverters and communications devices specified in this document. All claims in this category will require a proof of purchase receipt and date to qualify.

The SMA factory warranty provides toll-free technical support, shipping costs, and repair or replacement part costs during the warranty period. The factory warranty period begins 3 months after shipment from SMA America. Five and ten year warranty extensions can be purchased at any time during the factory warranty coverage period. The maximum total warranty coverage period is 20 years.

Warranty Conditions

If a device is determined to be defective during the SMA factory warranty period, one of the following services, as selected by SMA, will be performed at no charge:

1. Exchange the defective device with either a new or like-new device that is functionally equivalent to the device being replaced; or
2. Repair the defective device at SMA's depot facility; or
3. Refund the actual cash value, as determined by SMA, of the defective unit (after the first two years of the factory warranty and during the warranty extension period, if applicable)

In the case of an exchange, the remainder of the eligible warranty will be transferred to the replacement device, or 90 days whichever date is later.

If the warranty applies, and if SMA has a branch or service partner in the country where the device is operated, ground transportation costs are covered by SMA. If the device is operated in a country where SMA does not have a branch or service partner, SMA will ship a replacement unit to the customer's designated freight forwarder location within the USA. The customer will be responsible for shipment to the final destination and for the return of the defective unit to their USA freight forwarder location. SMA will cover ground transportation cost to and from the customer's designated freight forwarder.

The SMA factory warranty includes a Service Call Rebate for eligible installers/dealer companies as follows:

1. SBXXXX-US, SBXXXXHF-US, SBXXXXXTL-US, STPXXXXXTL-US, SB700U, SBXXXXU, SWRXXXXU, WBXXXX-US, STP60-US-10, MLX60 UL Inverters, SMA Inverter Manager, and SIXXXXU, SIXXXX-US Sunny Island units are eligible for a Service Call Rebate during the complete factory warranty period.
2. SB240-US inverters, Multigate-US and MG-XT-XX-US units are eligible for a Service Call Rebate during the first 2 years of the factory warranty period.
3. Other non-inverter products listed in this document are not eligible for a Service Call Rebate

For rebate program details, please see the SMA Inverter Service Call Rebate form located at www.sma-america.com. (Please select the Service tab and Downloads)

In order to fulfill its obligations under this limited warranty, SMA America may require a copy of the purchase receipt, the warranty certificate, installation document, or evidence of the warranty extension. End-user customers are encouraged to retain such documentation. The model/serial number must be included on the documentation provided in order to determine warranty entitlement.

Warranty Transferability

The SMA factory warranty is freely assignable / transferable with written notice to SMA America. To apply for warranty transfer, please see the SMA Warranty Transfer of Ownership form located at www.sma-america.com. (Please select the Service tab and Downloads)

Exclusion of Liability

The SMA limited factory warranty does not cover failures or damages that occur due to:

- transport damage
- incorrect installation or commissioning
- failure to observe the user manual, maintenance requirements and intervals

- modifications, changes or attempted repairs
- incorrect use or inappropriate operation
- insufficient ventilation of the device
- failure to observe the applicable safety regulations,
- force majeure (e.g. lightning, overvoltage, storm, fire)
- cosmetic defects which do not directly influence energy production, or degrade form, fit, function

Additional claims due to direct or indirect damage, especially compensation claims for damages due to loss of profits, or revenue, or incurred costs arising from disassembly and mounting, are expressly excluded in the absence of a written contract agreement with SMA America.

How to get Warranty Support

SMA America products are designed and built for reliability. In the unlikely event of a failure, please contact the SMA Technical Service Line at 1-877-697-6283 where an SMA Technical Support Representative will assist you.

- Proper fault diagnosis may require a qualified Solar PV service technician to be at the SMA device location and equipped with a quality digital AC/DC voltmeter.
- The onsite service technician may be asked to take voltage measurements and provide error codes from the inverter.
- Additional information will be required such as:
    - model number
    - serial number
    - job site name
    - original date of installation
    - PV array configuration
    - description of any modifications that have been performed on the inverter

If the onsite repair technician is unwilling or unable to assist SMA in the fault diagnosis process, the customer may be charged an inspection fee plus shipping costs if no trouble is found when the device is tested by the SMA Service Repair Department.

Replacement Procedure and Conditions

SMA America will provide standard ground shipping. If expedited shipping is requested, the shipping costs will be billed to the customer.

SMA America does not provide new replacement equipment to distributors or installers who exchange new equipment from their stock to customers in the field at their own discretion.

Unresolved or pending financial issues between the customer and SMA America at the time of trouble call reporting will have to be resolved before material exchange can occur.

Customer-modified equipment does not qualify for the advanced replacement exchange warranty process and must be returned to the SMA depot for repair.

Unless the modification created the failure, customer-modified equipment is covered under the above described SMA warranty conditions on a repair/return basis only.

When replacing an inverter, customer is asked to safely remove any piggyback modules (i.e. RS-232 cards, RS-485 cards, etc.) from the inverter to be returned, and retain them for reinstallation by customer on the replacement equipment.

Customer or their installer is expected and requested to repack the defective equipment in the same shipping box used to ship the replacement, and manually apply the SMA provided return shipping label(s) to the box of the equipment to be returned.

If the end-user chooses to have the inverter repaired and returned, SMA America will send an empty shipping box and shipping call tag if the original packaging is not available. The returned unit will be repaired and returned to the end-user.

SMA Solar Technology America, LLC
6020 West Oaks Blvd, Ste 300
Rocklin, CA 95765
Tel. +1 916 625 0870
Tel. +1 877-MY SMA TECH
Tel. +1 877 697 6283 (Toll free, available for USA, Canada and Puerto Rico)
Fax +1 916 625 0871
Service@SMA-America.com www.SMA-America.com

SMA AMERICA, LLC REPAIR CENTER
3801 North Havana Street
Denver, CO 80239

SMA Solar Technology Canada Inc.
2425 Matheson Blvd. E, 7th Floor
Mississauga, ON L4W 5K4
Canada
Tel. +1 877 697 6283 (Toll free, available for Canada) Service@SMA-Canada.ca
www.SMA-Canada.ca

Exhibit "J"
ADDITIONAL CONTRACT DOCUMENTS
TO
CONTRACT FOR DESIGN AND CONSTRUCTION

San Jose Unified School District
and
SunPower Corporation

- Coordination and Project Meetings
- Construction Schedule - Network Analysis
- Submittals
- Regulatory Requirements
- Testing Laboratory Services
- Temporary Facilities and Controls
- Site Standards
- Temporary Tree and Plant Protection
- Storm Water Pollution Prevention Plan – Construction
- Materials and Equipment
- Delivery, Storage and Handling
- Contract Closeout and Final Cleaning
- Field Engineering
- Cutting and Patching
- Operation and Maintenance Data
- Warranties
- Record Documents
- Commissioning

COORDINATION AND PROJECT MEETINGS

1. GENERAL

1.1. SECTION INCLUDES

1.1.1. Coordination Responsibilities of the Designer/Builder
1.1.2. Field Engineering Responsibilities of the Designer/Builder
1.1.3. Preconstruction Conference.
1.1.4. Progress Meetings.
1.1.5. Pre-Installation Conferences.
1.1.6. Post Construction Dedication.

1.2. COORDINATION RESPONSIBILITIES OF THE DESIGNER/BUILDER

1.2.1. Coordinate scheduling, submittals, and Work of the Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
1.2.2. Prior to commencement of a particular type or kind of work examine relevant information, contract documents, and subsequent data issued to the Project.
1.2.3. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
1.2.4. Closing up of holes, backfilling, and other covering up operations shall not proceed until all enclosed or covered work and inspections have been completed. Verify before proceeding.
1.2.5. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
1.2.6. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
1.2.7. In locations where several elements of mechanical and electrical work must be sequenced and positioned with precision in order to fit into available space, prepare coordination drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating, or installing any of the elements required to be coordinated.
1.2.8. Closing up of walls, partitions or furred spaces, backfilling, and other covering up operations shall not proceed until all enclosed or covered work and inspections have been completed. Verify before proceeding.
1.2.9. Coordinate completion and clean up of Work of separate sections in preparation for completion and for portions of work designated for District's occupancy.
1.2.10. After District occupancy of Project, coordinate access to Site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of District's activities.
1.2.11. Coordinate all utility company work in accordance with the Contract Documents.

1.3. FIELD ENGINEERING RESPONSIBILITIES OF THE DESIGNER/BUILDER

1.3.1. Designer/Builder shall employ a Civil Engineer registered in the State of California and acceptable to the District.
1.3.2. Control datum for survey is that established by District provided-survey. Designer/Builder to locate and protect survey control and reference points.
1.3.3. Replace dislocated survey control points based on original survey control.
1.3.4. Provide field engineering services. Establish elevations, lines, and levels utilizing recognized engineering survey practices.
1.3.5. Upon completion of Work, submit certificate signed by the Civil Engineer, that elevations and locations of Work are in conformance with Contract Documents. Record

deviations on Record Drawings.

1.4. PRECONSTRUCTION CONFERENCE

1.4.1. Construction Manager or Project Engineer will schedule a conference immediately after receipt of fully executed Contract Documents prior to Project mobilization.

1.4.2. Mandatory Attendance: Construction Manager, Project Engineer, Inspector of Record, District, Designer/Builder, Designer/Builder's Project Manager, and Designer/Builder's Job/Project Superintendent.

1.4.3. Optional Attendance: District's consultants, subcontractors, and utility company representatives.

1.4.4. Construction Manager shall preside at conference and shall prepare and record minutes and distribute copies.

1.4.5. Agenda:

1.4.5.1. Execution of District-Designer/Builder Contract.
1.4.5.2. Issue Notice to Proceed.
1.4.5.3. Submission of executed bonds and insurance certificates.
1.4.5.4. Distribution of Contract Documents.
1.4.5.5. Submission of list of Subcontractors, list of Products, Schedule of Values, and Progress Schedule.
1.4.5.6. Designation of responsible personnel representing the parties.
1.4.5.7. Procedures for processing Construction Directives and Change Orders.
1.4.5.8. Procedures for Request for Information.
1.4.5.9. Procedures for testing and inspecting.
1.4.5.10. Procedures for processing applications for payment.
1.4.5.11. Procedures for Project closeout.
1.4.5.12. Use of Premises.
1.4.5.13. Work restrictions.
1.4.5.14. District's occupancy requirements or options.
1.4.5.15. Responsibility for temporary facilities and controls.
1.4.5.16. Construction waste management and recycling.
1.4.5.17. Parking availability.
1.4.5.18. Office, work and storage areas.
1.4.5.19. Equipment deliveries and priority.
1.4.5.20. Security.
1.4.5.21. Progress cleaning.

1.5. PROGRESS MEETINGS

1.5.1. Construction Manager shall schedule and administer meetings throughout progress of the Work at a minimum of every week.

1.5.2. Construction Manager or Project Engineer will make arrangements for meetings, prepare agenda, and preside at meetings and shall record minutes (Field Reports), and distribute copies.

1.5.3. Attendance Required: Job Superintendent, Construction Manager, Project Engineer, Project Inspector (Inspector of Record), District, Subcontractors, and suppliers as appropriate to agenda topics for each meeting.

1.5.4. Agenda:

1.5.4.1. Review minutes of previous meetings. (Field Reports)
1.5.4.2. Review of Work progress.
1.5.4.3. Field observations, problems, and decisions.
1.5.4.4. Identification of problems which impede planned progress.
1.5.4.5. Review of submittals schedule and status of submittals.
1.5.4.6. Review of off-site fabrication and delivery schedules.
1.5.4.7. Maintenance of construction schedule.
1.5.4.8. Corrective measures to regain projected schedules.
1.5.4.9. Planned progress during succeeding work period.

1.5.4.10. Coordination of projected progress.
1.5.4.11. Maintenance of quality and work standards.
1.5.4.12. Effect of proposed changes on progress schedule and coordination.
1.5.4.13. Other business relating to Work.

1.5.5. District has authority to schedule meetings other than those listed, as necessary.

1.6. PRE-INSTALLATION CONFERENCES

1.6.1. When required in individual specification section, Designer/Builder shall convene a pre-installation conference prior to commencing work of the section. Refer to individual specification section for timing requirements of conference.

1.6.2. Designer/Builder shall require his/her subcontractors and suppliers directly affecting, or affected by, work of the specific section to attend.

1.6.3. Notify the Construction Manager, Project Engineer, Inspector of Record, and District two (2) days in advance of meeting date.

1.6.4. The pre-installation conference may coincide with a regularly scheduled progress meeting.

1.6.5. Designer/Builder shall prepare agenda, preside at conference, record minutes, and distribute copies within two (2) days after conference to participants.

1.6.6. The purpose of the meeting will be to review Contract Documents, conditions of installation, preparation and installation procedures, and coordination with related work and manufacturer's recommendations.

1.6.7. Pre-installation Schedule: As a minimum, Work being installed under the Contract Documents technical sections will require pre-installation conferences. Designer/Builder shall review the technical specifications and add all additional requirements for pre-installation meetings contained in those sections.

1.7. POST CONSTRUCTION DEDICATION

1.7.1. Attendance Required: Project Superintendent, Designer/Builder, Project Manager, major subcontractors, Construction Manager, Project Engineer, Inspector of Record, and District.

1.7.2. Preparation prior to Dedication: Designer/Builder and appropriate subcontractors and suppliers shall:

1.7.2.1. Assist District in operation of mechanical devices and systems.
1.7.2.2. Verify operation and adjust controls for communication systems.
1.7.2.3. Assist District in operation of lighting systems.

END OF DOCUMENT

CONSTRUCTION SCHEDULE - NETWORK ANALYSIS

1. GENERAL

1.1. REFERENCES

1.1.1. Construction Planning and Scheduling Manual - A Manual for General Designer/Builders and the Construction Industry, The Associated General Contractors of America (AGC).

1.1.2. CSI - Construction Specifications Institute MP-2-1 Master Format.

1.1.3. U.S. National Weather Service - Local Climatological Data (NOAA.gov).

1.1.4. Designer/Builder shall utilize MS Project or approved alternative scheduling software for Project and construction planning and scheduling.

1.2. PERFORMANCE REQUIREMENTS

1.2.1. Ensure adequate scheduling during construction activities so Work may be prosecuted in an orderly and expeditious manner within stipulated Contract Time.

1.2.2. Ensure coordination of Designer/Builder and subcontractors at all levels.

1.2.3. Ensure coordination of submittals, fabrication, delivery, erection, installation, and testing of Products, materials and equipment.

1.2.4. Ensure on-time delivery of District furnished Products, materials and equipment.

1.2.5. Ensure coordination of jurisdictional reviews.

1.2.6. Prepare applications for payment.

1.2.7. Monitor progress of Work.

1.2.8. Prepare proper requests for changes to Contract Time.

1.2.9. Prepare proper requests for changes to Construction Schedule.

1.2.10. Detect potential schedule delays and identification of corrective actions.

1.3. QUALITY ASSURANCE

1.3.1. Perform scheduling work in accordance with Construction Planning and Scheduling Manual published by the AGC.

1.3.2. Maintain one copy of Construction Planning and Scheduling Manual on Site.

1.3.3. In the event of discrepancy between the AGC publication and the Contract Documents, provisions of the Contract Documents shall govern.

1.4. SUBMITTALS

1.4.1. Submission of submittals pursuant to the Construction Documents. Adobe “PDF” files are not acceptable, but Autodesk or similar format is acceptable.

1.4.2. Submit Short Interval Schedule at each Construction Progress Meeting.

1.4.3. Submit Time Adjustment Schedule within five (5) days of commencement of a claimed delay.

1.4.4. Submit Recovery Schedules as required for timely completion of Work or when demanded by the District.

1.4.5. Submit one (1) reproducible and two (2) copies of each schedule.

1.5. REVIEW AND EVALUATION

1.5.1. Designer/Builder shall participate in joint review of Construction Schedule and Reports with District and Construction Manager.

1.5.2. Within seven (7) days of receipt of District and Construction Manager's comments provide satisfactory revision to Construction Schedule or adequate justification for activities in question.

1.5.3. In the event that an activity or element of Work is not detected by District or Construction Manager review, such omission or error shall be corrected by next scheduled update and shall not affect Contract Time.

1.5.4. Acceptance by District of corrected Construction Schedule shall be a condition precedent to making any progress payments.

1.5.5. Schedule of Values shall be basis for determining progress payments.

1.5.6. Review and acceptance by District and Construction Manager of Preliminary Work Schedule or Construction Schedule does not constitute responsibility whatsoever for accuracy or feasibility of schedules nor does such acceptance expressly or impliedly

warrant, acknowledge or admit reasonableness of activities, logic, duration, manpower, cost or equipment loading stated or implied on schedules.

1.6. FORMAT

1.6.1. Prepare diagrams and supporting mathematical analyses in a form reasonably acceptable to the District.

1.6.2. **Listings**: Reading from left to right, in ascending order for each activity.

1.6.3. **Diagram Size**: 11X17.

1.6.4. **Scale and Spacing**: To allow for legible notations and revisions.

1.6.5. Illustrate order and interdependence of activities and sequence of Work.

1.6.6. Illustrate complete sequence of construction by activity.

1.6.7. Schedule will have all predecessors and successors shown for review.

1.6.8. Provide legend of symbols and abbreviations used.

1.7. COST AND SCHEDULE REPORTS

1.7.1. **Activity Analysis**: Tabulate each activity of network diagram and identify for each activity:

1.7.1.1. Description.

1.7.1.2. Interface with outside contractors or agencies.

1.7.1.3. Number.

1.7.1.4. Preceding and following number.

1.7.1.5. Duration.

1.7.1.6. Earliest start date, earliest finish date.

1.7.1.7. Actual start date, actual finish date.

1.7.1.8. Latest start date, latest finish date.

1.7.1.9. Total and free float.

1.7.1.10. Identification of critical path activity.

1.7.1.11. Monetary value keyed to Schedule of Values.

1.7.1.12. delete

1.7.1.13. delete

1.7.1.14. Percentage complete.

1.7.1.15. Variance positive or negative.

1.7.2. **Required Sorts**: List activities in sorts or groups:

1.7.2.1. By activity number.

1.7.2.2. By amount of float time in order of early start.

1.7.2.3. By responsibility in order of earliest start date.

1.7.2.4. In order of latest start dates.

1.7.2.5. In order of latest finish dates.

1.7.2.6. Application for payment sorted by Schedule of Values.

1.7.2.7. Listing of activities on critical path.

1.7.3. Listing of basic input data which generates schedule.

1.8. CONSTRUCTION SCHEDULE

1.8.1. Designer/Builder shall develop and submit a preliminary schedule of construction (or Preliminary Construction Schedule) as required by this Document and the Contract Documents. It shall be submitted in computer generated network format and shall be organized by Activity Codes representing the Designer/Builder's intended sequencing of the Work, and with time scaled network diagrams of activities. The Preliminary Construction Schedule shall include activities such as mobilization, preparation of submittals, specified review periods, procurement items, fabrication items, milestones, and all detailed construction activities.

1.8.2. Upon District's acceptance of the Preliminary Construction Schedule, Designer/Builder shall update the accepted Preliminary Construction Schedule until Designer/Builder's Construction Schedule is fully developed and accepted. Once approved by District, this shall become the Construction Schedule. This schedule shall include and identify all tasks that are on the Project's critical path with a specific determination of the start and

completion of each critical path task, all contract milestones and each milestone's completion date(s) as may be required by the District, and the date of Project Completion. Since updates to the Construction Schedule are the basis for payment to Designer/Builder, submittal and acceptance of the Construction Schedule and updates shall be a condition precedent to making of monthly payments, as indicated in the Contract and the Schedule of Values.

1.8.3. Failure to submit an adequate or accurate Preliminary Construction Schedule, Construction Schedule, updates thereto or failure to submit on established dates, will be considered a breach of Contract.

1.8.4. Failure to include any activity shall not be an excuse for completing all Work by required Completion Date.

1.8.5. Activities of long intervals shall be broken into increments no longer than seven (7) days or a value over $20,000.00 unless approved by the District or it is non-construction activity for procurement and delivery.

1.8.6. The Construction Schedule shall comply with the following and include the following:

1.8.6.1. Designer/Builder's approach to mobilization, procurement, and construction during the first thirty (30) calendar days including crew sizes, equipment and material delivery, Site access, submittals, and permits.

1.8.6.2. Shall designate critical path or paths.

1.8.6.3. Procurement activities to include mobilization, shop drawings and sample submittals.

1.8.6.4. Identification of key and long-lead elements and realistic delivery dates.

1.8.6.5. Construction activities in units of whole days limited to fourteen (14) days for each activity except non-construction, procurement and delivery.

1.8.6.6. Duration of each activity.

1.8.6.7. Shall contain seasonal weather considerations.

1.8.6.8. Indicate a date for Project Completion that is no later than Completion Date subject to any time extensions processed as part of a Change Order.

1.8.6.9. Conform to mandatory dates specified in the Contract Documents.

1.8.6.10. Designer/Builder shall allow for inclement weather in the Proposed Baseline Schedule by incorporating an activity titled "Rain Day Impact Allowance" as the last activity prior to the Completion Milestone. No other activities may be concurrent with it. The duration of the Rain Day Impact Allowance activity will be calculated from the Notice to Proceed until the Completion.

1.8.6.11. Level of detail shall correspond to complexity of work involved.

1.8.6.12. Indicate procurement activities, delivery, and installation of District furnished material and equipment.

1.8.6.13. Designate critical path or paths.

1.8.6.14. Subcontractor work at all levels shall be included in schedule.

1.8.6.15. As developed shall show sequence and interdependence of activities required for complete performance of Work.

1.8.6.16. Shall be logical and show a coordinated plan of Work.

1.8.6.17. Show order of activities and major points of interface, including specific dates of completion.

1.8.6.18. Duration of activities shall be coordinated with subcontractors and suppliers and shall be best estimate of time required.

1.8.6.19. Shall show description, duration and float for each activity.

1.8.7. **Activity.** An activity shall meet the following criteria:

1.8.7.1. Any portion or element of Work or action that is precisely described, readily identifiable, and is a function of a logical sequential process.

1.8.7.2. Descriptions shall be clear and concise. Beginning and end shall be readily verifiable. Starts and finishes shall be scheduled by logical restraints.

1.8.7.3. Responsibility shall be identified with a single performing entity.
1.8.7.4. Additional codes shall identify building, floor, and CSI classification.
1.8.7.5. Each activity shall have manpower-loading assigned.
1.8.7.6. Major construction equipment shall be assigned to each activity.
1.8.7.7. Activities labeled start, continue or completion are not allowed.

1.8.8. **Equipment and Materials.** For major equipment and materials show a sequence of activities including:
1.8.8.1. Preparation of shop drawings and sample submissions.
1.8.8.2. Review of shop drawings and samples.
1.8.8.3. Finish and color selection.
1.8.8.4. Fabrication and delivery.
1.8.8.5. Erection or installation.
1.8.8.6. Testing.

1.8.9. Include a minimum of thirty (30) days prior to Completion Date for punch lists and clean up.

1.9. SHORT INTERVAL SCHEDULE

1.9.1. The Three-Week Rolling Schedule shall be based on the most recent District Accepted Construction Schedule or Update. It shall include weekly updates to all construction, submittal, fabrication/procurement, and separate Work Contract activities. Designer/Builder shall ensure that it accurately reflects the current progress of the Work.
1.9.2. Shall be fully developed horizontal bar-chart-type schedule directly derived from Construction Schedule.
1.9.3. Prepare schedule on sheet of sufficient width to clearly show data.
1.9.4. Provide continuous heavy vertical line identifying first day of week.
1.9.5. Provide continuous subordinate vertical line identifying each day of week.
1.9.6. Identify activities by same activity number and description as Construction Schedule.
1.9.7. Show each activity in proper sequence.
1.9.8. Indicate graphically sequences necessary for related activities.
1.9.9. Indicate activities completed or in progress for previous two (2) week period.
1.9.10. Indicate activities scheduled for succeeding two (2) week period.
1.9.11. Further detail may be added if necessary to monitor schedule.

1.10. REQUESTED TIME ADJUSTMENT SCHEDULE

1.10.1. Updated Construction Schedule shall not show a Completion Date later than the Contract Time, subject to any time extensions processed as part of a Change Order.
1.10.2. If an extension of time is requested, a separate schedule entitled "Requested Time Adjustment Schedule" shall be submitted to District and Construction Manager.
1.10.3. Indicate requested adjustments in Contract Time which are due to changes or delays in completion of Work.
1.10.4. Extension request shall include forecast of Project Completion date and actual achievement of any dates listed in Contract Documents.
1.10.5. To the extent that any requests are pending at time of any Construction Schedule update, Time Adjustment Schedule shall also be updated.
1.10.6. Schedule shall be a time-scaled network analysis.
1.10.7. Accompany schedule with formal written time extension request and detailed impact analysis justifying extension.
1.10.8. Time impact analysis shall demonstrate time impact based upon date of delay, and status of construction at that time and event time computation of all affected activities. Event times shall be those as shown in latest Construction Schedule.
1.10.9. Activity delays shall not automatically constitute an extension of Contract Time.
1.10.10. Failure of subcontractors shall not be justification for an extension of time.
1.10.11. Float is not for the exclusive use or benefit of any single party. Float time shall be apportioned according to needs of project, as determined by the District.

1.10.12. Float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity durations, or imposed dates shall be apportioned according to benefit of Project.

1.10.13. Extensions will be granted only to extent that time adjustments to activities exceed total positive float of the critical path and extends Completion date.

1.10.14. District shall not have an obligation to consider any time extension request unless requirements of Contract Documents, and specifically, but not limited to these requirements are complied with.

1.10.15. District shall not be responsible or liable for any construction acceleration due to failure of District to grant time extensions under Contract Documents should requested adjustments in Contract Time not substantially comply with submission and justification requirements of Contract for time extension requests.

1.10.16. In the event a Requested Time Adjustment Schedule and Time Impact Analysis are not submitted within ten (10) days after commencement of a delay it is mutually agreed that delay does not require a Contract Time extension.

1.11. RECOVERY SCHEDULE

1.11.1. When activities are behind Construction Schedule a supplementary Recovery Schedule shall be submitted.

1.11.2. Designer/Builder shall prepare and submit to the District a Recovery Schedule at any time requested by the District, at no cost to the District .

1.11.3. Form and detail shall be sufficient to explain and display how activities will be rescheduled to regain compliance with Construction Schedule and to complete the Work by the Completion Date.

1.11.4. Maximum duration shall be one (1) month and shall coincide with payment period.

1.11.5. Ten (10) days prior to expiration of Recovery Schedule, Designer/Builder shall have to show verification to determine if activities have regained compliance with Construction Schedule. Based upon this verification the following will occur:

1.11.5.1. Supplemental Recovery Schedule will be submitted to address subsequent payment period

1.11.5.2. Construction Schedule will be resumed.

1.12. UPDATING SCHEDULES

1.12.1. Review and update schedule at least ten (10) days prior to submitting an Application for Payment.

1.12.2. Maintain schedule to record actual prosecution and progress.

1.12.3. Identify approved Change Orders which affect schedule as separate new activities.

1.12.4. Change Orders of less than $5,000.00 value or less than three (3) days duration need not be shown unless critical path is affected.

1.12.5. No other revisions shall be made to schedule unless authorized by District.

1.12.6. Designer/Builder shall provide meeting minutes to explain the Monthly Schedule Update including:

1.12.6.1. Activities or portions of activities completed during previous reporting period.

1.12.6.2. Actual start dates for activities currently in progress.

1.12.6.3. Deviations from critical path in days ahead or behind.

1.12.6.4. List of major construction equipment used and any equipment idle.

1.12.6.5. Number of personnel by craft engaged on Work during reporting period.

1.12.6.6. Progress analysis describing problem areas.

1.12.6.7. Current and anticipated delay factors and their impact.

1.12.6.8. Proposed corrective actions and logic revisions for Recovery Schedule.

1.12.6.9. Proposed modifications, additions, deletions and changes in logic of Construction Schedule.

1.12.6.10. In updating the Schedule, Designer/Builder shall not modify Activity ID numbers, schedule calculation rules/criteria, or the Activity Coding

Structure required.

1.12.7. Schedule update will form basis upon which progress payments will be made.

1.12.8. District will not be obligated to review or process Application for Payment until schedule and Progress Report have been submitted.

1.13. DISTRIBUTION

1.13.1. Following joint review and acceptance of updated schedules distribute copies to District, Construction Manager, and all other concerned parties.

1.13.2. Instruct recipients to promptly report in writing any problem anticipated by projections shown in schedule.

2. PRODUCTS

2.1. SCHEDULING SOFTWARE

Designer/Builder shall utilize a District-approved equivalent scheduling software such as MS Project to employ the Critical Path Method (CPM) in the development and maintenance of the Construction Schedule. The scheduling software shall be capable of being resource loaded with manpower, costs and materials. It shall also be capable of generating time-scaled logic diagrams, resource histograms and profiles, bar charts, layouts and reports with any and/or all activity detail.

2.2. ELECTRONIC DATA

Provide compact disk(s) that contain a back-up of the Proposed Baseline Schedule data on it. The electronic MS Project files shall be saved in a readable type format, showing logical ties and links.

END OF DOCUMENT

SUBMITTALS

1. GENERAL

1.1. SUBMITTAL PROCEDURES – USE A PRE-APPROVED PROGRAM

1.1.1. DESIGNER/BUILDER SHALL USE A DISTRICT-APPROVED PROGRAM/SOFTWARE FOR THE SUBMITTAL PROCESS

1.1.2. Designer/Builder shall transmit each submittal in conformance with requirements of this Document. For each submittal, Designer/Builder shall:

1.1.2.1. Sequentially number the transmittal forms. Resubmitted submittals must have the original number with an alphabetic suffix;

1.1.2.2. Identify Project and District's project number, Designer/Builder, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate;

1.1.2.3. Apply Designer/Builder's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Submittals without Designer/Builder's stamp and signature will be returned without review.

1.1.3. Coordinate preparation and processing of submittals with performance of Work. Transmit each submittal sufficiently in advance of performance of Work to avoid delay.

1.1.3.1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

1.1.3.2. Coordinate transmittal of different types of submittals for related parts of Work so processing will not be delayed because of the need to review submittals concurrently for coordination.

1.1.3.3. District reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

1.1.4. Comply with Contract Documents for list of submittals and time requirements for scheduled performance of Work.

1.1.5. No extension of Contract Time will be authorized because of failure to transmit submittals to the District sufficiently in advance of the Work to permit processing.

1.1.6. District shall review as diligently as possible and return all submittals in a timely fashion to not cause any delay to the Project Schedule, with an anticipated response time being no longer than seven (7) days.

1.1.7. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.

1.1.8. Provide space for review stamps.

1.1.9. Revise and resubmit submittals as required, identify all changes made since previous submittal.

1.1.10. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.1.11. Submittals not requested will not be recognized or processed. Submittals not requested will be returned without review.

1.2. SHOP DRAWINGS

1.2.1. Do not reproduce Contract Documents or copy standard information as the basis of shop drawings. Standard information prepared without specific reference to the Project is not a shop drawing.

1.2.2. Do not use or allow others to use Shop Drawings which have been submitted and have been rejected.

1.3. ELECTRONIC SUBMITTAL PROCESS

1.3.1. Submittal Procedure for Large Format shop drawings.

1.3.1.1. Designer/Builder shall provide six (6) paper copies of the large format Shop Drawings directly to the District and the Construction Manager (CM) and Designer/Builder will upload/post an electronic transmittal (with a detailed description of the submittal including the subject, specification number and number of drawings) on pre-approved program.

1.3.1.2. Designer/Builder shall verify that the Schedule of Submittals and all submittal log(s) on pre-approved program are accurate and up to date.

1.3.1.3. The District and Construction Manager will review and markup each Submittal and provide changes to Designer/Builder for Designer/Builder's incorporation into the Submittal.

1.3.1.4. This process will continue until the Designer/Builder has provided a Submittal that is acceptable to the District and the Construction Manager.

1.3.1.5. Once a Submittal is accepted, the District will provide a final accepted Submittal to the Designer/Builder and the Designer/Builder will closeout that one Submittal.

1.3.1.6. Designer/Builder shall send one (1) copy of the completed record submittal of the large format documents to a vendor for scanning and posting on pre-approved program.

1.3.2. Product Data, Calculations and Small Format Drawings

1.3.2.1. Designer/Builder shall upload/post one (1) electronic copy (from manufacturer's website or pre-scanned) of the product literature, data, calculations, and/or small format shop drawings on pre-approved program with a Transmittal (with a detailed description of the submittal) directly to the CM.

1.3.2.2. The District and Construction Manager will review and markup each Submittal and provide changes to Designer/Builder for Designer/Builder's incorporation into the Submittal.

1.3.2.3. This process will continue until the Designer/Builder has provided a Submittal that is acceptable to the District and the Construction Manager.

1.3.2.4. Once a Submittal is accepted, the District will provide a final accepted Submittal to the Designer/Builder and the Designer/Builder will closeout that one Submittal.

1.3.3. Sample Submittal Procedure – (Product / Assembly Samples)

1.3.3.1. Designer/Builder shall provide four (4) physical samples directly to the District and the CM and Designer/Builder will upload/post an electronic transmittal (with a detailed description of the submittal including the subject, specification number and number of drawings) on.

1.3.3.2. The District and Construction Manager will review and markup each Submittal and provide changes to Designer/Builder for Designer/Builder's incorporation into the Submittal.

1.3.3.3. This process will continue until the Designer/Builder has provided a Submittal that is acceptable to the District and the Construction Manager.

1.3.3.4. Once a Submittal is accepted, the District will provide a final accepted Submittal to the Designer/Builder and the Designer/Builder will closeout that one Submittal.

1.4. PRODUCT DATA

In addition to the above requirements, mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

1.5. SAMPLES

Designer/Builder shall provide photographs of other installations that are similar to the finished Project.

1.6. MANUFACTURER'S INSTRUCTION

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

1.6.2. Identify conflicts between manufacturers' instructions and Contract Documents.

1.7. MANUFACTURER'S CERTIFICATES

1.7.1. When specified in individual specification Sections, submit manufacturers' certificate to Construction Manager for review, in quantities specified for Product Data.

1.7.2. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.

1.7.3. Certificates may be recent or previous test results on material or Product, but must be acceptable to District.

1.8. MOCK-UP

Not Required for this Contract.

1.9. DEFERRED APPROVAL REQUIREMENTS

1.9.1. Installation of deferred approval items shall not be started until detailed plans, specifications, and engineering calculations have been accepted and signed by the Architect or Engineer in general responsible charge of design and signed by a California registered Architect or professional engineer who has been delegated responsibility covering the work shown on a particular plan or specification and approved by the Division of the State Architect (DSA). Deferred approval items for this Project are as indicated in the Contract Documents

1.9.2. Deferred approval drawings and specifications become part of the approved documents for the Project when they are submitted to and approved by DSA.

1.9.3. Submit material using electronic submittal process as defined above.

1.9.4. Identify and specify all supports, fasteners, spacing, penetrations, etc., for each of the deferred approval items, including calculations for each and all fasteners.

1.9.5. Submit documents to District for review prior to forwarding to the DSA.

1.9.6. Documents shall bear the stamp and signature of the Structural, Mechanical, or Electrical Engineer licensed in California who is responsible for that work.

1.9.7. District and its subconsultants will review the documents only for conformance with general design concept. The Designer/Builder will then forward the Submittal to DSA for approval.

1.9.8. Designer/Builder shall respond to review comments made by DSA and revise and resubmit submittal to DSA for final approval.

END OF DOCUMENT

REGULATORY REQUIREMENTS

1. GENERAL

1.1. DESCRIPTION

This section covers the general requirements for regulatory requirements pertaining to the Work and is supplementary to all other regulatory requirements mentioned or referenced elsewhere in the Contract Documents.

1.2. REQUIREMENTS OF REGULATORY AGENCIES

1.2.1. All statutes, ordinances, laws, rules, codes, regulations, standards, and the lawful orders of all public authorities having jurisdiction of the Work, are hereby incorporated into the Contract Documents as if repeated in full herein and are intended to be included in any reference to Code or Building Code, unless otherwise specified, including, without limitation, the references in the list below. Designer/Builder shall make available at the Site copies of all the listed documents applicable to the Work as the District and/or Construction Manager may request, including, without limitation, applicable portions of the California Code of Regulations (C.C.R.).

1.2.2. This Project shall be governed by applicable regulations, including, without limitation, the State of California's Administrative Regulations for the Division of the State Architect-Structural Safety (DSA/SS), Chapter 4, Part 1, Title 24, C.C.R., and the most current version on the date the Contract is executed and as it pertains to school construction including, without limitation:

1.2.2.1. Test and testing laboratory pursuant to Section 4-335 (District shall pay for the testing laboratory).

1.2.2.2. All special inspections pursuant to Section 4-333(d).

1.2.2.3. Designer/Builder shall submit verified reports pursuant to Section 4-336 & 4-343(c).

1.2.2.4. Administration

1.2.2.4.1. Duties of Architect and Engineers working for Designer/Builder shall be pursuant to Section 4-341.

1.2.2.4.2. Duties of Designer/Builder shall be pursuant Section 4-343.

1.2.2.4.3. Verified Reports shall be pursuant to Section 4-336.

1.2.2.5. Designer/Builder shall keep and make available a copy of Part 1 and 2 of the most current version of C.C.R., Title 24 at the Site during construction.

1.2.2.6. Designer/Builder shall notify the Division of State Architect (DSA) upon the start of construction pursuant to Section 4-331.

1.2.2.7. Addenda and Change Orders shall be pursuant to Section 4-338.

1.2.3. Items of deferred approval shall be clearly marked on the first sheet of the Designer/Builder's and/or Engineer's approved Drawings. All items later submitted for approval shall be pursuant to Title 24 requirements to the DSA.

1.2.3.1. Building Standards Administrative Code, C.C.R., Title 24, Part 1..

1.2.3.2. California Building Code (CBC), C.C.R., Title 24, Part 2.; (Uniform Building code volumes 1-3 and California Amendments).

1.2.3.3. California Electrical Code (CEC), C.C.R., Title 24, Part 3 ; (National Electrical Code and California Amendments).

1.2.3.4. California Mechanical Code (CMC), C.C.R., Title 24, Part 4 ; (Uniform Mechanical Code and California Amendments).

1.2.3.5. California Plumbing Code (CPC), C.C.R., Title 24, Part 5; (Uniform Plumbing Code and California Amendments).

1.2.3.6. California Fire Code (CFC), C.C.R., Title 24, Part 9; (Fire Plumbing Code and California Amendments).

1.2.3.7. California Referenced Standards Code, C.C.R., Title 24, Part 12.

1.2.3.8. State Fire Marshal Regulations, C.C.R., Title 19, Public Safety.

1.2.3.9. Partial List of Applicable NFPA Standards:

1.2.3.9.1. NFPA 13 - Automatic Sprinkler System.

1.2.3.9.2. NFPA 14 - Standpipes Systems.
1.2.3.9.3. NFPA 17A - Wet Chemical System
1.2.3.9.4. NFPA 24 - Private Fire Mains.
1.2.3.9.5. (California Amended) NFPA 72 - National Fire Alarm Codes.
1.2.3.9.6. NFPA 253 - Critical Radiant Flux of Floor Covering System.
1.2.3.9.7. FPA 2001 - Clean Agent Fire Extinguishing Systems.
1.2.3.10. California Division of the State Architect Interpretation of Regulations Manual.

END OF DOCUMENT

TESTING LABORATORY SERVICES

1. GENERAL

1.1. REFERENCES

1.1.1. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

1.1.2. ASTM E329 - Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.

1.1.3. CBC - California Building Code.

1.1.4. UBC - Uniform Building Code.

1.1.5. Title 24, Parts 1 and 2, of the California Code of Regulations. Designer/Builder shall keep a copy of these available at the job Site for ready reference during construction

1.1.6. DSA - Division of the State Architect, Office of Regulation Services, Structural Safety Section. DSA shall be notified at or before the start of construction.

1.2. OBSERVATION AND SUPERVISION

1.2.1. The District and Construction Manager or their appointed representatives will review the Work and the Designer/Builder shall provide facilities and access to the Work at all times as required to facilitate this review. Administration by the Designer/Builder and any consulting Structural Engineer will be in accordance with applicable regulations, including, without limitation, 24 C.C.R. §4-341.

1.2.2. One or more Project Inspector(s) approved by DSA and employed by or in contract with the District(“Project Inspector”), will observe the Work in accordance with 24 C.C.R. §§4-333(b) and 4-342:

1.2.3. Project Inspector shall have access to the Work wherever it is in preparation or progress for ascertaining that the Work is in accordance with the Contract Documents and all applicable code sections. Designer/Builder shall provide facilities and access as required and shall provide assistance for sampling or measuring materials.

1.2.3.1. Project Inspector will notify District and Construction Manager and inform Designer/Builder of any observed failure of Work or material to conform to Contract Documents.

1.2.3.2. The Project Inspector shall observe and monitor all testing and inspection activities required.

1.2.4. Designer/Builder shall conform with all applicable laws as indicated in the Contract Documents, including, without limitation, to 24 C.C.R. §4-343. Designer/Builder shall supervise and direct the Work and maintain a competent superintendent on the Project who is authorized to act in all matters pertaining to the Work. The Designer/Builder shall inspect all materials, as they arrive, for compliance with the Contract Documents. Designer/Builder shall reject defective Work or materials immediately upon delivery or failure of the Work or material to comply with the Contract Documents. The Designer/Builder shall submit verified reports as indicated in the Contract Documents, including, without limitation, the Specifications and as required by 24 C.C.R. §4-336.

1.3. TESTING LABORATORIES AND AGENCIES

1.3.1. Testing agencies and tests shall be in conformance with the Contract Documents and the requirements of 24 C.C.R. §4-335.

1.3.2. Testing and inspection in connection with earthwork shall be under the direction of the District's consulting soils engineer ("Soils Engineer”).

1.3.3. Testing and inspection of construction materials and workmanship shall be performed by a qualified laboratory ("Testing Laboratory" or “Laboratory”). The Testing Laboratory shall be under direction of an engineer registered in the State of California, shall conform to requirements of ASTM E329, and shall be employed by or in contract with the District.

1.4. TESTS AND INSPECTIONS

1.4.1. Designer/Builder shall be responsible for notifying District and Project Inspector of all

required tests and inspections. Designer/Builder shall notify District and Project Inspector forty-eight (48) hours in advance of performing any Work requiring testing or inspection.

1.4.2. Designer/Builder shall provide access to Work to be tested and furnish incidental labor, equipment, and facilities to facilitate all inspections and tests.

1.4.3. District will pay for first inspections and tests required by the Title 24 and other inspections or tests that District and/or Construction Manager may direct to have made, including, but not limited to, the following principal items:

1.4.3.1. Tests and observations for earthwork and pavings.

1.4.3.2. Tests for concrete mix designs, including tests of trial batches.

1.4.3.3. Tests and inspections for structural steel work.

1.4.3.4. Field tests for framing lumber moisture content.

1.4.3.5. Additional tests directed by District that establish that materials and installation comply with the Contract Documents.

1.4.3.6. Test and observation of welding and expansion anchors.

1.4.3.7. Factory observation of components and assembly of modular prefabrication structures and buildings.

1.4.4. District may at its discretion, pay and back charge Designer/Builder for:

1.4.4.1. Retests or reinspections, if required, and tests or inspection required due to Designer/Builder error or lack of required identifications of material.

1.4.4.2. Uncovering of work in accordance with Contract Documents.

1.4.4.3. Testing done on weekends, holidays, and overtime will be chargeable to Designer/Builder for the overtime portion.

1.4.4.4. Testing done off site.

1.4.5. Testing and inspection reports and certifications:

1.4.5.1. If initially received by Designer/Builder, Designer/Builder shall provide to each of the following a copy of the agency or laboratory report of each test or inspection or certification: District; Construction Manager, if any; Consulting Engineer, if any; Other Engineers on the Project, as appropriate; and; Project Inspector.

1.4.5.2. When the test or inspection is one required by the Title 24, a copy of the report shall also be provided to the DSA.

1.5. SELECTION AND PAYMENT

1.5.1. District will hire and pay for services of an independent Testing Laboratory to perform specified inspection and testing as specified by District's Testing Laboratory.

1.5.2. District's hiring of Testing Laboratory shall in no way relieve Designer/Builder of its obligation to perform work in accordance with requirements of Contract Documents.

1.6. DISTRICT'S TESTING LABORATORY RESPONSIBILITIES

1.6.1. Test samples of mixes submitted by Inspector.

1.6.2. Perform specified inspection, sampling, and testing of Products in accordance with specified standards.

1.6.3. Notify Designer/Builder of observed irregularities or non-conformance of Work or Products.

1.6.4. Attend preconstruction conferences and progress meetings when requested by Designer/Builder.

1.7. LABORATORY REPORTS

1.7.1. After each inspection and test, District shall then submit one copy of laboratory report to Designer/Builder Reports of test results of materials and inspections found not to be in compliance with the requirements of the Contract Documents shall be forwarded immediately.

1.7.2. Each Testing Laboratory shall submit a verified report covering all of the tests which were required to be made by that agency during the progress of the Project. Such report shall be furnished each time that Work is suspended, covering the tests up to that time

and at the Completion of the Project, covering all tests.

1.8. LIMITS ON TESTING LABORATORY AUTHORITY

1.8.1. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

1.8.2. Laboratory may not approve or accept any portion of the Work.

1.8.3. Laboratory may not assume any duties of Designer/Builder

1.8.4. Laboratory has no authority to stop the Work.

1.9. DESIGNER/BUILDER RESPONSIBILITIES

1.9.1. Submit proposed items for testing as required herein and/or as further required in the Contract Documents for review in accordance with applicable specifications.

1.9.2. Cooperate with Laboratory personnel, and provide access to the Work and to manufacturer's facilities.

1.9.3. Notify Construction Manager, District, and Testing Laboratory 48 hours prior to expected time for operations requiring inspection and testing services.

1.9.4. When tests or inspections cannot be performed after such notice, reimburse District for Laboratory personnel and travel expenses incurred due to the Designer/Builder's negligence.

1.9.5. Designer/Builder shall notify District a sufficient time in advance of the manufacture of material to be supplied by Designer/Builder pursuant to the Contract Documents, which must by terms of the Contract be tested, in order that the District may arrange for the testing of same at the source of supply.

1.9.5.1. Any material shipped by the Designer/Builder from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice that such testing and inspection will not be required shall not be incorporated in the Work.

1.9.6. Contract and pay for services of District's Testing Laboratory to perform additional inspections, sampling and testing required when initial tests indicate Designer/Builder's work and/or materials does not comply with Contract Documents.

1.10. SCHEDULE OF INSPECTIONS AND TESTS PER DSA APPROVED T&I SHEET

To the extent the following scopes of work are part of the Project, the Testing Laboratory shall perform tests and inspections for the following in conformance with the (CBC) California Building Code (International Building Code with State of California Amendments), California Code of Regulations, Title 24, Part 2:

- Structural Tests and Special Inspections (Chapter 17A)
  - Special Inspections (§ 1704A)
- Soils and Foundations (Chapter 18A)
  - Geotechnical Investigations (§ 1803A)
- Concrete (Chapter 19A)
  - Specifications for Tests and Materials (§)
  - Concrete Quality, Mixing and Placing (§)
  - Concrete Reinforcement and Anchor Testing Inspection (§ 1916A)
- Masonry (Chapter 21A)
  - Masonry Construction Materials (§ 2103A)
  - Masonry Quality (§ 2103A)
  - Quality Assurance (§ 2105A)
- Structural Steel (Chapter 22A)
  - Structural Steel (§ 2205A)
  - Identification & Protection of Steel for Structural Purposes (§ 2203A)
  - Inspection and Tests of Structural Steel (§ 2212A)
- Wood (Chapter 23)
  - Minimum Standards and Quality (§ 2303)
  - Wood Construction (§ 1704A.6)

- Exterior Walls (Chapter 14)
    - Masonry Units (§ 1404.4)
    - Masonry Construction Materials (§ 2103A)
    - Exterior Insulation and Finish Systems (§ 1408)
- Roof Assemblies and Roofing Structures (Chapter 15)
    - Materials (§ 1506)
- Aluminum (Chapter 20)
    - Materials (§ 2002.1)
    - Inspection (§ 2003.1)

1.10.1. **Plumbing (where applicable)**

Testing as required including, but not limited to: Sterilization, soil waste and vent, water piping, source of water, gas piping, downspouts and storm drains.

1.10.2. **Automatic Fire Sprinklers (where applicable)**

Testing as required including, but not limited to: hydrostatic pressure.

1.10.3. **Heating, Ventilating and Air Conditioning (where applicable)**

Testing as required including, but not limited to: Ductwork tests, cooling tower tests, boiler tests, controls testing, piping tests, water and air systems, and test and balance of heating and air conditioning systems.

1.10.4. **Electrical (where applicable)**

Testing as required including, but not limited to: Equipment testing, all electrical system operations, grounding system and checking insulation after cable is pulled.

1.11. **PROJECT INSPECTOR'S ACCESS TO SITE**

1.11.1. A Project Inspector employed by the District in accordance with the requirement of State of California Code of Regulations, Title 24, Part 1 will be assigned to the Work. Project Inspector's duties are specifically defined in 24. C.C.R. §4-342, and as indicated in the Contract.

1.11.2. District and Construction Manager shall at all times have access for the purpose of inspection to all parts of the Work and to the shops wherein the Work is in preparation, and Designer/Builder shall at all times maintain proper facilities and provide safe access for such inspection.

1.11.3. The Work in all stages of progress shall be subject to the personal continuous observation of the Inspector. Inspector shall have free access to any or all parts of the Work at any time. Designer/Builder shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep Inspector fully informed respecting the progress and manner of the Work and the character of the materials. Inspection of the Work shall not relieve the Designer/Builder from any obligation set forth in the Contract Documents.

1.11.4. The Inspector is not authorized to change, revoke, alter, enlarge or decrease in any way any requirement of the Contract Documents, drawings, specifications or subsequent change orders.

1.11.5. Whenever there is insufficient evidence of compliance with any of the provisions of Title 24 or evidence that any material or construction does not conform to the requirements of Title 24, the Division of the State Architect may require tests as proof of compliance. Test methods shall be as specified herein or by other recognized and accepted test methods determined by the Division of the State Architect. All tests shall be performed by a testing laboratory accepted by the Division of the State Architect.

END OF DOCUMENT

TEMPORARY FACILITIES AND CONTROLS

1. GENERAL

1.1. **TEMPORARY UTILITIES**

1.1.1. Electric Power and Lighting

1.1.1.1. Designer/Builder will furnish and pay for power during the course of the work to the extent power is not in the building(s) or on the Site. Designer/Builder shall be responsible for providing temporary facilities required on the Site to point of intended use.

1.1.1.2. Designer/Builder shall furnish, wire for, install, and maintain temporary electrical lights wherever it is necessary to provide illumination for the proper performance and/or observation of the Work: a minimum of 20 foot-candles for rough work and 50 foot-candles for finish work.

1.1.1.3. Designer/Builder shall be responsible for maintaining existing lighting levels in the Project vicinity should temporary outages or service interruptions occur.

1.1.2. Heat and Ventilation

1.1.2.1. Designer/Builder shall provide temporary heat to maintain environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and curing of materials, and to protect materials and finishes from damage due to improper temperature and humidity conditions. Portable heaters shall be standard units complete with controls.

1.1.2.2. Designer/Builder shall provide forced ventilation and dehumidification, as required, of enclosed areas for proper installation and curing of materials, to disperse humidity, and to prevent accumulations of dust, fumes, vapors, and gases.

1.1.2.3. Designer/Builder shall pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the Work.

1.1.3. Water

1.1.3.1. District will furnish and pay for water during the course of the work.

1.1.3.2. Designer/Builder shall make potable water available for human consumption.

1.1.4. Sanitary Facilities

1.1.4.1. Designer/Builder shall provide sanitary temporary 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 facilities shall be maintained in a sanitary condition at all times and shall be left at the Site until removal is directed by the Project Inspector or Designer/Builder completes all Work.

1.1.4.2. Use of toilet facilities in the Work shall not be permitted except by consent of the Project Inspector and District.

1.1.5. Telephone Service [Not applicable]

1.1.6. Fire Protection:

1.1.6.1. Designer/Builder shall provide and maintain fire extinguishers and other equipment for fire protection. Such equipment shall be designated for use for fire protection only and shall comply with all requirements of the California Fire, State Fire Marshall and/or its designee.

1.1.6.2. Where on-site welding and burning of steel is unavoidable, Designer/Builder shall provide protection for adjacent surfaces.

1.1.7. Trash Removal:

Designer/Builder shall provide trash removal on a timely basis from all Site Offices and the Site.

1.2. CONSTRUCTION AIDS

1.2.1. No District tools or equipment shall be used by Designer/Builder for the performance of the Work.

1.3. BARRIERS AND ENCLOSURES

1.3.1. Designer/Builder shall obtain District's written permission for locations and types of temporary barriers and enclosures, including fire-rated materials proposed for use, prior to their installation.

1.3.2. Designer/Builder shall provide a six (6) foot high, chain link perimeter fence with posts and fabric screen as a temporary barrier around construction area. Designer/Builder shall provide and maintain temporary enclosures to prevent public entry and to protect persons using other buildings and portions of the Site and/or Premises. Designer/Builder shall remove temporary fence, barriers and enclosure upon Completion of the Work.

1.3.3. Designer/Builder shall provide site access to existing facilities for persons using other buildings and portions of the Site, the public, and for deliveries and other services and activities.

1.4. SECURITY

Designer/Builder shall secure all construction equipment, machinery and vehicles, park and store only within fenced area, and render inoperable during non-work hours. Designer/Builder is responsible for insuring that no construction materials, tools, equipment, machinery or vehicles can be used for unauthorized entry or other damage or interference to activities and security of existing facilities adjacent to and in the vicinity of the Project Site.

1.5. TEMPORARY CONTROLS

1.5.1. Noise Control

1.5.1.1. Designer/Builder acknowledges that adjacent facilities may remain in operation during all or a portion of the Work, and it shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents.

1.5.1.2. Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to District a minimum of forty-eight (48) hours in advance of their performance.

1.5.2. Noise and Vibration

1.5.2.1. Equipment and impact tools shall have intake and exhaust mufflers.

1.5.2.2. Designer/Builder shall cooperate with District to minimize and/or cease the use of noisy and vibratory equipment if that equipment becomes objectionable by its longevity.

1.5.3. Dust and Dirt

1.5.3.1. Designer/Builder shall conduct demolition and construction operations to minimize the generation of dust and dirt, and prevent dust and dirt from interfering with the progress of the Work and from accumulating in the Work and adjacent areas including, without limitation, occupied facilities.

1.5.3.2. Designer/Builder shall periodically water exterior demolition and construction areas to minimize the generation of dust and dirt.

1.5.3.3. Designer/Builder shall ensure that all hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.

1.5.3.4. Designer/Builder shall prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drain lines.

1.5.4. Water

Designer/Builder shall not permit surface and subsurface water, and other liquids, to accumulate in or about the vicinity of the Premises. Should accumulation develop, Designer/Builder shall control the water or other liquid, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

1.5.5. Pollution

1.5.5.1. No burning of refuse, debris, or other materials shall be permitted on or in the vicinity of the Premises.

1.5.5.2. Designer/Builder shall comply with applicable regulatory requirements and anti-pollution ordinances during the conduct of the Work including, without limitation, demolition, construction, and disposal operations.

1.5.6. Lighting

If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

1.6. PUBLICITY RELEASES

Designer/Builder shall not release any information, story, photograph, plan, or drawing relating information about the Project to anyone, including press and other public communications medium, including, without limitation, on website(s).

END OF DOCUMENT

SITE STANDARDS

1. GENERAL

1.1. REQUIREMENTS OF THE DISTRICT

1.1.1. Drug-Free Schools and Safety Requirements:

1.1.1.1. No drugs, alcohol, smoking or the use of tobacco products are allowed at any time in any buildings, Designer/Builder-owned vehicles or vehicles owned by others while on District property. No students, staff, visitors, or contractors are to use drugs on these sites.

1.1.1.2. Designer/Builder shall post: "Non-Smoking Area" in a highly visible location on Site. Designer/Builder may designate a smoking area outside of District property within the public right-of-way, provided that this area remains quiet and unobtrusive to adjacent neighbors. This smoking area must be kept clean at all times.

1.1.1.3. Designer/Builder shall ensure that no alcohol, firearms, weapons, or controlled substances enter or are used at the Site. Designer/Builder shall immediately remove from the Site and terminate the employment of any employee(s) found in violation of this provision.

1.1.2. **Language**: Unacceptable and/or loud language will not be tolerated, "Cat calls" or other derogatory language toward students or public will not be allowed.

1.1.3. Disturbing the Peace (Noise and Lighting):

1.1.3.1. Designer/Builder shall observe the noise ordinance of the Site at all times including, without limitation, all applicable local, city, and/or state laws, ordinances, and/or regulations regarding noise and allowable noise levels.

1.1.3.2. District reserves the right to prohibit the use of radios at the Site, except for handheld communication radios.

1.1.3.3. If portable lights are used after dark, the lights must be located so as not to direct light into neighboring properties.

1.1.4. **Traffic**:

1.1.4.1. Driving on the Premises shall be limited to periods when students and public are not present. If driving or deliveries must be made during the school hours, a ground guide shall lead the vehicle across the area of travel. In no case shall driving take place across playgrounds or other pedestrian paths during recess, lunch, and/or class period changes. The speed limit on-the Premises shall be five (5) miles per hour (maximum) or less if conditions require.

1.1.4.2. All paths of travel for deliveries, including without limitation, material, equipment, and supply deliveries, shall be reviewed and approved by District in advance.

1.1.4.3. District shall designate a construction entry to the Site. If Designer/Builder requests, District determines it is required, and to the extent possible, District shall designate a staging area so as not to interfere with the normal functioning of school facilities. Location of gates and fencing shall be approved in advance with District and at Designer/Builder's expense.

1.1.4.4. Parking areas shall be reviewed and approved by District in advance. No parking is to occur under the drip line of trees or in areas that could otherwise be damaged.

1.1.4.5. All of the above shall be observed and complied with by the Designer/Builder and all workers on the Site. Failure to follow these directives could result in individual(s) being suspended or removed from the work force at the discretion of the District. The same rules and regulations shall apply equally to delivery personnel, inspectors, consultants, and other visitors to the Site.

END OF DOCUMENT

TEMPORARY TREE AND PLANT PROTECTION

WHERE SUBSTANTIAL TREE PROTECTION WILL BE REQUIRED ON THE SITE, OBTAIN AN ARBORIST TO REVIEW THIS DOCUMENT PRIOR TO CONSTRUCTION.

1. GENERAL

1.1. SUMMARY

This Document includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

1.2. DEFINITIONS

Tree Protection Zone: Area surrounding individual trees or groups of trees to remain during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.3. SUBMITTALS

1.3.1. Product Data: For each type of product indicated.

1.3.2. Tree Pruning Schedule: Written schedule from arborist detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

1.3.3. Qualification Data: For tree service firm and arborist.

1.3.4. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.

1.3.5. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

1.4. QUALITY ASSURANCE

1.4.1. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of tree protection and trimming.

1.4.2. Arborist Qualifications: An arborist certified by ISA (International Society of Arboriculture) or licensed in the jurisdiction where Project is located.

1.4.3. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."

1.4.3.1. Before tree protection and trimming operations begin, meet with District to review tree protection and trimming procedures and responsibilities.

2. PRODUCTS

2.1. MATERIALS

2.1.1. Drainage Fill: Selected crushed stone, or crushed or uncrushed gravel, washed, ASTM D 448, Size 24, with 90 to 100 percent passing a 2-1/2-inch (63-mm) sieve and not more than 10 percent passing a 3/4-inch (19-mm) sieve.

2.1.2. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other nonsoil materials.

2.1.2.1. Obtain topsoil only from well-drained sites where topsoil is 4 inches (100 mm) deep or more; do not obtain from bogs or marshes.

2.1.3. Filter Fabric: Manufacturer's standard, nonwoven, pervious, geotextile fabric of polypropylene, nylon, or polyester fibers.

2.1.4. Chain-Link Fence: Metallic-coated steel chain-link fence fabric of 0.120-inch- (3-mm-) diameter wire; a minimum of 48 inches (1200 mm) high; with 1.9-inch- (48-mm-) diameter line posts; 2-3/8-inch- (60-mm-) diameter terminal and corner posts; 1-5/8-inch- (41-mm-) diameter top rail; and 0.177-inch- (4.5-mm-) diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.

2.1.5. Select mulch as recommended by arborist or landscape architect.
2.1.6. Organic Mulch: Use shredded hardwood, ground or shredded bark, or wood and bark chips, all free of deleterious materials.

3. EXECUTION

3.1. PREPARATION

3.1.1. Temporary Fencing: Install temporary fencing around tree protection zones to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
3.1.2. Install chain-link fence according to ASTM F 567 and manufacturer's written instructions.
3.1.3. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
3.1.4. Mulch areas inside tree protection zones and other areas indicated.
3.1.4.1. Select mulch as recommended by arborist or landscape architect.
3.1.4.2. Apply 2-inch (50-mm) to 3-inch (75-mm) average thickness of organic mulch. Do not place mulch within 6 inches (150 mm)] of tree trunks.
3.1.5. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.
3.1.6. Maintain tree protection zones free of weeds and trash.
3.1.7. Do not allow fires within tree protection zones.

3.2. EXCAVATION

3.2.1. Install shoring or other protective support systems to minimize sloping or benching of excavations where construction or utility excavation is near trees to be protected.
3.2.2. Do not excavate within tree protection zones, unless otherwise indicated.
3.2.3. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks and comb soil to expose roots.
3.2.3.1. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
3.2.4. Where utility trenches are required within tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
3.2.4.1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.3. REGRADING

3.3.1. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones.
3.3.2. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist, unless otherwise indicated.
3.3.2.1. Root Pruning: Prune tree roots exposed during grade lowering. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots with sharp pruning instruments; do not break or chop.
3.3.3. Minor Fill: Where existing grade is 6 inches (150 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.
3.3.4. Moderate Fill: Where existing grade is more than 6 inches (150 mm) but less than 12 inches (300 mm) below elevation of finish grade, place drainage fill, filter fabric, and

topsoil on existing grade as follows:

3.3.4.1. Carefully place drainage fill against tree trunk approximately 2 inches (50 mm) above elevation of finish grade and extend not less than 18 inches (450 mm) from tree trunk on all sides. For balance of area within drip-line perimeter, place drainage fill up to 6 inches (150 mm) below elevation of grade.

3.3.4.2. Place filter fabric with edges overlapping 6 inches (150 mm) minimum.

3.3.4.3. Place fill layer of topsoil to finish grade. Do not compact drainage fill or topsoil. Hand grade to required finish elevations.

3.4. TREE PRUNING

3.4.1. Prune trees to remain that are affected by temporary and permanent construction.

3.4.2. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.

3.4.3. Pruning Standards: Prune trees according to ANSI A300 (Part 1), as recommended by arborist report.

3.4.4. Adjust pruning requirements per arborist's recommendations.

3.4.5. Cut branches with sharp pruning instruments; do not break or chop.

3.4.6. Modify below to specific project requirements.

3.4.7. Chip removed tree branches and dispose of or spread over areas identified by District.

3.5. TREE REPAIR AND REPLACEMENT

3.5.1. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

3.5.2. Remove and replace trees indicated to remain that die or are damaged during construction operations or that are incapable of restoring to normal growth pattern.

3.5.2.1. Provide new trees of 6-inch (150-mm) caliper size when damaged trees more than 6 inches (150 mm) in caliper size, measured 12 inches (300 mm) above grade, are required to be replaced.

3.5.2.2. **Plant and maintain new trees as specified in Contract Documents.**

3.5.3. Where recommended by arborist report, aerate surface soil, compacted during construction, 10 feet (3 m) beyond drip line and no closer than 36 inches (900 mm) to tree trunk. Drill 2-inch (50-mm) diameter holes a minimum of 12 inches (300 mm) deep at 24 inches (600 mm) o.c. Backfill holes with an equal mix of augered soil and sand.

3.6. DISPOSAL OF WASTE MATERIALS

3.6.1. Burning is not permitted.

3.6.2. Disposal: Remove excess excavated material and displaced trees from Site.

END OF DOCUMENT

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – CONSTRUCTION

1. Seller shall implement erosion control and storm water best management practices (BMPs) on the Project site to avoid or minimize any potential impacts associated with storm water runoff and sedimentation.

2. The Seller and its civil engineer each determined that the construction of this Project is not anticipated to approach or exceed the one-acre disturbance threshold that would necessitate enrollment under the CGP. However, if prior to construction the project design is modified and will result in one or more acres of disturbance, the Seller shall comply with the requirements italicized below in this "SWPPP – CONSTRUCTION" Section to obtain permit coverage from the State Water Board.

2.1. ***GENERAL****. The Clean Water Act and Porter Cologne Water Quality Act prohibit the discharge of any water containing pollutants from certain construction sites unless a National Pollutant Discharge Elimination System permit is first obtained and followed. The National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction Storm Water Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the California State Water Resources Control Board (State Water Board) authorizes the discharge of storm water and certain non-storm water from construction sites if certain conditions and measures are taken. The District has determined that the construction of this Project requires enrollment in the Construction Storm Water Permit.*

2.2. ***SUBMITTAL****. All submittals shall be made in a form conducive for the District to electronically upload the approved submittals to the Storm water Multi-Application Reporting and Tracking System (SMARTS).*

2.2.1. RISK ASSESSMENT

2.2.1.1. Concurrent with the Schedule of Submittals as indicated in the Contract, Designer/Builder shall prepare and submit a proposed "Risk Assessment" as set forth in the Construction Storm Water Permit.

2.2.1.2. The District's Qualified SWPPP Designer/Builder ("QSD") will review the Designer/Builder's proposed Risk Assessment for compliance with the Construction Storm Water Permit. If changes to the proposed Risk Assessment are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Designer/Builder

2.2.1.3. Designer/Builder shall make the changes specified by the District's QSD and shall submit the revised Risk Assessment to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the Risk Assessment and provide the Contract with a copy within seven (7) days of receipt of the revised Risk Assessment.

2.2.2. SITE MAPS

2.2.2.1. Concurrent with the Schedule of Submittals as indicated in the Contract, Designer/Builder shall prepare and submit proposed "Site Maps" as described in Attachment B of the Construction Storm Water Permit.

2.2.2.2. The District's QSD will review the Designer/Builder's proposed Site Maps for compliance with the Construction Storm Water Permit. If changes to the proposed Site Maps are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Designer/Builder

2.2.2.3. Designer/Builder shall make the changes specified by the District's QSD and shall submit the revised Site Maps to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the Site Maps and provide the Contract with a copy within seven (7) days of receipt of the revised SWPPP.

2.2.3. SWPPP

2.2.3.1. Concurrent with the Schedule of Submittals as indicated in the Contract, Designer/Builder shall prepare and submit to the District a proposed SWPPP for the

Work.

2.2.3.2. The District's Qualified SWPPP Designer/Builder ("QSD") will review the Designer/Builder's proposed SWPPP for compliance with the Construction Storm Water Permit. If changes to the proposed SWPPP are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Designer/Builder

2.2.3.3. Designer/Builder shall make the changes specified by the District's QSD and shall submit the revised SWPPP to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the SWPPP and provide the Contract with a copy within seven (7) days of receipt of the revised SWPPP.

2.2.4. RAINAIN EVENT ACTION PLAN (REAP)

2.2.4.1. If Designer/Builder determines that Site is a Risk Level 1, concurrent with the Schedule of Submittals as indicated in the Contract, Designer/Builder shall prepare and submit to the District a proposed REAP for the Work.

2.2.4.2. The District's QSD will review the Designer/Builder's proposed REAP for compliance with the Construction Storm Water Permit. If changes to the proposed REAP are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Designer/Builder

2.2.4.3. Designer/Builder shall make the changes specified by the District's QSD and shall submit the revised REAP to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the REAP and provide the Contract with a copy within seven (7) days of receipt of the revised REAP.

2.2.5. ACTIVE TREATMENT SYSTEM (ATS)

2.2.5.1. If Designer/Builder determines that Site requires an ATS under the Construction Storm Water Permit, concurrent with the Schedule of Submittals as indicated in the Contract, Designer/Builder shall prepare and submit to the District a proposed ATS for the Work.

2.2.5.2. The District's QSD will review the Designer/Builder's proposed ATS for compliance with the Construction Storm Water Permit. If changes to the proposed ATS are required to comply with the Construction Storm Water Permit, the District QSD will identify such changes to the Designer/Builder

2.2.5.3. Designer/Builder shall make the changes specified by the District's QSD and shall submit the revised ATS to the District within seven (7) days of receipt of the changes identified by the District's QSD. If the changes had been acceptably made, the District's QSD will approve the ATS and provide the Contract with a copy within seven (7) days of receipt of the revised ATS.

*2.2.6. **RECORDS**. All electronic and hardcopy records required by the Construction Storm Water Permit shall be submitted to the District within seven (7) days of Completion of the Project.*

*2.3. **PERMIT REGISTRATION DOCUMENTS**. Prior to any activities on Site that disturb the Site's surface, the Permit Registration Documents (PRDs) required by the Construction Storm Water Permit must be filed with the Regional Water Quality Control Board. The District shall file the PRDs with the Regional Water Quality Control Board to activate coverage under the Construction Storm Water Permit.*

2.4. IMPLEMENTATION REQUIREMENTS

2.4.1. Designer/Builder shall not conduct any activities that may affect the Site's construction runoff water quality until the District provides Designer/Builder with the Waste Discharger Identification Number (WDID) assigned to this Project by the State Water Board.

2.4.2. Designer/Builder shall keep a copy of the approved SWPPP at the job site. The SWPPP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the District for response.

2.4.3. Designer/Builder shall designate in writing to the District a Qualified SWPPP Practitioner (QSP) who shall be responsible for implementing the SWPPP, REAP (if applicable), ATS (if

applicable), conducting non-storm water and storm water visual observations, and for ensuring that all best management practices (BMPs) required by the SWPPP and General Permit are properly implemented and maintained.

2.4.4. All measures required by the SWPPP shall be implemented concurrent with the commencement of construction. Pollution practices and devices shall be followed or installed as early in the construction schedule as possible with frequent upgrading of devices as construction progresses.

2.4.5. Designer/Builder shall ensure that all measures are properly maintained and repaired to protect the water quality of discharges.

2.5. ***INSPECTION, SAMPLING, ANALYSIS, AND RECORD KEEPING REQUIREMENTS****. The Designer/Builder's QSP shall conduct all required visual observations, sampling, analysis, reporting, and record keeping required by the SWPPP and the Construction Storm Water Permit.*

2.6. ***REPORTING REQUIREMENTS****. Designer/Builder shall prepare and provide all the reports, which include, but are not limited to the Annual Report and any NEL Violation Reports or NAL Exceedance Reports, all of which are required by the SWPPP and the Construction Storm Water Permit.*

2.7. ***ANNUAL REPORT****. By August 1 of each year (defined as July 1 to June 30) that had at least one continuous three (3) month period coverage under the General Permit, Designer/Builder shall complete and submit to the District an Annual Report, as required by the General Permit. If the Project is complete prior to August 1, Designer/Builder shall submit the report prior to acceptance of the Project.*

2.8. COMPLETION OF WORK

2.8.1. Clean-up shall be performed as each portion of the work progresses. All refuse, excess material, and possible pollutants shall be disposed of in a legal manner off-site and all temporary and permanent SWPPP devices shall be in place and maintained in good condition.

2.8.2. At Completion of Work, Designer/Builder shall inspect installed SWPPP devices, and present the currently implemented SWPPP with all backup records to the District.

2.9. ***NOTICE OF TERMINATION (NOT)****. A Notice of Termination (NOT) must be submitted by the Designer/Builder to the District for electronic submittal by the Legally Responsible Person via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the Project site that demonstrate final stabilization has been achieved. The NOT shall be submitted to the District on or before the Designer/Builder submits its final application for payment. If the Regional Water Board rejects the NOT for any reason, the Designer/Builder shall revise the NOT as many times as necessary to get the Regional Water Board's approval. The Regional Water Board will consider a construction site complete when the conditions of the General Permit, Section II.D have been met.*

2.10. QUALITY ASSURANCE

2.10.1. Before performing any of the obligations indicated herein, the Designer/Builder's QSP shall meet the training and certification requirements in the Construction Storm Water Permit.

2.10.2. Designer/Builder shall perform the Work in strict compliance with the approved SWPPP, REAP, ATS, and the Construction Storm Water Permit.

2.10.3. Designer/Builder shall conduct at least a one-hour training session on the requirements of the SWPPP for each employee before an employee conducts any construction on the Site. Designer/Builder shall maintain documentation of this employee training at the site for review by the District or any regulatory agency.

2.11. PERFORMANCE REQUIREMENTS

2.11.1. The Storm Water Pollution Prevention Plan is a minimum requirement. Revisions and modifications to the SWPPP are acceptable only if they maintain levels of protection equal to or greater than originally specified.

2.11.2. Read and be thoroughly familiar with all of the requirements of the SWPPP.

2.11.3. Inspect and monitor all work and storage areas for compliance with the SWPPP prior to any anticipated rain.

2.11.4. Complete any and all corrective measures as may be directed by the regulatory agency.

2.11.5. ***Penalties***: *Designer/Builder shall pay any fees and any penalties that may be imposed by the regulatory agency for non-compliance with SWPPP during the course of Work.*

2.11.6. ***Costs***: *Designer/Builder to pay all costs associated with the implementation of the requirements of the SWPPP in order to maintain compliance with the Permit. This includes installation of all Housekeeping BMPs, General Site and Material Management BMPs, Inspection requirements, maintenance requirements, and all other requirements specified in the SWPPP.*

2.12. ***MATERIALS***. *All temporary and permanent storm water pollution prevention facilities, equipment, and materials as required by or as necessary to comply with the SWPPP as described in the BMP Handbook.*

END OF DOCUMENT

MATERIALS AND EQUIPMENT

1. GENERAL

1.1. MATERIAL AND EQUIPMENT

1.1.1. Only items approved by the District and/or Construction Manager shall be used.

1.1.2. Designer/Builder shall submit lists of Products and other Product information in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

1.2. MATERIAL AND EQUIPMENT COLORS

1.2.1. The Designer/Builder shall comply with all schedule(s) of colors provided by the District and/or Construction Manager.

1.2.2. No individual color selections will be made until after approval of all pertinent materials and equipment and after receipt of appropriate samples in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

1.2.3. Designer/Builder shall request priority in writing for any item requiring advance ordering to maintain the approved Construction Schedule.

1.3. DELIVERY, STORAGE, AND HANDLING

1.3.1. Designer/Builder shall deliver manufactured materials in original packages, containers, or bundles (with seals unbroken), bearing name or identification mark of manufacturer.

1.3.2. Designer/Builder shall deliver fabrications in as large assemblies as practicable; where specified as shop-primed or shop-finished, package or crate as required to preserve such priming or finish intact and free from abrasion.

1.3.3. Designer/Builder shall store materials in such a manner as necessary to properly protect them from damage. Materials or equipment damaged by handling, weather, dirt, or from any other cause will not be accepted.

1.3.4. Materials are not be acceptable that have been warehoused for long periods of time, stored or transported in improper environment, improperly packaged, inadequately labeled, poorly protected, excessively shipped, deviated from normal distribution pattern, or reassembled.

1.3.5. Designer/Builder shall store material so as to cause no obstructions of sidewalks, roadways, and underground services. Designer/Builder shall protect material and equipment furnished pursuant to the Contract Documents.

1.3.6. Designer/Builder may store materials on Site with prior written approval by the District, all material shall remain under Designer/Builder's control and Designer/Builder shall remain liable for any damage to the materials. Should the Project Site not have storage area available, the Designer/Builder shall provide for off-site storage at no cost to District.

1.3.7. When any room in Project is used as a shop or storeroom, the Designer/Builder shall be responsible for any repairs, patching, or cleaning necessary due to that use. Location of storage space shall be subject to prior written approval by District.

2. PRODUCTS

2.1. MANUFACTURERS

2.1.1. Manufacturers listed in various sections of Contract Documents are names of those manufacturers that are believed to be capable of supplying one or more of items specified therein.

2.1.2. The listing of a manufacturer does not imply that every product of that manufacturer is acceptable as meeting the requirements of the Contract Documents.

2.2. FACILITIES AND EQUIPMENT

Designer/Builder shall provide, install, maintain, and operate a complete and adequate facility for handling, the execution, disposal, and distribution of material and equipment as required for proper and timely performance of Work.

2.3. MATERIAL REFERENCE STANDARDS

Where material is specified solely by reference to “standard specifications” and if requested by District, Designer/Builder shall submit for review data on actual material proposed to be incorporated into Work, listing name and address of vendor, manufacturer, or producer, and trade or brand names of those materials, and data substantiating compliance with standard specifications.

3. EXECUTION

3.1. WORKMANSHIP

3.1.1. Where not more specifically described in any other Contract Documents, workmanship shall conform to methods and operations of best standards and accepted practices of trade or trades involved and shall include items of fabrication, construction, or installation regularly furnished or required for completion (including finish and for successful operation, as intended).

3.1.2. Work shall be executed by tradespersons skilled in their respective field of work. When completed, parts shall have been durably and substantially built and present a neat appearance.

3.2. COORDINATION

3.2.1. Designer/Builder shall coordinate installation of materials and equipment so as to not interfere with installation of other work. Adjustment or rework because of Designer/Builder’s failure to coordinate will be at no additional cost to District.

3.2.2. Designer/Builder shall examine in-place materials and equipment for readiness, completeness, fitness to be concealed or to receive Work, and compliance with Contract Documents. Concealing or covering work constitutes acceptance of additional cost which will result should in-place materials and equipment be found unsuitable for receiving other work or otherwise deviating from the requirements of the Contract Documents.

3.3. COMPLETENESS

Designer/Builder shall provide all portions of the Work, unless clearly stated otherwise, installed complete and operational with all elements, accessories, anchorages, utility connections, etc., in manner to assure well-balanced performance, in accordance with manufacturer's recommendations and in accordance with Contract Documents. For example, electric water coolers require water, electricity, and drain services; roof drains require drain system; sinks fit within countertop, etc. Terms such as “installed complete,” “operable condition,” “for use intended,” “connected to all utilities,” “terminate with proper cap,” “adequately anchored,” “patch and refinish,” “to match similar,” should be assumed to apply in all cases, except where completeness of functional or operable condition is specifically stated as not required.

3.4. APPROVED INSTALLER OR APPLICATOR

Designer/Builder shall ensure that all installations are only performed by a manufacturer’s approved installer or applicator.

3.5. MANUFACTURER'S RECOMMENDATIONS

All installations shall be in accordance with manufacturer's published recommendations and specific written directions of manufacturer's representative. Should Contract Documents differ from recommendations of manufacturer or directions of manufacturer’s representative, Designer/Builder shall analyze differences, make recommendations to the District and the Construction Manager in writing, and shall not proceed until interpretation or clarification has been issued by the District and/or the Construction Manager.

END OF DOCUMENT

DELIVERY, STORAGE AND HANDLING

1. GENERAL

1.1. PRODUCTS

1.1.1. Products are as defined in the Contract.

1.1.2. Designer/Builder shall not use and/or reuse materials and/or equipment removed from existing Premises, except as specifically permitted by the Contract Documents.

1.1.3. Designer/Builder shall provide interchangeable components of the same manufacturer, for similar components.

1.2. TRANSPORTATION AND HANDLING

1.2.1. Designer/Builder shall transport and handle Products in accordance with manufacturer's instructions.

1.2.2. Designer/Builder shall promptly inspect shipments to confirm that Products comply with Contract requirements, are of correct quantity, and are undamaged.

1.2.3. Designer/Builder shall provide equipment and personnel to properly handle Products to prevent soiling, disfigurement, or damage.

1.3. STORAGE AND PROTECTION

1.3.1. Designer/Builder shall store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Designer/Builder shall store sensitive Products in weather-tight, climate controlled enclosures.

1.3.2. Designer/Builder shall place fabricated Products that are stored outside, on above-ground sloped supports.

1.3.3. Designer/Builder shall provide off-site storage and protection for Products when Site does not permit on-site storage or protection.

1.3.4. Designer/Builder shall cover Products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.

1.3.5. Designer/Builder shall store loose granular materials on solid flat surfaces in a well-drained area and prevent mixing with foreign matter.

1.3.6. Designer/Builder shall provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.

1.3.7. Designer/Builder shall arrange storage of Products to permit access for inspection and periodically inspect to assure Products are undamaged and are maintained under specified conditions.

END OF DOCUMENT

CONTRACT CLOSEOUT AND FINAL CLEANING

1. GENERAL

1.1. CLOSEOUT PROCEDURES

Designer/Builder shall comply with all closeout provisions as indicated in the Contract.

1.2. FINAL CLEANING

1.2.1. Designer/Builder shall execute final cleaning prior to final inspection.

1.2.2. Delete

1.2.3. Designer/Builder shall clean equipment and fixtures to a clean condition.

1.2.4. Delete

1.2.5. Designer/Builder shall clean debris from roofs, gutters, down spouts, and drainage systems.

1.2.6. Designer/Builder shall clean Site, sweep paved areas, and rake clean landscaped surfaces.

1.2.7. Designer/Builder shall remove waste and surplus materials, rubbish, and construction facilities from the Site.

1.3. ADJUSTING

Designer/Builder shall adjust operating products and equipment to ensure smooth and unhindered operation.

1.4. RECORD DOCUMENTS AND SHOP DRAWINGS

Designer/Builder shall legibly mark each item to record actual construction, including:

1.4.1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permit surface improvements.

1.4.2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

1.4.3. Field changes of dimension and detail.

1.4.4. Details not on original Contract Drawings

1.4.5. Changes made by modification(s).

1.4.6. References to related Shop Drawings and modifications.

1.4.7. Designer/Builder will provide one set of Record Drawings to District.

1.4.8. Designer/Builder shall submit all required documents to District and/or Construction Manager prior to or with its final Application for Payment.

1.5. INSTRUCTION OF DISTRICT PERSONNEL

1.5.1. Before final inspection, at agreed upon times, Designer/Builder shall instruct District's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems.

1.5.2. For equipment requiring seasonal operation, Designer/Builder shall perform instructions for other seasons within six (6) months.

1.5.3. Designer/Builder shall use operation and maintenance manuals as basis for instruction. Designer/Builder shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

1.5.4. Designer/Builder shall prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.6. SPARE PARTS AND MAINTENANCE MATERIALS

1.6.1. Designer/Builder shall provide products, spare parts, maintenance, and extra materials in quantities specified in the Specifications and in Manufacturer's recommendations.

1.6.2. Designer/Builder shall provide District all required Operation and Maintenance Data.

END OF DOCUMENT

FIELD ENGINEERING

1. GENERAL

1.1. REQUIREMENTS INCLUDED

1.1.1. Designer/Builder shall provide and pay for field engineering services by a California-registered engineer, required for the Project, including, without limitations:

1.1.1.1. Survey work required in execution of the Project.

1.1.1.2. Civil or other professional engineering services specified, or required to execute Designer/Builder's construction methods.

1.2. QUALIFICATIONS OF SURVEYOR OR ENGINEERS

Designer/Builder shall only use a qualified licensed engineer or registered land surveyor, to whom District makes no objection.

1.3. SURVEY REFERENCE POINTS

1.3.1. Existing basic horizontal and vertical control points for the Project are those designated on the Drawings.

1.3.2. Designer/Builder shall locate and protect control points prior to starting Site Work and preserve all permanent reference points during construction. In addition, Designer/Builder shall:

1.3.2.1. Make no changes or relocation without prior written notice to District and Construction Manager.

1.3.2.2. Report to District and Construction Manager when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.

1.3.2.3. Require surveyor to replace Project control points based on original survey control that may be lost or destroyed.

1.4. RECORDS

Designer/Builder shall maintain a complete, accurate log of all control and survey work as it progresses.

1.5. SUBMITTALS

1.5.1. Designer/Builder shall submit name and address of Surveyor and Professional Engineer to District and Construction Manager prior to its/their work on the Project.

1.5.2. On request of District and Construction Manager, Designer/Builder shall submit documentation to verify accuracy of field engineering work, at no additional cost to the District.

1.5.3. Designer/Builder shall submit a certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance or nonconformance with Contract Documents.

2. EXECUTION

2.1. COMPLIANCE WITH LAWS

Designer/Builder is responsible for meeting all applicable codes, OSHA, safety and shoring requirements.

2.2. NONCONFORMING WORK

Designer/Builder is responsible for any re-surveying required by correction of nonconforming work.

END OF DOCUMENT

CUTTING AND PATCHING

1. GENERAL

1.1. CUTTING AND PATCHING

1.1.1. Designer/Builder shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:

1.1.1.1. Make several parts fit together properly.

1.1.1.2. Uncover portions of Work to provide for installation of ill-timed Work.

1.1.1.3. Remove and replace defective Work.

1.1.1.4. Remove and replace Work not conforming to requirements of Contract Documents.

1.1.1.5. Remove Samples of installed Work as specified for testing.

1.1.1.6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

1.1.1.7. Attaching new materials to existing remodeling areas – including painting (or other finishes) to match existing conditions.

1.1.2. In addition to Contract requirements, upon written instructions from District, Designer/Builder shall uncover Work to provide for observations of covered Work in accordance with the Contract Documents; remove samples of installed materials for testing as directed by District; and remove Work to provide for alteration of existing Work.

1.1.3. Designer/Builder shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or work of others.

1.1.4. Designer/Builder shall not cut and patch operating elements and safety related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:

1.1.4.1. Primary operational systems and equipment.

1.1.4.2. Air or smoke barriers.

1.1.4.3. Fire-suppression systems.

1.1.4.4. Mechanical systems piping and ducts.

1.1.4.5. Control systems.

1.1.4.6. Communication systems.

1.1.4.7. Conveying systems.

1.1.4.8. Electrical wiring systems.

1.1.5. Designer/Builder shall not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing capacity to perform as intended, or that results in increased maintenance or decreased operational life of safety. Miscellaneous elements include the following:

1.1.5.1. Water, moisture or vapor barriers.

1.1.5.2. Membranes and flashings.

1.1.5.3. Exterior curtain-wall construction.

1.1.5.4. Equipment supports.

1.1.5.5. Piping, ductwork, vessels and equipment.

1.1.5.6. Noise and vibration control elements and systems.

1.1.5.7. Shoring, bracing and sheeting.

1.2. SUBMITTALS

1.2.1. Designer/Builder shall submit written notice to District pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration (Request) at least ten (10) days prior to any cutting or alterations that may affect the structural safety of Project, or work of others, including the following:

1.2.1.1. The work of the District or other trades.

1.2.1.2. Structural value or integrity of any element of Project.

1.2.1.3. Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.
1.2.1.4. Efficiency, operational life, maintenance or safety of operational elements.
1.2.1.5. Visual qualities of sight-exposed elements.

1.2.2. Contractor's Request shall also include:
1.2.2.1. Identification of Project.
1.2.2.2. Description of affected Work.
1.2.2.3. Necessity for cutting, alteration, or excavations.
1.2.2.4. Affects of Work on District, other trades, or structural or weatherproof integrity of Project.
1.2.2.5. Description of proposed Work:
1.2.2.5.1. Scope of cutting, patching, alteration, or excavation.
1.2.2.5.2. Trades that will execute Work.
1.2.2.5.3. Products proposed to be used.
1.2.2.5.4. Extent of refinishing to be done.
1.2.2.6. Alternates to cutting and patching.
1.2.2.7. Cost proposal, when applicable.
1.2.2.8. The scheduled date the Designer/Builder intends to perform the Work and the duration of time to complete the Work.
1.2.2.9. Written permission of other trades whose Work will be affected.

1.3. QUALITY ASSURANCE

1.3.1. Designer/Builder shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.

1.3.2. Designer/Builder shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the District's decision shall be final.

1.4. PAYMENT FOR COSTS

1.4.1. Cost caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of the District, its consultants, including but not limited to the Construction Manager, the Project Inspector(s), Engineers, and Agents, will be paid by Designer/Builder and/or deducted from the Contract by the District.

1.4.2. District shall only pay for cost of Work if it is part of the original Contract Price or if a change has been made to the contract in compliance with the provisions of the Contract. Cost of Work performed upon instructions from the District, other than defective or nonconforming Work, will be paid by District on approval of written Change Order.

2. PRODUCTS

2.1. MATERIALS

2.1.1. Designer/Builder shall provide for replacement and restoration of Work removed. Designer/Builder shall comply with the Contract Documents and with the Industry Standard(s), for the type of Work, and the Specification requirements for each specific product involved. If not specified, Designer/Builder shall first recommend a product of a manufacturer or appropriate trade association for approval by the District.

2.1.2. Materials to be cut and patched include those damaged by the performance of the Work.

3. EXECUTION

3.1. INSPECTION

3.1.1. Designer/Builder shall inspect existing conditions of the Site and the Work, including

elements subject to movement or damage during cutting and patching, excavating and backfilling. After uncovering Work, Designer/Builder shall inspect conditions affecting installation of new products.

3.1.2. Designer/Builder shall report unsatisfactory or questionable conditions in writing to District as indicated in the Contract and shall proceed with Work as indicated in the Contract.

3.2. PREPARATION

3.2.1. Designer/Builder shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.

3.2.2. Designer/Builder shall provide devices and methods to protect other portions of Project from damage.

3.2.3. Designer/Builder shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation, any work that may be exposed by cutting and patching Work. Designer/Builder shall keep excavations free from water.

3.3. ERECTION, INSTALLATION AND APPLICATION

3.3.1. With respect to performance, Designer/Builder shall:

3.3.1.1. Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.

3.3.1.2. Execute cutting and demolition by methods that will prevent damage to other Work, and provide proper surfaces to receive installation of repairs and new Work.

3.3.1.3. Execute cutting, demolition excavating, and backfilling by methods that will prevent damage to other Work and damage from settlement.

3.3.1.4. Designer/Builder shall employ original installer or fabricator to perform cutting and patching for:

3.3.1.5. Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.

3.3.1.6. Sight-exposed finished surfaces.

3.3.2. Designer/Builder shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.

3.3.3. Designer/Builder shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Designer/Builder shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. Designer/Builder shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.

3.3.4. Designer/Builder shall restore Work which has been cut or removed. Designer/Builder shall install new products to provide completed Work in accordance with requirements of the Contract Documents and as required to match surrounding areas and surfaces.

3.3.5. Designer/Builder shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF DOCUMENT

OPERATION AND MAINTENANCE DATA

1. GENERAL

1.1. QUALITY ASSURANCE

1.1.1. Designer/Builder shall prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.1.2. The provisions in this “Operations and Maintenance Data” document only apply to activities that the Designer/Builder does not perform as the Operator under a separate O&M Contract, if applicable.

1.2. FORMAT

1.2.1. Designer/Builder shall prepare data in the form of an instructional manual entitled “OPERATIONS AND MAINTENANCE MANUAL & INSTRUCTIONS” (“Manual”).

1.2.2. Binders: Designer/Builder shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size. When multiple binders are used, Designer/Builder shall correlate data into related consistent groupings.

1.2.3. Cover: Designer/Builder shall identify each binder with typed or printed title "OPERATION AND MAINTENANCE MANUAL & INSTRUCTIONS"; and shall list title of Project and identify subject matter of contents.

1.2.4. Designer/Builder shall arrange content by systems process flow under section numbers and sequence of Table of Contents of the Contract Documents.

1.2.5. Designer/Builder shall provide tabbed fly leaf for each separate Product and system, with typed description of Product and major component parts of equipment.

1.2.6. Text: The content shall include Manufacturer's printed data, or typewritten data on 24 pound paper.

1.2.7. Drawings: Designer/Builder shall provide with reinforced punched binder tab and shall bind in with text; folding larger drawings to size of text pages.

1.3. CONTENTS, EACH VOLUME

1.3.1. Table of Contents: Designer/Builder shall provide title of Project; names, addresses, and telephone numbers of any engineers, subconsultants, Subcontractor(s), and Designer/Builder with name of responsible parties; and schedule of Products and systems, indexed to content of the volume.

1.3.2. For Each Product or System: Designer/Builder shall list names, addresses, and telephone numbers of Subcontractor(s) and suppliers, including local source of supplies and replacement parts.

1.3.3. Product Data: Designer/Builder shall mark each sheet to clearly identify specific Products and component parts, and data applicable to installation. Delete inapplicable information.

1.3.4. Drawings: Designer/Builder shall supplement Product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Designer/Builder shall not use Project Record Documents as maintenance drawings.

1.3.5. Text: The Designer/Builder shall include any and all information as required to supplement Product data. Designer/Builder shall provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.4. MANUAL FOR MATERIALS AND FINISHES

1.4.1. Building Products, Applied Materials, and Finishes: Designer/Builder shall include Product data, with catalog number, size, composition, and color and texture designations. Designer/Builder shall provide information for re-ordering custom manufactured Products.

1.4.2. Instructions for Care and Maintenance: Designer/Builder shall include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

1.4.3. Moisture Protection and Weather Exposed Products: Designer/Builder shall include Product data listing applicable reference standards, chemical composition, and details of installation. Designer/Builder shall provide recommendations for inspections,

maintenance, and repair.

1.4.4. Additional Requirements: Designer/Builder shall include all additional requirements as specified in the Specifications.

1.4.5. Designer/Builder shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.5. MANUAL FOR EQUIPMENT AND SYSTEMS

1.5.1. Each Item of Equipment and Each System: Designer/Builder shall include description of unit or system, and component parts and identify function, normal operating characteristics, and limiting conditions. Designer/Builder shall include performance curves, with engineering data and tests, and complete nomenclature, and commercial number of replaceable parts.

1.5.2. Panelboard Circuit Directories: Designer/Builder shall provide electrical service characteristics, controls, and communications.

1.5.3. Designer/Builder shall include color coded wiring diagrams as installed.

1.5.4. Operating Procedures: Designer/Builder shall include start-up, break-in, and routine normal operating instructions and sequences. Designer/Builder shall include regulation, control, stopping, shut-down, and emergency instructions. Designer/Builder shall include summer, winter, and any special operating instructions.

1.5.5. Maintenance Requirements: Designer/Builder shall include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

1.5.6. Designer/Builder shall provide servicing and lubrication schedule, and list of lubricants required.

1.5.7. Designer/Builder shall include manufacturer's printed operation and maintenance instructions.

1.5.8. Designer/Builder shall include sequence of operation by controls manufacturer.

1.5.9. Designer/Builder shall provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

1.5.10. Designer/Builder shall provide control diagrams by controls manufacturer as installed.

1.5.11. Designer/Builder shall provide Designer/Builder's coordination drawings, with color coded piping diagrams as installed.

1.5.12. Designer/Builder shall provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

1.5.13. Designer/Builder shall provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

1.5.14. Additional Requirements: Designer/Builder shall include all additional requirements as specified in Specification(s).

1.5.15. Designer/Builder shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.6. SUBMITTAL

1.6.1. Concurrent with the Schedule of Submittals as indicated in the Contract, Designer/Builder shall submit to the District for review two (2) copies of a preliminary draft of proposed formats and outlines of the contents of the Manual.

1.6.2. For equipment, or component parts of equipment put into service during construction and to be operated by District, Designer/Builder shall submit draft content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.

1.6.3. On or before the Designer/Builder submits its final application for payment, Designer/Builder shall submit two (2) copies of a complete Manual in final form. The District will provide comments to Designer/Builder and Designer/Builder must revise the content of the Manual as required by District prior to District's approval of Designer/Builder's final Application for Payment.

1.6.4. Designer/Builder must submit two (2) copies of revised Manual in final form within ten

(10) days after receiving District's comments: one copy shall be physically delivered to the District in "hardcopy form"; and the other copy shall be submitted to the District by means of the Box file hosting service. Failure to do so will be a basis for the District withholding funds sufficient to protect itself for Designer/Builder's failure to provide a final Manual to the District.

END OF DOCUMENT

WARRANTIES

1. GENERAL

1.1. The provisions in this "Warranties" document only applies to warranties for any part of the Generating Facilities not including the inverter(s) or the solar panels, which are detailed in other areas of the Contract. Any conflict between this Section and the Contract shall be resolved in favor the Contract.

1.2. FORMAT

1.2.1. Binders: Designer/Builder shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size.

1.2.2. Cover: Designer/Builder shall identify each binder with typed or printed title "WARRANTIES" and shall list title of Project.

1.2.3. Table of Contents: Designer/Builder shall provide title of Project; name, address, and telephone number of Designer/Builder and equipment supplier, and name of responsible principal. Designer/Builder shall identify each item with the number and title of the specific Specification, document, provision, or section in which the name of the Product or work item is specified.

1.2.4. Designer/Builder shall separate each warranty with index tab sheets keyed to the Table of Contents listing, providing full information and using separate typed sheets as necessary. Designer/Builder shall list each applicable and/or responsible Subcontractor(s), supplier(s), and/or manufacturer(s), with name, address, and telephone number of each responsible principal(s).

1.3. PREPARATION

1.3.1. Designer/Builder shall obtain warranties, executed in duplicate by each applicable and/or responsible subcontractor(s), supplier(s), and manufacturer(s), within ten (10) days after completion of the applicable item or work. Except for items put into use with District's permission, Designer/Builder shall leave date of beginning of time of warranty until the date of completion is determined.

1.3.2. Designer/Builder shall verify that warranties are in proper form, contain full information, and are notarized, when required.

1.3.3. Designer/Builder shall co-execute submittals when required.

1.3.4. Designer/Builder shall retain warranties until time specified for submittal.

1.4. TIME OF SUBMITTALS

1.4.1. For equipment or component parts of equipment put into service during construction with District's permission, Designer/Builder shall submit a draft warranty for that equipment or component within ten (10) days after acceptance of that equipment or component.

1.4.2. On or before the Designer/Builder submits its final application for payment, Designer/Builder shall submit all warranties and related documents in final form. The District will provide comments to Designer/Builder and Designer/Builder must revise the content of the warranties as required by District prior to District's approval of Designer/Builder's final Application for Payment.

1.4.3. For items of Work that are not completed until after the date of Completion, Designer/Builder shall provide an updated warranty for those item(s) of Work within ten (10) days after acceptance, listing the date of acceptance as start of warranty period.

END OF DOCUMENT

RECORD DOCUMENTS

1. RECORD DRAWINGS

1.1. GENERAL

1.1.1. "Record Drawings" may also be referred to in the Contract as "As-Built Drawings."

1.1.2. As indicated in the Contract Documents, District will provide Designer/Builder with one set of reproducible plans of the original Contract Drawings.

1.1.3. Designer/Builder shall maintain at each Project Site one (1) set of marked-up plans and shall transfer all changes and information to those marked-up plans, as often as required in the Contract Documents, but in no case less than once each month. Designer/Builder shall submit to the Project Inspector one set of reproducible vellums of the Project Record Drawings ("As-Builts") showing all changes incorporated into the Work since the preceding monthly submittal. The As-Builts shall be available at the Project Site. The Designer/Builder shall submit reproducible vellums at the conclusion of the Project following review of the blueline prints.

1.1.4. Label and date each Record Drawing "RECORD DOCUMENT" in legibly printed letters.

1.1.5. All deviations in construction, including but not limited to pipe and conduit locations and deviations caused by without limitation Change Orders, Construction Directives, RFI's, and Addenda, shall be accurately and legibly recorded by Designer/Builder

1.1.6. Locations and changes shall be done by Designer/Builder in a neat and legible manner and, where applicable, indicated by drawing a "cloud" around the changed or additional information.

1.2. RECORD DRAWING INFORMATION

1.2.1. Designer/Builder shall record the following information:

1.2.1.1. Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.

1.2.1.2. Actual numbering of each electrical circuit.

1.2.1.3. Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Contract Drawings.

1.2.1.4. Locations of all items, not necessarily concealed, which vary from the Contract Documents.

1.2.1.5. Installed location of all cathodic protection anodes.

1.2.1.6. Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.

1.2.1.7. Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, etc.

1.2.1.8. Sufficient information to locate Work concealed in each building with reasonable ease and accuracy.

1.2.2. In some instances, this information may be recorded by dimension. In other instances, it may be recorded in relation to the spaces in the building near which it was installed.

1.2.3. Designer/Builder shall provide additional drawings as necessary for clarification.

1.2.4. Designer/Builder shall provide reproducible record drawings, made from final Shop Drawings marked "No Exceptions Taken" or "Approved as Noted."

2. RECORD SPECIFICATIONS

Designer/Builder shall mark each section legibly to record manufacturer, trade name, catalog number, and supplier of each Product and item of equipment actually installed.

3. MAINTENANCE OF RECORD DOCUMENTS

3.1. Designer/Builder shall store Record Documents apart from documents used for construction as follows:

3.1.1. Provide files and racks for storage of Record Documents.

3.1.2. Maintain Record Documents in a clean, dry, legible condition and in good order.

3.2. Designer/Builder shall not use Record Documents for construction purposes.

END OF DOCUMENT

COMMISSIONING

4. GENERAL

4.1. SUMMARY

4.1.1. Commissioning is a process for validating and documenting that the facility and its systems are constructed and perform in conformity with the Contract Documents.

4.1.2. The objective of the commissioning process is to verify that the performance of the facility and its systems meet or exceed the design intent.

4.1.3. Commissioning includes special facility start-up processes used to bring the facility to a fully operational state, free of deficiencies in an efficient and timely manner.

4.1.4. Training on related systems and equipment operation and maintenance shall be scheduled to commence only after start-up is complete and systems are verified to be 100% complete and functional.

4.2. DESCRIPTION

4.2.1. **Designer/Builder Startup**: Sub-phase of Designer/Builder's work ending with Acceptance of Work, during which Designer/Builder performs a pre-planned program of activities including starting, testing, inspecting, adjusting balancing, correcting deficiencies and other similar activities.

4.2.1.1. The District, Construction Manager and the Inspector shall be present to observe, inspect and identify deficiencies in building systems operations.

4.2.2. The completion of startup means the entire Construction Project including startup and fine tuning has been performed to the requirements of the Contract Documents and is verified in writing by the District and Construction Manager.

4.2.3. **Fine Tuning**: Fine tuning is the responsibility of Designer/Builders after District occupancy and ending one (1) year after District occupancy. During this time the Designer/Builder is responsible for optimizing systems and correcting deficiencies arising under normal operating conditions.

4.2.3.1. Includes a period after occupancy where systems are optimized under "live" operating conditions and all construction deficiencies are corrected.

4.2.3.2. Fine Tuning shall extend from date of District occupancy to one year after occupancy.

4.3. DEFINITION OF TERMS

4.3.1. **Contractor's Pre-Commissioning Checklists**: Includes installation and start-up items as specified to be completed by the appropriate contractors prior to operational verification through the functional testing process.

4.3.2. **Installation Verification Process**: Includes the on-site inspection and review of related system components for conformance to Contract Documents. The Designer/Builder shall verify systems readiness for functional testing procedures prior to the start of functional testing. Deficiencies will be documented by the Inspector for future resolution.

4.3.3. **Functional Performance Testing Process**: Includes the documented testing of system parameters, under actual or simulated operating conditions. Final performance commissioning of systems will begin only after the appropriate Designer/Builder certifies that systems are 100% complete and ready for functional testing. The Designer/Builder will be required to schedule, coordinate and perform device tests, calibration and functional performance test procedures.

4.3.4. **Deficiencies and Resolutions List:** Includes a list of noted deficiencies discovered as a result of the commissioning process. This list also includes the current disposition of issues, and the date of final resolution as confirmed by the Construction Manager and Inspector. Deficiencies are defined as those issues where products execution or performance does not satisfy the Project Contract Documents and/or the design intent.

4.4. COMMISSIONING SCHEDULE

4.4.1. Provide schedules for Designer/Builder Start-Up work.

4.4.2. Incorporate in overall construction schedule.

4.4.3. Contractor's activities, which will be performed as specified under Fine Tuning, shall be completed within one (1) year from date of occupancy by the District.

4.5. SUBMITTALS

4.5.1. Submit Draft and Final Designer/Builder Start-up Forms as described in this Document. Submit Draft Report for Construction Manager's review and comment prior to Final Submission. Submit Final Report not later than twenty weeks before scheduled date of Acceptance of Work.

4.5.2. Prepare and submit one copy of report form to be used in preparation of reports for each electrical system that is part of the Generating Facilities.

4.5.3. Each System Report shall be submitted including the following:

4.5.3.1. Project Name

4.5.3.2. Name of System

4.5.3.3. Index of report's content

4.5.3.4. Adjacent to list of equipment, columns to indicate status of equipment operation, to date and to sign off equipment start-up.

4.5.3.5. Space to record equipment and operational problems which cannot be corrected with scheduled Designer/Builder Start-Up program and which may delay Acceptance of Work.

4.5.3.6. Manufacturer's equipment start-up reports.

4.5.3.7. Systems' testing, balancing, and adjusting reports.

4.5.3.8. Equipment Report Forms shall include the following: Project name, name of equipment, starting and testing procedures to be performed and observations and test results to be recorded.

4.6. COMMISSIONING DUTIES AND RESPONSIBILITIES

4.6.1. Designer/Builder Duties and Responsibilities:

4.6.1.1. Assure the participation and cooperation of Subcontractors and Suppliers under their jurisdictions as required to complete the commissioning process.

4.6.1.2. Complete Commissioning Report Forms. Reports are to be completed in a neat easily readable condition.

4.6.1.3. Complete the respective start-up and check out procedures and insure readiness of equipment and systems prior to the start of the functional performance testing. Written confirmation of system readiness for performance testing is required.

4.6.1.4. Provide qualified representatives for the functional performance commissioning process.

4.6.1.5. Assure that all subcontractors, suppliers, test and balance, controls, etc. include in their respective contracts cost necessary to participate in and complete the commissioning process.

4.6.2. **Duties and Responsibilities of Others for Commissioning**: The commissioning process requires the active participation of the Construction Manager, District, and any other related consultants on the project.

4.7. SYSTEM FAILURES

After a second failure of a system to successfully meet the criteria as set for in the functional performance testing process, the Designer/Builder shall reimburse the District for cost associated with any additional retesting required due to uncorrected deficiencies. Costs shall include salary, benefits, overhead, travel costs and per diem lodging costs if applicable.

END OF DOCUMENT