



Agenda Item:	II A: Action Item
Date:	September 23, 2024
To:	Magnolia Educational & Research Foundation dba Magnolia Public Schools (“MPS”) Ad Hoc Committee (the “Committee”)
From:	Alfredo Rubalcava, CEO & Superintendent
Staff Lead(s):	Patrick Ontiveros, General Counsel & Director of Facilities Mustafa Sahin, Project Manager Katrina Jimenez, Assistant Project Manager
RE:	Approval of Design Services for Solar Photovoltaic (PV) Carport for MSA-5 7111 Winnetka Ave Project

Action Proposed:

MPS Staff recommends and moves that the MPS Ad Hoc Committee (“**Committee**”) approve the attached proposal from Stellar Solar in the total amount of Ninety-One Thousand Dollars (\$91,000) for the Magnolia Science Academy (MSA)-5 – 7111 Winnetka Modular Construction Project (the “**Project**”). Staff further recommends and moves that the Committee approve a contingency of Fifteen Thousand Dollars (\$15,000), for a total of One Hundred Six Thousand Dollars (\$106,000).

Purpose:

The purpose of this action is to approve the design services from Stellar Solar for a solar photovoltaic carport, which are essential to meet the submission requirements for the Project’s Increment 2 submission to the Division of the State Architect (“**DSA**”) on October 11, 2024. This approval will help keep us on track to meet the Project completion date of February 2026.

Background:

In a recent meeting with DSA staff regarding the Project, it was confirmed that solar pv plans must be submitted as part of the Increment 2 DSA package. Following this confirmation, Gateway reached out to multiple vendors to solicit interest and bids from qualified vendors to meet the submission deadline of October 11, 2024. Among the vendors contacted, only Stellar Solar was able to prepare the required plans within the necessary timeline.

Stellar Solar submitted a comprehensive proposal totaling \$735,000 for both the design and construction of the solar system. Stellar has agreed to provide design services separately for \$91,000. Another established vendor, Sitemiq, submitted a proposal for \$750,000 but was unable to meet the plan preparation deadline.

After a thorough review of both proposals, the team selected Stellar Solar for the following



reasons:

- **Timeliness:** Stellar Solar is the only vendor able to meet the critical October 11 submission deadline.
- **Cost Efficiency:** Their proposal is more cost-effective, coming in slightly lower than Sitelogiq's.
- **Streamlined Approval:** Stellar Solar's pre-approved DSA solar plan is expected to expedite the DSA approval process, potentially reducing overall project timelines.

This decision ensures that the Project remains on schedule for its proposed completion.

Analysis:

The selection of Stellar Solar for the design services of the Solar PV Carport at MSA-5 is based on both practical and financial considerations. Among the vendors contacted, Stellar Solar was the only one capable of meeting the October 11, 2024, deadline, a critical milestone for the increment 2 submission to the DSA.

Another key factor in the decision to proceed with Stellar Solar is their pre-approved DSA solar plan. This is crucial, ensuring that the overall schedule remains on track for the proposed completion in February 2026.

Budget Impact:

The proposed expense of \$106,000 which includes design services along with a \$15,000 contingency costs will be covered through the proceeds of the \$50.8 million Prop 1D Award (Charter School Facility Program Award), specifically designated for the MSA-5 construction project. This ensures that no additional strain is placed on the operating budget of MPS, as these funds are already allocated for facilities improvement and development.

The design services from Stellar Solar represent a necessary step in progressing toward the completion of the Solar PV Carport, with the long-term goal of enhancing energy efficiency and reducing operational costs for MSA-5.

Exhibits:

Exhibit A: Stellar Solar Proposal



Exhibit A

Stellar Solar Proposal

Stellar Solar

electrify your life

SOLAR PHOTOVOLTAIC CANOPY SYSTEM

Design-Build Canopy Structure + PV proposal 2024-9-10

Magnolia SA5

September 10, 2024

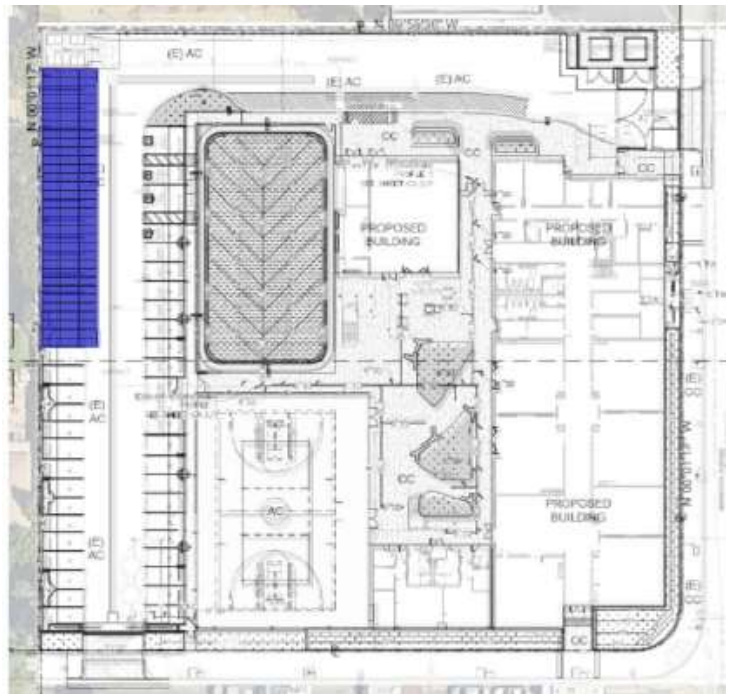
Project Location:

7111 Winnetka Avenue, Winnetka, CA 91306

Presented to:

Greg Brendel – The Brendel Companies
909-367-6967 direct; Brendel.Greg@gmail.com

11102 Rockaway Glen Road, Apple Valley, CA 92038



Prepared by: Marie Moulton Phillipp – (760) 681-7638 – MarieMP@SolarPVES.com

Stellar Solar - 265 Via Del Monte, Oceanside, CA 92058
www.StellarSolar.net CA License No. 749095 (C-10)



Magnolia SA5 – Design-Build Canopy Structure + PV – 2024-9-10

Stellar Solar - Scope of Work

Project: Magnolia SA5 – Design-Build Canopy Structure + PV
7111 Winnetka Avenue, Winnetka, CA 91306

Installer: TMAG dba Stellar Solar Electric CA License # 749095 (C-10)
6965 El Camino Real, Ste. 105-444, Carlsbad, CA 92009

Overview:

Stellar Solar prepared this bid using the target system performance minimum of 86,702 kWh to fit physically in the NW corner parking zone. The canopy structure will be fabricated and installed consisting of elevated 9” piers with mechanically attached galvanized tube steel posts and beams, plus double purlin rows to support PV modules attached on top. PV canopy structure shall be tilted west at a minimum of three or greater degrees, final tilt TBD.

PV system includes (96) Hanwha Q-Cells 600-watt solar modules = 57.6 kW DC. Two (2) SolarEdge 30kW 480v 3ph inverters with 1:1 optimizers that are module-level rapid shutdown compliant will be provided along with DC wire and conduit at canopy level, PV system grounding at canopy level, AC combiner load panel to connect two inverters at canopy structure for home run to electric room, AC wire to pull through underground conduits (installed by Electrical), AC disco in electric room, breaker connection on end of busbar of main switchgear (provided by others), and interconnection assistance. Inverter manufacturer performance monitoring system is included with access to online portal. The inverters communicate performance data to the manufacturer monitoring portal using onboard cellular comms cards.

LADWP typically requires a PV meter at the point of connection. Coordination with electrical contractor, engineer of record, and GC will be necessary to make room for the required utility meter.

Stellar Solar will provide design-build services to create the PV canopy structure and module design with stamped electrical and structural engineering drawings to support inclusion in the DSA submittal package. [*In-person DSA meetings and the DSA review and permit fees are excluded from our proposal.*]

Others will provide site utility metering, bidirectional switch gear, underground and building-penetrating conduit installation and associated trenching per typical new construction scope coordination.



Magnolia SA5 – Design-Build Canopy Structure + PV – 2024-9-10

PV system: 57.6 kW DC - (96) Hanwha Q. PEAK DUO XL-G11S.(x) BFG 600w \$ 735,000
On (2) SolarEdge 30kW 480v 3ph inverters with 2:1 optimizers
Including galvanized structural steel carport canopy (3-up portrait)

Equipment: Modules: Hanwha Q. PEAK DUO XL-G11S.(x) 600w (available for 2025)
Racking: Structural steel carport canopy for perimeter location, drilled and poured 9” raised piers, mechanically attached galvanized steel posts topped with galvanized steel beams and double purlins to support 3-up in portrait PV module rows attached with through bolts
Inverters: SolarEdge 3ph 480v inverters – (2) 30 kW with integrated disconnects
Optimizers: SolarEdge 1:1 optimizers corresponding to the modules selected
Monitoring: PV - SolarEdge inverter-level monitoring for kWh production
– cellular communications cards inside inverters (no hard-wired comms)
Meter: (LADWP utility-owned meter – to be coordinated)
BESS: N/A
Electrical: Two (2) 50A (min.) breakers to connect inverters into combiner panel
One (1) 100A AC load panel at canopy to combine PV inverters (AC disco incl.)
One (1) 100A AC disco for PV load panel before connection to main busbar
One (1) 100A AC breaker for PV Point of Connection on end of main busbar
Conductors

[GC/Electrical: Please provide supporting components – coordinated reqs.]

- + All underground and structure-penetrating conduits between PV canopy posts and trenched path back to electrical point of connection with stub-ups
- + Any concrete pad or bollards if required for a pedestal mounting preference *in lieu of planned canopy post mounted inverters and load panel*
- + Lighting beneath canopy to meet site requirements



Magnolia SA5 – Design-Build Canopy Structure + PV – 2024-9-10

Stellar Solar scope of work summary:

Stellar Solar will provide the proposed PV system from design and engineering of the structural steel canopies, drilling and erecting the structures, installing the solar panels through inverters at the canopy and post level, along with the module-level-shut-down optimizer units, provide and pull DC/canopy-level conduits with conductors to connect with two post-mounted inverters, connect inverters to post-mounted AC load panel as a PV combiner, and pull conductors through conduit stub-ups (by Others) for path to electrical switchgear location. AC disconnect will be provided and installed at the main electrical system Point of Connection along with a PV breaker on the end of the main busbar. PV system size meets/exceeds noted minimum output performance requirement (86,702 kWh minimum) in the designated location. Inverter-based SolarEdge performance monitoring will be provided through onboard cellular communications.

Inclusions / exclusions / assumptions are detailed below.

GC/Electrical contractor shared scope of work summary:

Others will provide and install bidirectional switch gear with adequate space at the end of the main busbar to locate our PV breaker.

Others will provide and install all structure-penetrating and underground conduits with stub-ups and pull strings, including those from the canopy to electric room. All trenching and associated inspections.

There should be a suitable grounding connection point to connect our PV grounding from the canopy equipment.

A utility-owned LADWP PV meter must be located within line of sight of the main electrical meter, typically including a meter receptacle and disconnect. Space for this must be allocated/coordinated by others.

Under-canopy lighting will be required to get through permitting. This lighting should be selected and installed by the same team coordinating other site lighting to verify overall site needs are met.

Roofer scope of work summary:

N/A for this carport canopy project.



Magnolia SA5 – Design-Build Canopy Structure + PV – 2024-9-10

[Copy-paste to respond in-line] The project *must* comply with Government Code Section 4217 and the Scope of Services outlined below. Your proposal should:

1. Outline your experience in providing design build solar carport projects with examples and references.

Stellar Solar has designed and installed multiple canopy structures over the years. The most visible example of a challenging DSA project where a design-build canopy solution was required is located at the Rancho Bernardo location in San Diego County for Palomar College (South). Several design challenges specific to the site and project were worked through and approved through DSA.

2. Outline your experience with Government Code 4217 and its requirements.

Stellar Solar has worked on design-build projects, but we have not been the party responsible for tracking code 4217 requirements. Having the list of requirements is generally all the Stellar Solar team needs to ensure compliance.

3. Supply your solar project calculations and verifications as to size, electrical billing savings, etc. (Note: This is to be a new building so there is not historic cost data available. Magnolia has other sites, but their electrical usage will not be comparable.)

Size: 57.6 kW DC PV

Minimum system sizes of both 50kW and 57kW have been communicated along with another notation of 80kW. Referencing the PV requirements calculations and description provided by Ryan McIntosh from Silver Creek, the listed output target for one year of 86,702 kWh is the minimum for the PV system designer. Factoring that minimum along with functional stringing on right-size inverters, we came up with a system design using two 30kW inverters that would each host (48) 600-watt modules for 57.6kW DC PV total. This design covers parking spaces in an even manner with 3-up in portrait that will require drive aisle emergency vehicle clearance height to manage the encroachment. Reducing canopies to 2-up in portrait to stay within the parking spaces is far less efficient and increases the costs with a longer structure without any gain in performance, so the 3-up perimeter solution is our recommendation to align with the designated NW corner parking zone allocation.



Electrical billing savings:

Please provide downloaded utility interval data, also called Green Button Data by some utilities, to enable a rough historical basis from another school property. It does not need to be from LADWP if another location is more comparable. It will also be necessary to confirm the anticipated utility billing rate that will be used for the newly constructed site to enable rate modeling. It would be valuable to have an example LADWP bill from any alternative location to also verify the applicable taxes and fees that are not captured in the default utility rates in our modeling software.

Due to the tight turnaround timeline such utility rate modeling is not yet feasible, lacking complete data. It is important to understand regarding the overall savings that a DSA-criteria structural steel canopy solution that is this small and is the narrow perimeter type is not being proposed with a primary focus on savings but is instead to satisfy the solar mandate and fit the project requirements. When financial modeling is the focus, we would recommend a much larger canopy system to improve the value, but a system much larger than this would also require a different type of connection like a tap on the switchgear or an increase to the switchgear bus rating. This system sizing approach is purely to enable the project to comply with the California solar mandate by installing the minimum PV system that will meet the requirements in a functional manner.

The savings and payback/breakeven modeling will not be a strong selling point, so please keep that in mind to avoid a “surprise” later. Rate and savings modeling will be required for the third-party financing loan solution process, so the modeling must be generated at some point, but lacking those details today it is important to provide early awareness regarding the utility rate modeling.

4. Provide an analysis of the project costs, anticipated payback period, and breakeven analysis.

Project costs are indicated in the proposal for the complete design-build process, except for the minor coordination items that typically fall under the electrical contractor’s scope. (See explanation above under electrical billing savings. As requested there, please share some alternative location utility interval usage history as a foundation for the modeling and advise of the applicable utility rate for the new site and ideally offer an LADWP bill example from another facility on that rate.)

5. Outline how you will **monitor and verify the production** and savings from the system to ensure Government Code 4217 compliance with your projections.

The PV system production output performance will be monitored through the inverter manufacturer-based monitoring portal that Magnolia can log into from any phone or computer



with proper credentials. Production monitoring is the key to verifying that the system is performing as prescribed. Weather events will have localized impacts and may result in some variability from one year to the next when looking at comparisons of each month year over year, just like there may be differences from one day to the next, but projected output performance modeling factors a 20+ year weather profile for the project location and does not assume perfect weather all the time, so minor differences are anticipated. The monitoring portal provides visibility to verify that the system's components are functioning properly, and if there is ever an issue Stellar Solar can be contacted to do a remote check on the system or to perform warranty repairs as appropriate.

*Please note that savings are a more complex modeling process under utility rate structures and rules, so monitoring software does not provide realistic savings models. This is especially challenging for commercial properties with both demand (kW) and kWh consumption charges that vary by time of day and time of year with rate updates sometimes multiple times per year plus a "demand ratchet" that further complicates the matter.

6. Describe how you will maintain the system and any costs associated with maintenance.

Typical PV systems are installed and can then operate without being touched electronically for years. While operations and maintenance contracts can be purchased, it often makes more fiscal sense to simply keep an eye on the monitoring portal for alarms or a sudden sustained drop-off in performance and to wash the panels annually. Washing the modules in early spring after the worst of the pollen falls in your area will improve the performance by cleaning off the grime and pollen that accumulates. A whole system health check can be purchased at any time if a full assessment of the electrical connections is preferred. No ongoing maintenance is included.

7. Describe the type of system to be used, its components and their sizing requirements, the system monitoring and verification processes, and the warranties for the various system components.

The system type, components, sizing, monitoring, and warranties have been outlined in this proposal.

8. Provide information re: your insurance company, bonding capacity, and financial qualifications

This can be provided but, in the effort to complete this submittal in time for Board review the complete details of this question are not on hand to include in this proposal. The school can (and will with contracting) be added as additionally insured on our standard insurance proof of coverage



form for the duration of the project. Bonding capacity varies with projects that are underway, but our bonding rate at last inquiry was around 2.5%. A financial reference sheet can be provided upon request.

9. Any other information that you feel will assist Magnolia in selecting you as their design builder.

Stellar Solar has a long history in California designing and building PV systems, from the first CA megawatt size project many years ago through small to large systems on private and public facilities. Entities like US Foods, Werner Dam, a federal courthouse, military, university campuses, corporate campuses, individual businesses, and churches have been contracting with Stellar Solar to design and build solar projects. Within the San Diego media region Stellar Solar has been awarded with the reader-voted “San Diego’s Best” solar company award for several years, but we work all over California and sometimes beyond. General contractors and electrical contractors include repeat customers, bringing more projects to us thanks to the confidence they have in our estimating, design, engineering, and field execution to construct and complete successful projects. We would be honored to earn Magnolia’s business and your confidence in our work.

Stellar Solar celebrates 26 years in business in 2024. Thank you for considering us for your project.



Inclusions:

Materials & Services covered by this budget:

1. Furnish and install structural steel carport canopy consisting of elevated 9” drilled and poured piers with mechanically attached galvanized tube steel posts and beams, plus double purlin rows to support PV modules attached on top. PV canopy structure shall be tilted west at a minimum of three or greater degrees, final tilt TBD.
2. Furnish and install **(96) x Hanwha Q-Cells 600-watt modules** (or current equivalent) flush mounted on canopy purlins with through bolts for a **57.6 kW DC** total PV system.
3. Equipment for hoisting and removal of PV materials and installation equipment.
4. Furnish and install all between-modules PV string wiring, DC conduits/raceways at canopy level with associated DC wire/conductors, post-mounted inverter(s), AC load panel to combine PV inverters, and grounding – all at canopy level
(to connect with AC conduit stub-ups (provided by Others for path to main switchgear with stub-up near Point of Connection that will be located on end of main busbar). [No post-penetrating, structure-penetrating, or underground conduits are in the Stellar Solar scope.]
5. Conductors/wire for PV connections
6. Furnish and install PV inverters (as described), on support posts beneath canopy-mounted PV, with unit(s) including an integrated means of disconnect.
7. Rapid Shutdown compliant inverters with Module Level Shutdown (MLSD) hardware. SolarEdge 1:1 optimizers are included as part of this installation and provide rapid shutdown compliance. Note that 1:1 optimizers are intentional for system size and module quantity compatibility with inverters for optimal stringing.
8. Web based SolarEdge monitoring system with internet portal access – DAS – Data Acquisition System for monitoring PV inverters. System performance kilowatt hour output data is provided as part of monitoring equipment/service. Inverter-level output performance data provided. (No module-level monitoring – primarily used for diagnostic servicing when applicable.)
9. 5-year standard DAS/monitoring cellular card-based service contract with supplier, renewable to meet current cellular communications technology after 5yrs due to fast evolution of technology. Cellular is typically most consistent, overcomes distance challenges for hard-wiring, and avoids IT conflicts or password changes. NOTE: SolarEdge and other inverters must be connected to the internet for firmware updates, even if alternate monitoring is requested.
10. Furnish and installation of AC panel board as combiner panels to combine inverters
11. Furnish and installation of PV AC disconnects at canopy location and in main electric room
12. Breaker for PV on end of busbar, opposite utility meter, for single Point of Connection of PV outputs to bidirectional switch gear in electric room
13. Coordination to request LADWP PV-specific meter installation to meet LADWP interconnection requirements.



14. Engineering & Calculations necessary for DSA permitting documents, including EE and structural stamp for PV system as described in this proposal. (Site and background docs to support PV and plans shall be provided by owner/architect/engineers of record.)
15. PV and BESS Permit processing support/assistance, *except for permit fees or in-person meetings*. Engineered and stamped PV & BESS plans/docs will be provided to support DSA review and permitting process, including standard comments and corrections.
16. Special inspections specifically associated with the steel canopy foundations and installation
17. Furnish and install all placards and labeling for PV system
18. Testing of all work
19. Commissioning
20. Tools and Equipment for our work
21. Single mobilization
22. Prevailing Wages
23. Debris and spoils removal from our work placed into on-site receptacles provided by others
24. Training for Owner's personnel – time not specified, so for the purposes of this proposal this training will be completed on a single day in conjunction with the commissioning process trip.
25. Interconnection application support for client. Stellar Solar will fill out information related to this scope of work and rely on the client and owner team to complete their portion of information. Beyond standard interconnection application form entries within Stellar Solar's scope, no other work is included as part of the interconnection application process. 'Campus' environments require active involvement of campus rep., GC/electrical contractor, and possibly utility personnel to complete the interconnection paperwork and approval process.

Exclusions:

1. Material escalation and/or availability guarantees. PV panels can be purchased in advance and stored on site in client control or in a bonded warehouse if necessary to control *price stability and availability* of products matching the selected/engineered/final design. Procurement release will require material deposits and payments from owners/GC. Storage fees TBD if or when applicable, but recommended PV modules will be available for shipping in 2025. Trade cases and other factors *will influence module prices in the months to years ahead*, so early module procurement is recommended. Structural steel scope *requires* early release of substantial deposits to start the process and further prepayment to release product before delivery. Please be prepared for this.
2. Monitoring infrastructure support – only applicable when external monitoring hardware and/or hard-wired data communications are required by a project. Distance impacts feasibility of hard-wired monitoring, so proximity to PV matters when hard-wired data systems are desired. The proposed solution would rely upon cellular communications to eliminate such needs.

10

Prepared by Marie Moulton Phillipp – 760-681-7638 – MarieMP@SolarPVES.com
Stellar Solar – 265 Via Del Monte, Oceanside, CA 92058 – www.StellarSolar.net – CA License No. 749095 (C-10)

Confidentiality Notice: The information contained in this proposal and any attachments is considered a confidential and/or privileged communication between Stellar Solar and the recipient.



3. Furnish and installation of conduit that penetrates a structure or goes underground; stub-ups with conductors (for PV location connections as applicable). Please coordinate for inclusion in main electrical scope. It is expected that all PV conduit in Stellar scope will be *at the canopy level* near PV array or external/flush to walls near main switchgear location.
4. Battery Energy Storage System (BESS) or Microgrid configuration
5. Furnish and installation of bidirectional switch gear
6. Furnish and installation of a tap-style connection at the main switch gear and utility meter location if/when required to accommodate PV and BESS combined system size. N/A if proposed PV system is the only PV or BESS equipment that will be connected to this switchgear. Larger PV systems or future BESS will exceed the allowable breaker connection.
(*When applicable*, either upsize and derate switchgear to avoid a tap, or order switch gear with pre-installed line side tap configuration for greatest efficiency and to avoid retrofit cost/time. Be advised that some utilities may not allow tap connections of PV or BESS. LADWP typically accepts tap connections.)
7. Third party certification of tap-style connection (when retrofit tap required)
8. Recertification of existing switch gear (outside of new tap-style connection, separately listed)
9. Service upgrades or derates to newly ordered or existing equipment
10. Utility shutdown and associated fees – assumed to be coordinated by Others if required.
11. Inverter supplemental enclosures beyond their off the shelf enclosures
12. Most inverters no longer include LCD display windows. There are only lights indicating 'on' status. When such LCD displays are listed as a requirement in inverter specs we typically cannot comply.
13. DAS/Monitoring *optional to add* an AlsoEnergy or other third-party monitoring system or revenue grade meter. Monitoring can be changed or added per client requests or needs, but adding AlsoEnergy or other third-party or external monitoring equipment will add costs that are dependent upon what features are requested.
14. DAS/monitoring software *integration* with existing Energy/Building Management system (available for additional fee through some suppliers – not all – please notify prior to contracting). Ex: External Data Connection Set Up Fees -i.e., Osi Pi Integrations HECO RTU - assumes 80 points and up 16 hours of development – additional time will be charged as required – per data feed
15. String or panel level kWh output monitoring (inverter and system level only)
16. Weather station as part of monitoring system – not standard for small PV.
17. NGOM setup – N/A – [*Typically required for PV when both PV and BESS are being installed or for line side tap connections or virtual net metering scenarios.*] Components involved:
Furnish and installation of PV AC disconnect(s) in NGOM setup – line of sight of electric room door.
Utility-owned meter and receptacle for PV – NGOM – Net Generation Output Meter
Coordinate with utility for approved equipment, pay utility to install their meter.
(*Typically required for PV systems when BESS is included, so utility has visibility on all PV output.*)

11

Prepared by Marie Moulton Phillipp – 760-681-7638 – MarieMP@SolarPVES.com
Stellar Solar – 265 Via Del Monte, Oceanside, CA 92058 – www.StellarSolar.net – CA License No. 749095 (C-10)

Confidentiality Notice: The information contained in this proposal and any attachments is considered a confidential and/or privileged communication between Stellar Solar and the recipient.



18. Telemetry (utility requirement – typically only with large PV installations – Ex: 1MW+ AC)
19. Concrete pad, such as if required to support a BESS cabinet/container or associated with a pedestal mounted set of equipment. None anticipated for this location with canopy post mounts.
20. Protective bollards around pedestals or BESS cabinet/container when required (not expected here)
21. Safety infrastructure: Safety tie-off points, Perimeter safety systems, skylight safety systems
22. Lighting – required under carport canopy systems to meet site lighting requirements
23. Sprinklers – sometimes required under canopy systems
24. Removal or disposal of hazardous/contaminated materials (notification of discovery only)
25. Demolition, surveying, utility locating work, specification writing
26. Trenching, underground work (outside of canopy post foundation drilling)
27. Mockups of PV installation
28. Traffic control or street closure permits (When required it is anticipated that a blanket permit has been obtained by others for the construction site, so any street closures associated with deliveries or hoisting can be accommodated without separate permits.)
29. Permit fees (DSA application, review, or other)
30. DSA in-person review meetings (if applicable this would require additional personnel time and travel fees per situation)
31. Special inspections (outside of those associated with the steel canopy foundations and installation process)
32. Utility or AHJ special requirements that may be triggered by installation of a PV system on site. (Examples include fire alarm and CO detector systems, equipment relocations, sprinkler systems, methane related requirements.)
33. Glare studies – when/if required, related to airport proximity; Environmental Studies; Coastal Commission or other special approval requirements; processes or agencies (*beyond the code-based typical AHJ approval process – DSA for Magnolia*) such as FM Global or other oversight bodies' additive review, engineering, or testing costs that are not made clear as process inclusions in our proposal language. *Material changes and subsequent re-engineering costs associated with such third-party special approval requirements beyond what is shown in original plan submittal are accordingly excluded.* These cannot be predicted if applicable or advised, as they go beyond standard code requirements.
34. Geotech soils report – (already received for Magnolia SA5) – typical for structural engineering calculations for carport canopy drilling zone and concrete pads that support BESS weight
35. Supplemental site mapping, non-Stellar Solar equipment identification, locating, or research if required to support utility interconnection requirements on a 'campus' or remote meter site.
36. Temporary facilities (chemical toilet, power, water, etc.)
37. Fencing, scaffolding, storage space/units
38. Parking fees (Notify in advance of contracting if this cost must be added.)

12

Prepared by Marie Moulton Phillipp – 760-681-7638 – MarieMP@SolarPVES.com
Stellar Solar – 265 Via Del Monte, Oceanside, CA 92058 – www.StellarSolar.net – CA License No. 749095 (C-10)

Confidentiality Notice: The information contained in this proposal and any attachments is considered a confidential and/or privileged communication between Stellar Solar and the recipient.



39. Cleaning of modules after installation. It is normal and expected for modules to collect dust. Return to 'wash' modules after installation is a separate add-on scope if/when requested.
40. Insurance special requirements if outside of standard Stellar Solar insurance. Submittal of insurance requirements to carrier will be done when requested, but coverage has not yet been verified. This is typically a minor adder even when something additional is required.
41. Utility rebate applications or fees if applicable. (Rebates are no longer expected to be available.)
42. Tax advising for tax incentives cannot be provided. NOTE for guidance: The 30% federal investment tax credit (ITC) is available for taxable entities and a Direct/Elective Pay tax credit is available for some non-taxable entities. Federal and state depreciation expensing, including bonus depreciation, also factors into the reduced net cost of PV for taxable entities. Entities should consult with their tax advisors on filing tax forms/claims. Third party financing may factor these tax incentives into the financial planning process per anticipated site qualifications.
43. Utility rate selections and changes – can only be made by owners directly with utilities
44. Union labor, labor agreements, PLA [*Prevailing Wage requirements noted separately.*]
45. Overtime, second shift, or weekend work (only M-F 0700-1700 included)
46. Things not addressed in this proposal document have not been reviewed or acknowledged and are not included. Please advise of any specific concerns for adequate coordination and acknowledgement. General conditions requirements to be met by others unless items are specifically called out as included in this bid.
47. Payment & Performance Bonding – capacity availability varies, but ~2.5% when provided.
48. Liquidated Damages – PV scheduling is often near the end and subject to the delays of all others.
49. Operations & Maintenance contracts for PV or BESS
– available under separate contracts if requested



Assumptions: Clarifications follow for the parameters of this project.

1. Inverter locations anticipated on canopy posts with onboard cell-card-based monitoring at PV inverter location unless coordinated differently prior to contracting. AC load panel to combine PV inverters is also anticipated to be located on a canopy post unless coordinated differently prior to contracting or through a change order.
2. Materials can be procured in advance and stored in an owner's bonded warehouse if appropriate, or they can be stored in a 3rd party logistics warehouse or Stellar Solar warehouse if acceptable (only when space is available). Logistics coordination discussion for project site deliveries will be important. **Early PV module procurement is critical to stable designs**, especially through longer durations involved with new construction to get through permitting and construction timelines without forced changes due to equipment availability challenges. Early inverter releases are sometimes critical due to unusually long lead times but are currently closer to 3-month lead times. These variables may change depending on the project timeline, but new module pricing and procurement challenges are on the horizon due to the implementation of recent trade case tariffs.
3. **PV material orders** will require deposits and/or pre-pay progress payment coordination. PV modules typically require advance payments to secure them and to have them released for delivery. Please consider in advance how to manage this, as it is different from the typical balance of materials.

Inverters can potentially have long lead times, so POs should be submitted early with deliveries taken as soon as inverters become available *when lead times are a concern*.

Structural steel canopies require more substantial up-front deposits to initiate the engineering and fabrication process and then to release the product for delivery and installation.

4. ACAD backgrounds for the site will be provided to Stellar Solar by the project team that has been working on the other phases of construction to facilitate completion of an accurate PV plan set. ACAD files will be requested/required during submittal preparation. Geotech soils reports will also be requested (already received for Magnolia SA5) for canopy sites and BESS pad structural planning when applicable. Canopy and ground mount installations may also require plot plans and supporting land data documentation.
5. Output values cannot be determined with realistic accuracy until a final on-site shading analysis can be performed with any nearby trees, mechanical enclosures and/or any roof obstructions and nearby buildings included. There are no claims or warranties being made regarding the system output values as they relate to potential shading until such verifications can be made for initial anticipated output. Final design and post-installation estimates can be made to establish a foundation for the product warranties. The panel manufacturer(s) will factor any baseline shading into their performance warranty.



Performance expectations:

Hanwha Q-Cells 600-watt (or comparable alternative, pending final design) output is projected to decline by no more than 2% in the first year, thereafter by .45% per year, so the power output will be at least 93.5% through 10th year and 84.95% of nominal power at the end of the 30th year based on manufacturer warranty guidelines. Product warranty of 12 years is typical for this model. Manufacturer warranty in effect at time of purchase applies.

Warranties:

1. 30-Year Manufacturer's Warranty on Solar Performance by Hanwha Q-Cells
2. 12-Year Manufacturer's Warranty on Module Workmanship by Hanwha Q-Cells
*Note that warranties in effect at time of purchase prevail for all solar modules.
3. 12-Year Manufacturer's Warranty on SolarEdge inverters (can be extended for \$\$)
4. 25-Year Manufacturer's Warranty on SolarEdge optimizers
5. 5-year min. PV DAS/monitoring service (software) by mfr. (access lifelong, ongoing active monitoring continues with cell card renewals for communications with inverter system)
6. 5-year min. PV DAS/monitoring hardware warranty by mfr. (for external hardware)
7. 1-year Stellar Solar warranty
8. Stellar Solar is an authorized installer for all Warranty items

Pricing: Prices quoted are valid for 30 days.

Prices and lead times remain volatile for our industry. Module manufacturers continue going through transitions in module dimensions, and long-range availability guarantees are not feasible. Proposed module expected to be available for shipping in 2025, but recent tariff news may impact pricing and supply in unpredictable ways. Deposits and advance payments to secure the product should be anticipated to maintain a stable design upon award and AHJ review.

Magnolia team,

Thank you for the opportunity to work with you on this PV canopy project. Please contact me with any questions, clarifications, or updates.

Respectfully,
Marie Moulton Phillipp

Stellar Solar celebrates 26 years in business in 2024. Thank you for considering us for your project.

15

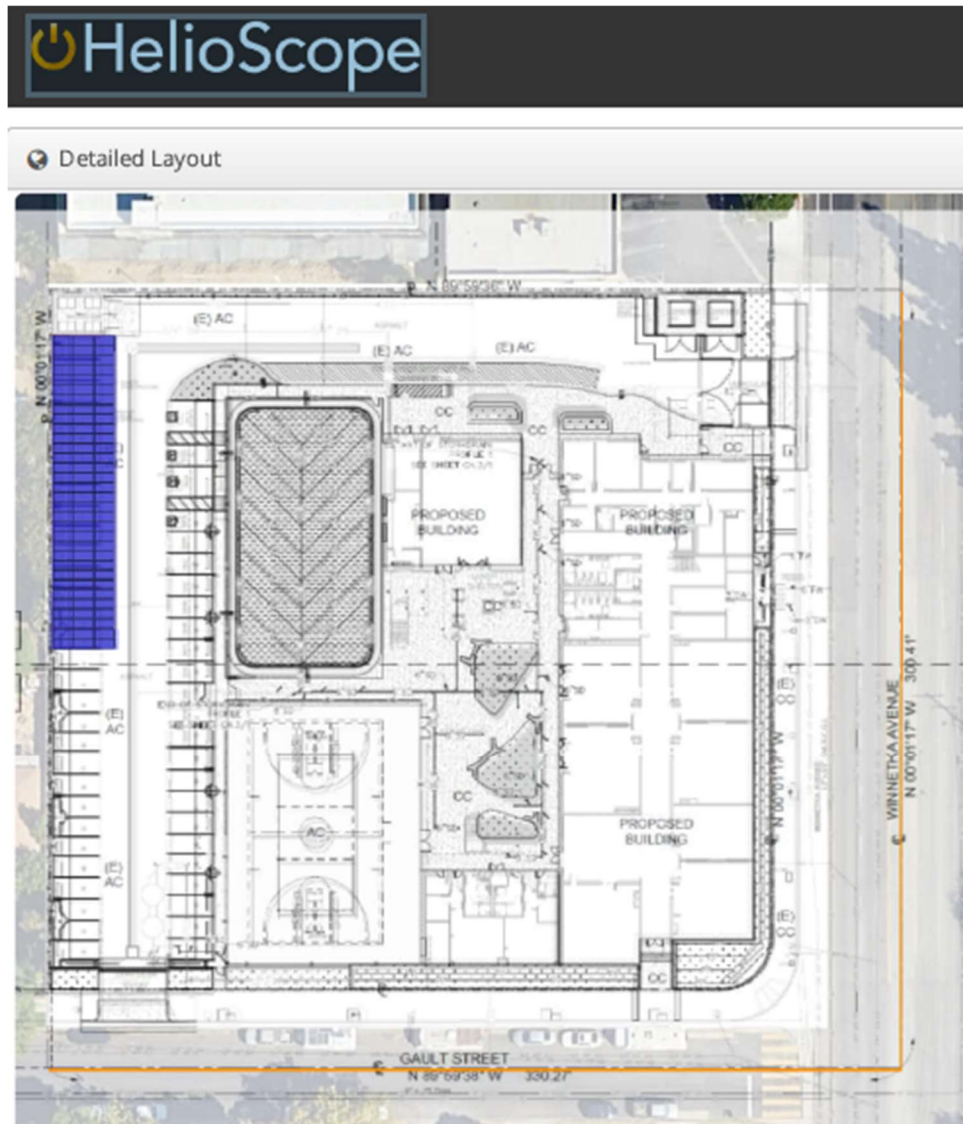
Prepared by Marie Moulton Phillipp – 760-681-7638 – MarieMP@SolarPVES.com
Stellar Solar – 265 Via Del Monte, Oceanside, CA 92058 – www.StellarSolar.net – CA License No. 749095 (C-10)

Confidentiality Notice: The information contained in this proposal and any attachments is considered a confidential and/or privileged communication between Stellar Solar and the recipient.

Magnolia SA5 – Design-Build Canopy Structure + PV – 2024-9-10

Preliminary Layout – 57.6 kW DC

Basis of design location used and sized to meet both electrical stringing and kWh performance target. PV modules will be through-bolt attached to structural steel canopy top sloped to west (min. 3-deg+). Emergency drive aisle height clearance will be factored into the design for DSA review.



16

Prepared by Marie Moulton Phillipp – 760-681-7638 – MarieMP@SolarPVES.com
Stellar Solar – 265 Via Del Monte, Oceanside, CA 92058 – www.StellarSolar.net – CA License No. 749095 (C-10)

Confidentiality Notice: The information contained in this proposal and any attachments is considered a confidential and/or privileged communication between Stellar Solar and the recipient.