

**SPECIFICATION SECTION 01 33 00: Design-Build Process and Submittals**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. This section describes the Design-Build Process and Submittal Requirements for the Project. Information provided in this section may be addressed in further detail elsewhere in the Contract or Bridging Documents. These requirements are in addition to those appearing elsewhere in the Contract or Bridging Documents.
- B. This specification applies to a design-build project and includes the design, construction and commissioning of a complete energy system as described here and elsewhere in the Contract and Bridging Documents.
- C. In this document, "Judicial Council" shall refer to Judicial Council of the State of California, owner of the site(s) where project will be located, regardless of system ownership, and include any representative of the site Judicial Council, such as independent engineers, consultants or inspectors. "Contract" refers to the design-build and/or construction contract and any associated design-build bridging documents, inclusive of requirements outlined in the request for proposals (RFP). "Contractor" refers to the entity performing the work, inclusive of Engineer(s) and Architect(s) of Record for design-build contracts, post construction system operator, and financier.
- D. Contractor shall follow the design-build process and submittal requirements of this specification, Section 01 10 00: Scope of Work, the Contract and other technical specifications for all stages of design.
- E. Bridging Documents may be amended or supplemented to include elements or ideas from Contractor's Proposal or other proposals, but only to the extent Judicial Council expressly agrees in writing. Contractor is solely responsible for confirming the extent of any changes to the Bridging Documents.

**1.02 RELATED DOCUMENTS**

- A. The Contract and any Design-Build Bridging Documents.
- B. Section 01 10 00: Summary of Work
- C. Other technical bridging specifications
- D. Where this specification and the Contract or other Bridging Documents are in conflict, the more stringent shall apply. Contractor shall identify conflicts and confirm recommended changes or procedures with the Judicial Council.

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### PART 2 - DESIGN-BUILD PROCESS & SUBMITTALS

#### 2.01 DESIGN PHASE

- A. The Judicial Council shall review and approve design documentation based on the requirements in this Specification, the Contract and the Bridging Documents. The design drawings and associated documents shall represent 100% of the intended and agreed upon scope for the Project. The Contractor shall be solely responsible for providing complete design and engineering, compliant with all applicable laws and the requirements of the Contract and Bridging Documents, by and through appropriately licensed design professionals, including, without limitation, licensed architects and registered professional engineers employed by, or under direct contract with Contractor. The design professionals so engaged shall serve as the Architect and Engineer(s) of Record and the Design Professional in General Responsible Charge of all construction.
- B. Upon Contract Execution, Contractor will be given Notice to Proceed (NTP) for the design phase of the project. Contractor shall submit executed NTP to the Judicial Council prior to commencing due diligence and site discovery. Upon Design NTP, Contractor shall begin due diligence and site discovery including but not limited to: geotechnical or CPT investigation and reporting, alta survey, coordination of title reports, civil survey, USA utility locate, ground penetrating radar (GPR) etc. Contractor shall ensure close coordination with Judicial Council for site access and scheduling.
- C. The Contractor shall organize and conduct weekly meetings during the design process, including providing formal meeting minutes. Three phases of formal design submittal are required as listed below, as well as a final Construction Document (CD) set following AHJ approval. For each phase of submittal, Contractor shall conduct design review meetings and maintain and distribute formal meeting minutes for each stage.

The following is an estimated schedule for each design phase submittal:

<b><u>Design Stage</u></b>	<b><u>Time from Contract Execution</u></b>
30% Schematic Design (SD)	within 10 weeks
60% Design Development (DD)	within 14 weeks
90% Construction Documents (CD)	within 18 weeks
Final CD Set	Within 20 (Prior to NTP)

- D. The Contractor shall submit an electronic submittal package for each Design Stage including, but not limited to the items outlined in Table 1.
- E. The Contractor shall host formal design review meetings with the Judicial Council and their representatives for each design stage submittal. The Contractor shall submit the design stage package no less than five (5) business days prior to the design review meeting. The Judicial Council and their representative(s) will provide formal comments for each phase of design and shall have ten (10) business days for review of each submittal.
- F. The Contractor shall address all Judicial Council comments in writing in the Judicial Council's preferred format and provide their comments with the next design submittal. The Judicial

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Council's review period will not begin until a complete design package and comment responses are received.

- G. Judicial Council comments shall be incorporated into each successive stage of the design review. If the Judicial Council has substantial comments on the 90% CD submittal, a formal review of the Final CD set may be performed by the Judicial Council and at the Judicial Council's discretion and at no additional cost to the Judicial Council. Contractor shall perform subsequent revisions and comment tracking prior to acceptance and issuance of a construction NTP.

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Submittal Requirement	30% Schematic Design (SD)	60% Design Development (DD)	90% CD Pre-AHJ & Final CD Set
1. Cover Sheet (TOC, project details, designers of record, Equip. Summary Table <sup>1</sup> , etc.)	X	X	X
2. PV/BESS System Sizes & Production Estimates	X	X	X
3. Site Plan (including array names, any BESS, interconnection details, conduit routes)	X	X	X
4. Interconnection Equipment Assessment	X	X	X
5. Electrical Site Plan Drawings, incl. Balance of System and any BESS	X	X	X
6. Electrical Single Line Diagrams w/ Utility Meter #s (including any BESS & ex. PV)	X	X	X
7. Site Plan (including topographic survey, GPR/UG utilities, easements)		X	X
8. Demolition Plans (tree/lights first submittal, comprehensive for final submittal)		X	X
9. Trench/Conduit Routes, Vault Locations, UG/Vault Details		X	X
10. DC String Wiring Plans (with corresponding inverter locations & IDs)		X	X
11. Electrical Grounding Details		X	X
12. Signage Details		X	X
13. Monitoring System & Metering Details (Including for any BESS)		X	X
14. Lighting Plan, As-Builts, Details and Photometric Plans		X	X
15. Equipment Pads, Mounting Details and Elevations (Including for any BESS)		X	X
16. All specifications related to the Scope of Work		X	X
17. For BESS/microgrid sites, control plans for the energy systems		Prelim	Detailed
18. Construction Schedule		Prelim	Detailed
19. Interconnection Plan			X
20. Interconnection Application Revision & Any Utility Coordination/Correspondence			X
21. Array Elevation Plan View			X
22. Structural Drawings and Calculations			X
23. Equipment Manufacturer's Cut Sheets and Details (Including any BESS/Microgrid)			X
24. Complete list of all Subcontractors, incl. specialty			X
25. Site Specific Construction Management Plan			X
26. Contractor's Commissioning Protocol (Including any BESS/Microgrid, see Section III)			X
27. For BESS Sites, BESS operating protocol to ensure SGIP PBI compliance			X
28. For Microgrid Sites, Microgrid operating protocol to meet bridging doc requirements			X
29. Complete Design Package Sufficient for AHJ Review			X

**Notes:**

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1. Equipment Summary Table shall include the following with details: Array No/Name, Dimensions, Azimuth, Tilt, Module Model/Count, Inverter Model/Count, Nameplate, No. of Strings, Canopy Column Count. BESS System, if included, shall list Power (kW), Energy (kWh), Pad Dimensions, Manufacturer and Control System.
- H. The Judicial Council will formally approve, in writing, each phase of the design upon determination that the design is progressing at or beyond the percentage completion expected at stage. The Contractor shall not enter a subsequent design phase without the approval of the Judicial Council. The Contractor is solely responsible for obtaining approvals from the Judicial Council and all other Authorities Having Jurisdiction (AHJs).
- I. The Contractor shall submit a System Size Spreadsheet showing all system sizes by site. For PV systems, size shall include modeling with year one production (kWh), and associated yields (kWh/kWp) per item 2 in Table 1. The spreadsheet shall be submitted at each phase of design as noted above and prior to construction. All final PV system designs shall be within 5% of contracted target production and must receive written approval from the Judicial Council before submittal to the AHJ. Along with the System Size Spreadsheet, the Contractor shall provide modeling software output reports, including shade analysis and 8760 production data using approved modeling software and assumptions prior to construction and post construction phase submittals. Where BESS, microgrid or other energy system components are included in the scope, the spreadsheet shall include nameplate and other key operational details for the additional systems.
- J. The Contractor shall conduct an interconnection equipment assessment for each interconnection service prior to the 30% Design submittal. Any issues with existing Judicial Council or Utility equipment that may prevent the system from interconnection to the Utility or may require unanticipated upgrades shall be identified at the time of the 30% Schematic Design submittal. The Contractor shall document costs for upgrades and compare with assumptions provided in B2 Cost Proposal Form for Judicial Council review and approval.
- K. The Contractor's 90% CD submittal set shall include specifications and/or details for the following items, either detailed on drawings or provided as specifications. Any deviations from bridging document specifications shall be identified and submitted as redlines with the 90% CD submittal.
  1. Cutting and Patching
  2. Subsurface Investigation
  3. Concrete Forming, Reinforcing, and Finishing
  4. Structural Steel Framing
  5. Metal Fabrications
  6. Roof Patch and Repair
  7. Painting and Coating
  8. Signage
  9. Testing and Commissioning
  10. Exterior Lighting and Controls
  11. Earthwork
  12. Vegetation Clearing and Control
  13. Pavement Specialties and Striping

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### 14. Fencing and Gates

- L. The Contractor shall submit complete electronic copies of all Final Approved Permit Sets (Issued for Construction) drawings prior to Construction. This document set shall address all comments made by the Judicial Council on the 90% submittal. Construction NTP shall not be provided until the complete document set has been provided.

### 2.02 CONSTRUCTION PHASE

- A. Contractor shall obtain all required permits and approvals from the AHJ(s) and the Utility(ies) prior to starting Construction, in coordination with the Judicial Council, and shall make copies available to the Judicial Council of all permit applications and approvals.
- B. Judicial Council shall provide formal NTP for construction upon receipt of acceptable Final Approved Permit Sets with all necessary AHJ approvals and all required proof of bonding. Contractor shall submit executed NTP documentation to the Judicial Council prior to commencing construction.
- C. Prior to beginning construction, Contractor shall:
  - 1. Provide a comprehensive onsite Construction Management and Safety Plan for the construction of the Project in accordance with all applicable laws, policies and OSHA compliant safety practices. As a minimum the Contractor should plan to share their documentation for the following operational safety items: Contractor shall initiate, maintain, and supervise all safety precautions and programs in connection with the performance of the work, and shall make all employees engaged in the performance of the work aware of all Project safety, fire, and health requirements and regulations including the appropriate use of personal protective equipment. The contractor shall ensure there is a Site-Specific Safety Plan for each location where work is being performed and that Site Specific Safety Plan is compliant with all applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety and protection of persons and property from damage, injury, or loss.
  - 2. Plan should include, at a minimum, address of local emergency medical facilities, project directory, information on Sub-Contractors, coordination with Judicial Council staff during specific construction tasks, and communication protocols.
  - 3. Provide an updated detailed Construction Schedule and a three-week look-ahead. Contractor shall keep the detailed construction schedule up to date. Accurate and up to date three-week look-ahead schedules shall also be provided throughout construction on a weekly basis the day prior to the weekly meeting.
  - 4. Conduct a kickoff meeting with the Judicial Council to confirm all logistics for mobilization and start of construction.
- D. The Contractor shall provide Manufacturers' Installation Manuals for major project components, including, but not limited to: PV modules, inverters, racking or mounting structure, monitoring systems, BESS systems, microgrid systems, EV charging systems, other major electrical equipment, and lighting. When approved by the Judicial Council, recommended installation

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standards shall become the basis for commissioning, inspecting and accepting or rejecting actual installation procedures used on the work.

- E. Prior to ordering equipment and materials, the Contractor shall verify all measurements at each project site and notify the Judicial Council in writing on any discrepancies between the drawings and site measurements.
- F. Any proposed changes to the agreed to design or scope of work shall be submitted in writing to the Judicial Council for approval before any changes are made. Submittal for changes shall contain all necessary details of the proposed changes, detailed costs, and an updated energy system details, including size and production spreadsheet. The Judicial Council will aim to review and respond to submitted design or scope changes within 15 business days, commencing from the day after submission of the proposed change.
- G. CONSTRUCTION SUBMITTALS: Shall be provided by the Contractor as detailed in Table 2:

**Table 2 – Construction Submittals**

Construction Submittal	Submittal Schedule
1. Construction Mgt & Safety Plan	No later than 15 days prior to site mobilization.
2. Construction Schedule	- Three-week look-ahead schedule updated and submitted weekly prior to the weekly meeting. - Detailed schedule regularly maintained and provided every two weeks or as-requested.
3. Manufacturers' Installation Manuals	No later than 5 days after construction kickoff meeting.
4. Weekly Meeting minutes	No later than the day prior to the next scheduled project meeting.
5. Product Data	As available
6. Test Reports / Factory Tests	As available
7. Field Tests	As available
8. Safety Data Sheets	Prior to installation
9. Design Deviations/ Requests for Information	<u>As-needed</u> . All deviations shall be accurately and legibly detailed by the Contractor and approved by Designer of Record, then presented to the Owner/Judicial Council Reps in the form of an RFI. All changes shall be recorded on as-built drawings at the time of the change.
10. Proposed Change Orders	Prior to commencing any changed work. Shall be formally submitted and approved by the Owner/Judicial Council Rep in writing.

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### **2.03 COMMISSIONING PHASE**

- A. The Contractor shall provide complete commissioning of all energy systems installed as part of this project.
- B. Commissioning protocols shall be provided in the form of a Method of Procedure (MOP) for review and approval by the Judicial Council for all major energy systems. Protocols shall adhere to all bridging document requirements and follow standard industry practices.
- C. Prior to commencement of commissioning tasks, the Contractor shall notify the Judicial Council and Judicial Council representatives. The Contractor shall reference the previously approved procedures and provide a schedule of all commissioning, testing and safety activities.
- D. Contractor shall provide electricians and support to Judicial Council and Judicial Council representative for verification of commissioning and workmanship, including providing reasonable notice prior to conducting commissioning activities so Judicial Council representatives may observe.
- E. A detailed and comprehensive commissioning report shall be submitted within 15 days after commissioning has been completed on a site-by-site basis.

### **2.04 CLOSEOUT PHASE / PROJECT ACCEPTANCE**

- A. Contractor shall deliver document submittals to the Judicial Council per Table 3 in order to achieve each completion milestone and successfully closeout the project. A digital library will be created by the Judicial Council, and the Contractor shall upload organized and collated digital versions of closeout documentation for each of the items listed below on a site-by-site basis. The Judicial Council will review each submittal and formally approve each item upon review and confirmation of completeness. Incomplete submittals shall be corrected by the Contractor prior submittal acceptance. A formal notice by the Contractor shall be provided for each milestone acknowledging this checklist and successful submission of completed and approved checklist items. The Judicial Council shall review and formally approve the notice for each site.



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<b>Substantial Completion</b>	
1	AHJ Substantial Completion Notice (As-needed for Interconnect)
2	Schedule for Project Closeout
3	Commissioning Protocol
4	Utility Interconnection Request Submitted
5	Contractor Notice of Substantial Completion
<b>Commercial Operation Date - COD (All Substantial Completion items plus:)</b>	
6	Utility Permission-to-Operate (PTO) Notice
7	AHJ(s) Acceptance/Completion Documentation
8	Contractor Commissioning Documentation
9	As-Built Plan Sets (See Item C)
10	Major Equipment Cut Sheets/Warranty Documentation
11	As-Built Performance Modeling & 8760 Data
12	DAS Login Access and Credentials & Verification of Function
13	Punchlist – Major/Safety Items Signed Off by Owner/Inspectors (See Item D)
14	O&M Manual Draft (See Item E)
15	Subcontractor Notices of Completion
16	Contractor Formal Commercial Operation Notice
<b>Final Completion/Acceptance (All COD items plus:)</b>	
17	Punchlist – All Lists Signed Off (See Item D)
18	O&M Manual Final
19	Owner/Judicial Council Rep Commissioning/Inspection Completed
20	Operation and Safety Training (for Purchaser)
21	All Change Orders/Payments Finalized
22	Final Amended Executed Contracts (PPA & PeGu) (See Item F)
23	Inverter/Data Logger Serial Numbers, IDs, Locations Provided and Functional
24	DSA Closeout Documentation Complete and Submitted (See Item G)
25	Contractor Notice of Final Completion

- B. For energy delivery and purchase under a PPA Contract, achieving the above milestones shall be interpreted as follows:
1. Commercial Operation Date (COD): Seller may begin recording energy delivered for the purposes of charging the Purchaser.
  2. Final Completion: Purchaser will begin paying for energy delivered upon Final Completion.
- C. Contractor shall submit complete digital “As-Built” Record Drawings for all sites for review and approval by the Judicial Council. Final as-built plans shall be provided in both AutoCAD (CAD) and portable document format (PDF). All deviations from the sizes, locations and other features shown in the Final CD/IFC plan sets must be captured in detail in the As-Built Record Drawings, including as-built sketches, details, and clarifications. Details shall include locations of work

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buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines and conduits. All directional boring logs, depths and routes and canopy or other foundation locations and depths shall be accurately shown on As-Built Record Drawings.

- D. The Contractor shall submit documentation of Punch List Completion for items under control of the Contractor within 30 days of the Judicial Council issuing the Final Punch List. The document must be signed and show proof of completion of each item.
- E. The Contractor shall submit to the Judicial Council a comprehensive Operations and Maintenance (O&M) manual. O&M manuals shall be prepared for the Judicial Council for all financing types, including third-party finance of the project. O&M manuals shall be collated into a single, bookmarked portable document format (PDF) file. The document shall be a well-organized, comprehensive and custom document with details for each site. The O&M document should not duplicate closeout submittal items listed in Table 3 and should not be a collection of manufacturers cut-sheets. The intention of the document is to provide an overview of the energy systems installed at each site for the Judicial Council's reference to safely interact with the systems, monitor performance, contact the Judicial Council during operation, respond during or after an emergency, and to understand the regular maintenance that will occur. The O&M manual shall include the following minimum items:
1. An overview and description of the energy systems installed, including system nameplates, system functions and key performance details. Summary shall also include the date and reference number for: Permission-to-Operate (PTO), Commercial Operation Date, Final Completion, and AHJ Closeout.
  2. A simple site plan for each site identifying the locations of major equipment, array/system naming conventions, monitoring system locations, and disconnects or other safety related equipment.
  3. Safety details, including shut-down procedures.
  4. Contact information for routine items and for emergencies.
  5. Monitoring system details including information for accessing the platform and key performance metrics the Judicial Council should review.
  6. Summary of Performance Guarantee on a site-by-site basis, inclusive of COD for each site, reporting dates and true-up dates.
  7. Maintenance information, including schedules, responsibilities for ongoing maintenance, and Standard Operating Procedures for both O&M personnel and the Judicial Council. Detail shall include notification and site access protocols for O&M personnel.
  8. Troubleshooting and repair, including responses to typical issues and responsible parties.
  9. Any other information that may be required for the Judicial Council to easily and safely interact with, confirm performance, troubleshoot, maintain and/or service the materials and equipment installed under this Contract.
  10. For BESS/Microgrid systems, a control plan detailing the intended system operation and function, with details for monitoring and confirming performance.

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- F. The Contractor shall submit executed Performance Guarantee (PeGu) Agreement amendment(s) within 30 days of PTO at all sites. All performance tables and commercial operation dates must be updated with the final as-built statistics.
- G. Contractor shall provide any other Project documentation required by AHJs to successfully closeout permits or meet other project requirements.
- H. Contractor shall obtain confirmation from the DSA that Carport design has been reviewed and meets DSA ADA requirements. For clarity only the ADA requirements will be reviewed by DSA.

END OF SPECIFICATION SECTION 01 33 00