



**REQUEST FOR PROPOSAL**

**REFURBISH ELECTRICAL ROOMS  
AND  
OTHER UPGRADES  
– BID PACKAGE 2**

RFP No.  
HHSC FY 18-09

FOR

**HAWAII HEALTH SYSTEMS CORPORATION**  
Kauai Region  
Kauai Veterans Memorial Hospital

Kauai Veterans Memorial Hospital  
4643 Waimea Canyon Drive  
Waimea, HI 96796

Hawaii Health Systems Corporation  
An Agency of the State of Hawaii

# **TABLE OF CONTENTS**

		<u>Page No.</u>
SECTION	1: ADMINISTRATION	3
SECTION	2: SCOPE OF SERVICES	8
SECTION	3: PROPOSALS	9
SECTION	4: EVALUATIONS	14
SECTION	5: AWARD OF CONTRACT	17
APPENDIX	A: SAMPLE TRANSMITTAL COVER LETTER	22
APPENDIX	B: PROPOSAL SUBMISSION CHECKLIST	23
APPENDIX	C: SAMPLE HAWAII HEALTH SYSTEMS CORPORATION CONTRACT FOR GOODS OR SERVICES BASED UPON COMPETITIVE SEALED PROPOSALS	24
APPENDIX	D: SPECIALIZED EXPERIENCE – PRIME CONTRACTOR	36
APPENDIX	E: CERTIFICATION OF COMPLIANCE	37
APPENDIX	F: BID FORM	38
EXHIBIT	A: SPECIFICATIONS	42
EXHIBIT	B: DRAWINGS	

## **SECTION 1: ADMINISTRATION**

### **1.1 INTRODUCTION**

This Request for Proposal (hereinafter “RFP”) is issued by the Kauai Region of the Hawaii Health Systems Corporation (hereinafter “HHSC”), a public body corporate and politic and an instrumentality and Agency of the State of Hawaii.

Thank you for your interest in submitting a proposal for this solicitation. The rationale for this competitive sealed RFP is to promote and ensure the fairest, most efficient means to obtain the **best value** to HHSC, i.e, the proposal offering the greatest overall combination of service and price. Hereinafter, organizations interested in submitting a proposal in response to this RFP shall be referred to as “OFFEROR”.

In order for HHSC to evaluate OFFEROR’s response in a timely manner, please thoroughly read this RFP and follow instructions as presented.

### **1.2 PROCUREMENT TIMETABLE**

The timetable as presented represents HHSC’s best estimated schedule. If an activity of the timetable, such as “Closing Date for Receipt of Proposals” is delayed, the rest of the timetable dates may be shifted. OFFEROR will be advised, by addendum to the RFP, of any changes to the timetable. Contract start date will be subject to the issuance of the Notice to Proceed.

<b>ACTIVITY</b>	<b>SCHEDULED DATES</b>
1. RFP Public Announcement	04/20/18
2. Closing Date for Receipt of Questions	05/04/18
3. Addendum for HHSC Response to Offeror's Questions	05/11/18
4. <b>Closing Date</b>	<b>3:00pm on Monday, 05/21/18</b>

### **1.3 MANDATORY PRE-PROPOSAL CONFERENCE**

*Questions and request for clarifications must be submitted in writing to the Contracting Manager via email or fax no later than **May 4, 2018**.* Subsequent answers from HHSC that affect the scope of this project will be contained in a written response to questions and clarification requests.

### **1.4 RFP ORGANIZATION**

This RFP is organized into five sections:

#### **SECTION 1: ADMINISTRATIVE**

Provides information regarding administrative requirements.

#### **SECTION 2: SCOPE OF SERVICES**

Provides a detailed description of goods and/or services to be provided and delineates HHSC and CONTRACTOR responsibilities.

**SECTION 3: PROPOSALS**

Describes the required format and content for submission of a proposal.

**SECTION 4: EVALUATION**

Describe how proposals will be evaluated and lists the “value weight percentages” of the evaluation categories.

**SECTION 5: AWARD OF CONTRACT**

Describes procedures for selection and award of contract.

**1.5 HEAD OF PURCHASING AGENCY (HOPA)**

The HOPA for HHSC, or designee, is authorized to execute any and all Agreements (Contracts), resulting from this RFP.

The HOPA for this RFP is:  
Lance Segawa  
Regional CEO – Kauai Region

**1.7 DESIGNATED OFFICIALS**

The officials identified in the following paragraphs have been designated by the HOPA as HHSC’s procurement officials responsible for execution of this RFP, award of Agreement and coordination of CONTRACTOR’s satisfactory completion of contract requirements.

**1.8 ISSUING OFFICER**

The Issuing Officer is responsible for administrating/facilitating all requirements of the RFP solicitation process and **is the sole point of contact for OFFEROR from date of public announcement of the RFP until the selection of the successful OFFEROR.** The Issuing Officer will also serve as the Contract Manager responsible for contractual actions throughout the term of the contract.

The Issuing Officer is:

Cora Shirai, Contract Manager  
HHSC/Kauai Veterans Memorial Hospital  
4643 Waimea Canyon Drive, P. O. Box 337  
Waimea, HI 96796  
Phone: 338-9454  
email: cshirai@hhsc.org

**1.9 HHSC ORGANIZATIONAL INFORMATION**

**1.9.1 CHARTER**

HHSC is a public body corporate and politic and an instrumentality and agency of the State of Hawaii. HHSC is administratively attached to the Department of Health, State of Hawaii and was created by the legislature with passage of Act 262, 1996 Session Laws of Hawaii. Act 262 affirms the State's commitment to provide quality health care for the people in the State of Hawaii, including those served by small rural facilities.

**1.9.2 STRUCTURE AND SERVICES**

HHSC oversees the operation of twelve public health facilities throughout the Hawaiian Island chain, including Oahu, Lanai, Kauai and Hawaii. HHSC is organized into four operational regions and provides a broad range of healthcare services including acute, long term, rural and ambulatory health care services. As the fourth largest public health system in the country, HHSC is the largest provider of healthcare in the Islands, other than on Oahu, and is the only acute care provider on the Islands of Maui and Lanai. This solicitation includes Kauai Veterans Memorial Hospital on the island of Kauai.

**1.9.3 MISSION**

The mission of HHSC is to provide and enhance accessible, comprehensive health care services that are quality-driven, customer-focused and cost-effective.

**1.9.4 FACILITY INFORMATION**

Detailed information pertaining to HHSC Facilities is located at <http://www.hhsc.org>.

**1.10 SUBMISSION OF QUESTIONS**

Relevant questions must be submitted in writing via electronic mail or facsimile to the Issuing Officer no later than the "Closing Date for Receipt of Questions", identified in paragraph 1.2 in order to generate an official answer. All written questions will receive an official written response from HHSC and become addenda to the RFP.

**- IMPORTANT -**

**OFFEROR may request changes and/or propose alternate language to the DAGS Interim General Terms and Conditions during this phase only. All requests will be presented to the HHSC Legal Department for review. No requests to change the DAGS Interim General Terms and Conditions will be entertained after the proposals have been submitted or during the contracting process.**

HHSC reserves the right to reject or deny any request(s) made by OFFEROR.

Responses by HHSC shall be due to the OFFEROR no later than the dates for initial questions and final questions stipulated in Section 1.2.

Impromptu, un-written questions directed to the Issuing Officer are permitted and verbal answers will be provided during pre-proposal conferences and other occasions, but are only intended as general direction and shall not represent the official HHSC position and shall not be relied upon by OFFEROR. The only official position of HHSC is that which is stated in writing and issued in the RFP as addenda thereto.

Any communication other than that described in this Section 1.10, whether oral or written, shall not be construed as a formal or official response/statement and may not be relied upon. Please send questions to the Issuing Officer, Cora Shirai ([cshirai@hhsc.org](mailto:cshirai@hhsc.org)) and Maia Guirao ([mguirao@hhsc.org](mailto:mguirao@hhsc.org)).

#### **1.11 SOLICITATION REVIEW**

OFFEROR should carefully review this solicitation for defects and questionable or objectionable matter. Comments concerning defects and questionable or objectionable matter, **excluding requests to revise the General or Special Conditions**, must be made in writing and should be received by the Issuing Officer, Cora Shirai, no later than the “Closing Date for Receipt of Questions” as identified in Section 1.2. This will allow issuance of any necessary amendments to the RFP. It will also assist in preventing the opening of proposals upon which award may not be made due to a defective solicitation package.

#### **1.12 RFP AMENDMENTS**

HHSC reserves the right to amend the RFP any time prior to the ending date for the proposal evaluation period. RFP Amendments will be in the form of addenda and posted on the Kauai Region Procurement website. It is the OFFERORS responsibility to check the website located at <http://kvmh.hhsc.org/procurement/open-solicitations/> to ensure that any and all Amendments are incorporated into their RFP response.

#### **1.13 CANCELLATION OF RFP**

The RFP may be canceled when it is determined to be in the best interests of HHSC.

#### **1.14 PROTESTS**

An actual or prospective OFFEROR who is aggrieved in connection with the solicitation or award of the contract may submit a protest. Any protest shall be submitted in writing to the HOPA as noted below.

A protest based upon the content of the solicitation shall be submitted in writing within five (5) working days **after** the OFFEROR knows or should have known of the facts giving rise thereto; provided, however, that the protest shall not be considered unless it is submitted in writing prior to and not later than the Closing Date for Receipt of Proposals identified in Section 1.2.

A protest of an award or proposed award shall be submitted within five (5) working days after the posting of award of the contract, provided that a protest following a debriefing shall be submitted within five (5) working days after the debriefing is completed. The

notice of award, if any, resulting from this solicitation shall be posted on the Kauai Veterans Memorial Hospital website at: <http://kvmh.hhsc.org/procurement/open-solicitations/>

Any and all protests shall be submitted in writing to the HOPA, as follows:

Lance Segawa  
Regional Chief Executive Officer – Kauai Region  
Hawaii Health Systems Corporation  
4643 Waimea Canyon Drive, P.O. Box 337  
Waimea, HI 96796

**SECTION TWO**  
**SCOPE OF SERVICES**

**2.1 INTRODUCTION**

The purpose of this competitive sealed solicitation is to award a single, fixed price Agreement to an Offeror for the installation of the photovoltaic panels. The Offeror must be able to demonstrate experience with similar projects and proven compliance with all the project's federal, state and county requirements. Renovations shall occur within the required guidelines for OSHA, Joint Commission and Infection Control.

**2.2 SCOPE OF WORK:**

1. Bid shall include the installation of the photovoltaic panels. Please refer to Specifications (EXHIBIT A) for details on scope of work.

Anticipated project start date shall commence on the Notice to Proceed date. Project completion shall be coordinated with the Regional Director of Facilities. Liquidated damages shall be assessed in the amount of TWO HUNDRED FIFTY DOLLARS (\$250.00) per day.

**2.3 WORKING HOURS**

1. All work shall be conducted during normal work hours, 7:30 a.m. to 4:00 p.m. Monday through Friday, excluding State Holidays. Noise restrictions do apply. Work performed outside of the hours above shall be approved by HHSC Technical Representative prior to work being performed. If work needs to be performed after normal work hours, the contractor shall be responsible for any cost the hospital incurs to provide necessary personnel to comply with its operations requirements.
2. The Contractor may be given approval to work beyond the regular hours including Saturdays, Sundays, State Holidays, night work, or after hours upon the pre-approval of the HHSC Technical Representative.

**2.4 TECHNICAL REPRESENTATIVES**

Technical Representative has the right to oversee the successful completion of contract requirements, including monitoring, coordinating and assessing CONTRACTOR performance; placing requests for services; and, approving completed work/services with verification of same for CONTRACTOR's invoices. Technical Representative will also serve as point of contact for "technical" matters throughout the term of the agreement. The Technical Representative is Mr. John Pimental, Regional Facilities Director.



## **SECTION 3** **PROPOSALS**

### **3.1 INTRODUCTION**

One of the objectives of the RFP is to make proposal preparation easy and efficient, while giving OFFEROR ample opportunity to highlight their proposal. When an OFFEROR submits a proposal, it shall be considered a complete plan for accomplishing the requirements described in this RFP.

### **3.2 PROPOSAL PREPARATION**

OFFEROR shall prepare a written proposal in accordance with requirements of this Section.

The Technical and Price proposals shall be distinct documents and readily separable for review. Proposals shall include all data and information requested to qualify proposals for evaluation and consideration for award. Non-compliance may be deemed sufficient cause for disqualification of a proposal.

Prepare proposals in three-ring binders, organized into distinctive sections, with tabs corresponding with the technical and price categories and other categories, as appropriate. The development of overly elaborate proposals and presentation material, not required and/or related to RFP requirements, is **HIGHLY DISCOURAGED**. This procedure will facilitate proposal evaluations.

Additionally, proposals shall include and address, at a minimum:

- The information identified below in Section 3.5;
- The pricing information outlined in Section 3.8;
- Proposal Transmittal Cover Sheet, Appendix A
- Proposal Submission Checklist, Appendix B;
- Bid Security Bond 5%
- Certificate of Compliance from the Hawaii State Department of Labor and Industrial Relations; and
- Certificate of Good Standing from the Department of Commerce and Consumer Affairs Business Registration Division

### **3.3 COSTS FOR PROPOSAL PREPARATION**

Any and all costs incurred in the development of proposals, i.e., preparing and submitting, on-site product/service demonstrations, on-site visits, oral presentations, travel and lodging, etc. shall be the sole responsibility of OFFEROR.

### **3.4 DISQUALIFICATION OF PROPOSALS**

HHSC reserves the right to consider as acceptable only those proposals submitted in accordance with all requirements set forth in the RFP and which demonstrate an understanding of the Scope of Services. HHSC reserves the right to ask for clarification of any item in the proposal.

**- ATTENTION -**

**Any proposal offering any other set of terms and conditions contradictory to those included in the RFP may be disqualified without further notice. Please refer to Section 1.10.**

An OFFEROR will be disqualified and the proposal automatically rejected for any one or more of the following reasons:

- Proof of collusion among OFFERORS, in which case all proposals involved in the collusive action will be rejected.
- The OFFEROR’S lack of responsibility and cooperation as shown by past work or services.
- The proposal shows any noncompliance with applicable law.
- The proposal is conditional, incomplete, or irregular in such a way as to make the proposal incomplete, indefinite, or ambiguous as to its meaning.
- The proposal has any provision reserving the right to accept or reject award, or to enter into a contract pursuant to an award, or provisions contrary to those required in the solicitation.
- Proof of exclusion from participation in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care.

**3.5 SUBMISSION OF PROPOSALS**

Each OFFEROR may submit only one (1) written proposal (which includes a technical proposal and a price proposal). Alternate proposals will not be accepted. The Issuing Officer must receive one (1) original and two (2) copies **and one copy in electronic format** of the proposal no later than the “Closing Date for Receipt of Proposals”, identified in Section 1, paragraph 1.1. **Proposals received after this time/date may be rejected.** The original shall be clearly marked “ORIGINAL” and copies shall be clearly marked “COPY”. Mail or deliver proposals to the following address:

Cora Shirai, Contract Manager  
Maia Guirao, Procurement Specialist  
Re: **RFP No. 18-09**  
Kauai Veterans Memorial Hospital  
4643 Waimea Canyon Drive, P. O. Box 337  
Waimea, HI 96796

The outside cover of the package containing the proposal should be noticeably marked, as follows:

**Proposal Submitted in Response to: **RFP # 18-09****

**3.6 PROPOSAL INFORMATION**

OFFERORS are hereby notified that evidence of the authority of the person(s) signing the offer document is required to be included with the offer documents. Failure to comply with this requirement will be cause for rejection of an offer as being non-responsive.

Each OFFEROR is to submit its proposal with the required number of copies in the format as contained in this RFP. The material should be in sequence and related to the RFP. HHSC will not provide any reimbursement for the cost of developing or presenting

proposals in response to this RFP. Failure to include the requested information may have a negative impact on the evaluation of the OFFEROR's proposal. The proposal should include at least the following information:

### **3.7 TECHNICAL PROPOSAL**

The technical proposal shall include the following categories:

1. Technical Summary (See Section 3.11.1)
2. Background, Qualification and Experience
3. Technical Proposal
4. Personnel Organization and Staffing; and
5. Management and Control

#### **3.7.1 TECHNICAL SUMMARY**

Clearly, concisely and briefly summarize and highlight the contents of the technical proposal in such a way to provide HHSC with a broad understanding and the unique, most promising aspects of the proposal.

#### **3.7.2 BACKGROUND, QUALIFICATION AND EXPERIENCE**

Provide explicit details on Company's background, qualifications, and experience relative to performing requirements set forth in the Scope of Services, including but not limited to:

- a. Background of Company, i.e. services offered, size, resources, years in business, location, State of Hawaii presence, state of incorporation, etc.
- b. Brief description of Company's qualifications to perform Scope of Services requirements.
- c. Brief description of three (3) past and/or present contracts demonstrating Company's qualifications, experience, and performance. Include customer name, contact name and telephone number. If not available, provide contact name and telephone number of three (3) references that can discuss your Company's qualifications, experience, and performance.
- d. Identification of litigation currently impacting the Company, if any. State "NONE", if none.

#### **3.7.3 TECHNICAL PROPOSAL**

Provide details on your technical proposal addressing how you will comply with the Statement of Work.

#### **3.7.4 PERSONNEL ORGANIZATION AND STAFFING**

Provide explicit details on the Company's personnel organization and staffing relative to performing requirements set forth in the Scope of Services, as follows:

- a. Company's managerial organizational chart and resumes of key positions.
- b. Key personnel identified to perform services, including: name, years of experience, years with the Company, qualifications and verifiable references (with contact telephone numbers), if any.

#### **3.7.5 MANAGEMENT AND CONTROL**

Provide a detailed summary of the methodology relative to performing requirements set forth in the Scope of Services, as follows:

- a. Assignment and management of personnel.
- b. Coordination of requirements with HHSC personnel.
- c. Problems anticipated, if any.

**3.8 PRICE PROPOSAL**

While price is a consideration, the overall value of the proposal is a critical factor in the evaluation. The Offeror shall provide material and labor cost and others (if applicable) using the Bid Form, APPENDIX F.

**3.9 PROPOSAL TRANSMITTAL COVER LETTER**

OFFEROR is required to submit the proposal with a transmittal cover letter. The transmittal cover letter must be on the OFFEROR'S official business letterhead; signed by an individual authorized to legally bind the OFFEROR; affixed with the corporate seal or notarized; and minimally include information, as written/requested, on the "sample" letter in Section 5, APPENDIX A.

**3.10 PUBLIC INSPECTION**

Proposals shall not be opened publicly, but shall be opened in the presence of two or more procurement officials. The register of proposals and OFFERORS' proposals shall be open to public inspection after the contract is executed by all parties.

OFFEROR shall request in writing the nondisclosure of designated trade secrets or other proprietary data to be confidential. Such data shall accompany the proposal and shall be readily separable from the proposal in order to facilitate eventual public inspection of the non-confidential portion of the proposal. The proposals are subject to disclosure rules set forth in Chapter 92F, HRS. The OFFEROR bears the burden of establishing that the designated data is exempted from the disclosure requirements set forth in Chapter 92F.

All proposals and other material submitted by OFFEROR become the property of HHSC and may be returned only at HHSC's option.

**3.11 TECHNICAL SECTION**

Any proposal offering a significantly non-compliant Technical Section may be disqualified without further notice.

**3.11.1 TECHNICAL SUMMARY**

Clearly, concisely and briefly summarize and highlight the contents of the technical proposal in such a way to provide HHSC with a broad understanding and the unique, most promising aspects of the proposal. This shall be placed at the beginning of the technical proposal.

**3.12 NON APPLICABLE PROPOSAL REQUIREMENT**

Excluding HHSC Special Conditions and DAGS Interim General and Conditions, and any objectionable or defective RFP matters, if any proposal requirement, as describe in this

Section, is not applicable to the OFFEROR and therefore will/cannot be provided, list the requirement(s) and provide detailed explanation of the reasons why the requirement(s) is not applicable. HHSC reserves the right to consider as acceptable only those proposals submitted in accordance with all requirements set forth in this Section.

**3.13 NON ACCEPTANCE OF ANY RFP REQUIREMENT**

If any RFP requirement, as described in this RFP, is not acceptable to the OFFEROR, list the requirement(s) and provide a detailed explanation of the reasons why the requirement(s) is not acceptable and provide a recommended revision, if applicable. HHSC reserves the right to consider as acceptable only those proposals submitted in accordance with all requirements set forth in the RFP.

**- ATTENTION -**

**Any proposal offering any other set of terms and conditions contradictory to those included in the RFP will be disqualified without further notice. Please refer to Section 1.10.**

**3.14 PROPOSAL SUBMISSION CHECKLIST**

The proposal submission checklist is designed to be used as a tool to ensure that all required documents and information are being submitted with OFFEROR'S proposal; and, as a supplementary means of performing evaluation of the "Mandatory Requirements", as set forth in Section 4, paragraph 4.3.1. The checklist is required to be completed by each OFFEROR and included (as the last document) in the proposal package. The proposal submission checklist is in Section 5, APPENDIX B.

## **SECTION 4** **EVALUATIONS**

### **4.1 INTRODUCTION**

The evaluation of proposals shall be conducted comprehensively, fairly, and impartially. Structural, quantitative scoring techniques will be utilized to maximize the objectivity of the evaluation.

### **4.2 PROPOSAL EVALUATION COMMITTEE**

An evaluation committee will be selected from HHSC to perform all evaluation requirements. The committee will be composed of individuals with experience in, knowledge of, and program responsibility for the requirements identified in the RFP. HHSC reserves the right to request information from OFFEROR to clarify the OFFEROR'S proposal.

### **4.3 EVALUATION PHASES**

Evaluation phases will be conducted as follows:

- Phase 1.....Evaluation of Mandatory Requirements
- Phase 2.....Technical Proposal Evaluation
- Phase 3.....Price Proposal Evaluation
- Phase 4....Determination of Priority List of OFFERORS
- Phase 4.....Proposal Discussions by Priority-List (**optional**)
- Phase 5.....Best and Final Offers by Priority List (**optional**)
- Phase 6.....Recommendation for Contract Award

#### **4.3.1 PHASE 1 – EVALUATION OF MANDATORY REQUIREMENTS**

The evaluation of the mandatory requirements, as listed below, shall be based upon a “Pass/No Pass” basis. The purpose of this phase is to determine whether an OFFEROR'S proposal is sufficiently responsible and responsive to RFP requirements to permit a complete evaluation, i.e., responsible in terms of “Does the OFFEROR have the capability to perform fully the Scope of Services requirements”; and, “Were proposal documents, as identified below, received by HHSC and do they contain the required information?” Failure to meet any mandatory requirement will be grounds for deeming the proposal non-responsible, non-responsive or both and disqualification (“No Pass”) thereof.

Proposal “Mandatory Requirements”

- Proposal Transmittal Cover Sheet
- Proposal in response to solicitation
- Pricing Schedule & Compensation
- Proposal Submission checklist
- Certificate of Compliance
- Certificate of Good Standing
- Bid Security (5% of lump sum proposal amount)

#### **4.3.2 PHASE 2 TECHNICAL PROPOSAL EVALUATION**

Evaluation of OFFEROR'S technical proposal shall be conducted using the technical proposal categories and the value weight percentages identified in paragraph 4.4 and the evaluation scoring system identified in paragraph 4.5.

**4.3.3 PHASE 3 PRICE PROPOSAL EVALUATION**

Evaluation of the price proposal shall be conducted using the price proposal category and the value weight percentages identified in paragraph 4.4.

**4.3.4 PHASE 4 PROPOSAL DISCUSSIONS WITH PRIORITY LISTED OFFERORS (OPTIONAL)**

At its discretion, following the Mandatory Requirements Phase, HHSC may develop a Priority List of Offerors based on the evaluation of OFFERORS' Technical and Price proposals. This Priority List may be asked to conduct discussions with HHSC. OFFEROR'S proposal may be accepted without Discussions. In the event that HHSC elects to hold Discussions, HHSC shall inform Priority-Listed OFFERORS of specific Discussion topics and issues; and schedule Discussion proceedings.

**4.3.5 PHASE 5 BEST AND FINAL OFFERS (OPTIONAL)**

OFFEROR may be requested to submit a Best and Final offer. Best and Final offers shall be evaluated and scoring of the OFFEROR'S proposal adjusted, accordingly. If a Best and Final offer is requested but not submitted, the previous submittal shall be construed as the Best and Final offer.

**4.3.6 PHASE 6: RECOMMENDATION FOR CONTRACT AWARD**

The Evaluation Committee shall prepare a report summarizing proposal evaluation findings/rankings and provide recommendation for award of contract to the HOPA.

**4.4 EVALUATION CATEGORIES AND VALUE WEIGHT PERCENTAGES**

<b>Mandatory Requirements</b>	<b>Pass/No Pass</b>
<b>Technical Proposal</b>	<b><u>Value Weight</u></b>
Cost	25%
Background, Qualifications and Past Performance	45%
Personnel Organization & Staffing	30%

---

**TOTAL..... 100%**

**4.5 EVALUATION SCORING SYSTEM**

The maximum number of points available for scoring is one thousand (1000) per evaluator. The proposal receiving the highest number of points is considered statistically the best proposal and the **best value** to HHSC; and, will be recommended for award of contract, unless otherwise determined and justified by the evaluation committee.

The evaluation categories are assigned a value weight percentage, as determined by HHSC, totaling 100%. Each category will be rated between one (1) and ten (10), with ten being the highest (the best rating) by each member of the evaluation committee. The OFFEROR'S total score (see note below) will be determined by: a) multiplying the assigned weight value of each category by the numerical rating provided by the evaluation committee member to determine the score for each category; b) totaling the score for all

categories of each evaluation committee member; and, c) totaling the score of all evaluators.

**Note:** In determining the total score, the OFFEROR'S price proposal with the lowest price will receive the highest available rating allocated to price. Each proposal that has a higher price than the lowest will have a lower rating for price. The points allocated to higher-priced proposals will be equal to the lowest proposal price multiplied by the maximum points available for price, divided by the higher proposal price.



## **SECTION 5** **AWARD OF CONTRACT**

### **5.1 AWARD OF CONTRACT**

Award of contract shall be made to the most responsible and responsive OFFEROR whose proposal is determined by the Evaluation Committee to provide the best value to HHSC, considering all evaluation reviews and results. The Contract award may be awarded in whole or in part based on the availability of funds.

### **5.2 CONTRACT AWARD NOTIFICATION**

The notice of award, if any, resulting from this solicitation shall be posted on the HHSC/Kauai Veterans Memorial Hospital website. This will serve as the official notification to all OFFERORS. In addition, the Issuing Officer will inform the successful OFFEROR of contract award selection by an official “notice of award” letter.

At its discretion and as a courtesy to the OFFEROR the Issuing Officer may issue a “Notice of Posting of Award” to the unsuccessful OFFERORS. However a delay in issuing the notice or the inadvertent omission of such courtesy notice will not extend the protest filing time.

### **5.3 CONTRACT AWARD DEBRIEFING**

If requested, HHSC shall provide a contract award debriefing. The purpose of a debriefing is to inform the non-selected OFFEROR of the basis for the source selection decision and contract award. A written request to the Issuing Officer for a debriefing shall be made within three (3) working days after receipt of non-award of contract letter from HHSC and/or posting of the award of the contract.

### **5.4 CONTRACT DOCUMENT**

The contract will be awarded by executing an **“Agreement for Goods or Services Based Upon Competitive Sealed Proposals”** (hereinafter “CONTRACT”) by HHSC and the successful OFFEROR (hereinafter “CONTRACTOR”). This document will serve as the official, legal contractual instrument between both parties. This document will incorporate (by attachments or reference) the RFP, with any and all addendums; GENERAL CONDITIONS and any SPECIAL CONDITIONS; and the CONTRACTOR’s accepted proposal, with any and all addendums, changes, negotiated agreements, all of which becomes part and whole of the CONTRACT.

A “sample” CONTRACT is located at APPENDIX C. Please DO NOT complete or execute the “sample” CONTRACT.

### **5.5 GENERAL AND SPECIAL CONDITIONS**

The DAGS Interim General Conditions are applicable and shall be apart and whole but are not physically included in these documents, but are included by reference. Copies of the Interim General Conditions may be obtained from the Division of Public Works,

Department of Accounting and General Services, State of Hawaii at the following website:  
<http://pwd.hawaii.gov/wp-content/uploads/2014/12/InterimGeneralConditions1999Edition.pdf>.

In the event of a conflict between the General Conditions and the Special Conditions, the Special Conditions shall control.

## 5.6 **GENERAL EXCISE/USE TAX**

Work to be performed under this solicitation is a business activity taxable under Chapter 237, Hawaii Revised Statutes (HRS), and Chapter 238, HRS, where applicable. Both out-of-state and Hawaii CONTRACTOR are advised that the gross receipts derived from this solicitation are subject to the general excise tax imposed by Chapter 237, HRS, and where applicable to tangible property imported into the State of Hawaii for resale, subject to the use tax imposed by Chapter 28, HRS.

Pursuant to Section 237-9, HRS, the CONTRACTOR is required to obtain and/or possess a valid General Excise Tax License from the Hawaii State Department of Taxation (DOTAX) prior to executing a contractual agreement with a State Agency.

The **General Excise Tax License** shall be obtained from the DOTAX offices in the State of Hawaii or the DOTAX Web Site and by mail or FAX. Refer to the next paragraph for procedures in obtaining DOTAX forms and information.

## 5.7 **CERTIFICATE OF COMPLIANCE**

The CONTRACTOR is required to obtain/possess a valid **Certificate of Compliance** from the Hawaii State Department of Labor and Industrial Relations (DLIR) prior to executing a contractual agreement with a State Agency. The certificate is valid for six months from the date of issue and must be valid on the date it is received by HHSC.

The **Certificate of Compliance** shall be obtained on the State of Hawaii, DLIR APPLICATION FOR CERTIFICATE OF COMPLIANCE WITH SECTION 3-122-112, HAR, Form LIR #27, which is available at [www.hawaii.gov/labor](http://www.hawaii.gov/labor) (open "Get a Form"; then open "LIR#27) or at the neighbor island DLIR District Offices. The application for the certificate is the responsibility of the OFFEROR and must be submitted directly to the DLIR and not to HHSC. The DLIR will return the form to the CONTRACTOR who in turn shall submit the form to HHSC.

## 5.8 **CERTIFICATE OF GOOD STANDING**

- a. **HAWAII BUSINESS.** A business entity referred to as a "Hawaii Business", is registered and incorporated or organized under the laws of the State of Hawaii. As evidence of compliance, the CONTRACTOR shall obtain/possess **Certificate of Good Standing** issued by the Department of Commerce and Consumer Affairs Business Registration Division (BREG). A "Hawaii Business" that is a sole proprietorship, however, is not required to register with the BREG, and therefore not required to submit the certificate. A CONTRACTOR's status as sole proprietor and its business street address as indicated on the proposal transmittal cover letter

(APPENDIX A) will be used to confirm that the CONTRACTOR is a Hawaii Business.

- b. COMPLIANT NON-HAWAII BUSINESS. A business entity referred to as a “Compliant Non-Hawaii Business” is not incorporated or organized under the laws of the State of Hawaii but is registered to do business in the State. As evidence of compliance, the CONTRACTOR shall obtain/possess Certificate of Good Standing issued by the Department of Commerce and Consumer Affairs Business Registration Division (BREG).
- c. The Certificate of Good Standing can be obtained by phone (call (808) 586-2727, Monday thru Thursday 7:45-4:30 HST) or by mail (Department of Commerce and Consumer Affairs, Business Registration Division, P.O. Box 40, Honolulu, Hawaii 96810). The certificate is valid for six (6) months from date of issue and must be valid on the date it is received by HHSC.

## 5.9 HAWAII COMPLIANCE EXPRESS

Alternatively, OFFEROR may apply and obtain proof of compliance with the above agencies electronically through the Hawaii State Procurement Office’s “Hawaii Compliance Express website at <http://vendors.ehawaii.gov>

One interface covers all the forms for all state agencies and partners. Easy to read instructions and context sensitive help make compliance safe, fast and efficient. Using the Wizard will file with Department of Taxation and optionally with the Business Registration Division of the DCAA. If you have or will have employees, the Wizard will also file with Department of Labor and Industrial Relations.

OFFERORS who elect to use the services will be required to pay an annual fee.

## 5.10 PERFORMANCE AND PAYMENT BOND

Upon the acceptance of the proposal by HHSC, the CONTRACTOR must enter into and execute a contract and furnish a Performance and Payment bond, as required by law.

## 5.11 Certification for Safety and Health Programs for Offers in excess of \$100,000

In accordance with HRS 396-18, by submitting this proposal, the Offeror certifies that its organization will have a written safety and health plan for this Project that will be available and implemented by the date stipulated in the Notice to Proceed. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational, Safety and Health Division (HIOSH).

## 5.12 LABOR AND WAGE CERTIFICATION

In accordance with HRS 104 Wages and Hours of Employment on Public Works Construction Projects in excess of \$2000, by submitting this proposal, the Offeror will comply with the requirements of chapter 104 and certifies that:

- a. Individuals engaged in the performance of the contract on the job site shall be paid not less than wages that the Director of Labor and Industrial Relations shall have determined to be prevailing for corresponding classes of laborers and mechanics employed on public works projects including any periodic adjustments to the prevailing wages during the performance of the contract;
- b. Overtime compensation shall be at one and one-half times the basic hourly rate plus fringe benefits for hours worked on Saturday, Sunday, or legal holiday of the State or in excess of eight hours on any other day; and
- c. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety shall be fully complied with.

**5.13** For offers of \$25,000 or more, the bidder shall comply with the following chapters of the Hawaii Revised Statutes (HRS): Chapter 237 HRS (general excise tax); Chapter 383 HRS (employment security - unemployment insurance); Chapter 386 HRS (workers compensation); Chapter 392 (temporary disability insurance); Chapter 393 HRS (pre-paid health care); and shall be incorporated or organized under the laws of the State, or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract. Offeror shall complete the CERTIFICATION OF COMPLIANCE form (APPENDIX F) and submit it with the proposal.

**5.14 CONTRACT EXECUTION**

Upon receipt of the CONTRACT document, the CONTRACTOR shall have ten (10) business days to execute and return the CONTRACT to the Issuing Officer. Explicit execution instructions will accompany the CONTRACT. A copy of the fully executed CONTRACT will be provided the CONTRACTOR within seven (7) business days of CONTRACT execution.

Award of CONTRACT may be withdrawn if the CONTRACTOR is unable to meet CONTRACT execution requirements.

**5.15 CONTRACT COMMENCEMENT DATE**

Upon completion of CONTRACT execution requirements, a "**Notice to Proceed**" letter will be provided the CONTRACTOR specifying the "Commencement" (start work) date of the CONTRACT. No work is to be undertaken by the CONTRACTOR prior to the commencement date specified in the Notice to Proceed letter. HHSC is not liable for any work, contract, costs, expenses, loss of profits, or any damages whatsoever incurred by the CONTRACTOR prior to the official, notice to proceed "Commencement" date.

**5.16 HEALTH AND HR REQUIREMENTS**

- a. Health, Insurance and Confidentiality requirements: If applicable, Offeror must ensure that personnel have the required health clearances and that all health, insurance and confidentiality requirements are maintained. Each individual performing on site work must be cleared with the Hospital's Human Resources and Employee Health Departments before starting work to include:

1. Facility will perform or Contractor will provide evidence of:
  - a) If Facility performs the State and Federal background checks, the cost is \$20 per individual billable to the Contractor. The Facility will bill the Contractor for the amount of checks performed. The Contractor should make prior arrangements with the Facility's HR Department to coordinate the checks and continued work is contingent upon satisfactory clearance of the background checks.
  - b) OIG/GSA clearance.
2. Contractor will provide satisfactory evidence of the following:
  - a) TB clearance – 2 step TST or historical documentation of a 2-step TST and a current skin test within 30 days of start date, or in the case of a positive TST, Chest X-ray with no evidence of active TB within the past (12) months. TB clearance shall be provided annually.

Drug screen – 10 panel drug screen, marijuana, cocaine, opiates, amphetamines [including crystal methamphetamine, phencyclidine (PCP), barbiturates, propoxyphene, methaqualone, benzodiazepine, and methadone] which is required within 30 days of start.

## SAMPLE PROPOSAL TRANSMITTAL COVER LETTER

Ms. Shirai:

(Name of Business) \_\_\_\_\_ proposes to provide any and all goods and services as set forth in the “Request for Proposals for Competitive Sealed Proposals” to provide the **“REFURBISH ELECTRICAL ROOMS AND OTHER UPGRADES – BID PACKAGE 2”** Kauai Veterans Memorial Hospital, **RFP #18-09**, for which fees/costs have been set. The fees/costs offered herein shall apply for \_\_\_\_\_ (Please insert applicable period of time) \_\_\_\_\_.

It is understood and agreed that \_\_\_\_\_ (Name of Business) \_\_\_\_\_ have read HHSC’s Scope of Services described in the RFP and that this proposal is made in accordance with the provisions of such Scope of Services. By signing this proposal, \_\_\_\_\_ (Name of Business) \_\_\_\_\_ guarantee and certify that all items included in this proposal meet or exceed any and all such Scope of Services.

\_\_\_\_\_ (Name of Business) \_\_\_\_\_ agree, if awarded the contract, to provide the goods and services set forth in the RFP; and comply with all terms and conditions indicated in the RFP; and at the fees/costs set forth in this proposal. The following individual(s) may be contacted regarding this proposal:

\_\_\_\_\_  
\_\_\_\_\_

**Other information:**

Business Phone #:		Federal Tax ID #:	
Facsimile #:		Hawaii GET Lic. ID #:	
E-mail address:			

\_\_\_\_\_ (Name of Business) \_\_\_\_\_ is a:  Sole Proprietor  Partnership  Corporation  Joint Venture Other  
(Specify) \_\_\_\_\_

State of Incorporation is: \_\_\_\_\_ (Specify) \_\_\_\_\_

The exact legal name of the business under which the contract, if awarded, shall be executed is:

\_\_\_\_\_  
Business Address: \_\_\_\_\_

(Authorized Bidder’s Signature, Printed Name/Title; Corporate Seal or Notarized)

Encl: Proposal

**PROPOSAL SUBMISSION CHECKLIST**

**\*Please Check Off  
Items For  
Submitted HHSC Use**

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Proposal Received “On-Time”                                |
| <input type="checkbox"/> | <input type="checkbox"/> | One Original; two copies; one electronic copy of Proposals |
| <input type="checkbox"/> | <input type="checkbox"/> | Proposal Transmittal Cover Letter:                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Official Business Letterhead                               |
| <input type="checkbox"/> | <input type="checkbox"/> | Authorized Signature                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | Corporate Seal or Notarized                                |
| <input type="checkbox"/> | <input type="checkbox"/> | Required Information                                       |
|                          |                          |  |
| Technical Proposal       |                          |  |
| <input type="checkbox"/> | <input type="checkbox"/> | Technical Summary  |
| <input type="checkbox"/> | <input type="checkbox"/> | Background, Qualification & Experience                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Technical Proposal   |
| <input type="checkbox"/> | <input type="checkbox"/> | Personnel Organization and Staffing                        |
| <input type="checkbox"/> | <input type="checkbox"/> | Management & Control                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | Cost Proposal  |
| <input type="checkbox"/> | <input type="checkbox"/> | Certificate of Compliance                                  |
| <input type="checkbox"/> | <input type="checkbox"/> | Certificate of Good Standing                               |
| <input type="checkbox"/> | <input type="checkbox"/> | Bid Security (5% of Total Lump Sum Proposal Amount)        |
| <input type="checkbox"/> | <input type="checkbox"/> | All Data and Information Required of the RFP               |
| <input type="checkbox"/> | <input type="checkbox"/> | Proprietary Documents (optional)                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Others (optional)  |
| <input type="checkbox"/> | <input type="checkbox"/> | Proposal Submission Checklist                              |
| <input type="checkbox"/> | <input type="checkbox"/> | General Excise License                                     |

**HAWAII HEALTH SYSTEMS CORPORATION  
AGREEMENT FOR GOODS OR SERVICES  
BASED UPON COMPETITIVE SEALED PROPOSALS**

**AGREEMENT NO: FY \_\_\_\_\_**

**THIS AGREEMENT**, by and between Kauai Region, a division of the Hawaii Health Systems Corporation, a public body corporate and politic and an instrumentality and agency of the State of Hawaii (hereinafter "HHSC"), by its Regional Chief Executive Officer (hereinafter "RCEO"), whose address is 4643 Waimea Canyon Drive, Waimea, Hawaii 96796, and \_\_\_\_\_, (hereinafter "CONTRACTOR"), a \_\_\_\_\_, under the laws of the State of \_\_\_\_\_ whose business address and taxpayer identification number are as follows:

**RECITALS**

- A. The HHSC is in need of the goods or services, or both, described in this Agreement and its attachments.
- B. The HHSC has issued a request for competitive sealed proposals, and has received and reviewed proposals submitted in response to the request.
- C.
- D. The CONTRACTOR has been identified as the responsible and responsive offeror whose proposal is the most advantageous for the HHSC, taking into consideration price and the evaluation factors set forth in the request.
- E. The HHSC desires to retain and engage the CONTRACTOR to provide the goods or services, or both, as the case may be, and the CONTRACTOR is agreeable to providing said goods or services, or both.

**NOW, THEREFORE**, in consideration of the promises contained in this Agreement, the HHSC and the CONTRACTOR agree as follows:

1. **Scope of Services.** The CONTRACTOR shall, in a proper and satisfactory manner as determined by the HHSC, provide all the services set forth in the request for competitive sealed proposals, **RFP #18-09** ("REQUEST"), and the CONTRACTOR's accepted proposal, including any and all revisions/addendum's/negotiated agreements thereto (collectively "PROPOSAL"), both of which, even if not physically attached to this Agreement, are hereby made a part of this Agreement.
2. **Time of Performance.** The performance required of the CONTRACTOR under this Agreement shall be executed in accordance with the time period set forth in Attachment S2.



3. **Compensation.** The CONTRACTOR shall be compensated for goods supplied or services performed, or both, under this Agreement in a total amount not to exceed \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_), including taxes, at the time and in the manner set forth in the RFP and CONTRACTOR's proposal.

4. **Bonds.** The CONTRACTOR (is) required to provide a (performance and payment) bond.

5. **Standards of Conduct Declaration.** The Standards of Conduct Declaration of the CONTRACTOR, is attached and is made a part of this Agreement.

6. **Other Terms and Conditions.** The DAGS Interim General Conditions and any Special Conditions are attached hereto and made a part of this Agreement. In the event of a conflict between the DAGS Interim General Conditions and the Special Conditions, the Special Conditions shall control. In the event of a conflict among the documents, the order of precedence shall be as follows: (1) Agreement, as may be amended by supplemental amendments from time to time, (2) Special Conditions, (3) DAGS Interim General Conditions, (4) Request, including all attachments and addenda; and (3) Proposal.

7. **Liquidated Damages.** Liquidated damages shall be assessed in the amount of TWO HUNDRED FIFTY DOLLARS (\$250.00) per day.

8. **Notices.** Any written notice required to be given by any party to this Agreement shall be (a) delivered personally, or (b) sent by United States first class mail, postage prepaid. Notice required to be given to the RCEO shall be sent to: HHSC, Head of Purchasing Agency (HOPA) / CEO, 4643 Waimea Canyon Drive, Waimea, Hawaii 96796. Notice to the "head of the purchasing agency" and/or "Agency Procurement Officer" as denoted in the General Conditions shall be sent to: HHSC, Attn: Procurement Office, 4643 Waimea Canyon Drive, Waimea, Hawaii 96796. Notice to the CONTRACTOR shall be sent to the CONTRACTOR's address as indicated in this Agreement. A notice shall be deemed to have been received three (3) days after mailing or at the time or actual receipt, whichever is earlier. The CONTRACTOR is responsible for notifying the HHSC in writing of any change of address.

**[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.  
SIGNATURES APPEAR ON THE FOLLOWING PAGE.]**

**IN VIEW OF THE ABOVE**, the parties execute this Agreement by their signatures, on the dates below, to be effective as of the date first above written.

**HHSC**

\_\_\_\_\_  
*(Signature)*

Lance Segawa  
*(Printed Name)*

Regional Chief Executive Officer - Kauai  
*(Title)*

\_\_\_\_\_  
*(Date)*

**\*CONTRACTOR**

\_\_\_\_\_  
*(Signature)*

\_\_\_\_\_  
*Printed Name:*

\_\_\_\_\_  
*(Title)*

\_\_\_\_\_  
*(Date)*

**\* Evidence of authority of the CONTRACTOR's representative to sign this Agreement for the CONTRACTOR must be attached.**



STATE OF HAWAII

CONTRACTOR'S ACKNOWLEDGMENT

STATE OF \_\_\_\_\_ )

) SS.

\_\_\_\_\_ COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me appeared \_\_\_\_\_ and \_\_\_\_\_, to me known, to be the person(s) described in and, who, being by me duly sworn, did say that he/she/they is/are \_\_\_\_\_ and \_\_\_\_\_ of \_\_\_\_\_, the CONTRACTOR named in the foregoing instrument, and that he/she/they is/are authorized to sign said instrument on behalf of the CONTRACTOR, and acknowledges that he/she/they executed said instrument as the free act and deed of the CONTRACTOR.

(Notary Stamp or Seal)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

Notary Public, State of \_\_\_\_\_

My commission expires: \_\_\_\_\_

Doc. Date: \_\_\_\_\_ # Pages: \_\_\_\_\_

Notary Name: \_\_\_\_\_ Circuit \_\_\_\_\_

Doc. Description: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Notary Stamp or Seal)

\_\_\_\_\_  
\_\_\_\_\_

Notary Signature

Date

NOTARY CERTIFICATION

## STANDARDS OF CONDUCT DECLARATION

For the purposes of this declaration:

"Controlling interest" means an interest in a business or other undertaking which is sufficient in fact to control, whether the interest is greater or less than fifty percent (50%).

"Employee" means any nominated, appointed, or elected officer or employee of the State or HHSC, including members of boards, commissions, and committees, and employees under contract to the State or of the constitutional convention, but excluding legislators, delegates to the constitutional convention, justices, and judges.

On behalf of \_\_\_\_\_, CONTRACTOR, the undersigned does declare, under penalty of perjury, as follows:

1. CONTRACTOR (is) (is not) a legislator or an employee or a business in which a legislator or an employee has a controlling interest.\*

2. CONTRACTOR has not been assisted or represented by a legislator or employee for a fee or other compensation to obtain this Agreement and will not be assisted or represented by a legislator or employee for a fee or other compensation in the performance of the Agreement, if the legislator or employee had been involved in the development or award of the Agreement.

3. CONTRACTOR has not been assisted or represented for a fee or other compensation in the award of this Agreement by a State or HHSC employee or, in the case of the Legislature, by a legislator.

4. CONTRACTOR has not been represented or assisted personally on matters related to the Agreement by a person who has been an employee of the State or HHSC within the preceding two (2) years and who participated while in state office or employment on the matter with which the Agreement is directly concerned.

5. CONTRACTOR has not been represented or assisted on matters related to this Agreement, for a fee or other consideration by an individual who, within the past twelve (12) months, has been a State or HHSC employee, or in the case of the Legislature, a legislator.

6. CONTRACTOR has not been represented or assisted in the award of this Agreement for a fee or other consideration by an individual who, 1) within the past twelve (12) months, served as a State or HHSC employee or in the case of the Legislature, a legislator, and b) participated while an employee or legislator on matters related to this Agreement.

CONTRACTOR understands that the Agreement to which this document is attached is voidable on behalf of the State or HHSC if this Agreement was entered into in violation of any provision of chapter 84, Hawaii Revised Statutes, commonly referred to as the Code of Ethics, including the provisions which are the source of the declarations above. Additionally, any fee, compensation, gift, or profit received by any person as a result of a violation of the Code of Ethics may be recovered by the State or HHSC.

CONTRACTOR

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\*Reminder to FACILITY: if "is" is circled, YOUR FACILITY is required, under section 84-15, Hawaii Revised Statutes, to file with the State Ethics Commission, ten (10) days before the Agreement is entered into, a written justification as to why the Agreement was not required to be competitively bid.

**Scope of Services**

- A. The CONTRACTOR shall provide services for the “REFURBISH ELECTRICAL ROOMS AND OTHER UPGRADES – BID PACKAGE 2” as specified in the Request for Proposal (“RFP”) No. 18-09, at Kauai Veterans Memorial Hospital.
  
- B. RFP No. 18-09 inclusive of all addendums and the Proposal, although not physically attached, is incorporated herein and made a part of this Agreement.
  
- C. The Kauai Region Technical Representative shall have the right to oversee the successful completion of contract requirements, including monitoring, and coordinating and assessing CONTRACTOR performance, and approving completed work/services with verification of same prior to the approval of a CONTRACTOR invoice. The Technical Representative also services as the point of contact for the CONTRACTOR for “Technical” matters (non-contractual) from award to contract completion. The Kauai Region Technical Representative John Pimental, Regional Director of Facilities.

## ATTACHMENT 2

### Time of Performance

- A. This Agreement shall commence on the Notice to Proceed Date as set for the in the RFP #18-09 and continue for period of one (1) year unless sooner terminated or extended as provided in the Agreement.
  
- B. This Agreement may be extended for two (2) one (1) year terms, subject to mutual written agreement between Kauai Region and the CONTRACTOR prior to the end of the then current contract period. A supplemental agreement shall be executed by the CONTRACTOR and Kauai Region to exercise any and all extensions.

**Compensation**

- A. In full consideration for the services to be performed by the CONTRACTOR under this Agreement, the HHSC agrees, subject to appropriation and allotments, to pay to the CONTRACTOR a total sum of money not to exceed \_\_\_\_\_ **DOLLARS (\$000,000.00)**, including all applicable taxes and expenses incurred, and in accordance with the following:
1. Base bid: \$ \_\_\_\_\_
- B. The CONTRACTOR shall submit invoices to the Facility's Technical Representative for approval and payment. Invoices shall reference the Agreement number and include, at a minimum, an itemized account of all compensation due.

**SPECIAL CONDITIONS**

- A. These Special Conditions are attached to the Agreement and incorporated by reference. In the event there is a conflict between the terms of the documents, or an ambiguity exists among the terms of the documents, the following order of priority shall prevail, with “1” being given the highest priority:
1. HHSC Special Conditions
  2. DAGS Interim General Conditions
  3. The solicitation documents and all addenda [indicate: RFP; IFB; or other].
  4. CONTRACTOR’s Terms and Conditions.
  5. CONTRACTOR’s proposal and best offer.
- B. The State of Hawaii Department of Accounting and General Services (“DAGS”) Interim General Conditions, dated August 1999, as may be amended from time to time (the “Interim General Conditions”), shall be read by the CONTRACTOR as they form a part of this Agreement. The Interim General Conditions are not physical included in these specifications, but are included by reference. Copies of the Interim General Conditions may be obtained from the Division of Public Works, DAGS, State of Hawaii at the following website:  
<https://pwd.hawaii.gov/wp-content/uploads/2014/12/InterimGeneralConditions1999Edition.pdf>
- C. The Interim General Conditions are hereby amended as follows:
1. The following terms specified in Section 1 are hereby defined as follows:
    - a) “Bidder” shall have the same definition as CONTRACTOR.
    - b) “Comptroller” shall be the Chief Financial Officer of the HHSC Kauai Region or his authorized representative.
    - c) “Department” shall be HHSC or its designee.
    - d) “Engineer” shall be the person so designated by Kauai Region
    - e) “State” shall be HHSC or its designee.
  2. Section 1.20 and 1.25 replace “State of Hawaii” with “State”.
  3. The last two sentences of the third paragraph of Section 2.1.1.2, of the Interim General Conditions is deleted and replaced with the following:  
If the notice is faxed, the time of receipt by the RCEO’s fax machine shall be official.
  4. Section 2.1.2.1 is amended by deleting the second sentence in its entirety.
  5. The address specified in Section 2.6.1 of the Interim General Conditions shall be changed to HHSC Kauai Region, 4643 Waimea Canyon Drive, Waimea, Hawaii 96796
  6. Section 2.10 through 2.11 is hereby deleted in their entirety.



7. Section 3.8.1 is amended to read as follows:

The contract shall be signed and forwarded to HHSC, by the successful bidder all within three (3) days of receipt of the contract. The performance and payment bonds shall be received by HHSC within (10) calendar days after the bidder is awarded the contract. No proposal or contract shall be considered binding upon the State until the contract has been fully and properly executed by all parties thereto.

8. Section 3.9.2 is amended by replacing “ten (10) calendar days after such award or within such further time as the Comptroller may allow” with “the time allowed in the previous section”.
9. Section 4.1 is amended by deleting the words “accepted bid” from the first sentence.
10. Section 4.9.3 is amended by replacing the words “submission of bids” with “execution of this contract”..
11. Sections 5.5 is amended by deleting the last sentence and replacing it in its entirety as follows:

In the event of conflict among the Contract Documents, the order of precedence is listed in Section 6 of this Agreement and as further detailed in the following subparagraphs:

12. Section 5.5.1 and 5.5.2 are hereby deleted in their entirety.
13. Section 5.8.1 is amended by replacing “twenty-four (24)” with “three (3)”.
14. Section 5.11 is hereby deleted in its entirety.
15. Section 5.12.4 is hereby deleted in its entirety.
16. Section 7.3.7.4, subparagraphs a. and b. are amended by replacing the words “State University System, The University of Hawaii” with “HHSC”.
17. Section 7.4.1 is hereby deleted in its entirety and replaced with the following:

The Contractor shall prepare, process, obtain, and pay for all permits necessary for the proper execution of the work.

18. Sections 7.14.2, 7.19.2, and 7.19.4 are hereby amended by deleting the words “Departments and Agencies and their” and insert “directors” between “officers” and “representatives”.
19. A new Section 7.14.4 is hereby added as follows:

CONTRACTOR warrants that it and none of its employees, agents or subcontractors performing services or providing goods pursuant to this Agreement are excluded from participating in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care. HHSC reserves the right to verify that the above warranty is true and to immediately cancel this Agreement in the event is violated.

20. Section 7.15 is amended by deleting the words “and its Departments and Agencies”.
21. Section 7.21.8.6 is amended by deleting the word “bad” from the words “weather day conditions.”
22. Section 7.35.1 is amended by replacing the word “earlier” with the word “later”.
23. A new Section entitled Corporate Compliance Program is hereby added to the Interim Special Conditions:

**CORPORATE COMPLIANCE PROGRAM.** A description of the Corporate Compliance Program is posted on the HHSC internet ([www.hhsc.org](http://www.hhsc.org)). The CONTRACTOR, by signing this contract, acknowledges that it has read said description, and that the CONTRACTOR knows of the fact and substance of the Corporate Compliance Program, which governs operations at all facilities of the HHSC. The CONTRACTOR understands and agrees that employees, agents, and contractors performing any services at any of the HHSC facilities shall be fully subject to such Corporate Compliance Program, as may be amended from time to time, as well as all federal program requirements and applicable policies and procedures of HHSC and its facilities. The Corporate Compliance Program requires periodic training, including an orientation program, of all people who provide financial, business office, personnel, coding, medical records information systems and clinical services in the facility. The CONTRACTOR agrees to cause its employees, agents, and contractors who provide any services at any financial, business office, personnel, coding, medical records information systems and clinical services at any of the HHSC facilities to participate in the orientation and training programs.

24. A new Section entitled Confidentiality of Material is hereby added to the Interim Special Conditions as follows:

**CONFIDENTIALITY OF MATERIAL.**

- a. All material given to or made available to the CONTRACTOR by virtue of this Agreement, which is identified as proprietary or confidential information, will be safeguarded by the CONTRACTOR and shall not be disclosed to any individual or organization without the prior written approval of the HHSC. It is acknowledged and agreed that all the trade secrets, business plans, marketing plans, know how, data, contracts,

including this Agreement, documents, scientific and medical concepts, billing records, personnel records, medical records of any kind, and referral sources for existing or future services, products, operations, management, business, pricing, financial status, valuations, business plans, goals, strategies, objectives and agreements of HHSC an any of its facilities, affiliates or subsidiaries, and all patient information in any form, whether written, verbal or electronic are confidential (“Confidential Information”); provided, however, that Confidential Information, with the exception of patient information, shall not include information that is in the public domain.

- b. All information, data, or other material provided by the CONTRACTOR to the HHSC is subject to the Uniform Information Practices Act, chapter 92F, HRS, as modified by chapter 323F HRS.

- 25. A new Section entitled Contractor Exclusion from Federal Programs is hereby added to the Interim Special Conditions as follows:

**CONTRACTOR EXCLUSION FROM FEDERAL PROGRAMS.**

CONTRACTOR warrants that it and none of its employees, agents or subcontractors performing services or providing goods pursuant to this Agreement are excluded from participation in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care. HHSC reserves the right to verify that the above warranty is true and to immediately cancel this Agreement in the event it is violated.

- 26. A new Section entitled Campaign Contributions is hereby added to the Interim Special Conditions as follows:

**CAMPAIGN CONTRIBUTIONS.** CONTRACTOR acknowledges that it is unlawful under Section 11-355, Hawaii Revised Statutes, unless specifically permitted under that law, for CONTRACTOR at any time between the execution of this Agreement through the completion of the Agreement to: (a) directly or indirectly make any contribution or to promise expressly or impliedly to make any contribution to any political party, committee or candidate or to any person for any political purpose or use; or (b) knowingly solicit an contribution from any person for any purpose during any period.

**SPECIALIZED EXPERIENCE  
CONSTRUCTION OR PRIME CONTRACTOR**

Provide the following information to show examples of projects your company constructed within the last five years indicating experience with projects of similar type and scope. Use one form per project. Each project shall not exceed 2 pages.

Your Firm's Name: \_\_\_\_\_

Name of Project: \_\_\_\_\_

Location of Project: \_\_\_\_\_

Owner: \_\_\_\_\_

General Scope of Construction Project:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Your Role (Prime, Joint Venture, or Subcontractor, etc.)

\_\_\_\_\_

Construction cost: \_\_\_\_\_

Extent and type of work you subcontracted out: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Dates Construction: Began \_\_\_\_\_ Completed \_\_\_\_\_

A/E name if Design Assist/Build: \_\_\_\_\_

Were you terminated or assessed liquidated damages? \_\_\_\_\_

If either yes, please explain \_\_\_\_\_

Owner's point of contact for reference

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_

**CERTIFICATION OF COMPLIANCE**

\_\_\_\_\_ certifies it is in compliance with all laws  
(Company Name)

governing entities doing business in the State, including the following:

1. Chapter 237 HRS (General Excise Tax)
2. Chapter 383 HRS (Hawaii Employment Security Law - Unemployment Insurance)
3. Chapter 386 HRS (Workers' Compensation Law)
4. Chapter 392 HRS (Temporary Disability Insurance)
5. Chapter 393 HRS (Prepaid Health Care Act)
6. Offeror / Bidder is incorporated or organized under the laws of the State or is registered to do business in the State as a separate branch or division that is capable of fully performing under the contract.

Furthermore, \_\_\_\_\_ acknowledges that  
(Company Name)  
making a false certification shall cause its suspension from further offerings or awards.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

**BID FORM**

FOR

FURNISHING LABOR, MATERIALS, EQUIPMENT AND OTHER TOOLS

REQUIRED FOR

KAUAI VETERANS MEMORIAL HOSPITAL

REFURBISH ELECTRICAL ROOMS

AND

OTHER UPGRADES – BID PACKAGE 2

RFP NO. 18-09

TAX MAP KEY: 1-2-06: PARCEL 35, LOT 14

WAIMEA, KAUAI, HAWAII

FOR THE

HAWAII HEALTH SYSTEMS CORPORATION

STATE OF HAWAII

After carefully examining the bid documents, drawings and specifications identified above, the Offeror proposes to furnish at its own expenses all necessary labor, materials, tools and equipment to complete the work according to the true intent and meaning of the drawings and specifications, all for the Lump Sum Base Bid of:

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_)  
**(Schedule of Values shall be submitted in bid)**

Submitted By:

\_\_\_\_\_  
Signature / Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

(Name of Business) is a:  Sole Proprietor

Partnership  Corporation  Joint Venture Other (Specify) \_\_\_\_\_

Business Address: \_\_\_\_\_

Business Phone Number: \_\_\_\_\_

E-mail address: \_\_\_\_\_

Federal TAX ID #: \_\_\_\_\_

Hawaii GET Lic ID #: \_\_\_\_\_

State of Incorporation is: (Specify) \_\_\_\_\_  
 The exact legal name of the business under which the contract, if awarded, shall be executed is: \_\_\_\_\_

**RECEIPT OF ADDENDA**

Receipt of the following addenda issued by the HHSC is acknowledged by the date(s) of receipt indicated below:

Addendum No. 1 _____	Addendum No. 4 _____
Addendum No. 2 _____	Addendum No. 5 _____
Addendum No. 3 _____	Addendum No. 6 _____

It is understood that failure to receive any such addendum shall not relieve the Bidder from any obligations under this Proposal as submitted.

**ALL JOINT CONTRACTORS OR SUBCONTRACTORS TO BE ENGAGED ON THIS PROJECT**

The Bidder agrees that following is a complete listing of all joint contractors or subcontractors covered under Chapter 444 HRS, who will be engaged by the Bidder on this project to perform the required work. The Bidder certifies that it and its listed subcontractors or joint contractors together hold all licenses necessary to complete the Work, and understands that failure to comply with this requirement may be just cause for rejection of the bid.

‘A’ General Engineering Contractors and ‘B’ General Building Contractors are reminded that due to the Hawaii Supreme Court’s January 28, 2002 decision in *Okada Trucking Col, Ltd. v. Board of Water Supply, et al.*, 97 Haw. 450 (2002) they are prohibited from undertaking any work, solely or as part of a larger project, which would require the general contractor to act as a specialty contractor in any area in which the general contractor has no license. Although the ‘A’ and ‘B’ Contractor may still bid on and act as the “Prime Contractor” on an ‘A’ or ‘B’ project (*See, HRS § 444-7 for the definitions of an “A” and “B” project.*), respectively, the ‘A’ and ‘B’ contractor may only perform work in the areas in which they have the appropriate contractor’s license (*An ‘A’ or ‘B’ Contractor obtains ‘C’ specialty contractor’s license either on its own, or automatically under HAR § 16-77-32*). The remaining work must be performed by appropriately licensed entities. It is the sole responsibility of the Contractor to review the requirements of this Project and determine the appropriate licenses that are required to complete the Project.

The Bidder shall provide the complete firm name, license number and nature and classification description by each joint contractor or subcontractor. For projects with Alternate(s), Bidders shall fill out the supplementary schedule and list the Joint Contractor or Subcontractor who will be engaged for the respective Alternate Work. Do not include any Joint Contractor or Subcontractor previously listed.

Bidders shall list only joint contractor or subcontractor per required specialty contractor’s license.

Class	Classification Description	License	Complete Firm Name Joint Contractor or Subcontractor
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Enclosed herewith:

- |                                |                           |
|--------------------------------|---------------------------|
| 1. Surety Bond (*1)            | 6. Official Check (*3)    |
| 2. Legal Tender (*2)           | 7. Share Certificate (*3) |
| 3. Cashier's Check (*3)        | 8. Teller's Check (*3)    |
| 4. Certificate of Deposit (*3) | 9. Treasurer's Check (*3) |
| 5. Certified Check (*3)        |                           |

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_) as  
required by law.

(\*5) NOTES:

1. Surety bond underwritten by a company licensed to issue bonds in this State;
2. Legal tender; or
3. A certificated of deposit; share certificate; or cashier's, treasurer's, teller's, or official check drawn by, or certified check accepted by, and payable on demand to the State by a bank, or savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.
  - a. These instruments may be utilized only to a maximum of \$100,000.
  - b. If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be accepted.
4. Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.
5. Fill in all blank spaces with information asked for or bid may be invalidated. PROPOSAL MUST BE INTACT, MISSING PAGES MAY INVALIDATE YOUR BID.

CERTIFICATION OF COMPLIANCE

\_\_\_\_\_ certifies it is in compliance with all laws  
(Company Name)

Governing entities doing business in the State, including the following:

1. Chapter 237 HRS (General Excise Tax)
2. Chapter 383 HRS (Hawaii Employment Security Law – Unemployment Insurance)
3. Chapter 386 HRS (Worker's Compensation Law)
4. Chapter 392 HRS (Temporary Disability Insurance)
5. Chapter 393 HRS (Prepaid Health Care Act)
6. OFFEROR / Bidder is incorporated or organized under the laws of the State or is registered to do business in the State as a separate branch or division that is capable of fully performing under the contract.

Furthermore, \_\_\_\_\_ acknowledges that making a  
(Company Name)



false certification shall cause its suspension from further offerings or awards.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

(NOTARIZATION)

**END OF BID FORM**

**HHSC LN #18-0249  
KAUAI VETERANS MEMORIAL HOSPITAL  
REFURBISH ELECTRICAL ROOMS  
AND OTHER UPGRADES – BID PACKAGE 2  
KAUAI, HAWAII**

Prepared for:  
Hawaii Health Systems Corporation (HHSC)  
Honolulu, Hawaii

**TECHNICAL SPECIFICATIONS**

BID SET

APRIL 2018



828 Fort Street Mall, Suite 500 • Honolulu, Hawaii 96813  
Tel: 808 521-3773

TABLE OF CONTENTS

	<u>Page</u>
<u>TECHNICAL SPECIFICATIONS</u>	
<b>DIVISIONS 1 - 6 (NOT USED)</b>	
<b>DIVISION 7 - THERMAL AND MOISTURE PROTECTION</b>	
Section 07920 - Sealants .....	1 - 6
<b>DIVISION 9 - FINISHES</b>	
Section 09900 - Painting .....	1 - 12
<b>DIVISIONS 10 - 15 (NOT USED)</b>	
<b>DIVISION 16 - ELECTRICAL</b>	
Section 16010 - Basic Electrical Requirements .....	1 - 12
Section 16052 - Electric Photovoltaic System .....	1 - 16

## **DIVISION 7 - THERMAL AND MOISTURE PROTECTION**

### **SECTION 07920 SEALANTS**

#### **PART 1 – GENERAL**

##### 1.01 GENERAL CONDITIONS

- A. Drawings and other provisions of contract, including General and Supplementary Conditions and other Division I specifications apply to this section.

##### 1.02 SUMMARY

- A. Completely close with sealant all joints indicated or specified to be sealed to a watertight and airtight condition without staining substrates.

##### 1.03 SUBMITTALS

- A. **Manufacturer's Data:** Submit copies of manufacturer's product data and specifications for type of sealant required, to the Engineer for acceptance.
- B. **Material Safety Data Sheets (MSDS):** Submit MSDS for each sealant product.
- C. **Color Samples:** Submit 4 sets of color finish samples of sealants.
- D. **Compatibility and Adhesion Test Reports:** From sealant manufacturer, indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- E. **Warranty:** Submit warranty as stipulated in item entitled "WARRANTY" hereinbelow.

##### 1.04 QUALITY ASSURANCE

- A. **Installer Qualifications:** Manufacturer's authorized installer who is approved or licensed for installation of elastomeric sealants required for this Project.

- B. Source Limitations: Obtain each type of sealant through one source from a single manufacturer.
- C. Preconstruction Compatibility and Adhesion Testing: Submit to sealant manufacturers, for testing samples of materials that will contact or affect sealants. Use manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain optimum adhesion of sealants to joint substrates. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.
- D. Stain-Test Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver sealants to the jobsite in sealed containers labeled to show the designated name, formula, or specification number, lot number, color, date of manufacture, shelf life, curing time, manufacturer's directions, and name of manufacturer.
- B. Storage: Carefully handle and store all materials to prevent inclusion of foreign materials. Remove from project site all damaged and deteriorated materials and materials exceeding shelf life.
- C. Sealant materials shall be handled in accordance with the manufacturer's specifications and installed prior to expiration of shelf life.

#### 1.06 WARRANTY

- A. Provide a 2-year written warranty from the project acceptance date against leaks, air infiltration, cracks, and other failures of the installation and materials. Where sealant is associated with a system with longer warranty period, sealant warranty shall match applicable system.
  - 1. Repair of sealants to seal leaks caused by faulty materials or workmanship;
  - 2. Repair or replace damage to the building or its finishes, equipment or furniture when occasioned by such leaks at no additional cost to the Owner.

- B. The Surety shall not be held liable beyond 2 years from the project acceptance date.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS**

- A. General: Provide sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Sealants At Vertical and Overhead Joints: One-part polyurethane-based sealant, conforming to ASTM C 920, Type S, Grade NS, Class 25, Use NT. Provide one of the following, or accepted equivalent:
  - 1. Vulkem 116; Tremco, Inc.
  - 2. Chem-Calk 900; Bostik Construction Products Div.
  - 3. Sikaflex Ia; Sika Corp.
  - 4. DynaTrol I-XL; Pecora Corp.
  - 5. NP-I; MasterSeal.
- C. Primer for Sealants: Non-staining, as recommended by the sealant manufacturer.
- D. Sealant Backer Rod: Compressible rod stock of polyethylene foam, polyethylenejacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable, nonabsorptive material conforming with ASTM C 1330 as recommended for compatibility with sealant by the sealant manufacturer to control the joint depth for sealant placement, to break bond of sealant at bottom of joint, to form optimum shape of sealant bead on back side, and to provide a highly compressible backer which will minimize the possibility of sealant extrusion when joint is compressed. Do not use oakum or other types of absorptive materials as backstops.
- E. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer. Provide self adhesive tape where required.
- F. Masking Tape: Non-staining, nonabsorbent type compatible with joint sealants and to surfaces adjacent to joints.

### **PART 3- EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine joint widths, surfaces, and backing, and their anchorage to the structure, and conditions under which joint sealer work is to be performed, and notify Contractor in writing of conditions detrimental to proper completion of the work and performance of sealers. Do not proceed with joint sealer work until unsatisfactory conditions have been corrected in a manner acceptable to installer.
  
- B. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
  - 1. Remove foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and accepted for sealant adhesion and compatibility by sealant manufacturer; oil; grease; waterproofing; water repellants; water; and surface dirt.
  - 2. Clean concrete and masonry and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
  - 3. Remove laitance and form release agents from concrete.
  - 4. Steel Surfaces in Contact with Sealant: Scrape and wirebrush to remove loose mill scale. Remove dirt, oil, or grease by solvent cleaning, and wipe surfaces with clean cloths.
  - 5. Clean metal and other nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
  - 6. Do not permit solvents to air dry. Wipe surfaces free of solvent using clean, dry white cloth or white lintless paper.
  
- C. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturers recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.

- D. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.
- E. Examine joint size and correct to achieve depth ratio of 1/2 of joint width with a minimum width and depth of 1/4-inch, maximum width of one-inch unless specifically allowed otherwise by the sealant manufacturer.

### 3.03 INSTALLATION OF JOINT SEALERS

- A. General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Weather Conditions: Do not proceed with installation of sealants under adverse weather conditions. Proceed with the work only when weather conditions are favorable for proper cure and development of high early bond strength.
- C. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- D. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
  - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.
    - a. Do not leave gaps between ends of joint fillers.
    - b. Do not stretch, twist, puncture, or tear joint fillers.
    - c. Remove absorbent joint fillers which have become wet prior to sealant application and replace with dry material,
  - 2. Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
  - 3. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.
- E. Primer: Immediately prior to application of the sealant, clean out all loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete, masonry units, wood, and other porous



surfaces in accordance with compound manufacturer's instructions. Do not apply primer to exposed finish surfaces.

- F. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
- G. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
  - 1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
  - 2. Provide flush joint configuration per Figure 5B in ASTM C 1193, where indicated.

#### 3.04 CLEAN-UP

- A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

#### 3.05 PROTECTION

- A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of project acceptance. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new materials to produce joint sealer installations with repaired areas indistinguishable from original work.

END OF SECTION

## **DIVISION 9 - FINISHES**

### **SECTION 09900 PAINTING**

#### **PART 1 – GENERAL**

##### **1.01 GENERAL CONDITIONS**

- A. Drawings and other provisions of contract, including General and Supplementary Conditions and other Division I specifications apply to this section.

##### **1.02 SUMMARY**

- A. The work includes painting and finishing of exterior and interior items and surfaces throughout the project, whether scheduled or not, except as otherwise indicated. Painting shall include new work and existing new surfaces made bare or damaged during construction. Surface preparation, priming, and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of the work and is included in this Section.
- B. The work includes field painting of exposed bare and covered pipes and conduits (including color coding), and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under the electrical work, such as junction boxes, raceways, and cabinets, except as otherwise indicated.
- C. "Paint" as used herein means all coating systems materials, including primers, enamels, sealers, stain, varnish, and fillers, and other applied materials whether used as prime, intermediate, or finish coats, except as specifically noted herein.
- D. Paint all exposed surfaces whether or not colors are designated in "schedules". Where items or surfaces are not specifically mentioned, paint these the same as adjacent similar materials or areas. If color or finish is not designated, the Engineer will select these from standard colors available for the materials systems specified.

##### **1.03 PAINTING NOT INCLUDED**

- A. The following categories of work are not included as part of the field-applied finish work, or are included in other sections of these specifications.

1. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under the various sections for miscellaneous metal, hollow metal work, and similar items. Also, for fabricated components such as shop fabricate or factory-built mechanical and electrical equipment or accessories.
2. Mechanical and Electrical Work: The prime coat for mechanical and electrical work is specified in DIVISION 15 - MECHANICAL and DIVISION 16 - ELECTRICAL, respectively. Finish coats are as specified herein.
3. Concealed Surfaces (Present and Future): Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, furred areas, and pipe spaces.
4. Finished Metal Surfaces: Metal surfaces of anodized aluminum, stainless steel, chromium plate, and similar finished materials will not require finish painting, unless otherwise indicated.
5. Labels: Do not paint over any code-required labels, such as Underwriters' Laboratories, or any equipment identification, performance rating, name, or nomenclature plates.

#### 1.04 SUBMITTALS

- A. Schedule of Finishes: Submit sets of the proposed painting finish schedule to the Engineer for acceptance. The schedule shall indicate the wet film thickness (mils) at which the proposed paints/coatings will be applied that are necessary to achieve the final dry film thickness indicated on the Schedule of Finishes under item entitled "SCHEDULE OF FINISHES" hereinbelow.
- B. Color Samples: All colors shall match existing. Color samples are not required. Contractor shall be responsible for tinting colors to match existing as found in the field.
- C. Schedule of Operations: Before work on the project is commenced, submit complete sets of a work schedule showing Contractor's sequence of operations and dates.
- D. Warranty: Submit warranty as stipulated in item entitled "WARRANTY" hereinbelow.
- E. Certifications: Submit copies of asbestos-free, lead-free, zinc-chromate-free, strontium-chromate-free, cadmium-free, and mercury free paint certificates.

- F. Manufacturer’s Product Data Sheets: Submit copies of the manufacturer’s product data sheets for the primers, paints, coatings, solvents, sealing and patching materials, sealants and caulking, and other materials being used. Data sheets shall indicate thinning and mixing instructions, required film thickness (mil) and application instructions.
- G. Manufacturer’s Material Safety Data Sheets (MSDS): Submit copies of the manufacturer’s material safety data sheets for coatings, solvents, and other hazardous materials.

1.05 ANALYZING AND TESTING

- A. All paints and their applied thickness shall be subject to testing whenever the Engineer deems necessary to determine conformation to the requirements of these specifications. Should testing by a laboratory be required, the laboratory shall be selected by the Engineer and the cost of testing shall be borne by the Contractor. However, should test results show that the paint is in compliance with this specifications, the cost will be borne by the Owner.
- B. All rejected material shall be removed from the job site immediately. Surfaces painted with the rejected material shall be redone at no additional cost to the Owner.
- C. Where the required paint thickness is deficient, the affected surface(s) shall be recoated as necessary to provide the required paint thickness at no additional cost to the Owner.

1.06 QUALITY ASSURANCE

- A. Painting Terminology: Refer to ASTM D 16, “Standard Terminology for Paint, Related Coatings, Materials, and Applications”.
- B. Gloss/Sheen Levels: ASTM D 523, “Specular Gloss”, as follows:

Description	Units at 60 Degrees	Units at 85 Degrees
Matte or Flat	0 to 5	10 max
Velvet	0 to 10	10 to 35
Eggshell	10-25	10 to 35
Satin	20 to 35	35 min
Semi-Gloss	35 to 70	
Glss	70 to 85	
High Gloss	More than 85	

- C. Where the Contractor proposes to employ airless spraying, the applicator(s) shall have completed an accepted “Spray Applicator Certification Program” conducted by the Painting Industry of Hawaii.
- D. As a minimum, the certification shall include material and equipment selection, use and maintenance, hands-on application, and safety training.

#### 1.07 WARRANTY

- A. The Contractor shall warrant that the work performed under this Section conforms to the contract requirements and is free of any defect in the materials used and workmanship performed by the Contractor. Such warranty shall continue for a period of one year from the project acceptance date and the Contractor shall remedy any such defect which is discovered during that period at no cost to the Owner.
- B. The Owner will notify the Contractor in writing within a reasonable time after discovery of any failure or defect.
- C. C, Should the Contractor fail to remedy any failure or defect described in Paragraph A above within 10 working days after receipt of notice thereof, the Owner shall have the right to repair or otherwise remedy such failure or defect and charge the Contractor for the cost of same.

#### 1.08 SPECIAL REQUIREMENTS

- A. Codes: The Contractor shall comply with the State OSHL (Occupational Safety and Health Law) and all pollution control regulations of the State Department of Health.
- B. Safety methods used during coating application shall comply with SSPC-PA Guide 3.
- C. Protection:
  - 1. Persons:
    - a. The Contractor shall take all necessary precautions to protect public pedestrians, including tenants from injury.
    - b. The Contractor shall provide, erect, and maintain safety barricades around scaffolds, hoists, and wherever Contractor’s operation create hazardous conditions in order to properly protect the public and workmen.
  - 2. Completed Work: The Contractor shall provide all necessary protection for wet paint surfaces.

3. Protective Covering: The Contractor shall provide and install protective covering over equipment, floor, and other areas that are not scheduled for treatment. Protective covering shall be clean, sanitary drop cloth or plastic sheets. Paint applied to surfaces not scheduled for treatment shall be completely removed and surfaces shall be returned to original condition.
  4. Safeguarding of Property: The Contractor shall take whatever steps may be necessary to safeguard his work and also the property of the Owner and other individuals in the vicinity of the work area during the execution of this Contract. Contractor shall be responsible for and make good on any and all damages and for losses to work or property caused by his or his employee's negligence. Where the damaged property cannot be cleaned and restored to its original condition (i.e. prior to being damaged) it shall be replaced with a new product of equal quality. No proration or use of Husedhi products will be permitted.
  5. Fire Safety: The Contractor shall direct his employees not to smoke in the vicinity and to exercise precautions against fire at all times. Waste rags, plastic (polyester sheets), empty cans, etc., shall be removed from the site at the end of each day.
- D. Right of Rejection: The Engineer will have the right to reject all work which is not in compliance with the plans and specifications. Rejected work will be redone at no additional cost to the Owner. In addition, the Engineer will have the right to require the immediate removal of any paint applicator who demonstrates negligence, lack of competence or repeated non-compliance with the contract requirements.
- E. Sequence of Operations: The sequence of operations shall divide the surfaces into work areas and present a schedule for:
1. Surface preparation and spot prime.
  2. Prime coat.
  3. First finish coat.
  4. Second finish coat.
- F. Inspection and Acceptance: The Contractor shall obtain written acceptance from the Engineer upon completion of each phase of work (phases of work are surface preparation and spot prime, prime, first finish coat, and second finish coat) before proceeding into the next phase of work. The Contractor shall give the Engineer one day (24 hours minimum) advance notice of completion of any phase of work for a work area only when he deviates from the previously submitted work schedule. The Contractor shall provide necessary access to areas to be inspected. Failure to obtain acceptance of any phase of work for a work area may result in redoing the operation at no cost to the Owner.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver paint materials to the job site in original unopened containers with original labels intact.
- B. No paint material, empty cans and paint brushes and rollers, drop cloths and rags, may be stored in buildings, but shall be stored in separate storage facilities away from the buildings. Receiving, opening, and mixing of painting materials shall be done in this area.
- C. The Contractor may furnish a job site storage facility. Such facility shall comply with requirements of the local Fire Department. The storage area shall be kept clean and facility shall be locked when not in use or when no visual supervision is possible.
- D. Ensure the safe storage and use of paint materials and the safe storage or disposal of waste at the end of each work day.
- E. Handle manufactured materials as recommended by the manufacturer.

**PART 2- PRODUCTS**

2.01 MATERIALS

- A. Asbestos Prohibition: All paint shall be asbestos-free.
- B. Lead Prohibition: All paint shall be lead-free.
- C. Mercury Prohibition: All paint shall be mercury-free.
- D. Chromate Prohibition: All paint shall be free of zinc-chromate and/or strontiumchromate.
- E. Cadmium Prohibition: All paint shall be cadmium-free.
- F. Material shall be equal in quality to that specified under the Schedule of Finishes and any given finish shall be as labeled by one manufacturer.
- G. All materials shall be delivered to the job site in undamaged original containers bearing the manufacturer's label and shall be stored in such a manner as to prevent damage. All rejected materials shall be removed from the job site immediately.

- H. Paints shall be as manufactured by Benjamin Moore, Carboline, Dupont, Devoe, Devoe Coatings, Glidden, Glidden Professional, PPG Protective & Marine Coatings, Pittsburg, Sherwin-Williams, Tnemec, or accepted equivalent.
- I. Thinning of paint shall be done using material recommended by the manufacturer. Mix proprietary products according to manufacturer's printed specifications. Compound thinner, mineral oil, kerosene, refined linseed oil, or gasoline shall not be used for thinning.
- J. Except for metal primers, all paint shall contain maximum amount of mildewcide per gallon of paint permitted by the mildewcide manufacturer without adversely affecting the quality of the paint.
- K. The supplier shall submit a signed certificate indicating the amounts of mildewcide added by both the paint manufacturer and the paint supplier. Mercurial fungicide shall not be used.

## 2.02 SCHEDULE OF FINISHES

- A. The Schedule of Finishes is made for the convenience of the Contractor and indicates the types and quality of finishes to be applied to the surfaces. Refer to Finish Schedule for symbols indicating location for various finishes. Provide additional systems for surfaces to be painted not listed hereinafter.
- B. All paints unless otherwise noted, are the products of Benjamin Moore and are so named to establish desired quality and standard of materials. Painting materials, equal to those mentioned by trade name under the various treatments may be used, provided they meet with the acceptance of the Engineer.
- C. Treatments shall be applied on exposed surfaces of designated materials, in conformity with instructions of the paint product used.
- D. Exterior Painting: Spread rates are approximate.
  - 1. Concrete:
    - Prime Coat: N068 Super Spec Masonry Interior/Exterior Acrylic High Build Masonry Primer  
1.2 mils DFT @ 425 sf/gal
    - 2nd and 3rd Coats: N448 Ultra Spec Ext Satin Finish  
1.5 mils DFT @ 403 sf/gal/coat



2. Typical Coating System for Steel: Follow SSPC-SP-1 for solvent cleaning, for maximum protection follow SSPC-SP-10 near white metal blast.

Producer	Coat	Products	DFT (mils)	Min. Time to Recoat	Max. Time to Recoat
Corotech	1st	V175*	1.5-2.1	2 hours	2 weeks exterior 3 months interior
Corotech	2nd	V150	2.2-2.8	8 hours	4 weeks
Corotech	3rd	V500	2.3-3.3	8 hours	3 days

\*for galvanized surfaces

- E. Interior Paints: Use low VOC/low odor paint to maximum extent possible. Spread rates are approximate.
  1. Gypsum Wallboard and Concrete:
    - Prime Coat: N372 Eco Spec WB Interior Latex Primer  
1.2 mils DFT @ 577 sf/gal
    - 2nd and  
3rd Coats: N374 Eco Spec WB Interior Latex Eggshell Finish  
1.4 mils DFT @ 412 sf/gal/coat  
or  
N376 Eco Spec WB Interior Latex Semi-Gloss Finish  
1.5 mils DFT @ 428 sf/gal/coat

### 2.03 COMPATIBILITY OF PAINTING SYSTEMS AND SUBSTRATES

- A. The Contractor shall ensure that painting systems specified are compatible with existing painted surfaces. Alkyd paints shall not be applied over existing latex coating. Alkyd paints shall not be used over cementitious surfaces. Latex paints shall not be applied directly over alkyd paints without proper conditioner and accepted by the Engineer.
- B. Field Tests for Alkyd or Latex Paints: The Contractor shall perform the following field tests for compatibility of substrates to new paint systems prior to ordering paint:
  1. Latex films will dissolve when wiped with rubbing alcohol; alkyd films will not.
  2. When sanded, latex films will TTclog sandpaper; alkyd films will sand clean.
  3. Alkyds will soften after applying a 10 percent solution of Drano in water; latex films will not soften.

4. Alkyds will burn when exposed to a flame; latex film will not burn.
  5. Paints which do not respond to 2 or more of these tests are probably epoxy, urethane, or other type of coating.
  6. Provide a packaged swab test in accordance with the package directions.
  7. Existing paint identified or suspect of having lead-containing paint shall be tested in a manner that does not produce airborne or uncontrolled lead debris.
- C. Should there be any discrepancies between the specified Schedule of Finishes and the existing paint systems, the Contractor shall notify the Engineer in writing of any incompatible systems specified and submit a revised Schedule of Finishes for acceptance when necessary. With the acceptance of the revised Schedule of Finishes, the Contractor shall make any corrections and/or revisions necessary to resolve the discrepancies and/or inconsistencies. The Contractor shall not proceed with any painting systems that are incompatible, although specified otherwise, until all incompatible conditions detrimental for the proper application and performance of the painting systems have been corrected. The failures due to the application of the incompatible paint systems shall be corrected at no additional cost to the Owner. Proceeding with the work shall imply acceptance of the specified Schedule of Finishes and the compatibility with the existing painted surfaces by the Contractor.

### **PART 3- EXECUTION**

#### **3.01 SURFACE PREPARATION**

- A. General:
1. Surface preparation shall be in accordance with the Painting and Decorating Contractors of America, "Architectural Specification Manual", methods are applicable to all substrates.
  2. Scrub surfaces with stiff nylon bristle brush and Trisodium Phosphate (TSP) solution at rate of 3/4 cup TSP per gallon of warm water to remove accumulated film of wax, oil, grease, smoke, dust, dirt, chalky, or other foreign matter which would impair bond or bleeding through new finish. Thoroughly sponge wipe surfaces with clean water. Allow surfaces to thoroughly dry before priming, painting, calking, or sealing. Following sponge wiping, the surfaces shall be allowed to dry for a minimum of 24 hours.
  3. Cracks and openings found at joints and where different materials abut each other shall be sealed with a caulking compound compatible with the substrate and primer/paint. The caulking shall

be applied and allowed to set in accordance with the manufacturer's recommendations and instructions.

- B. The Painting Contractor shall be wholly responsible for the finish of his work and shall not commence any part of it until surfaces are in proper condition. If Painting Contractor considers any surfaces unsuitable for proper finish of his work, he shall notify the Engineer of this fact in writing and he shall not apply any material until the unsuitable surfaces have been made satisfactory, or until the Engineer has instructed him to proceed. Major defects shall be restored by the proper trades. In general, follow paint manufacturer's directions for surface preparation for the paint to be applied.
- C. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface- applied protection prior to surface preparation and painting operations. Remove, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, reinstall the removed items by workmen skilled in the trades involved.
- D. Puttying of nail holes, cracks, and blemishes shall be done after priming coat has become hard and dry and before second coat is applied.
- E. Concrete surfaces shall be wire brushed and cleaned to remove all dust and loose mortar.
- F. Surfaces adjacent to areas being finished shall be protected and left clean of paints, stains, etc. Clean drop cloths shall be used until completion of job.
- G. Unprimed galvanized metal shall be washed with a solution of chemical phosphoric metal etch and allowed to dry.
- H. Metal surfaces shall be made clean and free of any defects or condition that may produce unsatisfactory finish. Touch-up any chipped or abraded places on surfaces that have been shop coated with the proper primer.
- I. Gypsum Board Surfaces:
  - 1. Surface Cleaning: Surfaces shall be dry. Remove loose dirt and dust by brushing with a soft brush or rubbing with a dry cloth prior to application of the first coat material.

2. Repair of Minor Defects: Prior to painting, repair joints, cracks, holes, surface irregularities, and other minor defects with patching plaster or spackling compound and sand smooth.

### 3.02 PAINT APPLICATION

#### A. General:

1. Apply coating materials in accordance with SSPC-PA 1. SSPC-PA 1 methods are applicable to all substrates, except as modified herein. Thoroughly work coating materials into joints, crevices, and open spaces, Touch-up damaged coatings before applying subsequent coats.
2. Work shall be done in a workmanlike manner by skilled and experienced mechanics and shall conform to the best painting practices.
3. Materials shall be applied in accordance with the manufacturer's specifications and the finished surfaces shall be free from runs, sags, drips, ridges, waves, laps, streaks, brush marks, and variations in color, texture, and finish (glossy or dull). The coverage shall be complete and each coat shall be so applied as to produce a film of uniform thickness. No paint, varnish or enamel shall be applied until the preceding coat is thoroughly dry and acceptance.
4. No exterior painting of unprotected surfaces shall be done in rainy, damp weather. Coats shall be applied only to surfaces that are thoroughly dry.
5. Interior areas shall be broom clean and dust free before and during the application of coating material.
6. Mixing shall be done outside the building.

#### B. Application:

1. Paint application shall be by brush or roller or combination thereof or as required by manufacturer.
2. Drying Time: Allow time between coats, as recommended by the coating manufacturer, to permit thorough drying. Provide each coat in specified condition to receive the next coat.
3. Primers and Intermediate Coats: Do not allow primers or intermediate coats to dry more than 30 days, or longer than recommended by the manufacturer, before applying subsequent coats. Follow manufacturer's recommendations for surface preparation if primers or intermediate coats are allowed to dry. longer than recommended by manufacturers of subsequent coatings. Each coat shall cover the surface of the preceding coat or surface completely, and there shall be a visually perceptible difference in shades of successive coats.

- 4. Finished Surfaces: Provide finished surfaces free from runs, drops, ridges, waves, laps, brush marks, and variations in selected colors.
- C. Colors: Colors shall match existing or as selected by the Engineer.
- D. Finish Film Thickness: Apply primer, intermediate, and finish coats to not less than 1.5 mils dry film thickness, 4 mils wet unless recommended otherwise in writing by the manufacturer, for each coat and in accordance with the manufacturer's recommendations. Verify mil thickness by use of a suitable wet film gauge. Use a Tooke or other dry film gauge to test for total dry film thickness.

### 3.03 MISCELLANEOUS

- A. Installation of Removed Items: After completion of final paint coat, removed items shall be reinstalled.
- B. At the completion of other trades, touch-up damaged surfaces.

### 3.04 CLEAN-UP

- A. During the progress of the work, all debris, empty crates, waste, drippings, etc., shall be removed by the Contractor and the grounds about the areas to be painted shall be left clean and orderly at the end of each work day.
- B. Upon completion of the work, staging, scaffolding, containers, and all other debris shall be removed from the site. All paint, shellac, oil or stains splashed or spilled upon adjacent surfaces not requiring treatment (hardware, fixture, floor) shall be removed and the entire job left clean and acceptable.

END OF SECTION

## **DIVISION 16 – ELECTRICAL**

### **SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS**

#### **PART 1 – GENERAL**

##### 1.01 GENERAL CONDITIONS

- A. Drawings and other general provisions of contract, including General and Supplementary Conditions and other Division 1 specification sections, apply to this section.

##### 1.02 SUMMARY

- A. The intent of Division 16 Specifications and Drawings is to provide a complete set and workable facility with complete systems as shown, specified and required by applicable codes. Include all work specified in Division 16 and shown on the drawings, including appurtenances, connections and sundries, in the finished job.
- B. The Division 16 specifications and drawings are complementary' what is called for by one is binding, as if called by both. Items shown on the drawings are not necessarily included in the specifications, and vice versa.
- C. Imperative language is frequently used in Division 16 specifications. Except as otherwise specified, requirements expressed imperatively are to be performed by the Contractor.
- D. The General and Supplemental Conditions apply to this Division, including but not limited to:
  - 1. Drawings and Specifications.
  - 2. Public ordinances, codes and permits.
- E. Division 1, General Requirements, apply to this Division.
- F. All sections of Division 16, Electrical Specifications, are interrelated. Use Division 16, in its entirety, when interpreting any material, method or direction listed in any Section.
- G. Use the more stringent requirements when specified materials or methods exceed the applicable code standards.

- H. The drawings that accompany the Division 16 specifications are diagrammatic. They do not show every offset, bend, conduit body, elbow or junction box that may be required to install work in the space provided and avoid conflicts. Follow the drawing as closely as is practical and install additional bends, offsets and elbows where needed by local job site conditions. Provide necessary junction boxes to meet code regulations for the allowed number of conduit bends. The right is reserved to make minor field order changes in outlet location prior to roughing-in without additional cost to the Owner.
- I. Provide the standardized products or systems for Division 16 that are under the National Purchasing Agreement (NPA). Coordinate the NPA-Contractor division of responsibility requirements for products and systems under the Division 16 specifications:

#### 1.03 REFERENCES

- A. Publications and standards listed below form a part of this specification to the extent referenced. The publications and standards are referred to in the text by basic designation only.
  - 1. 1997 Uniform Building Code and latest local amendments
  - 2. 2000 Uniform Fire Code and latest local amendments
  - 3. National Fire Protection Association (NFPA)
  - 4. National Electrical Manufacturers Association (NEMA).
  - 5. National Electrical Contractors Association (NECA).
  - 6. American National Standards Institute (ANSI).
  - 7. Institute of Electrical and Electronic Engineers (IEEE).
  - 8. International Seismic Application Technology (ISAT).
  - 9. Underwriters Laboratories (UL).
  - 10. National Electrical Code 2011 (NEC).

#### 1.04 SUBMITTALS

- A. Comply with provisions of Division 1.
- B. Submit 6 copies of shop drawings, product data, samples, schedules and reports as required by the Division 16 Sections.
- C. Where products, equipment, or systems differ by more than 10% in dimension or weight from anchorage details shown in the drawings, submit product data to the Structural Engineer for review.

1.05 QUALITY ASSURANCE

- A. Provide materials, equipment and accessories that are new and free from defects.
- B. Provide materials and apparatus that comply with NEC, NEMA and ANSI standards.
- C. Provide materials and apparatus that bear the UL label where such label is applicable.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate with the requirements of Division 1.
- B. Protect materials from corrosion and breakage. Store materials above grade. Provide appropriate covering.
- C. Protect equipment from weather and moisture by appropriate covering. Provide and maintain heating within equipment enclosure in accordance with manufacturer's instructions.

1.07 SITE VISITATION

- A. Coordinate with the requirements of Bidding and Contract Requirements, Instruction to Bidders.
- B. Visit the site prior to bidding and become familiar with existing conditions and other factors which may affect the execution of work. Include all related costs in the initial bid proposal.

1.08 SCHEDULE OF WORK

- A. Coordinate with the requirements of Division 1.
- B. Provide full-time supervisory staff to coordinate and maintain work force for project work sequencing requirements.
- C. Arrange work to comply with schedule of construction requirements.

1.09 WARRANTY

- A. Coordinate with the requirements of Division 1.



- B. Provide one year guarantee for installed project materials and equipment unless otherwise indicated in other Division 16 Sections. Guarantee period effective from time of work acceptance.

#### 1.10 OPERATING INSTRUCTIONS AND MAINTENANCE MANUALS

- A. Coordinate with the requirements of Division 1.
- B. Provide approved operating and maintenance instructions for testing and commissioning work.

#### 1.11 RECORD DRAWINGS

- A. Coordinate with the requirements of Division 1.
- B. Provide record drawings that fully represent installed conditions including actual location of outlets, true panelboard connections following phase balancing routines, correct conduit and wire sizing as well as routing, and revised panelboard schedules.
- C. Maintain up-to-date record set of electrical prints during the course of construction. The prints are subject to monthly review by the owner's representative to ascertain that they are current. If not current, monthly payments may be withheld.

### **PART 2 – PRODUCTS**

#### 2.01 GENERAL

- A. The products specified in some Division 16 sections are a part of the Owner's Standardization program, which includes National Purchase Agreements (NPA). No substitutions are permitted for NPA products.
- B. Refer to applicable Division 16 sections for complete product specifications.
- C. All equipment to be installed or permanently connected (hardwired) shall be listed, labeled, or certified by a Nationally Recognized Testing Laboratory (NRTL).

## 2.02 ACCEPTABLE MANUFACTURERS

- A. Manufacturers' names and model numbers used for materials, processor or equipment in Division 16 provide the standards of quality, utility and appearance.
- B. Products of the first named manufacturer have been used as the basis of the design. If another listed manufacturer is selected, it is the Contractor's responsibility to verify that equipment dimensions, weights, capacities, ratings, environmental requirements, mounting methods, etc., are comparable with the first named manufacturer. Where different, these items shall be submitted to the Engineer for approval. Upon approval, the Contractor shall be responsible for all design changes required to accommodate the selected products, including permit and approval of the changes by regulatory agencies.

## 2.03 SUBSTITUTIONS

- A. Coordinate with the requirements of Division 1.
- B. Products or systems listed as "no substitutions": Provide as specified.
- C. Products or systems noted as "or equivalent": A product or system of equivalent design, construction and performance will be considered. Submit all pertinent data and product information for review. Provide the specified products or systems if proposed equivalent is found unacceptable.
- D. Acceptance of a substitution is not to be considered a release from the Specifications. Correct any deficiencies in an item, even though approved, at Contractor's expense.
- E. Be responsible for installation of approved substitution. Make any changes required for installation of approved substituted equipment, at no increase in Contract Sum.

## **PART 3 – EXECUTION**

### 3.01 GENERAL WIRING METHODS

- A. Examine site related work and surfaces before starting work of any Section.
  - 1. Report to Engineer, in writing, conditions which will prevent proper execution of this work.

2. Beginning work of any section without reporting unsuitable conditions to Engineer, constitutes acceptance of conditions by Contractor.
3. Perform any required removal, repair or replacement of this work caused by unsuitable conditions at no additional cost to Owner.

### 3.02 CONNECTIONS TO EXISTING WORK

- A. Install new work and connect to existing work with minimum interference to existing facilities.
- B. Provide temporary shutdowns of existing services only with written consent of Owner. Perform this work at no additional charges and at times that do not interfere with normal operation of existing facilities.
- C. Maintain continuous operation of existing facilities as required with necessary temporary connections between new and existing work.
- D. Do not interrupt alarm and emergency systems without consent of owner.
- E. Connect new work to existing work in neat and acceptable manner.
- F. Restore existing disturbed work to original condition, including maintenance of wiring and continuity as required.
- G. Provide temporary electrical power to temporary facilities as shown on the plans.

### 3.04 INSTALLATION

- A. Provide a complete, properly operating system for each item of equipment called for under this work. Installation in accordance to equipment manufacturer's instructions, the best industry practices, and the contract documents.
- B. Make installation in a neat, finished and safe manner, according to the latest published NECA Standard of Installation under competent supervision.
- C. Review shop drawings for work done by other trades.
- D. Verify all dimensions by field measurements.
- E. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.

- F. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components as they are constructed.
- G. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the work. Give particular attention to large equipment requiring positioning prior to closing in the building.
- H. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
- I. Install systems, materials, and equipment to comply with approved submittal data, including coordination drawings, to greatest extent possible. Comply with arrangements indicated by the Contract Documents, recognizing that portions of the work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Engineer.
- J. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
- K. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations. Rearrangement or relocation of electrical work that block access to mechanical duct inspection or servicing panels, valves, fire damper actuators and similar apparatus done at Contractors' own expense.
- L. Coordinate electrical systems, equipment, and materials installations with other building components.
- M. Install systems, materials, and equipment giving right-of-way priority to systems required to be installed at a specified slope.

### 3.05 NOISE CONTROL

- A. Perform necessary sound rated wall sealing for the electrical work, per Code.
- B. Back to back or straight through boxes are not permitted unless specifically noted on the drawings.

- C. Do not install contactors, transformers, starters and similar noise producing devices on walls common to occupied spaces unless specifically noted on the drawings. Where such devices must be mounted on common walls, install using shock mounted or isolated methods to prevent the transmission of device inherent noise to the occupied space.
- D. Contractors, starters, transformers, and like equipment, which are found to be noticeably noisier than other similar equipment on the project, will be deemed defective and replaced.

### 3.06 FIRE WALL PENETRATIONS

- A. Perform necessary fire-rated wall sealing for the electrical work in compliance with the Uniform Building Code. Penetrations of pipes, conduits, etc., in walls requiring protected openings shall be fire-stopped. Fire-stop materials shall be a tested assembly approved by the local Fire Marshal.
- B. Provide necessary wall material to maintain fire wall rating where flush-mounted panelboards or cabinets are installed.

### 3.07 EQUIPMENT CONNECTIONS

- A. Provide complete electrical connections for all items of equipment requiring such connections, including incidental wiring, materials, devices and labor necessary for a finished working installation.
- B. Verify the location and method for connecting to each item of equipment prior to roughing-in. Check voltage and phase of each item of equipment before connection.
- C. Make motor connections for the proper direction of rotation.
- D. Furnish all code required disconnects under this work, whether specifically shown or not.

### 3.08 EQUIPMENT SUPPORT

- A. Perform necessary equipment seismic anchorage in compliance with the Uniform Building Code and requirements of any local agency having jurisdiction.
- B. Securely fasten to the structural floor all free-standing electrical equipment such as transformers, switchboards, distribution boards,

transfer switches, and so forth, as shown in the drawings. Where equipment differs by more than 10% in dimension or weight from anchorage details shown in the drawings, submit product data to the Structural Engineer for review.

- C. Support all junction boxes, pull boxes or other raceway terminating housings located above the suspended ceiling from the floor above, roof or penthouse floor structure to prevent sagging or swaying.
- D. Minimum support capacity: Not less than four times the ultimate weight of the object being supported from the building structure or anchored to the structural floor.
- E. For suspended utility systems, utilize engineered brace spacing tables and installation details per the International Seismic Application Technology (ISAT) Design Manual or approved equal.
- F. For instances where a pre-approved seismic support detail cannot be used because of field conditions, submit details and calculations signed and stamped by a registered structural engineer in the State of Hawaii for approval by the authority having jurisdiction.

### 3.09 ALIGNMENT

- A. Install panels, cabinets and equipment level and plumb, parallel with structural building lines. Join switchgear, panels and electrical enclosures so that they fit neatly together without gaps, openings or distortion.
- B. Fit surface panels, devices and outlets with neat, appropriate trims, plates or covers, without over-hanging edges, protruding corners, or raw edges, to leave a finished appearance.

### 3.10 CUTTING AND PATCHING

- A. Perform necessary cutting and patching for the electrical work in compliance with Division 1.
- B. Neatly patch and finish any surface damaged by this work to match adjacent construction surface conditions; for instance, repair surfaces where raceways pass through finished floors or walls. Clean and remove all dirt and debris. Perform this work to the satisfaction of the Engineer.

### 3.11 COORDINATION OF WORK

- A. Coordinate with the requirements of Division 1.

- B. Conduct work in a manner to cooperate with all other trades for proper installation of all items of equipment. Consult the Drawings of all other trades or crafts to avoid conflicts with equipment, structural members, mechanical and plumbing work. In general, the architectural drawings govern, but resolve conflicts with the Engineer prior to rough-in.
- C. Verify the physical dimension of each item of electrical equipment to fit the available space. The Contractor is responsible for coordinating electrical equipment space requirements with the allotted space provisions, and access routes through the construction area.
- D. Coordinate rough-in and wiring requirements for all mechanical equipment with equipment supplier and installer. Make installation in accordance with rough-in and wiring diagrams provided for Contractor's use.

### 3.12 PROTECTION OF WORK

- A. Coordinate with the requirements of Division 1.
- B. Protect all electrical work and equipment installed under this Division against damage by other trades, weather conditions or any other causes. Equipment found damaged or in other than new condition will be rejected as defective.
- C. Keep motor control center panels, and all electrical equipment covered or closed to exclude dust, dirt and splashes of plaster, cement or paint so that all shall be free of all such contamination before acceptance. Keep enclosures and trims in new condition, free of rust scratches and other finish defects. If damaged, properly refinish in a manner acceptable to the Engineer.

### 3.13 ADJUSTING AND CLEANING

- A. Coordinate with the requirements of Division 1.
- B. Voltage Check:
  - 1. At job completion, check voltage at several points of utilization for power equipment installed under this work. During voltage check, energize installed loads.

3.14 COMMISSIONING AND TESTING

- A. Upon job completion, test systems and show that the equipment installed operates as designed and specified, free of faults and unintentional grounds. The system tests may be set up and done for coordination with construction phasing. Perform testing or system operational functions in the presence of the Engineer or his representatives. Schedule work in advance and as directed by the Engineer or his representatives.
- B. Provide a minimum of 1 journeyman electrician with required tools during testing or system commissioning work. Provide equipment factory representative for this work when needed.
- C. Provide testing and commissioning work for equipment and systems noted in Division 16 specifications and drawings, including but not limited to:
  - 1. Low voltage distribution system.

3.15 PROJECT CLOSEOUT

- A. Coordinate with the requirements of Division 1.
- B. Special tools or safety equipment: Provide one of each tool or piece of safety equipment required for proper operation and maintenance of equipment installed under this work.
- C. Keying: Provide tow keys for each lock furnished under this work.

END OF SECTION



## **SECTION 16052 - ELECTRICAL PHOTOVOLTAIC SYSTEM**

### **PART 1 - GENERAL**

#### **1.01 SUMMARY OF PROJECT**

- A. The work covered by this section of the Specifications shall include furnishing all labor, materials, equipment and services to construct and install the complete electrical system shown on the accompanying Drawings and specified herein. This work shall include but is not necessarily limited to:
1. Photovoltaic system, inclusive of PV modules, PV inverters, PV racking system, mounting clips, combiner boxes, drawings, calculations.
  2. Photovoltaic system raceways, outlets, and boxes.
  3. Complete photovoltaic system branch circuit wiring.
  4. Power wiring for equipment.
  5. Wiring and connecting of all electrical equipment supplied for installation and use in this contract and not specifically listed as work by others, including the furnishing of disconnects for all motors.
  6. Test the completed installation.

#### **1.02 SUBMITTALS**

- A. The following shall be submitted in accordance with Division 1:
1. Shop Drawings: Power systems, including branch circuits, outlets, panelboards, and wiring, PV Racking System

#### **1.03 GENERAL REQUIREMENTS**

- A. It is the intent of the plans and specifications to provide a complete installation. Should there be omissions or discrepancies in the plans and specifications, the Contractor shall call the attention of the Engineer to such omissions and discrepancies in advance of the date of bid opening so that the necessary corrections can be made. Otherwise the Contractor shall furnish and install the omissions or discrepancies as if the same were specified and provided for.
1. Before bidding on this work, carefully examine each of the drawings and the site. By submitting a proposal of the work included in this contract, the Contractor shall be deemed to have made such examination and to be familiar with and accept all conditions of the job site.

2. Standards:
  - a. The entire installation shall be made in strict accordance with the latest rules and regulations of the National Electrical Code, NFPA, ANSI, NEMA, and IPCEA, Underwriters Laboratories Inc., ISO 9001 Quality Standard, Institute of Electrical and Electronic Engineers (IEEE) and the local ordinances, rules and regulations of the local County.
  - b. The Electrical Contractor shall obtain and pay for the electrical permit as required by local laws and rules. All work shall be inspected by the proper local authorities as it progresses. The Electrical Contractor shall pay all inspection fees and shall deliver certificates of completion and inspection to the Owner before final payment will be made. Cost of permit and inspection fees shall be included in the Electrical Contractor's quoted price for the installation.
  - c. Arrange with Kauai Island Utility Company (KIUC) and pay for service charges and any work by them pertaining to the photovoltaic system project.
  - d. Contractor shall provide PV panels and other equipment installation and mounting details/supports on and in buildings. Contractor shall provide roof penetration details. All penetrations to existing roof or (carport) decking shall be sealed and weatherproofed (provide flashing details as required). Contractor shall verify PV installation will not void any existing roof warranties.
  - e. All PV system equipment, other than the PV panels, shall be installed as shown on drawings.
  - f. Coordinate all work with other trades. Contractor shall provide O&M manual to include PV system and interfaces, all components specifications, operating instructions, removal and replacement of components, and three line diagrams.
3. Drawings:
  - a. Contract Drawings: These specifications are accompanied by floor plans of the building, and diagrammatic electrical layouts showing the approximate location of the outlets, switches, devices and other equipment. The wiring layouts and schedules show the approximate locations of all outlets, switch controls, service runs and other electrical apparatus. These locations are approximate and before installing, the Contractor shall study adjacent architectural details and make installation in most logical manner. Any device may be relocated within 10'-0" before installation at the direction of the Engineer, whose decision shall be final.
  - b. Shop Drawings: Submit six (6) copies of shop drawings, manufacturer's technical brochures and catalog cuts

accompanied by a letter of transmittal from the Electrical Contractor. Submittals, which fail to provide sufficient information for evaluation, will be returned to the Contractor for resubmittal without extensions of time or waiver. Shop drawings, or catalog cuts, of the following equipment shall be submitted:

- (1) Panelboard(s), circuit breakers.
- (2) Photovoltaic System.
- (3) Any built-to-order equipment.
- (4) PV Racking System

Shop drawings and catalog cut submittals processed by the Engineer are not Change Orders. The purpose of the submittals by the Contractor is to demonstrate to the State of Hawaii Department of Accounting and General Services (DAGS) that he understands the design concept, that he demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing the fabrication and installation methods he intends to use.

- c. As-Built Drawings: The Contractor shall keep at the job site a complete, neat and accurate record of all approved deviations from the contract drawings, shop drawings and specifications, indicating the work as actually installed. These changes shall be recorded on prints of the drawings affected and the shop drawings. Above reference to deviation shall not be construed to allow deviations without prior approval. Reproducible as-builts shall be submitted prior to final acceptance to DAGS.
4. Symbols: The standard electrical symbols together with special symbols, notes, and instructions shown on the drawings indicate the work and equipment required and are all to be included as a part of these specifications.

#### 1.04 QUALITY ASSURANCE

- A. For actual fabrication, installation and testing of the work of this section, use only thoroughly trained and experienced workmen completely familiar with items required and with manufacturers' recommended methods of installation. In acceptance or rejection of installed work, no allowance will be made for lack of skill on part of workmen.
- B. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the installed work and materials of all other trades.

1.06 WARRANTY

- A. All work and materials executed under this Section shall be under warranty to be free from defects of materials and workmanship for one (1) year from date of final acceptance of project as a whole, except lamps, which shall be warranted for 50% of the rated life as published by the manufacturer. All repair and replacement work required, including other work damaged by this work's defects shall be performed without cost to the Owner. Should any equipment or material fail within this period, the Contractor shall replace or repair that item at no cost to the Owner for material and/or services, if such is due to faulty workmanship or quality of material furnished. The Contractor shall be responsible for all damages to any part of the premises caused by failure in the equipment furnished under this section for a period of one year after the final acceptance of the work as a whole.
- B. Maintenance for the photovoltaic system shall be for one (1) year from date of final acceptance of the project as a whole. Contractor shall periodically check system operation once every two (2) months for one (1) year. Record all information in sequence listed below with results and findings. Items requiring attention shall be noted and corrections shall be by Contractor. Notify Engineer's Project Coordinator for scheduling of maintenance test so that a Engineer's Inspector can be present during test.
1. At the Inverter: Use a voltmeter and a DC ammeter to check and record the inverter's operating DC input voltage and current level and on the AC side, and the inverter's output voltage and current levels. Check that the appropriate LEDs are lit up to indicate proper operation of the inverter. If the inverter(s) can display the total kWh produced since it first started up, record the amount. Use this number to compare the PV system's production since the last inspection.
  2. On the Roof: Note and record the condition of the modules. Look for signs of degradation (for example, color changes, fogged glazing, de-lamination, warping, or water leaks), cracked glazing, and bent frames on the modules. Tighten all loose nuts and bolts, holding the modules to the mounting rack and to the mounting clips. Secure any loose wiring under the modules. Check the wiring for cuts, gashes, or worn spots in the wiring's insulation. Replace any damaged wire runs. Check the frame ground connections between modules and from the modules to the junction box(es). Check to see that the sealants around all building penetrations are in good condition and repair if necessary. Open the junction box(es) and look for and correct any dirty, loose, or broken connections. Test the tightness of each connection and tighten all loose ones. Note any

problems that can be corrected at a later time or at the next scheduled inspection time. Close the junctions box(es) and check that all conduit connections are tight.

Remove all sources of shade on the array and rinse the array to remove the accumulated dust, dirt, and other debris. Some debris, such as bird droppings, may need to soak a bit to fully remove it.

3. Back at the Inverter: Turn the inverter off and check for dirty, loose, or broken wires and connections. Check for and repair any ground faults. Power the system up. Check for normal start up operation and that the inverter produces AC electricity.

## **PART 2 - PRODUCTS**

### **2.01 GENERAL**

- A. All materials shall be new and of the best quality available in their respective kinds, free from all defects, NEC Articles 90-6 and 110-3 and those items listed by the Underwriters' Laboratories shall bear "UL" label of approval and shall be of the make and types specified for approval.
- B. Brand names and catalog numbers indicate standards of design and quality required. In case of obsolescence, supersedure, or error in catalog number, the associated description and intent implied by the application shall govern. Requests for substitutions shall comply with applicable sections.

Example:

Manufacturer Item	Manufacturer and Catalog No. Specified	Substitute & Catalog Number
Cable	Joe Doe - No. 3200	King - No. 3200

- C. Failure to obtain approval of substitute materials prior to bidding shall mean that materials as specified shall be provided. Qualifying data shall include cuts, shop drawings, and specifications to show equality with material specified herein and in drawings. The decision of the Engineer shall govern as to what materials or equipment may be substituted for that specified. The burden of proof as to the equality of any proposed substitution shall be upon the Contractor.

## 2.02 MATERIALS

### A. Raceways:

1. Rigid metal conduit - Rigid steel, hot-dipped galvanized inside and outside, zinc-coated, round bore for use with threaded fittings, 1/2-inch minimum diameter, except as noted. Other sizes to conform to NEC requirements, based on THW wires. Manufacture and install according to NEC Article 346. Aluminum conduits not allowed.
2. Rigid non-metallic conduit - Non-metallic conduit shall be polyvinyl chloride (PVC) schedule 40 round bore for underground use. Non-metallic conduits shall be permitted only where indicated on Drawings. Manufacture and install according to NEC Article 347.
3. Liquidtight flexible metal conduit - Flexible steel, zinc-coated, jacketed with high density polyethylene or polyvinyl-chloride jacket. Use with factory approved fittings. Manufacture and install according to NEC Article 351.

### B. Wires:

1. Conductors shall be copper, 600 volts, No. 12 AWG minimum. Conductors No. 10 and smaller, solid and round. Conductor No. 8 and larger, 7 or 19 strands, concentric. All conductors No. 6 and smaller shall be NEC Type TW, XHHW and THW. All conductors No. 4 and larger shall be NEC Type XHHW or THW. Fixture wiring shall be NEC Type RHH or THHN. Exterior conductors shall be Type RHW-USE or cross-linked polyethylene, Style USE. Fire alarm conductors shall be Type THWN.
2. Color Code: Brown- Phase "A", Orange-Phase "B", Yellow-Phase "C", White-Neutral, Green-Ground (480Y/277V System). Black-Phase "A", Red-Phase "B", Blue-Phase "C", White-Neutral, Green-Ground. (208/120V System) Color coding shall be maintained throughout entire system. Use other colors when more wires than above listed are contained on one raceway and for 480 volt system. Engineer shall determine whether deviation from color coding will be permitted.
3. Communications Wiring: Wiring for data and telephone (voice), shall be unshielded twisted pair (UTP), Category 6, where specified.

- ### C. Circuit Breakers:
- Individual breakers shall be molded plastic case, with toggle operated mechanism thermal-magnetic overload trips. Inter-changeable trip shall be provided when available. Toggle positions "ON", "TRIPPED" and "OFF", engraved on body of toggle. Enclosed in NEMA style steel box ratings as indicated on the drawings. Boxes shall be NEMA 1 for interior locations and NEMA 4X SS 316 for exterior locations.

- D. Panelboards: Provide as shown on plans, unit circuit breaker panelboard as indicated. See plans for schedule.
1. Enclosures: Panelboard enclosures shall be corrosion resistant galvanealed (zinc finished) sheet steel with removable end walls. Fronts shall be cold-rolled steel, coated with a phosphatized rust inhibitor and then finish coated with ANSI 61 light gray enamel.
  2. Fronts: A four-piece front shall be furnished to provide ease of wiring access. A door shall be a one-piece bolt on front with a lockable hinged door over the protective devices. All door hinges shall be continuous piano hinges which are welded to the door and bolt on front. Door locks shall be provided. Provide 2 keys. All screw fasteners are zinc coated to retard corrosion.
  3. Main and Branch Devices: Main and branch circuit breakers shall be quick-make, quick break, and trip indicating. All three-pole breakers with ampere ratings greater than 100 ampere shall have interchangeable trips when available. Interrupting rating of circuit breakers shall not be less than the maximum short circuit current available at the incoming line terminals as shown on plans. A UL-Listed series rating alternative may be provided.
  4. Interiors: Panelboard symmetrical interior shall be so designed and assembled that the circuit breakers are mounted onto the bus bar with positive gripping jaw assemblies and locked pressure connections. The circuit breaker shall be removed or replaced without disturbing adjacent protective devices and without removing the main bus or branch circuit connections. The interiors shall allow installation of fusible switches and molded-case circuit breakers in the same panelboard. Insulation barriers shall be installed over the vertical bus behind the dead front shield to provide increased safety when field service is required.

Bus Bars:

1. Bus bars shall be copper, current density rated and meet UL67 temperature rise limits through actual tests. All bus bars shall be silver plated. Bus bar current density rating shall be 1000 amperes per square inch for copper. Bus bars shall be sequenced-phased, and rigidly supported by high impact resistant, insulated bus supporting assemblies to prevent vibration or short circuits. All solderless terminations shall be suitable for either copper or aluminum UL Listed wire or cable and shall be tested and listed in conjunction with appropriate UL standards.
2. The neutral bar shall be fully rated and capable of being located in either corner of the enclosure at the line end to facilitate conductor termination.
3. Ground wire terminations shall be provided as an option in kit form suitable for installation by the panelboard installer without voiding UL label.

Other:

1. A panel directory, neatly typed on factory-card giving branch circuit “USE” and general location of outlets shall be provided. Provide feed-thru lugs for panelboards larger than 42 poles.
  2. Panelboards shall be listed and labeled by Underwriters Laboratories, Inc. in accordance with UL Standard 67, and shall conform to the latest requirements of the National Electrical Code NEMA Standards PB1. The panelboard shall meet service entrance requirements when required.
- E. Pullboxes: Pullboxes shall be provided where required by the NEC or Utility Company requirements. Boxes shall be code gauge steel with screw cover and raintight construction when installed in locations exposed to rain.
- F. Enclosures and Cabinets: Enclosures and cabinets for panelboards, breakers, and switches shall be NEMA type, fabricated from galvanized steel, prime painted and enamel finished according to NEMA specifications.
- G. Photovoltaic System:
1. Photovoltaic Inverter (10-Year Minimum Warranty): The Sunny Boy 20kW inverters provide high reliability, ease of installation and lifetime maintainability. 20-plus year design-life with new market-leading reliability features including bus bars for all power connections, a sealed electronics module and an instrumented cooling system. This provides stringing capability with all PV modules currently available. PV panels shall utilize high efficiency crystalline solar cells and have a minimum panel efficiency of 15%, 5 year product warranty and a 25 year performance warranty.
    - a. Features
      - (1) Superior Reliability  
Engineered power connections eliminate failure points  
Advanced, high-reliability circuit board system
      - (2) Exceptional Installability  
Complete range of fused DC sub-combiner options  
Exterior mounting flange for fast and easy anchoring



- (3) Electrical Specifications
- |                               |                 |
|-------------------------------|-----------------|
| Model                         | SMA             |
| 20000TL-US                    |                 |
| Continuous Output Power (kW)  | 20kW AC         |
| Weighted CEC Efficiency       | 97.5%           |
| DC Imp Nominal Current (A)    | 66A             |
| AC Operating Range (V)        | 277V (244-305V) |
| AC Out Max Continuous Current | 24A             |
2. Photovoltaic Modules:
- a. Model SunPower E19/320 High Efficiency, High Quality PV Module for on-grid commercial systems installation.
  - b. PV panels shall utilize high efficiency crystalline solar cells and have a minimum panel efficiency of 19.6%. Conversion rate and low-light performance shall enable modules to deal with challenging conditions of military, utility, residential and commercial installations. Other acceptable manufacturers are Sharp, SolarWorld/Sunmodule, Kyocera, etc. or approved equal or better.
    - Features
    - Outstanding low-light performance
    - 25-year transferrable power output warranty
- (1) Electrical Characteristics
- |                                 |         |
|---------------------------------|---------|
| Model (E19)                     | SPR-320 |
| STC open-circuit voltage (Voc)  | 64.8V   |
| STC short-circuit current (Isc) | 6.24A   |
| Maximum power at STC (Pmax)     | 320Wp   |
- (2) Module Diagram: Dimensions are 61.39 inches x 41.18 inches.
3. Photovoltaic Racking System: Premanufactured racking system for attachment to roof; aluminum beams, sliders, mounting clamps, brackets, clips, connectors, and required connectors, including weeb lug. Acceptable manufacturers are SOLARMOUNTi-PV, UNIRAC or approved equal PV racking system or better.
- The SOLARMOUNTi-PV racking system shall consist of 2 piece aluminum standoffs, flashing, aluminum beams, butyl coated aluminum flange connections with stainless steel washers and zinc plated lag bolts, aluminum beam spices, clamps and sliders with stainless steel nuts and bolts and grounding lugs. Racking system shall be compatible with roofing materials.
- Each system should be reviewed by a qualified licensed professional ho understands wind effects on roof design and construction prior to purchase and installation. The contractor shall

- provide detailed drawings of the support system stamped by a Hawaii Licensed Structural Engineer.
4. Data Acquisition Server: A8812-x AcquiSuite DR™ data acquisition server, provides high performance and low cost for:
- Demand response programs
  - Benchmarking building operations performance
  - Verification of energy savings and utility costs
  - Cost allocation to department or tenants
  - Internet based supervisory control outputs
- The installation can be done by the building engineer or contractor in less than 2 hours. Applications include:
- Demand response program control and reporting
  - Cost allocation to tenants and third parties
  - Measurement and verification of energy savings
  - Data center branch circuit monitoring
  - Monitoring performance of building systems
- Installation is as follows:
- “Flex” I/O inputs provide easy connections for analog, pulse and resistance sensors
  - Integrated web server provides setup and configuration using any industry standard web browser.
- Wireless connectivity is as follows:
- all data is stored at the site in nonvolatile memory, insuring protection of valuable information in the event of power loss
  - On-board ModHopper (R9120-x) for wireless RS 485 communications
5. A89DC-08 Solar Current Monitor with Modbus Output: Features of this monitor include:
- 8 non-contact Hall Effect current sensors provide ease of installation
  - Modbus RTU RS 485 output for readings
  - Real time readings of DC current levels for all DC generating devices.
- The A89DC-08 can be combined with additional Obvius products to provide a complete monitoring package for solar installations. Options include:
- Inverters with Modbus output
  - ModHopper transceivers for wireless Modbus communications.
- Other features include:
- MCDM provides user-selectable options for detecting failed devices or panels.

- H. Hardware, Supports, Backing, Etc.: All hardware, supports, backing, and other accessories necessary to install electrical equipment shall be provided. Wood

materials shall be "wolmanized" treated against termites; iron or steel materials shall be galvanized for corrosion protection, and non-ferrous materials shall be brass or bronze. All wood screws shall be brass or galvanized steel.

- I. Other Materials: All other materials not specifically described but required for a complete and operable electrical installation, shall be new, first quality of their respective kinds, and as selected by Contractor subject to approval by Engineer.

### **PART 3 - EXECUTION**

#### **3.01 INSTALLATION AND WORKMANSHIP**

- A. Perform all work in accordance with equipment manufacturer's requirements and applicable NFPA standards. Install equipment and materials in a workmanlike manner conforming to recognized commercial standards.
- B. Construction Methods:
  1. Comply with local ordinances and regulations of the County. Workmanship subject to approval of the Engineer, who shall be afforded every opportunity to determine skill and competency. Concealed work re-opened at random during formal inspection by Engineer without additional charge to the Owner.
  2. Construction shall conform to construction practices as recommended by American Electricians Handbook by Croft (latest edition) Edison Electric Institute, National Electrical Code, National Electrical Safety Code and applicable instructions of manufacturers of equipment and materials supplied for project.

#### **3.02 SURFACE CONDITIONS**

- A. Inspection: Prior to work of this section, carefully inspect installed work of other trades and verify that all such work is complete to point where this installation may properly commence.
- B. Discrepancies: In event of discrepancy, immediately notify Engineer. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

#### **3.03 PREPARATION**

- A. Coordination: Coordinate installation of electrical items with schedules for work of other trades to prevent unnecessary delays in total work. Where electrical items are shown in conflict with locations of structural members and mechanical or other equipment, furnish and install required supports and wiring to clear encroachments.

- B. Accuracy of Data: The data indicated on drawings and in specifications are as exact as could be secured but their absolute accuracy is not guaranteed. Exact locations, distances, levels and other conditions will be governed by job decisions of Engineer.

3.04 INSTALLATION OF RACEWAYS AND FITTINGS

- A. All wiring for branch circuits shall be installed in conduit except as noted.
- B. All conduits within building interior shall be rigid steel conduits or electrical metallic tubing. Electrical metallic tubing may be above floor. Paint steel conduits in or under ground floor slabs with asphaltic corrosion resistance base paint or compound. Polyvinyl chloride conduit may be used only in below grade installation. Transition to steel conduit elbow shall be made at floor line. All conduits below ground floor level shall be concrete encased, where indicated.
- C. Conduits shall be of ample size to allow drawing in or removing of wires and cables without undue strain and suitable bushings shall be installed on each end of every run of conduit where wires are installed.
- D. Conduit system shall be continuous from outlet to outlet or fitting to fitting so that electrical continuity is obtained between all conduits of the system.
- E. Cut raceways square, and ream inner edges. Adjoining lengths shall butt together evenly in couplings to provide passage for installing conductors. Factory threads shall be cleaned with die before installation of conduit. Use of running threads not permitted. Where conduits cannot be joined by standard threaded couplings, approved watertight conduit unions shall be used.
- F. Bends, offsets, and crossing of conduits shall be avoided wherever possible. When necessary make bends and offsets with hickey or conduit bending machine. Do not use vise or pipe tee. Flattened or crushed conduit shall not be acceptable. Bends made so that interior cross-sectional area will not be reduced. Radius of curve of inner edge of field bend shall be not less than ten times internal diameter of raceway.
- G. Cap raceways during construction with plastic or metal-capped bushings to prevent entrance of dirt or moisture. Swab all raceways out and dry before wires or cables are pulled in.
- H. Mount raceway free from other pipes, valves, or mechanical equipment. Keep all conduits at least six inches away from the covering on hot water pipes, and 18" away from kitchen exhaust ducts.

- I. Fish wires, cords, strings, chains or the like shall not be placed or inserted in the conduit system during installation of the conduits.
- J. After conduit system has been installed, empty conduits shall be left with a nylon drag wire.
- K. Install insulating bushings and two locknuts on each end of every run of conduit at enclosures and boxes. Provide grounding bushings as required to grounding receptacles and connect conduits to service ground, per NEC Article 250.
- L. Run exposed raceways parallel with, or at right angles to structural or architectural elements.
- M. Securely fasten raceways with galvanized pipe strap, with screws or bolts and spaced not more than 7 feet apart, or with approved beam clamps, or approved single or gang pipe hangers spaced not more than 7 feet apart, as conditions require. Vertical runs shall be supported at intervals not exceeding 5 feet by approved clamp hangers. Conduit runs with one 90-degree bend or equivalent, 150 feet maximum length without pullbox shall be permitted. Support raceways from structure. Do not support raceways from or on mechanical pipes, ducts or ceiling suspension wires.

### 3.05 INSTALLATION OF CONDUCTORS

- A. Except for cables and wires otherwise called for, install all conductors in conduit, wireway or cable tray.
- B. Color Coding: Wires shall be color-coded in accordance with requirements of the NEC.
- C. Tag all feeders for identification.
- D. Splicing:
  - 1. Wires shall be formed neatly in enclosures and boxes. Conductors, #10 and smaller shall be twisted and made secure with wirenut suitable for the purpose. Splice conductors #8 through #4/0 with high pressure compression (indent) copper sleeve connectors. Do not use bolt-on connectors.
  - 2. Insulate all splices with a minimum of two half-lapped layers of vinyl-plastic electrical tape where insulation is required.
  - 3. Splice insulation shall be 200% in thickness of original wire insulation and of same electrical and mechanical characteristics.
- E. Lubricants: Chemically neutral to insulation and sheath. Apply liberally during pulling.

- F. Pulling Conductors: Mechanical means for pulling to be torque limiting type and not to be used for No. 2 AWG and smaller wires. Pulling tensions shall not exceed manufacturer's recommendations. Form neatly in enclosure for minimum of cross-overs.
- G. Communication System Wiring:
  - 1. Above grade communication wiring may be run exposed and shall be adequately secured by straps or other approved methods. Wiring above the suspended (drop ceiling) shall be supported by J-hooks or other approved methods. Wiring shall NOT be laid on the suspended ceiling framing system. Installation of wiring shall conform to applicable EIA/ TIA standards.
  - 2. Underground wiring shall be installed in new communications (telephone) raceways.

### 3.06 GROUNDING

- A. All metallic enclosures, raceways, and electrical equipment shall be grounded according to requirements of National Electrical Code, Article 250.
- B. Service entrance, motors, metallic enclosures, raceways and electrical equipment grounded according to requirements of National Electrical Code, Article 250. At service entrance, install copper clad steel ground rods (number as required) to obtain ground to 25 ohms or less as measured by three-point potential method with electrical ground megger. Connect service entrance ground to building service entrance equipment via ground wire (size as per NEC Article 250-94) and nearest cold water pipe with No. 1/0 bare copper wire. Ground connection to equipment, raceways, motors, grounding type receptacles and other metallic parts directly exposed to ungrounded electric conductors by No. 12 AWG minimum, AWG copper, NEC type TW, green insulated. At water meter and "dielectric" union joints, install pipe clamps, Thomas & Betts Co. No. 3900 series, on both sides of meter on metallic pipes and connect together with No. 1/0 copper. Connection shall not interfere with installation or removal of water meter.
  - 1. All grounding wire runs within buildings shall be in rigid steel conduits. Where practicable, all ground wires shall be run together with circuit conductors.
  - 2. A No. 6 bare copper wire shall be used to connect ground to intercommunication cabinet. A four-foot slack of grounding wire shall be left in cabinet.

3.07 EQUIPMENT CONNECTIONS

- A. Connect all photovoltaic equipment. Make power connections to equipment with short section of flexible conduit.

3.08 MISCELLANEOUS DETAILS

- A. Cut, core and patch as required to install electrical system. Repair any surface damaged or marred by notching, coring or any other process necessary for installation of electrical work. Cutting, repairs and refinishing shall be subject to the approval of the Engineer. Need for remedial work determined by the Engineer as attributable to poor coordination and workmanship shall be cause for reconstruction to the satisfaction of the Engineer, and at no cost to the Owner.

3.09 FINISHING

- A. Patch, repair and restore all structural and architectural elements cut or drilled for installation of electrical system. Drilling, cutting, patching, repairing and restoring shall be finished by suitable trades subject to approval of Engineer.
- B. Attach electrical equipment to wood by wood screws, and attach to concrete by embedded or expansion inserts and bolts. Use power-driven charge with approval only. Close unused knock-outs on boxes or enclosures with metal cap. Powder actuated fasteners shall not be used on precast concrete. Do not use powder activated fasteners to attach enclosures and boxes to the building.
- C. Wipe clean all exposed raceways and enclosures with rag and solvent. Prime painting and finishing of unfinished raceways and enclosures shall conform to PAINTING Section. Factory finished enclosures shall not be painted. Panelboard, switches, circuit breakers, junction boxes, and equipment shall be identified by stenciling with engraved plastic nameplates on cover or door. Voltage and phase shall be indicated on nameplates for panelboards, switches and circuit breakers.
- D. Mark all control, communication wires and fire alarm wires with wire markers attached to conductors in all enclosures.

3.10 TESTING AND INSPECTIONS

- A. After the installation has been completed, and at such time as the Engineer may direct, the Contractor shall conduct all tests required to secure approval of the installation from all agencies having jurisdiction. The equipment shall be demonstrated to operate in accordance with the requirements of this section of the specifications. The test shall be performed in the presence of the Engineer. The Contractor shall furnish

the necessary instruments and personnel required for the test, and the Owner will furnish the necessary electrical power.

1. All wiring shall be tested to insure proper operation according to functions specified. All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects. All systems shall show proper neutral connections.
  2. Interior installation, 600 volts and less shall be tested for insulation resistance after all wiring is completed and ready for connection to equipment. With a 500V megger, measure and record the insulation resistance from phase to phase, and phase to neutral. The above tests shall be witnessed by the Engineer and resistances of feeder cables shall be recorded and four (4) copies submitted to the Engineer.
  3. Proper operation of all electrical devices shall be demonstrated at request of Engineer during final inspection.
  4. Balance loading on each feeder.
  5. Measure ground resistance at service equipment in the presence of the Engineer. Submit four (4) copies of test results to the Engineer.
- B. The Contractor shall retape splices which have been bared for inspection. The Electrical Contractor shall test all portions of the electrical system furnished by him for proper operation and freedom from accidental grounds. All tests shall be subject to the approval of the Owner.
- C. Wherever test or inspection reveals faulty equipment or installation, the Contractor shall take corrective action, at his own expense repairing or replacing equipment or installation as directed.
- D. If the Owner (or his representative) shall discover any of the following errors, the Contractor, at his own expense shall go over all similar portions of the entire job, taking the necessary or directed remedial action.
1. Loose connections.
  2. Impaired clearance.
  3. Improper finish.
  4. Improper adjustment.

### 3.11 CLEAN UP

- A. Upon completion of all installation, lamping and testing, thoroughly inspect all exposed portions of the electrical installation and completely remove all exposed labels, soil, markings and foreign material.

END OF SECTION