

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
HONOLULU, HAWAII

SPECIAL PROVISIONS, SPECIFICATIONS, PROPOSAL AND CONTRACT

FOR

MAINTENANCE OF ELECTRICAL EQUIPMENT

AT

H-3 FREEWAY, HARANO TUNNEL,

ISLAND OF OAHU

PROJECT NO. HWY-OT-2020-06R

2020

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## **NOTICE TO BIDDERS**

(Chapter 103D, HRS)

The receiving of SEALED BIDS for the MAINTENANCE OF ELECTRICAL EQUIPMENT AT H-3 FREEWAY, HARANO TUNNEL, ISLAND OF OAHU, Project No. HWY-OT-2020-06R, will begin as advertised in HiePRO. Bidders are to register and submit bids through HiePRO only. See the following HiePRO link for important information on registering: <https://hiepro.ehawaii.gov/welcome.html>.

Deadline to submit bids is October 1, 2020 at 2:00 p.m., Hawaii Standard Time (HST). Bids received after said due date and time shall not be considered.

The scope of work consists of maintenance, repair, inspection and testing of various electrical equipment at the Harano Tunnel, Island of Oahu.

To be eligible for award, bidders must possess a valid State of Hawaii Specialty Contractor's C-13 (Electrical Contractor) License and C-62 (Pole and Line Contractor) License at the time of bidding. C-63 (High Voltage Electrical Contractor) License is also acceptable in place of C-62 (Pole and Line Contractor) license.

The Hawaii Products Preference pursuant to Section 103D-1002, Hawaii Revised Statutes (HRS), is applicable to this project. Persons wishing to certify and qualify a product as a Hawaii Product shall submit a Certification for Hawaii Product Preference (SPO Form 38) to the DOT Contracts office no later than 4:30 P.M., fourteen (14) calendar days prior to the bid opening date. Late submittals for this project will not be reviewed by the DOT. A separate SPO-Form 38 shall be completed and submitted for each product. Forms are available at <http://spo.hawaii.gov/all-forms/>.

ALL requests for information (RFI) shall be received in writing via HiePRO prior to the Question Due Date in General Information of the HiePRO solicitation. Questions received after

the deadline will not be addressed. Verbal requests for information will not receive a response.

Any protest of this solicitation shall be submitted in writing to the Director of Transportation, in accordance with §103D-701, HRS and §3-126, HAR.

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of Section 11-355, HRS, which states that campaign contributions are prohibited from specified State or county government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, contact the Campaign Spending Commission at (808) 586-0285.

The U.S. Department of Transportation Regulation entitled “Nondiscrimination in Federally-Assisted Programs of the U.S. Department of Transportation,” Title 49, Code of Federal Regulations (CFR), Part 21 is applicable to this project. Bidders are hereby notified that the Department of Transportation will affirmatively ensure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the grounds of race, color, national origin or sex (as directed by 23 CFR Part 200).

For additional information, contact Dawna Emoto, Project Manager, by phone at (808) 587-2628 or by email at dawna.l.emoto@hawaii.gov.

The State reserves the right to reject any or all proposals and to waive any defects in said proposals for the best interest of the public.



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JADE T. BUTAY  
Director of Transportation

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

## SPECIAL PROVISIONS

The Specifications contained herein are amended as follows:

A. SECTION 1 – DEFINITIONS AND TERMS is amended as follows:

1. 1.38 WORKING DAY is amended in its entirety to read as follows:

“Everyday, except Saturdays, Sundays and State holidays as observed. Normal State holidays are as follows:

New Year’s Day (1st day in January) \*  
Dr. Martin Luther King, Jr. Day (third Monday in January)  
President’s Day (third Monday in February)  
Prince Kuhio Day (26th day in March)  
Good Friday (day preceding Easter Sunday)  
Memorial Day (last Monday in May)  
King Kamehameha Day (11th day in June)  
Independence Day (4th day in July)  
Statehood Day (third Friday in August)  
Labor Day (first Monday in September)  
General Election Day (as observed by the State)  
Veterans Day (11th day in November)  
Thanksgiving Day (fourth Thursday in November)  
Christmas Day (25th day in December)

State Holiday schedules can be obtained online at: <http://hawaii.gov/hrd>

2. Add the following new subsections:

1.39 ENGINEER – The Oahu District Engineer, acting directly or through his duly authorized representatives, including State Consultant-provided Inspectors, who are responsible for Oahu District engineering supervision of construction and other highway matters.

1.40 STANDARD SPECIFICATIONS – The Hawaii Standard Specifications for Road and Bridge Construction, 2005, Highways Division, Department of Transportation, including any amendments. To review the standard specifications, log on to:

<http://hidot.hawaii.gov/highways/s2005-standard-specifications/>

The Contractor shall utilize the latest revision.

1.41 OSHA – The U.S. Department of Labor (DOL), Occupational Safety and Health Administration (OSHA). To review the OSHA, log on to:

<https://www.osha.gov>

The Contractor shall utilize the latest revision.”

B. SECTION 2 - PROPOSAL REQUIREMENTS AND CONDITIONS is amended as follows:

1. 2.1 QUALIFICATION OF BIDDERS is to be amended by adding the following paragraphs to the first paragraph:

“Attention is directed to the provisions of Chapter 444, H.R.S., regarding the licensing of contractors in the State.

**A. Contractor Qualification**

1. **License.** At the date of bidding, possess a valid State of Hawaii Specialty Contractor’s C-13, Electrical Contractor License **and** C-62, Pole and Line Contractor License. For the C-62 license, C-63, High Voltage Electrical Contractor License is also acceptable.

a. Statement of Capabilities. In the spaces provided in the Statement of Capabilities, the Contractor shall provide the following information (Refer to Section 10.2(A) 1 Statement of Capabilities, of the Specifications for more information on Statement of Capabilities):

i. Copy of the specified license, and

2. **Work Experience.** At the date of bidding, the Contractor shall have a minimum of two (2) consecutive years of Hawaii Specialty Contractor’s C-13, C-62 **or** C-63 license, experience, **as applicable**, in the field of electrical maintenance, repair, inspection and testing services performing on similar jobs required of this project.

a. Statement of Capabilities. In the spaces provided in the Statement of Capabilities, the Contractor shall provide the following information (Refer to Section 10.2(A) 1 Statement of Capabilities, of the Specifications for more information on Statement of Capabilities):

ii. Number of years of experience, as applicable. and

3. **Documentation of Work Experience.** Produce a list of similar projects to substantiate the Contractor’s experience. List shall contain a minimum of three (3) different electrical maintenance, repair and inspection projects to include name of company that you worked with or you are currently working with, point of contact, phone number, description of electrical maintenance, repair and inspection work performed and cost of project. The



minimum of three (3) different electrical maintenance, repair, inspection and testing projects experience shall be positive on performance evaluation by the respective agency.

4. The Contractor shall possess the required business and tax license to conduct business in the State of Hawaii.
5. At the date of bidding, have all required equipment (e.g. handheld tools, **specialized test equipment**, utility trucks, etc.) necessary to perform all the maintenance procedures specified in this document. Non-possession of these specialized pieces of test equipment shall be considered "prima facie" evidence that the prospective bidder does not have the recent experience required.
  - a. Required equipment maybe owned or leased. To show availability of equipment, the bidder shall complete the Statement of Capabilities form or submit a separate list of owned and/or leased equipment.
  - b. Bidders who are currently renting equipment shall submit a copy of rental agreements during the pre-start meeting.
  - c. The following are required on all equipment/vehicles, as applicable:
    - i. Contractor's vehicles must have Contractor's company name and/or logo displayed on doors or side panels and shall be in letters large enough to be easily legible from a distance of one hundred (100) feet. Magnetic signs bearing the contractor's company name/logo are acceptable. Cost for the logo/contractor's company name shall be considered as incidental cost of maintaining landscaped areas.
    - ii. All vehicles shall be kept in good condition and appearance.
    - iii. Shall meet all State and County licensing and registration and safety requirements and shall be equipped properly in accordance with City, State, Federal and OSHA requirements.
    - iv. The Contractor shall obtain insurance coverages as specified by Section 7.9 Insurance, of the Specifications.

- v. Operation of all equipment shall be in accordance with all applicable OSHA, other Federal, State, and local regulations and laws and the equipment operator's manual.
6. Be familiar with working on State Highways preferably on the Island of Oahu.

**B. Contractor's Personnel Qualification.**

The Contractor shall determine the number of trained/certified staff personnel that he/she is going to employ in order to satisfactorily perform all tasks and fulfill all the safety requirements of the contract documents, but shall employ the minimum number of personnel as specified below who is trained/certified/licensed/experienced on the following:

The Contractor shall be a qualified Journeyman electrician **and/or** Field Engineer or may employ one in his staff with the following requirements:

1. **Journeyman electrician:**

- a. **License.** At the date of bidding, possess a valid State of Hawaii Journey Worker Electrician License and/or Journey Worker Industrial Electrician License and/or Supervising Electrician License and/or Supervising Industrial Electrician License; **and**
- b. **Factory Training.** At the date of bidding, factory trained by possessing a valid certificate of "specialized" training (i.e. switch gears, transformers, transfer switch, protective relays, programmable logic controllers, substations, etc.) completion by General Electric (GE) Energy **or a company equivalent to GE Energy** in performing maintenance, repair and testing services of the electrical equipment listed in the Appendices.
- c. **Work experience.** At the date of bidding, a minimum of:
  - 1. Two (2) continuous years of State of Hawaii Journey Worker Electrician License and/or, Journey Worker Industrial Electrician License and/or, Supervising Electrician License and/or Supervising Industrial Electrician License **experience** in the field of electrical maintenance, repair and inspection services on "specialized" equipment (i.e. switch gears, transformers, transfer switch, protective relays, programmable logic controllers,

substations, etc.) and performing on similar jobs required of this project.

2. Two (2) continuous years' work experience as GE Energy-trained **or** trained by a company equivalent to GE Energy specializing in the field of electrical maintenance, repair, inspection and testing services performing on similar jobs and equipment (switch gears, transformers, transfer switch, protective relays, programmable logic controllers, substations, etc.) required of this project.
- d. In the space provided in the Statement of Capabilities form, the Contractor shall provide the following information (Refer to Section 10.2(A) 1 of the Specifications for more information on Statement of Capabilities):
1. Name of factory-trained and Journeyman electrician.
  2. State of Hawaii Journeyman License number.
  3. Description of work experience similar to the scope of this contract including type of "specialized" electrical equipment as mentioned above,
  4. Copy of electrician Journeyman license.
  5. Copy of valid "specialized" factory training completion certificate by GE Energy **or** a company equivalent to GE Energy.
  6. Years of experience as of bid opening date.
- e. Should employment of the subject factory-trained and licensed Journeyman Electrician cease during the contract, the Contractor shall have ten (10) interim workdays to find an equally qualified replacement and the timely presentation of proof of qualification to the Highways Division, Oahu District - Engineer. Failure to cooperate forthwith could result in contract cancellation.

## 2. **Field Engineer.**

The Contractor shall be a qualified Field Engineer **and/or** Journeyman electrician as specified above or may employ one (1) in his staff with the following requirements:

- a. **Certification.** At the date of bidding, possesses a valid Field Engineering-training completion certificate by GE Energy or a company equivalent to GE Energy.
- b. The factory -trained and certified Field Engineer shall have a minimum of two (2) years' work experience as an electrical equipment (i.e. switch gears, transformers, transfer switch, protective relays, programmable logic controllers, substations, etc.) and performing maintenance, repair, inspection and testing services.
- c. In the space provided in the Statement of Capabilities form, the Contractor shall provide the following information (Refer to Section 10.2(A) 1 of the Specifications for more information on Statement of Capabilities):
  1. Name of Field Engineer,
  2. Factory Field Engineer certification number, as applicable,
  3. Description of work experience similar to the scope of this contract including type of "specialized" electrical equipment as mentioned above,
  4. Copy of GE Energy or by a company equivalent to GE Energy Field Engineer certification, and
  5. Years of experience as of bid opening date.

**3. Apprentice electrician or helper electrician(s).** The Contractor **may** employ Apprentice electrician or helper electrician(s) in his staff with the following requirements:

- a. At the date of bidding, a minimum of two (2) continuous years' **experience** in the field of electrical maintenance, repair, inspection and testing services to equipment similar to what are listed in the appendices.

Apprentice electrician or helper electrician shall be used only under the direct supervision of a Journeyperson electrician or a Field Engineer as specified.

- b. If the Contractor intends to use Apprentice electrician or helper electrician(s), in the spaces provided in the Statement of Capabilities, the Contractor **shall** provide the following information:

1. Name of Apprentice electrician or helper electricians(s).
2. Description of work experience similar to the scope of this contract.
3. Years of experience as of bid opening date.

C. Supplementary Contractor Personnel Requirements

1. Uniforms. Contractor employees on the job site shall be easily identified as Contractor's employees by wearing a shirt, T-shirt or coverall with the company name or logo. Contractor's employees shall present a neat and clean appearance at all times. One color and style of uniform shirt shall be selected which will be worn by all Contractor personnel. Cost of employee's uniform (shirt, T-shirt or coverall) shall be incidental to the unit price of maintaining, repairing, inspecting and testing electrical equipment.
2. Conduct of personnel. For security and safety reasons, the Contractor shall prohibit his or her personnel from parking their personally-owned vehicle along the highway right-of-way areas. The State reserves the right to disqualify the person based on performance anytime during the contract. Upon disqualification, the Contractor has ten (10) working days to submit a qualified replacement.
3. Locker Facilities and Appearance. No locker or dressing areas will be provided. The Contractor's personnel shall proceed to work properly dressed and presentable.
4. Conduct of personnel. The Contractor shall prohibit his personnel from disturbing papers on desks, opening desk drawers or cabinets, or using telephones or office equipment provided for State-government use. The Contractor and his employees are prohibited from smoking in any State-government building. Smoking shall be permitted only in designated outside smoking areas.

D. Availability

1. The Contractor shall furnish the State with telephone numbers of the place of business on the Island of Oahu where the Engineer or a designate can call a service electrician/technician, every calendar day of the year to perform work under this contract.

2. Personnel assigned to this job shall be available to respond to service calls within the parameters of these specifications.
- E. Ability to Communicate. Contractor personnel shall be able to speak and understand the English language and be able to communicate sufficiently in order to perform their assigned work. Contractor personnel shall be able to read, understand written materials such as manuals regulations, instructions, and others that personnel will be required to use in the performance of their assigned work.
  - F. Falsification of personnel qualifications, inability to successfully perform the work, or excessively high turnover of personnel assigned to this work, shall constitute a major breach of this contract.”

2. 2.3 PROPOSAL GUARANTY is deleted in its entirety.

Add the following new subsection:

“2.9 CERTIFICATE FOR PERFORMANCE OF SERVICES - Pursuant to Section 103-55, Hawaii Revised Statutes, and unless indicated otherwise, each bidder should submit the attached "Certificate for Performance of Services" in the event bids are in excess of \$25,000. The notarized certificate must be submitted to said Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813, before entering into a contract to perform services.

**As of January 1, 2020**, salaries of State and employees performing work similar to the work called for under this contract are as follows:

Class Title	Bargaining Unit (BU) Salary Schedule	Grade	Minimum Hourly Pay Rate
Electrician Helper	BU 01	BC 05	\$ 22.94
Electrician I	BU 01	BC 10	\$ 28.70
Electrician II (working foreman)	BU 01	WS 10	\$ 30.39
Electrician Supervisor I	BU 02	F110	\$31.08

The above information is provided to the Contractor for guidance only and is subject to change in accordance with existing collective bargaining contracts or shall change as contracts are renegotiated.

**It is the bidder’s responsibility to verify the accuracy of the wage rates contained herein and to provide for changes in the minimum wages, which must be paid to personnel working on this project at all times.**

Information on the status of Bargaining Unit (BU) contracts, salary schedules,

Class Specifications and minimum qualification requirements can be obtained from the State Department of Transportation, Highways Division, Personnel Management office (587-2229) or on line at: <http://dhrd.hawaii.gov/state-hr-professionals/class-and-comp/>

Bidders are further advised that they are not restricted to hire only those classifications of employees as listed but are free to employ such other classifications of workers as the bidder deems proper and proposes to use on the project, as may be according to the bidder's common hiring practice. However, the principal duties of employees other than those listed hereinabove working on the project will be matched against those of State workers to determine the closest equivalent State employee classification, and the Contractor must compensate such employee(s) at a rate which is no less than that of the equivalent State employee."

C. SECTION 3 - AWARD AND EXECUTION OF CONTRACT - is amended as follows:

1. 3.1 AWARD OF CONTRACT shall be amended by adding the following paragraph to the end of the subsection:

Any bid item lacking a price disqualifies the bidder and shall be grounds for rejection of bids."

2. 3.4 REQUIREMENT OF CONTRACT BOND is deleted in its entirety.

D. SECTION 4 - SCOPE OF WORK is amended as follows:

1. 4.2 PERFORMANCE OF WORK is amended by adding the following paragraphs to the end of the subsection:

"The Contractor shall perform work satisfactorily in the judgment of the Director during the contract period.

If it appears at any time that the work contracted to be performed is not satisfactory, the Director may require the Contractor to furnish and place in operation such additional work force and equipment as the Director shall deem necessary to bring the work up to satisfactory status.

In the case the Contractor fails to comply after ten (10) working days from the date of receipt of such written order from the Director, the Director may employ a working force and equipment and charge the Contractor for the reasonable cost thereof including depreciation for equipment or he may terminate the contract."

E. SECTION 5 - CONTROL OF WORK is amended as follows:

1. 5.3 COOPERATION OF CONTRACTOR AND DIRECTOR is amended by adding the following paragraphs to the end of the subsection:

“The Contractor shall furnish the State with a telephone number and email address where he can be reached at all times. This is very important during the bidding period as well as during the contract period.

The Contractor or designated qualified personnel shall return phone calls from the Engineer within one (1) hour of receipt of the phone call. All electronic mails from the Engineer shall be returned within three (3) hours of receipt of the electronic mail. Refer to Subsections 1.39, Engineer of the Special Provisions for the definition of Engineer.”

2. 5.4 INSPECTION is amended by adding the following paragraphs to the end of the subsection:

“All inspections and tests required by the Director shall be performed in such a manner that will not unduly delay or interrupt the Contractor’s work.

The Contractor shall maintain all books, documents, papers, records and other evidence pertaining to payroll, employee’s name and social security number, wage rates and hours worked and to make such materials and information available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of final payment under the contract, for inspection by the State. Failure to comply with the conditions of this Section during the contract period may result in cancellation of the contract.”

3. 5.5 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK is amended by adding the following paragraphs to the end of the subsection:

“At any time during the performance of this contract, but no later than six months after the acceptance of the services or materials incorporated in accordance with the requirements of this contract, the Director may require the Contractor to remedy by correction or replacement, any services or materials which have failed to comply with the requirements of this contract.”

- F. SECTION 7 - LEGAL RELATIONS AND RESPONSIBILITY is amended as follows:

7.8 LABOR AND COMPENSATION REQUIREMENTS is amended by replacing the first paragraph with the following:

1. 7.8 LABOR AND COMPENSATION REQUIREMENTS is amended by replacing the first paragraph with the following:

“7.8 LABOR AND COMPENSATION REQUIREMENTS - Wages paid each employee employed by the Contractor shall be no less than those specified in Section



2.9 of the Special Provisions. The Contractor shall submit certified payroll affidavits in the form approved by the Department, **showing full information on the following:**

- a. Name of each employee who worked during the reporting period,
- b. Their rates of pay,
- c. The number of hours worked,
- d. Gross earnings and
- e. Deductions made.

Personal information such as social security numbers and addresses of employees are not required.

For a sample format of certified payroll, click on the link:

<http://pwd.hawaii.gov/construction-management-branch/construction-administration-forms/>. Click on “Statement of Compliance & DAGS-ECP for Payroll Affidavits” for additional information. Refer to Appendix F, Sample – Certified Payroll Report, of the Appendices

The Engineer – Oahu District’s representative (Point of Contact) shall document failures to submit certified payroll affidavits and notify the Contractor in writing. Two documented offenses that show willfully ignoring this requirement or failure to document all employees in the payroll affidavit shall constitute a major breach of the Contract and the Contract may be terminated by the Director.

The Contractor shall be required to comply with the laws of the U.S. Citizenship and Immigration Services (USCIS). The Department reserves the right to periodically check the employable status of persons listed on the certified payroll certificates. Any person, who is found to be an illegal alien (undocumented alien) under the laws of the (USCIS), shall be immediately dismissed from the project and not be rehired until he or she is properly cleared.”

2. Add the following new subsection:

“7.10 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall conduct his maintenance operations with due regard to the convenience and safety of the public at all times. The protection of persons and property shall be provided by the Contractor.

All work under this contract shall be in full compliance with Subsection 107.11, Safety: Accident Prevention and 107.12, Protection of Persons and Property of the Standard Specifications. Refer to Section 1.40, Standard Specifications of the Special Provisions for the definition of Standard Specifications. Log on to:

<http://hawaii.gov/dot/highways/specifications2005/sspecprv.htm>

to review the standard specifications. The Contractor shall utilize the latest revision.

The Contractor shall take all necessary precautions to protect all his/her employees and all other personnel from hazards and injuries. The rules and regulations promulgated by the U.S. Department of Labor Occupational Safety and Health Acts (OSHA); the Hawaii Department of Labor and Industrial Relations (DLIR) Hawaii Occupational Safety and Health Division (HIOSH) and any other applicable federal, state, and local rules and regulations are not included herein, but are applicable and made part of these specifications.”

G. SECTION 8 - PROSECUTION AND PROGRESS is amended as follows:

1. 8.2 SUBCONTRACTING is amended by replacing the first paragraph with the following paragraphs:

“The Contractor shall give his personal attention to the fulfillment of the contract and shall keep the work under his control at all times. The scope and nature of work required under this contract are such that any licensed C-13, Electrical Contractor **and** C-62, Pole and Line Contractor should be able to do all the work required without subcontracting any of it to others. Work as C-63 Contractor may substitute work for a C-62 Contractor.

Any work, which falls outside of the authorized work of the C-13, C-62 or C- 63 license, **as applicable**, or work that requires specific training and certification, may be subcontracted only upon approval of the Director. His decision shall be final. Payment of all costs for such subcontractor work shall be according to prices or arrangements agreed upon prior to authorization of such work in writing. The Contractor, however, shall perform with its own organization, work amounting to not less than fifty percent (50%) of the total contract cost.”

2. 8.6 LIQUIDATED DAMAGES by adding the following paragraphs to the end of the subsection:

“Liquidated Damages - Timely performance by the Contractor of all his duties every calendar day is an essential part of this contract and in case of failure on the part of the Contractor to perform any of his duties in a timely manner, damages will be sustained by the State. As the amount of damages are difficult to predetermine, the amount of such damages are fixed in advance as follows:

- a. **Routine/Preventive Maintenance and Inspection Service.** For failure to provide satisfactory and timely maintenance service in accordance with the specifications as determined by the Director, liquidated damages shall be assessed to the Contractor for each and every calendar day at \$750.00 for each calendar day delay **or** at the rate of five percent (5%) of the applicable monthly unit price of the maintenance service bid price, whichever figure is greater.

Failure to provide scheduled servicing on seven or more occasions shall be considered enough to terminate the contract.

- b. **Trouble calls.** \$750.00 for each delay **or** five percent (5%) of current total monthly billing, whichever figure is greater, may be deducted from State's payment to the Contractor for each and every time it does not respond within one (1) hour during regular working hours and four (4) hours during off hours after receipt of a trouble call request for remedial maintenance for which it is contractually obligated under this contract.

For purposes of this paragraph, definition of the term "respond" means to have maintenance personnel on the job and working on the equipment, which is the subject of the request."

H. SECTION 9 – PAYMENT is amended as follows:

- 1. 9.2 RETAINAGE/DEDUCTION FROM PAYMENT - is amended by adding the following paragraphs to the end of the third paragraph: "Retainage is deducted monthly starting on the first invoice of the applicable term and if contract performance is satisfactory, deduction will end after six months. The Contractor, to be paid the retainage amount, has **two options**:
  - a. Submit the total retainage invoice at the end of the first term. Repeat the whole process of deducting retainage and submitting total retainage for payment for each contract term, **or**
  - b. Submit the total retainage invoice held during the first term at the end of the fifth term or the final term, as applicable (when contract is not renewed, etc.). Retainage will no longer be deducted at the 2nd, 3rd, 4th and 5th term, or the final term, as applicable (when contract is not renewed, etc.) of the contract."
- 2. 9.4 PROGRESS PAYMENTS is amended by adding the following paragraphs to the end of the subsection:

"The Contractor shall bill the State once a month.

To expedite processing of all payments for services rendered, the Contractor shall forward copies of the invoice as specified in Section 9.4 Progress Payment, of the Specifications, to the following address:

Tunnel Section  
c/o District Engineer - Oahu District  
Highways Division  
Department of Transportation  
727 Kakoi Street, Honolulu, Hawaii 96819

Each invoice shall include but not limited to the following information:

- (a) Contractor's name, address, and phone number.
- (b) Contract number, project number, and project title.
- (c) Bid item number, description of services, periods covered/date of services performed, quantity, unit price, amount, subtotal, and total.
- (d) Deductions, as applicable, shall be included in the invoices and subtotals and labeled as either (1) and/or (2) below:
  - (1) Liquidated Damages as specified in Section 8.6 Liquidated Damages, of the Special Provisions.
  - (2) Retainage as specified in Section 9.2 Retainage/Deduction from Payment, of the Specifications
- (e) Certification by the Contractor that services as requested under the contract have been performed as specified in Section 9.4 Progress Payment, of the Specifications.

**Refer to the sample invoice in Appendix E, Sample – Monthly Invoice of the Appendices.**

Pursuant to Section 7.8 Labor and Compensation Requirements, of the Special Provisions, the Contractor shall submit each month to the Department, certified copies of the payrolls within seven (7) days after the end of the month. The certification shall affirm that the payrolls are correct and complete. The certificates shall be forwarded to the same address as specified above.”

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

## SECTION 1 - DEFINITION AND TERMS

Whenever the following pronouns are used in these specifications, or in any documents or instruments where these specifications govern, the intent and meaning shall be interpreted as follows:

1.1 ADDENDA - A written document which may be issued by the Director during the bidding period involving changes to the specifications and plans, if any, which shall be considered and made a part of the contract.

1.2 AIRPORTS DIVISION - Airports Division, Department of Transportation, State of Hawaii.

1.3 AWARD - The written acceptance of a proposal by the State.

1.4 BIDDER - Any individual, partnership, corporation or other legal entity, or combination thereof, submitting a proposal for the work contemplated, acting either directly or through a duly authorized representative.

1.5 CALENDAR DAY - Every day shown on the calendar. If no designation of calendar or working day is made, "day" shall mean calendar day.

1.6 CHANGE ORDER - A written order issued by the Director to the Contractor requiring the contract work to be performed in accordance with a change or changes that may involve an adjustment in contract time and price or requiring performance of any unforeseen work essential to complete the contract.

1.7 CONTRACT - The written agreement between the State and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the (1) notice to bidders, (2) proposal, (3) contract form and contract bond, (4) specifications, (5) special provisions and plans, if any, (6) addenda, (7) notice to proceed, and (8) change orders and agreements that are required to complete the work, all of which constitute one instrument.

1.8 CONTRACT BOND - The approved form of security, executed by the Contractor and its Surety or Sureties, guaranteeing the completion of the work in accordance with the terms of the contract, and guaranteeing full payment of all claims for labor, materials, and supplies used or incorporated in the work.

1.9 CONTRACT TIME - The number of working days or calendar days allowed for completion of the contract, including authorized time extensions.

If a calendar date is specified as the date of completion in lieu of the number of working days or calendar days, the contract shall be completed by that date.

In case the contract is for a specified period of time, the contract time shall be for said specified period of time.

1.10 CONTRACTOR - The individual, partnership, corporation or other legal entity, or combination thereof, contracting with the State for performance of the prescribed work.

1.11 DEPARTMENT - The State Department of Transportation.

1.12 DIRECTOR - The Director of Transportation, acting either directly or through the Director's duly authorized representative.

1.13 EQUAL OR APPROVED EQUAL - Whenever this term is used in the specifications and plans, if any, it means a brand or article pre-qualified in accordance with Section 6.2 Trade Names and Alternates and which may be used in place of the one specified.

1.14 H.A.R. or HAR - Hawaii Administrative Rules.

1.15 H.R.S. or HRS - Hawaii Revised Statutes.

1.16 HARBORS DIVISION - Harbors Division, Department of Transportation, State of Hawaii.

1.17 HIGHWAYS DIVISION - Highways Division, Department of Transportation, State of Hawaii.

1.18 HOLIDAYS - The days which are set apart and established as State holidays pursuant to Section 8-1, H.R.S.

1.19 INSPECTOR - The Director's authorized representative assigned to make detailed inspections of contract performance and materials supplied.

1.20 NOTICE TO BIDDERS - The public announcement, as required by law, inviting proposals for the work to be performed or materials to be furnished.

1.21 NOTICE OF FINAL ACCEPTANCE - Written notice from the Director to the Contractor that the entire contract has been completed in all respects in accordance with the specifications and plans, if any, and any changes thereof previously approved by the Director.

1.22 NOTICE TO PROCEED - Written notice from the Director to the Contractor advising the Contractor of the date on which he is to begin the prosecution of the work.

1.23 PLANS - The contract drawings approved by the Director which show the location, character, dimensions and details of the work to be done and shall be a part of the contract.

1.24 PROCUREMENT OFFICER - The Director's duly authorized representative including project managers, project engineers and contract administrators assigned to prepare, evaluate and administer contracts for the purchasing of goods and services.

1.25 PROPOSAL (OR BID) - The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

1.26 PROPOSAL FORM - The approved format prepared by the Department or a facsimile thereof on which bids for the work must be prepared and submitted. (Reasonable facsimile acceptable for bidding.)

1.27 PROPOSAL GUARANTY - The security furnished with a proposal to guarantee that the bidder will enter into the contract and furnish all other requirements if the bidder's proposal is accepted.

1.28 QUALIFICATION QUESTIONNAIRE - The specified forms on which the bidder shall furnish required information as to the bidder's ability to perform and finance the work.

1.29 S.L.H. or SLH - Session Laws of Hawaii.

1.30 SPECIAL PROVISIONS - Revisions to the specifications. The specific clauses setting forth conditions or requirements peculiar to the project under consideration which are not thoroughly or satisfactorily stipulated in these specifications.

1.31 SPECIFICATIONS - The directions, provisions, and requirements pertaining to the method and manner of performing the work and to the quantities and qualities of materials to be furnished under the contract.

1.32 STATE - The State of Hawaii.



1.33 SUBCONTRACTOR - An individual, partnership, corporation, other legal entity, or any combination thereof, that enters into an agreement with the Contractor to perform a portion of the work for the Contractor.

1.34 SUPERINTENDENT - The Contractor's representative who is responsible for and in charge of the work.

1.35 SURETY - The corporation, partnership or individual, other than the Contractor, executing a bond furnished by the Contractor and guaranteeing performance by the Contractor.

1.36 TITLES (OR HEADINGS) - The titles or headings of the Sections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation. Unless otherwise indicated, whenever the word "Section" is used, reference is being made to a Section in these specifications.

1.37 WORK - The furnishing of all labor, materials, equipment, and other incidentals necessary or convenient for the successful completion of the project and the execution of all the duties and obligations imposed by the contract.

1.38 WORKING DAY - Any day, except Saturdays, Sundays and State holidays.

## SECTION 2 - PROPOSAL REQUIREMENTS AND CONDITIONS

2.1 QUALIFICATION OF BIDDERS - Prospective bidders must be capable of performing the work for which bids are called.

In accordance with Section 103D-310, HRS, the Department may require any prospective bidder to submit answers to questions contained in the "Standard Qualification Questionnaire for Prospective Bidders on Public Works Contracts" on the form furnished by the Department, properly executed and notarized, setting forth a complete statement of the experience of such prospective bidder and its organization in performing similar work and a statement of the equipment proposed to be used, together with adequate proof of the availability of such equipment. Whenever it appears to the Department, from answers to the questionnaire or otherwise, that the prospective bidder is not fully qualified and able to perform the intended work, the Department will, after affording the prospective bidder an opportunity to be heard and if still of the opinion that the bidder is not fully qualified to perform the work, refuse to receive or consider any bid offered by the prospective bidder. All information contained in the answers to the questionnaire shall be kept confidential. Questionnaire so submitted shall be returned to the bidders after serving their purpose.

Failure to complete the qualification questionnaire will be sufficient cause for the Department to disqualify a prospective bidder.

No person, firm or corporation may bid where (1) the person, firm, or corporation, or (2) a corporation owned substantially by the person, firm, or corporation, or (3) a substantial stockholder or an officer of the corporation, or (4) a partner or substantial investor in the firm is in arrears in payments owed to the State of Hawaii or its political subdivisions or is in default as a surety or failure to do faithfully and diligently previous contracts with the State.

2.2 REJECTION OF PROPOSALS CONTAINING ALTERATIONS, ERASURES, OR IRREGULARITIES - Proposals may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind.

When proposals are signed by any agent, other than the officer or officers of a corporation authorized to sign contract on its behalf or a member of copartnership, a Power of Attorney must be on file with the Department prior to opening bids or shall be submitted with the proposal; otherwise, the proposal may be rejected as irregular and unauthorized.

Members of a joint venture may be requested to supply the Department with a copy of their joint venture agreement or each member of the joint venture may be required to sign the proposal.

2.3 PROPOSAL GUARANTY - A proposal guaranty (bid bond) is not required except when specifically noted in the proposal section of the bid document.

When a proposal guaranty is required with a bid, it will be specifically stated in the proposal; and no proposal totaling \$25,000 or more will be considered unless accompanied by one of the following forms of bidder's security:

- A. a deposit of legal tender; or
- B. a surety bid bond underwritten by a company licensed to issue bonds in the State of Hawaii and submitted on the standard form provided herewith; or
- C. a certificate of deposit, share certificate, cashier's check, treasurer's check, teller's check, or official check drawn by, or a certified check accepted by and payable on demand to the State by a bank, savings institution, or credit union insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA).
  1. The bidder may use these instruments only to a maximum of one hundred thousand dollars (\$100,000.00).
  2. If the required security or bond amount totals over one hundred thousand dollars (\$100,000.00), more than one instrument not exceeding one hundred thousand dollars (\$100,000.00) each and issued by different financial institutions shall be acceptable.
  3. The instrument shall be made payable at sight to the Department of Transportation, State of Hawaii.

According to Section 103D-323, HRS, the above shall be in a sum not less than five percent (5%) of the amount bid.

2.4 DELIVERY OF PROPOSALS - Each proposal shall be placed, together with the proposal guaranty when required, in an envelope and sealed and so marked as to indicate the identity of the project, the name and address of the bidder, and other required information and then delivered as indicated in the Notice to Bidders. Proposals will be received up to the time fixed in the Notice to Bidders for the opening of bids.

2.5 WITHDRAWAL OF PROPOSALS - Any proposal may be withdrawn at any time prior to the time fixed in the Notice to Bidders for the opening of proposals upon the filing of a written request therefore with the Department, executed by the bidder or a duly authorized representative. The withdrawal of a proposal shall not preclude a bidder from submitting a new proposal.

2.6 PUBLIC OPENING OF PROPOSALS - Proposals will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders or their authorized agents are invited to be present.

2.7 DISQUALIFICATION OF BIDDERS - Any of the following reasons may be considered as being sufficient grounds for the disqualification of a bidder and the rejection of his proposal or proposals.

A. More than one proposal for the same work from an individual, firm, or corporation under the same or different name.

B. Evidence of collusion among bidders. Participants in such collusion will receive no recognition as bidders for any future work of the Department until such participant shall have been reinstated as a qualified bidder.

C. Evidence of assistance from a person who has been an employee of the agency within the preceding two years and who participated while in State office or employment in the matter with which the contract is directly concerned, pursuant to Section 84-15, H.R.S.

D. Lack of proposal guaranty.

E. Unsigned proposal or proposal not signed in ink by person or persons legally authorized to submit a proposal on behalf of the bidder.

2.8 MATERIAL GUARANTY - The bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the prosecution of the work, together with samples. Such samples may be subjected to tests to determine their quality and fitness for the work.

SECTION 3 - AWARD AND EXECUTION OF CONTRACT

3.1 AWARD OF CONTRACT - The State reserves the right to reject any and all proposals and to waive any defects as may be deemed to be in the best interest of the public.

The award of contract, if it be awarded, will be made within sixty (60) calendar days after the opening of bids to the lowest responsive and responsible bidder whose proposal complies with all the prescribed requirements. The successful bidder will be notified, by letter mailed to the address shown in its proposal, that its proposal has been accepted and it has been awarded the contract.

**Requirement for award.** To be eligible for award, the apparent low Bidder will be contacted to submit copies of the documents listed below to demonstrate compliance with Section 103D-310(c), HRS. The documents should be submitted to the Department as soon as possible. If a valid certificate/clearance is not submitted on a timely basis for award of a contract, a Bidder otherwise responsive and responsible may not receive the award.

**A. Tax Clearance.**

Pursuant to §103D-310(c), 103-53 and 103D-328, HRS, the successful bidder shall be required to submit a certified copy of its tax clearance issued by the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS) to demonstrate its compliance with Chapter 237, HRS. A tax clearance is valid for six (6) months from the most recent approval stamp date on the tax clearance and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date.

FORM A6, TAX CLEARANCE CERTIFICATE, is available at the following website:

<http://www.hawaii.gov/tax/>

To receive DOTAX Forms by fax or mail, phone (808)587-7572 or 1-800-222-7572.

The application for the Tax Clearance Certificate is the responsibility of the bidder, and must be submitted directly to the DOTAX or IRS. The approved certificate may then be submitted to the Department.

**B. DLIR Certificate of Compliance.**

Pursuant to §103D-310(c), HRS, the successful bidder shall be required to submit a copy (faxed copies are acceptable) of its approved Certificate of Compliance issued by the Hawaii State Department of Labor and Industrial Relations (DLIR) to demonstrate its compliance with unemployment insurance (Chapter 383, HRS), workers' compensation (Chapter 386, HRS), temporary disability insurance (Chapter 392, HRS), and prepaid health care (Chapter 393, HRS). The certificate is valid for six (6) months from the most recent approval stamp date on the certificate and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date. For certificates which receive a "pending" approval stamp, a DLIR approval stamp is required prior to the issuance of the Notice to Proceed.

FORM LIR#27, APPLICATION FOR CERTIFICATE OF COMPLIANCE WITH SECTION 3-122-112, HAR, is available at the following website:

[www.hawaii.gov/labor](http://www.hawaii.gov/labor)

More information is available by calling the DLIR Unemployment Insurance Division at (808) 586-8926.

Inquiries regarding the status of a LIR#27 Form may be made by calling the DLIR Disability Compensation Division at (808)586-9200.

The application for the Certificate of Compliance is the responsibility of the bidder, and must be submitted directly to the DLIR. The approved certificate may then be submitted to the Department.

**C. DCCA Certificate of Good Standing.**

Pursuant to §103D-310(c), HRS, the successful bidder shall be required to submit a copy (faxed copies are acceptable) of its approved Certificate of Good Standing issued by the Hawaii State Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) to demonstrate that it is either:

- (1) incorporated or organized under the laws of the State; or
- (2) registered to do business in the State as

a separate branch or division that is capable of fully performing under the contract.

A Certificate of Good Standing is valid for six (6) months from the approval date on the certificate and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date. A Hawaii business that is a sole proprietorship, is not required to register with the BREG, and therefore not required to submit a Certificate of Good Standing. Bidders are advised that there are costs associated with registering and obtaining a Certificate of Good Standing from the DCCA.

To purchase a CERTIFICATE OF GOOD STANDING, go to On-Line Services at the following website:

[www.hawaii.gov/dcca/](http://www.hawaii.gov/dcca/)

The application for the Certificate of Good Standing is the responsibility of the bidder, and must be submitted directly to the DCCA. The approved certificate may then be submitted to the Department.

3.2 CANCELLATION OF AWARD - The State reserves the right to cancel the award of any contract any time before the execution of said contract by all parties without any liability to the successful bidder or any other bidder.

3.3 RETURN OF PROPOSAL GUARANTY - All proposal guaranties, except those of the lowest two (2) bidders, will be returned immediately following the opening and checking of the proposals. The retained proposal guaranty of the second lowest bidder, if not a bid bond, will be returned within ten (10) calendar days following execution of contract by the successful bidder. The successful bidder's proposal guaranty, if not a bid bond, will be returned after a satisfactory contract bond has been furnished and the contract has been executed.

3.4 REQUIREMENT OF CONTRACT BOND - Only when required by the proposal, the successful bidder at the time of the execution of the contract shall file good and sufficient performance and payment bonds on the forms furnished by the Department, or a facsimile thereof, conditioned for the full and faithful performance of the contract in accordance with the terms and intent thereof and also for the prompt payment to all others for all labor and materials furnished by them to it and use in the prosecution of the work provided for in such contract,

in the manner, form and amount required by Section 3-122-224(b)(2), H.A.R., which bonds shall be in an amount equal to fifty per cent (50%) of the contract price, including amounts estimated to be required for extra work, or in the case of price-term, open-end, or requirements contract under which the total amount to be paid to the Contractor cannot be accurately estimated at the time the contract is to be awarded, the bond amounts shall be as designated in the bid documents. Such bonds shall also by their terms inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in the work so as to give them a right of action as contemplated by Section 103D-324, H.R.S.

The bidder shall limit the acceptable performance and payment bonds to the following:

- (a) Legal tender; or
- (b) Surety bond underwritten by a company licensed to issue bonds in the State of Hawaii; or
- (c) A certificate of deposit; share certificate,; cashier's check; treasurer's check; teller's check drawn by or a certified check accepted by and payable on demand to the State by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA).

1. The bidder may use these instruments only to a maximum of one hundred thousand dollars (\$100,000.00).
2. If the required security or bond amount totals over one hundred thousand dollars (\$100,000.00) more than one instrument not exceeding one hundred thousand dollars (\$100,000.00) each and issued by different financial institutions shall be acceptable.

3.5 EXECUTION OF CONTRACT - The contract and the "Certificate for Performance of Services", similar to a copy of the same annexed hereto, shall be executed by the successful bidder and returned, together with the contract bonds, when required, within ten (10) days after the award of the contract or within such further time as the Director may allow after the bidder has received the contract for execution.

Pursuant to Section 103D-309, H.R.S., the contract shall not bind the State in any way unless said contract has been fully and properly executed by all the parties thereto and



the Comptroller has endorsed thereon a certificate that there is available an unexpended appropriation over and above all outstanding contracts, sufficient to cover the amount required by the contract.

3.6 FAILURE TO EXECUTE CONTRACT - Failure to execute the contract, Certificate for Performance of Services and file acceptable bonds, when required, within ten (10) days after the award of the contract, or within such further time as the Director may allow, shall be cause for the cancellation of the award and the forfeiture of the proposal guaranty. Award of the contract may then be made to the next lowest responsible bidder.

## SECTION 4 - SCOPE OF WORK

4.1 WORK TO BE DONE - The work to be done is described in the Section(s) following Section 9 of these specifications.

4.2 PERFORMANCE OF WORK - The Contractor shall employ, so far as possible, such methods and means in carrying out his work so as not to cause any interruption, disturbance, or interference with the public.

In case the Contractor is performing work in a building, the Contractor shall conduct the work in such a manner so as not to cause any interruption, disturbance, or interference with the business activities of the tenants in the building.

4.3 EXTRA WORK - New and unforeseen items of work will be classed as extra work when they cannot be covered by any of the various items for which there is a bid price.

### 4.4 CHANGES AND CLAIMS FOR ADJUSTMENT

A. Change order. By a written order, at any time, and without notice to any surety, the procurement officer may, subject to all appropriate adjustments, make changes within the general scope of this contract in any one or more of the following:

1. Drawings, designs, or specifications, if the goods to be furnished are to be specially manufactured for the State in accordance therewith;
2. Method of shipment or packing;
3. Place of delivery;
4. Changes in the work within the scope of the contract; or
5. Changes in the time of performance of the contract that do not alter the scope of work.

B. Adjustments of price or time for performance. If any change order increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, an adjustment shall be made and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the price adjustment clause of this contract. Failure of the parties to agree to an adjustment shall not excuse the contractor from proceeding with the contract as changed, provided that the procurement officer promptly and duly make the provisional adjustments in payment or time for performance as may be reasonable. By proceeding with the work, the contractor shall not be deemed to have

prejudiced any claim for additional compensation, or an extension of time for completion.

C. Time period for claim. Within thirty (30) days after receipt of a written change order under subsection (a) unless the period is extended by the procurement officer in writing, the contractor shall file notice of intent to assert a claim for an adjustment. Later notification shall not bar the contractor's claim unless the State or county is prejudiced by the delay in notification.

D. Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if notice is not given prior to final payment under this contract.

E. Other claims not barred. In the absence of a change order, nothing in this clause shall be deemed to restrict the contractor's right to pursue a claim as under the contract or for breach of contract.

#### 4.5 PRICE ADJUSTMENT

Any adjustment in contract price pursuant to a clause in this contract shall be made in one or more of the following ways:

- A. By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
- B. By unit prices specified in the contract or subsequently agreed upon;
- C. By the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as specified in the contract or subsequently agreed upon;
- D. In such other manner as the parties may mutually agree; or
- E. In the absence of agreement between the parties, by a unilateral determination by the procurement officer of the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as computed by the procurement officer in accordance with generally accepted accounting principles and applicable sections of chapters 3-123 and 3-126 of the Hawaii Administrative Rules.

#### 4.6 VARIATION IN QUANTITY

Upon agreement of the parties, the quantity of goods or services or both specified in this contract may be increased by a maximum of ten (10) percent provided (1) the unit prices will remain the same except for any price adjustments otherwise applicable and (2) the procurement officer makes a written determination that such an increase will either be more economical than awarding another contract or that it would not be practical to award another contract.

## SECTION 5 - CONTROL OF WORK

5.1 AUTHORITY OF DIRECTOR - The Director shall decide all questions which may arise as to the quality or acceptability of materials furnished and work performed; the manner of performance and rate of progress of the work; the compensation for work performed; the interpretation of the contract and the fulfillment of the contract on the part of the Contractor. The Director's decision shall be final and the Director shall have the authority to enforce any such decision and order which the Contractor fails to carry out promptly and diligently. The Director shall have the following powers in the way of enforcement:

- A. The right to suspend the work.
- B. The right to withhold payment due the Contractor.

5.2 COORDINATION OF PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS - These specifications, the plans, special provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to describe and provide for the complete work.

5.3 COOPERATION OF CONTRACTOR AND DIRECTOR - The Contractor shall have available at the work site at all times, a copy of the specifications, special provisions and plans. The Contractor shall give the work constant attention to facilitate the progress thereof and shall cooperate with the Director in every way possible.

Before starting work on the project, the Contractor shall designate in writing a superintendent who shall have complete authority to represent and to act for the Contractor.

5.4 INSPECTION - The Director at all times shall have access to the work during its prosecution and shall be furnished with every reasonable facility for ascertaining that the materials and the workmanship are in accordance with the requirements and intentions of these specifications and special provisions. All work done and all materials furnished shall be subject to the Director's inspection and approval.

The inspection of the work shall not relieve the Contractor of any of its obligations to fulfill its contract as prescribed, and defective work shall be made good and unsuitable materials may be rejected, notwithstanding that such defective work and materials may have been previously overlooked by the Director and accepted or included in an estimate for payment.

Projects financed in whole or in part with Federal funds shall be subject to inspection at all times by representatives of the Federal agency involved.

5.5 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK - All work which has been rejected shall be corrected or removed and replaced by the Contractor in an acceptable manner and no compensation will be allowed the Contractor for such correction or removal and replacement. Upon failure on the part of the Contractor to comply promptly with any order of the Director, the Director may cause any rejected work to be corrected or removed and replaced and to deduct the costs thereof from any monies due or to become due the Contractor.

5.6 CLAIMS AND DISPUTES - The Contractor may give notice in writing to the Director for claims that extra compensation, damages, or an extension of time for completion is due the Contractor for one or more of the following reasons:

- A. Requirements not clearly covered in the contract, or not ordered by the Director as extra work;
- B. Failure between the State and the Contractor to agree to an adjustment in price for a contract change order issued by the State; or
- C. An action or omission on the part of the Director requiring performance changes within the scope of the contract.

The Contractor shall continue with performance of the contract in compliance with the directions or orders of the procurement officer, but by so doing, the Contractor shall not be deemed to have prejudiced any claim for additional compensation, damages, or an extension of time for completion; provided:

- A. The notice in writing be given:
  - 1. Before the commencement of the work involved, if at that time the Contractor knows of such requirements or the occurrence of such actions or omissions; or
  - 2. Within thirty (30) calendar days after the Contractor knows of such requirements or the occurrence of such action or omission if the Contractor did not have such knowledge before the commencement of the work; or
  - 3. Within thirty (30) calendar days after receipt of the written contract change order that was not

agreed upon by both parties; or

4. Within such further time as may be allowed by the Director in writing.

B. The notice shall clearly state the Contractor's intention to make claim and the reasons why the Contractor believes that additional compensation, changes or an extension of time may be remedies to which the Contractor is entitled; and afford the Director every facility for keeping records of the actual cost of work. Failure on the part of the Contractor to give such notification or to afford the procurement officer proper facilities for keeping strict account of actual cost shall constitute waiver of the claim for such extra compensation. The filing of such notice by the Contractor and the keeping of costs by the procurement officer shall not in any way be construed to prove the validity of the claim.

The Director will review the notice and render a decision. The Director's decision shall be final and conclusive unless, within thirty (30) calendar days from the date of the decision, the Contractor mails or otherwise furnishes a written appeal to the Director. The decision of the Director shall be final. Later notification of such claims shall not bar the Contractor's claim unless the State is prejudiced by the delay in notification. No claim by the Contractor for an adjustment hereunder shall be allowed if notice is not given before final payment under this contract. Any adjustment in the contract price made pursuant to this clause shall be determined according to Section 4.5 - Price Adjustment.

The provisions of this Section shall not be construed as establishing any claims contrary to the terms of Section 4.4 - Changes and Claims for Adjustment.

Nothing herein contained, however, shall excuse the Contractor from compliance with any rules of law precluding any state officers and any Contractors from acting in collusion or bad faith in issuing or performing contract change orders which are clearly not within the scope of the contract.

## SECTION 6 - CONTROL OF MATERIAL AND EQUIPMENT

6.1 DEFECTIVE MATERIALS - All materials not conforming to the requirements of these specifications or the special provisions shall be considered defective and all such materials, whether in place or not, shall be rejected. They shall be removed immediately from the site of the work, unless otherwise permitted by the Director. No rejected materials, the defects of which have been subsequently corrected, shall be used until approval in writing has been given by the Director. Upon failure on the part of the Contractor to comply promptly with any order to remove and replace defective materials, the Director may remove and replace defective material and to deduct the cost of removal and replacement from any monies due or to become due the Contractor.

6.2 TRADE NAMES AND ALTERNATES - For convenience in designation on the plans or in the specifications, certain equipment or articles or materials may be designated under a trade name or the name of a manufacturer and its information catalogue. The use of alternate equipment or an article or material which is of equal quality and of the required characteristics for the purposes intended will be permitted, subject to the written approval of the Director, in accordance with the following requirements:

A. QUALIFICATION BEFORE BID OPENING - When the specifications and/or plans specify one or more manufacturer's brand names of materials or equipment to indicate a quality, style, appearance, or performance, the bidder will be assumed to have based its bid on one of the specified named products, except where such proprietary product are specified, alternate brands may be qualified if found equal or better by the Director. Bidders requesting qualification of alternate proprietary products must submit a request to the Director for review and approval at the earliest date possible, but in any event, such request must be received at the Contracts office not later than ten (10) days before the bid opening date, not including the bid opening date.

It shall be the responsibility of the bidder to submit sufficient evidence based upon which a determination can be made by the Director that the alternate brand is qualified. The evidence shall be transmitted with a covering letter which shall list the evidence submitted and the items for which the substitution is requested.

If the evidence accompanying a request for substitution is insufficient to qualify a particular



model, the request shall be denied provided that further evidence may be submitted to qualify the item five (5) days prior to the bid opening date if the initial request was made prior to the deadline set above.

B. SUBSTITUTION AFTER BID OPENING - Substitution of material or equipment will not be allowed after the bid opening date except under the following unforeseen circumstances:

1. If a specified or pre qualified item is delayed by a lengthy strike in the factory or other unforeseeable contingency beyond the control of the Contractor which would cause an abnormal delay in the project completion.
2. If a specified or pre qualified item is found to be unusable due to change or other circumstances.
3. If the Contractor is willing to provide a more recently developed or manufactured item of material or equipment of the same manufacturer which the Director determines to be equal or better than the one specified or pre-qualified.

A substitution request, regardless of reason, shall be fully explained in writing by the Contractor and shall include its justification for said request, the quantities and unit prices involved, quotations and such other documents as are deemed necessary to support the request. Any savings in cost will accrue to the State and any additional cost for the substituted items will be paid by the Contractor.

The burden of proof as to the comparative quality and suitability of alternate equipment, articles, or materials shall be upon the bidder or Contractor and bidder or Contractor shall furnish, at its own expense, all information necessary or related thereto as required by the Director. The Director shall be the sole judge as to the comparative quality and suitability of alternate equipment, articles or materials and the Director's decisions shall be final.

The above shall not be construed to mean that substitution for brand name specified materials and equipment will be allowed; the Director reserves the right to deny any request he deems irregular or not in the best interest of the State.

6.3 ASSIGNMENT OF ANTITRUST CLAIMS FOR OVERCHARGES FOR GOODS AND MATERIALS PURCHASED

A. Vendor and purchaser recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, vendor hereby assigns to purchaser any and all claims for such overcharges as to goods and materials purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and which are not passed on to the purchaser under an escalation clause.

B. Contractor and owner recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the owner. Therefore, contractor hereby assigns to owner any and all claims for such overcharges as to goods and materials purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and any change order. In addition, contractor warrants and represents that each of its first tier suppliers and subcontractors shall assign any and all such claims to owner, subject to the aforementioned exception.

SECTION 7 - LEGAL RELATIONS AND RESPONSIBILITY

7.1 LAWS TO BE OBSERVED - The Contractor shall comply with all federal, state, city and county laws, ordinances, rules and regulations which in any manner affect those engaged or employed in the work, the materials used in the work, and the conduct of the work. Any reference to such laws, ordinances, rules and regulations shall include any amendments thereto effective as of the date of the call for sealed proposals.

The Contractor shall hold harmless, indemnify, defend and where appropriate, insure the State, its officers, agents and employees against any claim or liability arising from or based on the violation of any such laws, ordinances, rules or regulations. If any discrepancy or inconsistency is discovered in the contract for the work in relation to any law, ordinance, rule, regulation, order or decree, the Contractor shall forthwith report the same to the Director in writing.

7.2 PERMITS AND LICENSES - The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work.

7.3 PATENTS - The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the work, and shall hold harmless, indemnify, defend and where appropriate, insure the State, its officers, agents and employees from all suits at law or actions of every nature, for or on account of the use of any patented materials, equipment, devices or processes.

7.4 RESPONSIBILITY FOR INJURY AND DAMAGE - The State, its officers, agents and employees shall not be held accountable in any manner for any loss or damage to the work or any part thereof, or for any of the materials and equipment used or employed in performing the work, or for any injury to any person or persons either workers or the public, or for any damage to property caused by the Contractor or its workers or any one employed by the Contractor. The Contractor shall be responsible for any liability imposed by law for any injury to any person or any damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance. The acceptance of the completed work of the Contractor by the Director shall not relieve the Contractor from any liability which may have accrued or may accrue as a result of the performance of the work by the Contractor. The Contractor shall hold harmless, indemnify, defend and where appropriate, insure the State, its officers, agents and employees, from all suits or actions of every name, kind and description, brought for or on account of

any injuries or damages sustained by any persons or property caused by the Contractor, its servants or agents, or by or on account of any act or omission of the Contractor or its servants or agents, regardless of whether such actions or any claim is brought against them or any one of them before or after the final acceptance of the work. In addition to any remedy authorized by law, the State may withhold payment of any money due to Contractor as shall be reasonable until disposition has been made of any suits or claims for injuries or damages.

It is not the intention of the parties to this contract to make the public or any member thereof a third party beneficiary hereunder, or to authorize anyone not a party hereto to maintain a suit for personal injuries or property damage based on a contract theory of liability. In any event, the Contractor shall hold harmless, indemnify, defend and where appropriate, insure the State from suits and claims for personal injuries or property damage where such injuries or damage are caused by the negligent acts or omissions of the Contractor, its agents or employees.

7.5 COOPERATION BETWEEN CONTRACTORS - Where two or more Contractors are employed on related or adjacent work, each shall conduct its operations in such a manner as not to cause any unnecessary delay or hindrance to the other.

7.6 CONTRACTOR'S RESPONSIBILITY FOR WORK - Until the acceptance of the contract, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expenses thereof.

7.7 NO PERSONAL LIABILITY - Neither the Director nor any other officer or authorized employee of the Department shall be personally responsible for any liability arising under the contract.

7.8 LABOR AND COMPENSATION REQUIREMENTS - Wages paid each laborer employed by the Contractor or any subcontractor shall not be less than the prevailing minimum wage rate prescribed by law.

Every laborer employed by the Contractor or any subcontractor whose rate of compensation is Five Dollars (\$5.00) or less per day shall be paid his wages weekly pursuant to Section 103-54, H.R.S.

The Contractor's attention is directed to Chapter 377, H.R.S., Hawaii Employment Relations Act; Chapter 378, H.R.S., Employment Practices; Chapter 383, H.R.S., Hawaii Employment Security Law; Chapter 386, H.R.S., Workers' Compensation Law; Chapter 387, H.R.S., Wage and Hour Law; Chapter 392, H.R.S., Temporary Disability Insurance; Chapter 393, H.R.S., Prepared Health Care Act; Chapter 396, H.R.S., Occupational Safety and Health; and Section 103-55, H.R.S., Wages, Hours, Working Conditions of Employees of Contractor's Supplying Services.

7.9 INSURANCE - Prior to commencing with the work, the Contractor shall, at its own expense, obtain and submit to the Department, Certificate of Insurance from an insurance company authorized by the laws of the State to issue such insurance in the State of Hawaii showing full policy coverage of the Contractor.

TYPES OF INSURANCE:

A. Workers' Compensation:

The Contractor shall obtain worker's compensation insurance for all persons whom they employ in carrying out the work under this contract. This insurance shall be in strict conformity with the requirements of the most current and applicable State of Hawaii Worker's Compensation Insurance laws in effect on the date of the execution of this contract and as modified during the duration of the contract. The minimum limit of liability for workers compensation is the HRS 386 statutory limit.

B. Comprehensive Automobile Liability:

The Contractor shall obtain Auto Liability Insurance covering all owned, non-owned and hired autos with a combined single Limit of not less than \$1,000,000 per accident for bodily injury and property damage with the State of Hawaii named as additional insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess

policies.

C. Commercial General Liability:

The Contractor shall obtain General Liability insurance with a limit of not less than \$1,000,000 per occurrence and in the aggregates. The General liability insurance shall include the State of Hawaii as an additional insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.

All policies must provide that 30 days prior written notice of cancellation or material change in coverage be given to certificate holders stated above.

Such insurance when accepted by the Director in writing shall become applicable and shall remain unmodified throughout the entire term of the contract and in no event shall be terminated or otherwise allowed to lapse prior to written certification of final acceptance of the work by the State. Such insurance aforementioned shall cover the State for all work performed under the contract, all work performed incidental thereto or directly or indirectly connected therewith, including other work performed outside of the work area, and all change orders.

Any delay in the submission and approval of insurance certificates shall not be justification of or grounds for a request by the Contractor postponing the issuance of a notice to proceed notwithstanding the fact that the Contractor shall not be allowed to proceed with the work until said certificates are submitted and approved.

Failure to obtain insurance in accordance with the Section, on the part of the Contractor, shall be considered a major breach of the contract; and should the State be forced to expend funds which would have been covered under the insurance, the Contractor agrees to assume the liability for such funds and to indemnify and hold the State harmless.

## SECTION 8 - PROSECUTION AND PROGRESS

8.1 NOTICE TO PROCEED - A "Notice to Proceed" letter will be written to the Contractor by the Director. Such letter will indicate the date the Contractor is to begin work and from which date the contract time will commence to run.

The Contractor shall diligently perform the required duties during the term of the contract, or if the work is to be completed within a specified time limit, the Contractor shall diligently prosecute the work to completion within the specified time limit.

8.2 SUBCONTRACTING - The Contractor shall give its personal attention to the fulfillment of the contract and shall keep the work under its control.

Subject to Section 103D-302, H.R.S., the Contractor may subcontract a portion of the work pursuant to the provisions of this section, but the Contractor shall be primarily responsible for the work so subcontracted. The Contractor shall not subcontract any work to any subcontractor who has been suspended by the State.

Before any work is started under a subcontract, the Contractor shall have the written approval of the Director on a written statement on forms furnished by the Department, indicating the work to be subcontracted, the names of the subcontractors and the description of each portion of the work to be so subcontracted and showing that the subcontractors are particularly experienced and equipped to do the work subcontracted. The Contractor shall give assurance that the minimum wage rate schedule as stated in the contract shall apply to labor performed on the work so subcontracted. Consent of the Director to the subcontracting of work shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract.

When any portion of the work which has been subcontracted by the Contractor is not prosecuted in a manner satisfactory to the Director, the Contractor, upon receipt of a notice thereof in writing from the Director, shall remove the subcontractor immediately from the project and the subcontractor shall not again be employed on the work.

8.3 ASSIGNMENT OF CONTRACT - The performance of the contract may be assigned only with the prior written consent of the Director and when applicable, the Contractor's surety. Consent to any assignment shall not relieve the Contractor or the Contractor's surety of any obligations of the contract.

8.4 INSUBORDINATION - If any subcontractor or person employed by the Contractor shall fail or refuse to carry out the directions of the Director or shall appear to the Director to be incompetent or to act in a disorderly or improper manner, the subcontractor or person shall be removed immediately upon request by the Director and shall not again be employed on the work, nor shall it be employed upon any other Department project currently under contract to the same Contractor or subcontractor.

8.5 TEMPORARY SUSPENSION OF WORK

A. Order to stop work. The Director, may, by written order to the contractor, at any time, and without notice to any surety, require the contractor to stop all or any part of the work called for by this contract. This order shall be for a specified period not exceeding sixty (60) days after the order is delivered to the contractor, unless the parties agree to any further period. Any such order shall be identified specifically as a stop work order issued pursuant to this section. Upon receipt of such an order, the contractor shall forthwith comply with its terms and take all reasonable steps to minimize the occurrence of costs allocable to the work covered by the order during the period of work stoppage. Before the stop work order expires, or within any further period to which the parties shall have agreed, the Director shall either:

1. Cancel the stop work order; or
2. Terminate the work covered by such order as provided in the "termination for default clause" or the "termination for convenience clause" of this contract.

B. Cancellation or expiration of the order. If a stop work order issued under this section is canceled or if the period of the order or any extension thereof expires, the contractor shall have the right to resume work. An appropriate adjustment shall be made in the delivery schedule or contract price, or both, and the contract shall be modified in writing accordingly; if:

1. The stop work order results in an increase in the time required for, or in the contractor's cost properly allocable to, the performance of any part of this contract; and
2. The contractor asserts a claim for such an adjustment within thirty (30) days after the end of the period of work stoppage; provided that, if the Director decides that the facts justify such



action, any such claim asserted may be received and acted upon at any time prior to final payment under this contract.

C. Termination of stopped work. If a stop work order is not canceled and the work covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop work order shall be allowable by adjustment or otherwise.

D. Adjustment of price. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the price adjustment clause of this contract.

8.6 LIQUIDATED DAMAGES - It is mutually understood and agreed by and between the parties to the contract that the performance by the Contractor of its duties every calendar/working day is an essential part of the contract and in case of failure on the part of the Contractor to perform its duties for the time specified in the contract, the State will be damaged thereby and the amounts of said damages being difficult, if not impossible of definite ascertainment and proof, shall be estimated, agreed upon and fixed at the sum shown in the proposal for each and every calendar/working day that the Contractor fails to perform its duties during the period the contract is in effect; and the Contractor shall pay the liquidated damages as provided for in the proposal and, in case the same are not paid, the Department may deduct the amount thereof from any monies due or that may become due the Contractor under the contract.

8.7 DEFAULT AND TERMINATION OF CONTRACT

A. Termination by Default. If the contractor refuses or fails to perform any of the provisions of this contract with such diligence as will ensure its completion within the time specified in this contract, or any extension thereof, otherwise fails to timely satisfy the contract provisions, or commits any other substantial breach of this contract, the Director may notify the contractor in writing of the delay or non-performance and if not cured in ten (10) days or any longer time specified in writing by the Director, such officer may terminate the contractor's right to proceed with the contract or such part of the contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part the Director may procure similar goods or services in the manner and upon terms deemed appropriate by the Director. The contractor shall continue performance of the contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring

similar goods or services.

1. Contractor's duties. Notwithstanding termination of the contract and subject to any directions from the Director, the contractor shall take timely, reasonable, and necessary action to protect and preserve property in the possession of the contractor in which the State or county has an interest.

2. Compensation. Payment for completed goods delivered and accepted by the State shall be at the contract price. Payment for the protection and preservation of property shall be in an amount agreed upon by the contractor and Director; if the parties fail to agree, the Director shall set an amount subject to the contractor's rights under chapter 3-126, HAR. The State may withhold from amounts due the contractor such sums as the Director deems to be necessary to protect the State against loss because of outstanding liens or claims of former lien holders and to reimburse the State for the excess costs incurred in procuring similar goods and services.

3. Excuse for nonperformance or delayed performance. Except with respect to defaults of subcontractors, the contractor shall not be in default by reason of any failure in performance of this contract in accordance with its terms, including any failure by the contractor to make progress in the prosecution of the work hereunder which endangers such performance, if the contractor has notified the Director within fifteen (15) days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of the public enemy; acts of the State and any other governmental body in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform is caused by the failure of a subcontractor to perform or to make progress, and if such failure arises out of causes similar to those set forth above, the contractor shall not be deemed to be in default, unless the goods or services to be furnished by the subcontractor were unreasonably obtained from other sources in sufficient time to permit the contractor to meet the contract requirements. Upon request of the contractor, the Director shall ascertain the facts and extent of such failure, and if such officer determines that any failure to perform was

occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the contractor's progress and performance would have met the terms of the contract, the delivery schedule shall be revised accordingly, subject to the rights of the State under the clause entitled "Termination for Convenience". As used in this paragraph of this clause, the term "subcontractor" means subcontractor at any tier.

4. Erroneous termination for default. If, after notice of termination of the contractor's right to proceed under the provisions of this clause, it is determined for any reason that the contractor was not in default under the provisions of the clause, or that the delay was excusable under the provisions of paragraph 3 above, Excuse for nonperformance or delayed performance of this clause, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the State, be the same as if the notice of termination had been issued pursuant to such clause.

5. Additional rights and remedies. The rights and remedies provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

B. Termination for convenience. The Director may, when the interests of the State so require, terminate this contract in whole or in part, for the convenience of the State. The Director shall give written notice of the termination to the contractor specifying the part of the contract terminated and when termination becomes effective.

1. Contractor's obligation. The contractor shall incur no further obligations in connection with the terminated work and on the dates set in the notice of termination the contractor will stop work to the extent specified. The contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. The Director may direct the contractor to assign the contractor's right, title, and interest under terminated orders or subcontracts to the State. The contractor must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

2. Right to goods. The Director may require the contractor to transfer title and deliver to the State in the manner and to the extent directed by the Director:

- a. Any completed goods; and
- b. The partially completed goods and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights hereinafter called "manufacturing material," as the contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.

The Contractor shall, upon direction of the Director, protect and preserve property in the possession of the contractor in which the State has an interest. If the Director does not exercise this right, the contractor shall use the Contractor's best efforts to sell such goods and manufacturing materials. Use of this section in no way implies that the State has breached the contract by exercise of the termination for convenience clause.

3. Compensation:

- a. The Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data to the extent required by subchapter 15, chapter 3-122, HAR, bearing on such claim. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the Director may pay the Contractor, if at all, an amount set in accordance with subparagraph c. below.
- b. The Director and the Contractor may agree to settlement provided the Contractor has filed a termination claim supported by cost or pricing data to the extent required by subchapter 15, chapter 3-122, HAR, and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of goods and manufacturing materials under paragraph (2) of this clause, and the contract price of the work not terminated.

c. Absent complete agreement under subparagraph b above, the Director shall pay the Contractor the following amounts, provided payments agreed to under subparagraph b shall not duplicate payments under this subparagraph for the following:

(i) Contract prices for goods or services accepted under the contract;

(ii) Costs incurred in preparing to perform and performing the terminated portion of the work plus a fair and reasonable profit on such portion of the work, such profit shall not include anticipatory profit or consequential damages, less amounts paid or to be paid for accepted goods or services; provided that if it appears that the Contractor would have sustained a loss if the entire contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;

(iii) Costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to paragraph 1 of this clause. These costs must not include costs paid in accordance with subparagraph (ii) above.

(iv) The reasonable settlement costs of the Contractor including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract and for the termination of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this contract. The total sum to be paid the Contractor under this subparagraph shall not exceed the total contract price plus the reasonable settlement cost of the Contractor reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under subparagraph b of this paragraph, and the contract price of work not terminated.

d. Cost claimed, agreed to, or established under subparagraphs b and c shall be in accordance with chapter 3-123, HAR. bearing on such claim.

8.8 FINAL INSPECTION - Upon notice from the Contractor of the completion of the work or contract, the Director shall make an inspection. If the contract is found completed to the Director's satisfaction, such inspection shall constitute the final inspection and acceptance of the work.

If the work is unsatisfactory in whole or in part, the Director shall notify the Contractor of the work necessary for final completion and acceptance and the Contractor shall forthwith perform the work required by the Director. Upon performance of such required work by the Contractor, another inspection shall be made which shall constitute the final inspection if the work is completed satisfactorily.

Within ten (10) days after final inspection and acceptance of the work, or as soon thereafter as is practicable, the Contractor shall be notified by the Director in writing of such acceptance.

8.9 TERMINATION OF CONTRACTOR'S RESPONSIBILITY - The contract will be considered complete when all work has been completed, the final inspection made, the work accepted by the Director, and the final estimate paid. The Contractor will then be released from further obligation except as set forth in the contract and bond, when applicable.

## SECTION 9 - PAYMENT

9.1 SCOPE OF PAYMENT - The Contractor's bid price shall be inclusive of all costs, direct or indirect, including all taxes, required for the fulfillment of the contract.

Contract payments to the Contractor by the State shall be full payment for the furnishing of all labor, tools, equipment, and other incidentals, including all taxes, necessary for performing all work and services contemplated and embraced under the contract.

9.2 RETAINAGE/DEDUCTION FROM PAYMENT - The Director may at any time retain or deduct out of any sums due the Contractor to cover claims of the State against the Contractor, or such sums sufficient to cover any unpaid claims of others supported by sworn statements filed in the office of the Director, without any liability for damages, interest or otherwise to the Contractor for such retention or deduction.

Provided the work of the Contractor is progressing satisfactorily in the judgment of the Director and in accordance with the provisions of this contract, monthly payments, less five percent (5%), will be made to the Contractor. The amount of such monthly payments shall be determined by the Director based on the Director's estimate of the items of work performed and materials incorporated in the work and the value therefor at the unit prices or lump sum prices set forth in the contract. All monthly payments are shall be subject to correction at any time prior to or in the final payment.

At any time after fifty per cent (50%) of the work has been completed, if the State determines that the work contracted to be performed is progressing satisfactorily, the State may make any of the remaining monthly payments in full.

If the Director finds that unsatisfactory progress is being made, the State may, from the beginning of such unsatisfactory progress, withhold any amount up to five per cent (5%) of any subsequent monthly payment.

9.3 ASSIGNMENT OF PAYMENTS - All monies payable under the contract, or any part thereof, shall be paid to the Contractor in accordance with the provisions of this Section and no assignment or order executed by the Contractor directing payment of any portion or all of such funds to any other person or persons shall be recognized by the State unless such assignment or order specifies the amounts to be so paid and the purposes for which the assignment or order is given. Such assignment or order shall have attached thereto, by endorsement or otherwise, the consent of the surety, when

applicable. No such assignment or order shall be binding on the State.

Any assignment of money shall, however, be subject to all proper set-offs in favor of the State, to all deductions provided for in the contract and to all liens and rights conferred by law on the State. All money withheld, whether assigned or not, shall be subject to being used by the State for the completion of the work in the event of the Contractor's default.

9.4 PROGRESS PAYMENTS - Payments under this contract shall be made only upon submission by the Contractor of an original invoice and 2 copies. The invoice shall specify the amount due less retainage and shall also certify that services requested under the contract have been performed by the Contractor according to the contract.

9.5 FINAL PAYMENT - Final payment will only be made after the Contractor receives final acceptance by the Director as provided in Section 8.8, and until the Contractor has filed with the Department the following:

A. Consent of the surety, when applicable, to payment of the final estimate;

B. Satisfactory evidence by affidavit that all debts resulting from the contract have been fully paid or satisfactorily secured;

C. A current "Certificate of Vendor Compliance" issued by the Hawaii Compliance Express (HCE). The Certificate of Vendor Compliance is used to certify the Contractor's compliance with (a) Section 103D-328, HRS (for all contracts \$25,000 or more) which requires a current tax clearance certificate issued by the Hawaii State Department of Taxation and the Internal Revenue Service; (b) Chapters 383, 386, 392, and 393, HRS; and (c) Subsection 103D-310(c), HRS. The State reserves the right to verify that compliance is current prior to the issuance of final payment. Contractors are advised that non-compliance status will result in final payment being withheld until compliance is attained.

The filing of willfully false affidavits will disqualify the Contractor from bidding on future work of the Department.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

## SECTION 10 – MAINTENANCE, REPAIR AND INSPECTION OF ELECTRICAL EQUIPMENT

10.1 DESCRIPTION – The Contractor shall furnish labor, materials and equipment to maintain, repair, inspect and test electrical equipment at the Interstate Route H-3 Freeway, Harano Tunnel Facility per the specifications outlined herein.

This service shall be accomplished using skilled and trained personnel, who shall regularly and systematically examine, monitor and maintain electrical equipment.

The Contractor shall furnish the State with telephone through which the Contractor can be called by the State 24 hours a day, every day of the week. This is very important during the bidding period as well as the contract period.

### 10.2 BIDDER REQUIREMENTS

- (A) The bidder shall submit the following documents, as applicable, at the specified two optional schedule of submitting required documents in Section 10.2(B) below:
1. Statement of Capabilities.
    - a. The Statement of Capabilities is a questionnaire regarding the bidder’s qualifications as specified in Section 2.1 Qualification of Bidders, of the Special Provisions.
    - b. The Statement of Capabilities form is not physically included in these bid specifications but will be provided by mail to the bidders, **starting with the lowest bidder**, along with the written request as specified in Section 10.2(B) 1 of this section after bid opening and during the award process.
    - c. The bidder shall “complete” and sign this document. “Complete” shall mean providing **all** the requested information, except items marked optional. **Do not leave anything blank.**
  2. Copy of the valid State of Hawaii Specialty Contractor’s C-13, Electrical Contractor License **and** C-62, Pole and Line Contractor License. C-63, High Voltage Electrical Contractor License is acceptable to substitute C-62 license. The copy (ies) shall be in compliance with Section 2.1.A.1 of the Special Provisions.
  3. Copy of the valid State of Hawaii Journey Worker Electrician License **or** Journey Worker Industrial Electrician License **or** Supervising Electrician License **or** Supervising Industrial Electrician License. The copy(ies) shall be in compliance with Section 2.1.B.1.a of the Special Provisions; **and**
  4. Copy of the valid factory training completion certificate by GE Energy **or by a company equivalent to GE Energy**. The copy shall be in compliance with Section 2.1.B.1.b of the Special Provisions.

Note: If the bidder submits the specified documents in Sections 10.2(A) 3 and 4 above, the specified document Sections 10.2(A) 5 below may no longer be submitted. Refer to Section 2.1.B of the Special Provisions.

5. Copy of the GE Energy or by a company equivalent to GE Energy Field Engineer certificate of completion. The copy shall be in compliance with Section 2.1.B.2.a of the Special Provisions.

Note: If the bidder submits this Field Engineer certificate of completion, the specified documents in Sections 10.2(A) 3 and 4 above may no longer be submitted. Refer to Section 2.1.B of the Special Provisions.

(B) Schedule of Submitting Required Documents.

1. **Submit prior to award.** The completed Statement of Capabilities as specified in Section 10.2 (A) 1 Statement of Capabilities, above **and** requested documents as specified in Section 10.2 (A) 2 through 5 above, as applicable, shall be received by the Project Manager no later than seven (7) working days from the date of request (date of receipt of the written request) from the State.

- (C) **Failure by the bidder to submit.** The bidder maybe considered non-compliant with the requirements of the Special Provisions and the Specifications if the bidder fails to submit the documents to the Project Manager no later than **seven (7) working days** from the date of request (date of receipt of the written request) from the State. This failure may result in an adverse decision of an award by the Department of Transportation.

- (D) The signed statement of capabilities, including any documents, shall be returned to the bidder after serving their purpose.

10.3 INSPECTION OF DETAILED PLANS & EQUIPMENT DATA - Construction plans for equipment installed at the Harano Tunnel will be available for inspection at the Traffic Operations Center located on the second floor. They may be inspected from the first day of advertising for bids up to and including the day of bid opening. Limited manufacturer's catalog cuts and maintenance manuals are available for review by the Contractor. Bidders are advised to make an appointment by calling the phone number of the point of Contact as listed in Section 10.10 Coordination of Work, of the Specifications.

10.4 SCOPE OF WORK

(A) **Maintenance (routine/preventive)**

1. As a minimum, perform the maintenance tasks as listed in Appendix A, Routine/Preventive Maintenance, Inspection Tasks & Frequency, of the Appendices to all the electrical equipment as listed in Appendix B Equipment List, of the Appendices. Work in this contract shall cover all accessories and appurtenances incidental to equipment listed in Appendix B, including and not limited to the Intelligent Equipment Monitoring system. This system includes protective relays, power quality meters, programmable logic controllers,

ethernet switches and modules, servers, workstations, and software, quantities and models described in Appendix B. Frequency of routine/preventive maintenance and inspection services for each equipment shall be as specified in the Description column of the Proposal Schedule and completed as specified in Section 10.4(A)7 of this section.

2. If any procedure in this specification is found to contradict any manufacturers' recommendation contained in the "Operations and Maintenance Manual", the Contractor shall immediately bring such contradiction to the Engineer who shall determine which of the procedures shall be followed.
3. The Contractor shall label all equipment inspected and record all maintenance performed, malfunctions and corrective actions taken on the equipment in performing its work under this contract.
4. **Submittal of Routine/preventive Maintenance and Inspection Report.** No later than three (3) working days after completion of each maintenance service, the Contractor shall notify the State and provide the Engineer with the maintenance personnel's certified record together with task completed by them, the date, hours and time. The report should include at least the items shown in the "Routine/preventive Maintenance and Inspection Report" form. Refer to Appendix C Sample - Routine/preventive Maintenance and Inspection Report, of the Appendices.
5. **Submittal of Final Report.** Within twenty (20) days of completing all fieldwork, at the end of each contract term, the Contractor shall submit two (2) copies of a typewritten final report to the Engineer. The report shall include but not be limited to (a) an inventory of all equipment serviced, (b) malfunctions and deviations from norm detected, (c) corrective actions taken if any, (d) deviations of equipment inventory (field vs. specifications), (e) recommendations on maintenance tasks and project specifications, (f) evaluation of the status of individual components and/or systems, and (g) estimated cost for any recommended additional work.
6. All routine/preventive maintenance work shall be completed within seven (7) working days of the scheduled maintenance date and shall be performed during regular working hours as specified in Section 10.11 Hours of Operation, of the Specifications.
7. Routine/preventive Maintenance work shall be accomplished at the following schedule, as applicable:

Required maintenance tasks	Required completion month
Quarterly	During the months of January, April, July and October
Annual	Month of April

8. Any shut down of equipment necessary for servicing shall be coordinated with the Engineer.

9. All work performed by the Contractor shall be subject to random periodic inspection and approval by representatives of the Highways Division, State of Hawaii. All deficiencies shall be corrected at no additional cost to the State.
10. The Engineer may add more equipment during the term of this contract. Cost and payment for maintaining additional equipment shall be in accordance with Section 10.4 (F) Miscellaneous Work, of the Specifications.
11. Refer to Section 10.4(F), Miscellaneous Work, for additional miscellaneous work that the Engineer may task the Contractor.
12. **Submittal of Work Schedule.** The Contractor shall prepare a schedule to satisfy the prescribed schedule in the Operations and Maintenance Manual of each equipment covered in this contract and submits to the Engineer as specified under in item No. 5a, Section 10.13 Submittal/Reports Summary, of the Specifications. The Schedule shall be submitted within seven (7) calendar days after the issuance of the Notice to Proceed.
13. Payments to the Contractor for Routine/preventive Maintenance and Inspection service shall be in accordance with Section 10.17(A)1 through 10.17(A)7 Routine/preventive Maintenance and Inspection service of electrical equipment, of the Specifications.
14. **Liquidated Damages. Refer to Section 8.6.a Routine/preventive Maintenance and Inspection service, of the Special Provisions for the liquidated damages that the State shall be assessing the Contractor for failure to provide satisfactory and timely Routine/preventive Maintenance and Inspection service.**

**(B) Repairs/Trouble Call**

In case of failure or malfunction of the electrical equipment covered by this contract for any cause, the Contractor is subject to be called by the Engineer. **The number of personnel used to perform repair work on trouble calls by the Contractor shall be fully justified and approved by the Engineer before starting the said repair work.** The Contractor shall have adequate personnel, supervisors and equipment necessary to perform off hours trouble call.

**Trouble Call Ticket and Report.** The Contractor shall present his Trouble Call Ticket and Report to the Engineer or an authorized representative for certification at the end of each day or each job whichever is earlier. The ticket and report shall include: (a) all chargeable time, (b) material and (c) equipment used. Refer to Appendix D Sample –Trouble Call Ticket and Report, of the Appendices for additional required information.

1. Trouble Calls are classified as follows:

- a. Trouble Calls during Regular Working Hours. Refer to Section 10.11 Hours of Operation, of the Specifications for the definition of “regular working hours.”
1. The Contractor shall respond within one (1) hour to the job site. The Contractor shall be charged liquidated damages as specified in Section 8.6.b Trouble Calls, of the Special Provisions if the Contractor fails to respond within the specified time.
  2. Trouble calls during regular working hours shall be paid for based on the hourly bid price in the Contractor’s proposal as applicable (**Bid Item Nos. 8 and/or 9**) multiplied by the time spent at the job site to complete the repair work.
  3. Time spent at the job site to complete the repair work during regular working hours shall be taken to the closest one-quarter (1/4) of an hour and any fraction of a one-quarter (1/4) of an hour shall be considered a full one-quarter (1/4) of an hour.
  4. In order for the Contractor to receive payment, all trouble call tickets during regular working hours shall be certified and signed by the Engineer or his authorized representative. Refer to Section 10.4(B) for more information regarding trouble call tickets.
- b. Trouble Calls during Off-Hours - The term “off-hours” as used in these specifications shall mean 12:01 a.m. to 6:45 a.m. and 3:15 p.m. to midnight, Monday through Friday, all hours on Saturdays, Sundays, and State holidays.
1. The Contractor shall respond within four (4) hours to the job site. The Contractor shall be charged liquidated damages as specified in Section 8.6.b Trouble Calls, if the Contractor fails to respond within the specified time.
  2. The off-hours hourly rate of pay shall be based on the hourly bid rate of the Contractor’s proposal for regular working hours, Bid Item Nos. 8 and/or 9 of the Proposal Schedule plus fifty percent (50%) of the Contractor’s hourly bid rate, as applicable. Work performed during off hours shall be paid by Bid Item Nos.8 and or 9, of the Proposal Schedule.
  3. Time spent at the job site to complete the repair work during off-hours shall be taken to the closest one-quarter (1/4) of an hour and any fraction of a one-quarter (1/4) of an hour shall be considered a full one-quarter (1/4) of an hour. In any event, the Contractor shall receive a minimum of one (1) hour of pay even if the repair work is completed in less than one (1) hour.

4. **The Contractor shall secure the Engineer's or his or her representative's authorization for any repair work in excess of two (2) hours during off hours.**
5. Repair works initiated during working off-hours and finished during working hours shall be paid accordingly. That is, off-hour's hourly rate shall only apply to repair work performed during off-hours, and regular working hours hourly rate shall apply to repair work performed during regular working hour.
6. In order for the Contractor to receive payment, all off-hour trouble call tickets shall be certified and signed by the Engineer or his authorized representative. Refer to Section 10.4(B) for more information regarding trouble call tickets.
7. Off-hours hourly rate of pay shall be full compensation for furnishing technical expertise, labor, etc. as specified in Section 10.17, Basis of Payment of the Specifications, necessary to complete the repair work.

**(C) Repairs/Replacement Parts**

1. Minor Repair/Replacement Parts
  - a. "Minor Repair/Replacement Parts" shall mean cost of repair and replacement part is equal to or less than \$2,000.00.
  - b. Minor repairs requiring replacement of minor parts **and** does not pose a threat to public safety will require Engineer's approval, written or verbal, prior to commencing with the work.
  - c. Refer to Sections 10.4(C) 2.d through g of this section for additional information.
2. Major Repairs/Replacement Parts
  - a. "Major Repairs/Replacement Parts" shall mean repairs that will require a system to be shut down for more than 15 minutes or cost of repair and replacement parts is in excess of \$2,000.00.
  - b. The Contractor is not authorized to commence on any repair work in excess of \$2,000.00 without written authorization from the Engineer. The Contractor shall immediately notify the Engineer when a repair/replacement is required or planned. The Contractor shall submit a written cost estimate for labor, materials and/or equipment to the Engineer as expeditious as possible for his approval. The State reserves the right to solicit competitive bids and have repair work done by the lowest bidder.
  - c. All labor hours for repairs/replacement parts shall be negotiated separately in a manner similar to Section 4.5 Price Adjustment, of the Specifications

and shall be paid by the corresponding labor hour, **Bid Item Nos. 8 and/or 9**, of the Proposal Schedule.

- d. The Contractor shall be reimbursed for the cost of the new part(s) including shipping plus twenty percent (20%) for overhead, profit, taxes and other incidental expenses and shall be paid by **Bid Item No. 11, Replacement Parts**, of the Proposal Schedule. The Contractor shall substantiate its charges by submitting original billing as requested by the State.
- e. Due care will be exercised to prevent physical damage to the equipment.
- f. Original manufacturer's parts or equivalent will be used for all repairs.
- g. The Contractor shall submit a list of parts ordered but not received within thirty (30) days and explain in writing what parts are not received on the first day of each month.
- h. Refer to Section 10.4(D) Replacement/Spare Parts for information on parts that the Engineer may be tasking the Contractor to stock.

**(D) Spare Parts**

- 1. Original manufacturer's parts or equivalent will be used for all repairs.
- 2. The Engineer may request the Contractor to stock and maintain spare parts as requested by the State for a dollar value not to exceed two thousand dollars (\$2,000.00).
- 3. The State will purchase the remaining spare parts from the Contractor at the completion of this project and shall be paid by **Bid Item No. 11 Replacement Parts**, of the Proposal Schedule.
- 4. Refer to Section 10.9(B)2, of the Specifications for information on storage availability.

**(E) Technical Support Services**

- 1. In order for the Contractor to properly comply with the requirements of this contract, the Contractor shall have the option to secure the Technical Hardware and/or manufacturer's representative service(s) upon approval from the Engineer. The Engineer may also request the contractor to obtain these services.
- 2. Technical Support Services shall include but not limited to manufacturer or dealer services in the test or repair of electrical equipment, software, communication devices, and other components.



The request shall include the existing condition of the equipment and the Contractor's recommendation as to the necessity for technical support services.

3. Any Manufacturer's representative technical support service, if elected to be used by the Contractor, shall be secured for the term of this maintenance contract and all renewals.

4. Technical support services shall be paid by **Bid Item No. 12** Technical Support Services, of the Proposal Schedule. Manufacturer's technical support services within the warranty period of equipment shall not be paid for separately but is considered incidental to the purchase of the said equipment.

(F) **Miscellaneous Work.** The State may request the Contractor to provide discretionary services as follows:

1. The Engineer may add equipment for maintenance to this contract in the future.
2. Upgrades. Upgrade work requires authorization by the Engineer.
3. If approved by the Engineer, cost and payment shall be in accordance with Section 10.17(A) 5 Miscellaneous Work, of the Specifications.
4. Miscellaneous work, if approved by the Engineer, shall be paid by allowance in **Bid Item No. 13 Miscellaneous Work**, of the Proposal Schedule and negotiated in accordance with Section 10.17(B) of the Specifications.

10.5 INSPECTION AND CORRECTION OF DEFECTS - All materials furnished, and services performed by the Contractor under this contract shall be subject to inspection and test by the Engineer to the extent practicable at all times (including the period of performance) and places, and in any event prior to the acceptance. All inspections and tests required by the Engineer shall be performed in such a manner that will not unduly delay or interrupt the Contractor's work.

At any time during the performance of this contract, but no later than six months after acceptance of the services or materials incorporated in accordance with the requirements of this contract, the Director may require the Contractor to remedy by correction or replacement, any services or materials which have failed to comply with the requirements of this contract.

#### 10.6 WARRANTIES

(A) Commercial Warranties

1. The Contractor shall be responsible for exercising all manufacturers' commercial warranties on State-government equipment parts and systems under this contract. The Contractor shall report to the Engineer any difficulty in exercising manufacturer warranties and request assistance when necessary. The Engineer will provide existing copies of warranties, as applicable; to the Contractor prior to the contract notice to proceed date.

2. The Contractor shall maintain a file of the original warranties on new equipment installed and maintains a list of manufacturer's telephone numbers and points of contact for all warranted equipment. A copy of this list shall be provided to the Engineer thirty (30) days after the notice to proceed date and whenever new equipment is added or old warranties expire. This file shall be turned over to the Engineer upon completion or termination of this contract. These warranties shall list the "State of Hawaii, Department of Transportation" as the equipment owner.
3. State-government equipment installed by the Contractor that fails within a warranty period due to Contractor's poor workmanship, or by not following the manufacturer's installation, operation and/or maintenance instructions shall be replaced or repaired at the Contractor's expense.
4. Labor warranty shall be a full thirty (30) calendar days on all items of equipment provided by the Contractor which period shall commence upon completion and acceptance by the Engineer.

(B) Warranted Equipment

1. Warranted equipment and component parts shall not be repaired, removed or replaced by the Contractor while under warranty by the manufacturer or by the installer.
2. All defects in workmanship or material, defective parts or improper installation found by the Contractor shall be reported in writing to the Engineer. The Contractor shall have the knowledge of the equipment and component that are covered by the original warranty and the duration of the warranty.
3. The Contractor shall perform all preventive maintenance and inspection as prescribed by the manufacturer.

10.7 ADVISORY SERVICES AND SUBCONTRACTORS – All advisory services by a foreman or any other Contractor's personnel to the electrician/technicians in performing their work shall be considered as incidental cost to the Contractor's hourly bid rate for regular working hour's trouble calls. No separate payment shall be made therefore.

All specifications and hourly bid rates under this contract shall be applicable to subcontractor(s) should their services be required.

10.8 MISCELLANEOUS REQUIREMENTS

- (A) The Contractor shall clean respective areas after maintenance, repair, inspection and/or testing operations. Materials and equipment brought in by the Contractor for servicing shall be removed by contractor when work is completed. Equipment that were serviced shall be wiped down and free of oil, grease, dirt and handprints upon completion of service.
- (B) Close doors and turn off lights upon work completion in rooms where services were

performed, as applicable.

- (C) Immediately report hazardous conditions, fires and items that requires repair to the Engineer.
- (D) The Contractor shall be held accountable for any damage caused to building surfaces, fixtures, pavements or other features resulting from work for this project. Property damaged by action of the Contractor or his employees shall be replaced or repaired to the satisfaction of the Engineer at the Contractor's expense.

**10.9 MATERIALS, SUPPLIES, EQUIPMENT, FACILITIES AND UTILITIES**

(A) Contractor Furnished Supplies, Material and Equipment.

- 1. The Contractor shall furnish all necessary supplies, materials, tools and equipment (i.e. specialized test equipment, etc.)
- 2. Materials furnished by the Contractor shall be of quality to conform to these specifications.
- 3. Two-way radios or cell phones. The Contractor's operations on, over, and/or immediately adjacent to the Interstate Route H-3 shall require the use of two-way radios or cell phones.

(B) State Furnished Supplies, Material and Equipment, Facilities and Utilities.

- 1. The State will provide electrical power at existing outlets for the Contractor to operate such equipment as necessary in the performance of his/her work.
- 2. Water, limited to the normal water supply provided in the building, is also available for the Contractor' use. Storage area may be available for use at the Harano Tunnel Facility based on space availability.
- 3. Keys will not be issued to the Contractor. The State will be responsible for providing access to the contractor to perform contract work. The Contractor shall obtain access through the Engineer.

**10.10 COORDINATION OF WORK**

- (A) All work under this contract shall be coordinated with the Engineer or a duly Authorized representative. Refer to Section 1.39, Engineer of the Special Provisions for the definition of Engineer. Contact information is as follows:

Mr. Sergio George Abcede District Engineer (DE) – Oahu District Phone: 808-831-6703 Fax: 808-831-6725 Email: George.Abcede @hawaii.gov	<b>Point of Contact</b> Mr. Gerald Pang Tunnel Section Head - Oahu District (Authorized Representative of the DE) Phone: 808-485-6208 Fax: 808-485-6208 Email: Gerald.Pang @hawaii.gov
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- (B) Whenever any work is performed at the Harano Tunnel Facility, the

Contractor or his employees shall sign in and sign out at the facilities security office.

#### 10.11 HOURS OF OPERATION

- (A) Regular Working Hours. All routine, preventive, maintenance and inspection work shall be performed during “regular working hours” The term “regular working hours” as used in this specification shall mean 6:45 a.m. to 3:15 p.m., during working days as specified by Section 1.38, Working days of the Special Provisions. Normally energized power transformers and circuit breakers shall be service between the hours of 6:45 a.m. and 3:15 p.m.
- (B) Inclement Weather Schedule. The Contractor shall provide services in all weather conditions unless there is a warning during hurricane, tsunami, or flash flood condition. Maintenance operations shall resume to normal within twenty-four (24) hours after the threat has terminated and roads have been cleared.
- (C) Hurricane Condition/Tsunami/Flash Flood Warning. Hurricane season occurs during the period of June 1<sup>st</sup> through November 30<sup>th</sup> of each year. Should the State Civil Defense issues Hurricane, Tsunami or Flash Flood Warning, the Engineer shall immediately notify the Contractor.

#### 10.12 SAFETY

- (A) Safety Concerns
  - 1. The Contractor shall observe safety concerns in Section 7.10, Public Convenience and Safety of the Special Provisions, to the fullest during performance of work. The majority of the maintenance work is in and around, to include but not limited to, energized electrical equipment, chemicals and vehicular hazards,
  - 2. The Contractor and his/her employees shall exercise due care in performing any work. The Contractor and his/her employees maybe subject, to include but not limited to slip, trip, fall, vehicular hazards, chemical hazards, noise hazards, electrical hazards and other workplace hazards. **The Contractor shall maintain an internal aggressive safety program.** Refer to Section 10.13, Submittals/Reports Summary and Section 10.12 (C), Safety Plan of the Specifications for the required Safety Plan.
  - 3. If applicable, the Contractor shall provide, erect and maintain all applicable and necessary barricades, danger signals, flags, ropes, stanchions or other safety warning and control devices to identify work areas and ensure the safety of bystanders or passerby.
  - 4. All Contractor’s methods and practices shall be in accordance with the manufacturers’ Operations and Maintenance Manual, National Electrical Code (NEC), U.S. Department of Labor (DOL), Occupational Safety and Health Standards, the Environmental Protection Agency (EPA), health standards and

health programs required by the Hawaii Administrative Rules § 12-110 and Hawaii Revised Statutes § 396, and other agencies as specified by Section 7.10 Public Convenience and Safety, of the Special Provisions and safety regulations promulgated by other governmental and local agencies.

5. The contractor is responsible for the work site and the work practices of all employees on the project site and is the controlling, exposing, correcting as well as the creating employer for purposes of this scope of work. The State of Hawaii Department of Transportation monitoring of the work in progress is not representative as the controlling employer for purposes of workplace and work practice safety and health compliance.
6. While working at the jobsite, all employees shall wear OSHA approved safety equipment, including but not limited to: head protection, safety hardhat, hearing protection, vest, safety belts, lanyards, fall arrest system, goggles, gloves, chemical gloves, safety shoes, clothing and footwear **appropriate to the known hazard** and other equipment as required. As a minimum, vest used on the highway right of way shall be the appropriate safety apparel that meets current ANSI/ISEA 107 and the U.S. Department of Transportation's MUTCD Section 6D.03.

Cost of employee's personal protective equipment (**PPE**) shall be incidental to the cost of electrical maintenance, repair, inspection and testing services.

(B) Hazardous Materials/Environmental Protection.

1. The Contractor shall comply with all Federal, State and local environmental laws and regulations when handling hazardous materials.
2. All work shall be performed in strict compliance with the manufacturer's label and/or Safety Data Sheet (SDS), as applicable, and in accordance with State, Federal and local regulations and laws. A copy of the SDS shall be submitted to the Engineer **two days prior to scheduled use** for his approval **or immediately notify the Engineer by phone or fax for his verbal approval** in cases of emergency situations which occurs during off hours. Refer to Section 10.13, Submittals/Reports Summary of the Specifications for other miscellaneous submittals. The Contractor at the jobsite shall maintain a copy during handling chemicals. The Contractor is responsible in notifying personnel around the jobsite and building occupants about the existence of hazardous chemicals, as applicable.
3. The Contractor shall immediately contain and clean up the release or spill of hazardous material and shall report the incident to the Engineer.
4. Work shall not cause air or storm water pollution. The Contractor shall be responsible for all hauling and lawful disposal of debris. Any unauthorized or illegal disposal is grounds for termination of the contract.

(C) Safety Plan

1. As a minimum and as applicable, shall contain the following information: project number, project title, contract number, activity description, type of inherent risks (electrical, welding, etc.), types of associated risks (fire, fumes, noise, etc.), special training requirements, engineering controls (guardrails, welding curtains, emergency information, safety equipment checklist, etc.), administrative controls (Standard Operating Procedures, etc.) and personal protective equipment required.
2. This plan shall be submitted as specified by Section 10.13, Submittals/Reports Summary of the Specifications and resubmitted within seven (7) working days prior to commencement of the work when there are revisions.
3. The Safety Plan shall be prepared/developed/signed by a person who is knowledgeable (i.e. trained and certified) about the fundamental principles of occupational safety and health and work activities to be performed.

During the pre-start meeting, the Contractor shall submit a copy of the certificate of training of the person who prepared the Safety Plan.

The following certificates from the following training sources are acceptable:

- a. Construction Health and Safety Technician from the Board of Safety Professionals.
- b. Specialist in Safety and Health from the OSHA Training Institute
- c. Equivalent certificates to 10.12(C) 3.a and 10.12 (C) 3.b above.

TriSafety Consultation and other safety consultants will provide services in the preparation, development and certification of a Safety Plan.

4. Refer to Section 7.4 Responsibility for Injury and Damage, of the Specifications for the Contractor's accountability and responsibility for injury and damage.
5. Cost involved in the development of the Safety Plan shall be incidental to the Contractor's bid price of furnishing routine/preventive maintenance, repair and inspection of electrical equipment.
6. Cost involved in the development of the Safety Plan shall be incidental to the cost of electrical maintenance, repair, inspection and testing services.

**10.13 SUBMITTALS/REPORTS SUMMARY.** The Contractor shall submit the following submittals/reports as a hard copy or in a format as requested by the Engineer.

Item	Submittals/Reports	Reference	Required	Frequency	Submit to
1	Equipment List/Lease Agreement, as applicable	Section 2.1.A.5.b of the Special Provisions and Section 10.10 Coordination of Work, of the Specifications	Three (3) working days prior to the Notice to Proceed.	As revised	The Engineer - Oahu District's representative (Point of Contact)
2	Statement of Capabilities <b>including all required attachments</b>	Section 10.2 Bidder Requirements, of the Specifications.	Prior to award.	As revised	Project Manager, Construction and Maintenance Branch, Highways Division.
3	Names, Telephone Number(s) and Address(es) of Contact for Contractual issues	Section 10.2 Bidder Requirements, Statement of Capabilities, 10.10 Coordination of Work and Section 10.14 Pre-start Meeting, of the Specifications	Prior to award (included in the Statement of Capabilities) and three (3) working days prior to the Notice to Proceed	As revised	Project Manager, Construction and Maintenance Branch, Highways Division and the Engineer - Oahu District's representative (Point of Contact)
4	List of personnel employed under the contract along with Individual qualifications	Section 10.2 Bidder Requirements, Statement of Capabilities, 10.10 Coordination of Work and Section 10.14 Pre-start Meeting, of the Specifications	Prior to award and three (3) working days prior to Notice to Proceed date.	As revised	Project Manager, Construction and Maintenance Branch, Highways Division and the Engineer - Oahu District's representative (Point of Contact)

SUBMITTALS/REPORTS SUMMARY (continuation)

Item	Submittals/Reports	Reference	Required	Frequency	Submit to
5	Routine/preventive Maintenance and Inspection Report	Section 10.4(A) 4 of the Specifications	Not later than <b>one (1)</b> working day after the completion of each requested maintenance and inspection service.	As revised	The Engineer - Oahu District's representative (Point of Contact)
5a	Work Schedule	Section 10.4(A) 12 of the Specifications	Seven (7) calendar days after the issuance of the Notice to Proceed.	As revised	The Engineer - Oahu District's representative (Point of Contact)
6	Trouble Call Ticket and Report	Section 10.4(B) of the Specifications	End of each day or each job whichever is earlier.	As revised	The Engineer - Oahu District's representative (Point of Contact)
7	Final Report	Section 10.4(A) 5 of the Specifications	Within twenty (20) calendar days after completing all field work.	Annually	The Engineer - Oahu District's representative (Point of Contact)
8	Equipment Warranties	Section 10.6(A) 2 of the Specifications	Thirty (30) days after the notice to proceed date and whenever new equipment is added or old warranties expire	As needed	The Engineer - Oahu District's representative (Point of Contact)



SUBMITTALS/REPORTS SUMMARY (continuation)

Item	Submittals/Reports	Reference	Required	Frequency	Submit to
9	Safety Plan	Section 10.12(C), section 10.10 Coordination of Work and Section 10.14 Pre-start Meeting, of the Specifications	Three (3) working days prior to the Notice to Proceed.	As revised	Project Manager – Construction and Maintenance Branch and the Engineer - Oahu District’s representative (Point of Contact)
10	SDS for chemicals (as applicable)	Section 10.12(B) 2	Two working days prior to use or immediately for emergency situations.	As needed	The Engineer - Oahu District’s representative (Point of Contact)
11	Certified Payroll Report	Section 7.8 Labor and Compensation Requirements, of the Special Provisions and Appendix F Sample Certified Payroll Report, of the Appendices.	Within seven (7) days after the end of each month. Submitted with the monthly invoice.	Monthly	The Engineer - Oahu District’s representative (Point of Contact)

10.14 PRE-START MEETING – Three (3) working days prior to the Notice to Proceed date or earlier, the Contractor shall schedule a pre-start meeting by contacting the Engineer –Oahu District’s representative (Point of Contact) at the phone number or email address as specified in Section 10.9 Coordination of Work, of the Specifications. This meeting will include the Engineer, his authorized representative and other personnel as deemed necessary by the Engineer. The Contractor shall include and introduce the main contact person or Crew Supervisor for this project. Pursuant to Section 10.13 Submittals/Reports Summary, of the Specifications, **the Contractor shall be prepared to discuss and submit the specified documents that are listed in the table of this section** prior to the Notice to Proceed including, but not limited to the following:

- (A) Verification of the quantities of equipment and location.
- (B) Coordination of access to the working areas as applicable.
- (C) List of available State-furnished materials, supplies.
- (D) Verification of quantities in the Proposal Schedule and boundaries of working areas.

**10.15 TERM OF CONTRACT** – The term of this contract shall be for twelve (12) months from the date indicated on the Notice to Proceed from the State unless renewed as provided for in Section 10.16 Option to Extend Term, herein below.

**10.16 OPTION TO EXTEND TERM** – subject to the availability of State funds, this contract may be extended to four (4) additional twelve (12) - month periods or parts thereof (i.e. two, or three months, etc.) without the necessity for re-bidding upon mutual agreement between the State and the Contractor in writing provided the contract price for the extended period shall remain equal to or less than the initial bid price; however, the entire term of contract, including extensions, shall not exceed sixty (60) months.

**10.17 BASIS OF PAYMENT** - The Contractor’s bid price shall be full compensation for furnishing technical expertise as applicable, labor, technical knowledge and skills, material, tools, equipment, lubricants, chemicals, vehicles, communication costs, taxes, insurance, overhead, travel, and incidental costs necessary to maintain, repair, inspect and test electrical equipment as specified in this contract.

Incidental costs include, but not limited to the following:

Item	Reference	Item	Reference
Vehicle logo	Section 2.1.A.5.c.i of the Special Provisions	Personnel Protective Equipment (PPE)	Section 10.12 (A)6 of the Specifications
Employee uniform (shirt, T-shirt or coverall)	Section 2.1.C.1 of the Special Provisions	Development and certification of a safety plan	Section 10.12(C)5 of the Specifications
Communication equipment (i.e. 2-way radios, cell phones, etc.)	Section 10.9(A) 3 of the Specifications		

(A) Monthly Earnings

1. **Routine/preventive Maintenance and Inspection Services.** Earnings will be made on the basis of actual number of services performed and the applicable bid item and unit bid price, **Bid Item Nos. 1 through 7 and 10**, of the Proposal Schedule. Refer to Section 10.4(A) Routine/preventive Maintenance and Inspection Services, of the Specifications.
2. Trouble calls/repair work only, regular working hours– per man-hour, **Journeyman Electrician or Field Engineer, Bid Item No. 8.** Monthly payments to the Contractor will be made on the basis of actual number of services performed and the applicable unit bid prices. Refer to Section 10.4(B), Trouble Calls/ Repairs and 10.4(C) Repairs/Replacement Parts, of the Specifications for more information.

3. Trouble call/repair work only, regular working hours– per man-hour **Apprentice Electrician or helper, Bid Item No. 9.** Monthly payments to the Contractor will be made on the basis of actual number of services performed and the applicable unit bid prices. Refer to Section 10.4(B), Trouble Call/Repair and 10.4(C) Repairs/Replacement Parts, of the Specifications for more information.
  4. Replacement Parts, **Bid Item No. 11.** The Contractor shall be reimbursed for the cost of the new part in accordance with Section 10.4(C) 2.d of the Specifications.
  5. Technical Support Services, **Bid Item No. 12.** The Contractor shall be paid in accordance with Section 10.4(E) Technical Support Services, of the Specifications.
- (B) Miscellaneous Work, **Bid Item No. 13,** will be used only at the discretion of the Engineer for additional miscellaneous work within the scope of work and within the project area. The amount shall be negotiated in a manner similar to Section 4.5 - PRICE ADJUSTMENT, of the Specifications. Refer to Section 10.4(F) Miscellaneous Work, of the Specifications for additional miscellaneous work that the Engineer may task the Contractor.
- (C) Deductions (as applicable):
1. Retainage – computed as specified in Section 9.2 Retainage /Deduction from Payment, of the Specifications. Refer to Section 9.2 Retainage /Deduction from Payment, of the Special Provisions for retainage invoicing procedures.
  2. Liquidated Damages – computed as specified in Section 8.6 Liquidated Damages, of the Special Provisions.
- (D) Monthly Payments – Total monthly payments payable to the Contractor will be the applicable monthly payments in Section 10.17(A) 1through 6 above plus the applicable miscellaneous work in Section 10.17(B) Miscellaneous Work above minus the applicable Deductions in Section 10.17(C) Deductions, of this section.

To expedite processing of payments, refer to Section 9.4 Progress Payments, of the Special Provisions for the required information on monthly invoice

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION

APPENDICES

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Appendix C	Sample – Routine/Preventive Maintenance and Inspection Report
Appendix D	Sample –Trouble Call Ticket and Report
Appendix D1	Sample – Notice to Proceed Letter for Miscellaneous Work
Appendix E	Sample – Monthly Invoice
Appendix F	Sample – Certified Payroll Report
Appendix G	Sample – Satisfactory Evidence by Affidavit for Final Payment

## **Appendix A**

### **ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**

1. Automatic Transfer Switch Annual Preventative Maintenance
2. Emergency Generator Switchgear and 480 Volt Indoor Switchgear Annual Preventative Maintenance
3. 15 KV Switchgear Annual Preventive Maintenance
4. Unit Substation Preventative Maintenance
  - a. Quarterly
  - b. Annual
5. Padmounted Transformer Preventative Maintenance
  - a. Quarterly
  - b. Annual
6. Intelligent Equipment Monitoring System Preventative Maintenance
  - a. Quarterly
  - b. Annual

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
 (continuation)  
 SWGR-1Y-A.txt

**EMERGENCY GENERATOR SWITCHGEAR AND 480 VOLT INDOOR SWITCHGEAR ANNUAL PREVENTIVE MAINTENANCE**

THIS PM SHEET LINKED TO:

EQUIPMENT:           KHB-SWGR-02, KKB-SWGR-03,  
                           HHB-SWGR-05, HKB-SWGR-06, TOC-SWGR-07

PM TASK:             SWGR-1Y-A

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1	01/27/97		T. THOMPSON
2	01/28/97	F. SASSE	T. THOMPSON
3			

\* \* \* \* \*  
 \* \* \* \* \*  
 \*       !                   ! SAFETY INFORMATION   !!       \*  
 \* \* \* \* \*  
 \* 1. ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES.       \*  
 \* 2. THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND       \*  
    OBSERVE WARNINGS, CAUTIONS AND NOTES.                   \*  
 \* 3. ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE       \*  
    OBSERVED.   \*  
 \* 4. PRIOR TO PERFORMING THIS TASK, COORDINATE WITH           \*  
    CONTROL CENTER.   \*  
 \* 5. REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE   \*  
    BEYOND THE SCOPE OF THIS PM TO MAINTENANCE               \*  
    SUPERVISION.   \*  
 \* \* \* \* \*

\* \* NOTE \* \*

PERIODICALLY, THIS PM CHECKSHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

1. ELECTRICAL TOOLS
2. KEROSENE
3. LUBRICANT (GE-0282A2048P009, OR EQUIVIVANT)
4. VACUUM CLEANER
5. CLEANING TOOLS AND MATERIALS
6. ANSI-61 GRAY ACRYLIC ENAMEL PAINT (GE-0282A4534P001, OR EQUIVIVANT)
7. FILTERS
8. BURNISHING TOOL
9. MEGGER

WORK INSTRUCTIONS:

A. BREAKER AND INSTRUMENT COMPARTMENTS

1. ( ) WHILE IN THE TEST MODE, OPERATE EACH BREAKER AND CHECK ALL FUNCTIONS.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

SWGR-1Y-A.txt \* \*

NOTE \* \*

THE FOLLOWING STEPS SHOULD ONLY BE  
ACCOMPLISHED AFTER THE BREAKERS HAVE  
BEEN DEENERGIZED.

2. ( ) MANUALLY OPERATE THE BREAKER SEVERAL TIMES, CHECKING FOR OBSTRUCTIONS OR EXCESSIVE FRICTION.
3. ( ) ELECTRICALLY OPERATE THE BREAKER SEVERAL TIMES TO CHECK THE PERFORMANCE OF THE ELECTRICAL ACCESSORIES.
4. ( ) VISUALLY INSPECT THE BREAKER FOR LOOSE HARDWARE. INSPECT THE COMPARTMENT FLOOR FOR ANY HARDWARE THAT MAY HAVE FALLEN FROM THE BREAKERS.
5. ( ) REMOVE AND INSPECT THE ARC QUENCHERS FOR BREAKAGE OR EXCESSIVE BURNING.
6. ( ) CHECK ELECTRO-MECHANICAL DEVICES FOR POSITIVE TRIP.
7. ( ) CHECK INSULATING PARTS FOR SIGNS OF OVERHEATING AND CRACKS THAT MAY INDICATE EXCESSIVE THERMAL AGING.
8. ( ) ENSURE BEARING POINTS AND SLIDING SURFACES ARE MODERATELY LUBRICATED. IF NOT, REMOVE ANY HARDENED GREASE AND DIRT FROM LATCH AND BEARING SURFACES USING KEROSENE PRIOR TO APPLYING A NEW, THIN FILM OF LUBRICANT.
9. ( ) ON DRAWOUT BREAKERS, INSPECT THE CONTACT SURFACE OF THE DISCONNECT FINGERS FOR CLEANLINESS AND PROPER LUBRICATION.

B. INSTRUMENTS, INSTRUMENT TRANSFORMERS AND RELAYS

10. ( ) CHECK AND INSPECT ALL DEVICES TO ENSURE THEY ARE FUNCTIONING PROPERLY.
11. ( ) INSPECT ALL ELECTRICAL CONNECTIONS FOR SECURITY.
12. ( ) CHECK DEVICE MOUNTINGS.

C. RELAYS

AUXILIARY RELAYS

13. ( ) VISUALLY INSPECT PROTECTIVE RELAYS.
14. ( ) INSPECT FOR PROPER COIL AND RESISTANCE ACCORDING TO TABLE III IN O&M MANUAL.
15. ( ) ENSURE COIL IS CONNECTED PROPERLY USING BOTH COIL CONTACTS FOR DOUBLE BREAK ACTION.
16. ( ) ENSURE EACH COIL HAS A MINIMUM OF 1/4 INCH CONTACT GAP WHEN OPEN.
17. ( ) ENSURE ROLLERS SPIN FREELY ON LATCHING ASSEMBLY.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
SWGR-1Y-A.txt

18. ( ) MANUALLY TRIP RELAY BY APPLYING FORCE TO THE ARMATURE. RELAY SHOULD HAND TRIP WITH A 0.025 SHIM BETWEEN THE ARMATURE AND POLE PIECE.
19. ( ) INSPECT WIRING TO ENSURE IT DOES NOT INTERFERE WITH THE LATCHING MECHANISMS AND WIRES ARE WITHIN OUTER EDGES OF BARRIERS.
20. ( ) INSPECT TIE BOLTS FOR SECURITY (25 INCH POUNDS).
21. ( ) INSPECT CONTACTS FOR CLEANLINESS. USE A FLEXIBLE BURNISHING TOOL FOR CLEANING, IF NECESSARY.

TIME OVERCURRENT RELAYS

22. ( ) INSPECT CONTACTS FOR CLEANLINESS. USE A FLEXIBLE BURNISHING TOOL FOR CLEANING, IF NECESSARY.
23. ( ) CLEAN CLEAR LEXAN COVER ( WHERE APPLICABLE) WITH A SOFT CLOTH AND WATER ONLY.
24. ( ) PERFORM AN OVERALL FUNCTIONAL SYSTEM TEST.
25. ( ) PERFORM PICK-UP TEST FOR THE TAP SETTING IN SERVICE, AS OUTLINED IN THE INSTALLATION SECTION OF THE O&M MANUAL.
26. ( ) PERFORM THE TIME TESTS AS DESCRIBED IN THE INSTALLATON SECTION OF THE O&M MANUAL. RECALIBRATE, I REQUIRED.

(HIGH-SEISMIC INSTANTANEOUS UNIT)

27. ( ) CHECK THAT THE INSTANTANEOUS UNIT PICKED UP AT THE DESIRED CURRENT LEVEL, AS OUTLINED IN THE ACCEPTANCE TESTS SECTION OF THE O&M MANUAL.

(HIGH SEISMIC TARGET AND SEAL-IN UNIT)

28. ( ) CHECK THAT THE UNIT PICKS UP AT THE VALUES SHOWN IN TABLE XI OF THE O&M MANUAL.
29. ( ) CHECK THAT THE UNIT DROPS OUT AT 25% OR MORE OF TAP VALUE.

UNDERVOLTAGE RELAYS

30. ( ) CHECK THE GAP ON THE NORMALLY OPEN CONTACTS. GAPS SHOULD BE BETWEEN 0.010-0.015 INCH.
31. ( ) OBSERVE THE WIPE ON EACH NORMALLY CLOSED CONTACT BY DEFLECTING THE STATIONALRY CONTACT MEMBER TOWARDS THE FRAME. WHICP SHOULD BE APPROXIMATELY 0.005 INCH.
32. ( ) CHECK THE WIPE ON EACH NORMALLY OPEN CONTACT BY INSERTING A 0.005 INCH SHIM BETWEEN THE RESIDULE SCREW AND THE POLE PIECE AND OPERATING THE ARMATURE BY HAND. THE CONTACTS SHOULD MAKE BEFORE THE RESIDUAL SCREW STRIKES THE SHIM.
33. ( ) CONNECT A VARIABLE SOURCE OF VOLTAGE (AT RATED



Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
SWGR-1Y-A.txt

FREQUENCY) TO THE COIL STUDS AND CHECK THE PICK-UP AND DROPOUT VOLTAGES. USE THE VARIABLE RHEOSTAT TO THE RELAY AND, IF NECESSARY, THE RESIDUAL SCREW TO ADJUST TO THE VALUES REQUIRED.

- 34. ( ) CHECK THE PICK-UP AMPERES BY CONNECTING VARIABLE DC SOURCE TO THE TARGET CIRCUITS.
- 35. ( ) INSPECT CONTACTS FOR CLEANLINESS. USE A FLEXIBLE BURNISHING TOOL FOR CLEANING, IF NECESSARY.

D. BREAKER COMPARTMENT INTERIORS

- 36. ( ) THOROUGHLY CLEAN THE INTERIOR OF THE COMPARTMENTS USING A VACUUM CLEANER AND CLEAN RAGS.

\* \* NOTE \* \*

DO NOT USE STEEL WOOL OR OXIDE PAPERS. COMPRESSED AIR IS ALSO NOT RECOMMENDED.

- 37. ( ) INSPECT INDICATING DEVICES, MECHANICAL AND KEY INTERLOCKS.
- 38. ( ) INSPECT PRIMARY DISCONNECTING DEVICE CONTACTS FOR SIGNS OF ABNORMAL WEAR OR OVERHEATING.
- 39. ( ) CLEAN AND LUBRICATE THE RACKING MECHANISM.
- 40. ( ) BEFORE REPLACING THE BREAKER, CLEAN AND APPLY A THIN LAYER OF LUBRICANT TO THE PRIMARY AND SECONDARY DISCONNECTING DEVICE CONTACTS AND STUDS.

E. BUS AREA

- 41. ( ) INSPECT THE BUSES AND CONNECTIONS OR EVIDENCE OF OVERHEATING OR WEAKENING OF THE INSULATION SUPPORTS.
- 42. ( ) IF BUS INSULATION IS PRESENT, REMOVE THE MOLDED COVERS OVER THE MAIN BUS CONNECTIONS TO EXPOSE THE JOINTS FOR INSPECTION.
- 43. ( ) INSPECT CONNECTION AND BRACING BOLTS FOR SECURITY.
- 44. ( ) VACUUM AND CLEAN BUSES AND SUPPORTS.
- 45. ( ) VISUALLY INSPECT THE INSULATION ON THE BARS THAT RUN FROM THE BREAKER STUDS THROUGH THE BUS STRUCTURE TO THE CABLE AREA.
- 46. ( ) PERFORM A MEGGER READING AND RECORD THE RESISTANCE TO GROUND AND BETWEEN THE PHASES OF ALL INSULATED BARS, BUSES AND CONNECTIONS. RECORD RESULTS FOR COMPARISON WITH PREVIOUS READINGS TO UNCOVER ANY WEAKENING OF THE INSULATION.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

SWGR-1Y-A.txt \* \* NOTE \* \*

IF POSSIBLE, READING SHOULD BE TAKEN UNDER CONDITIONS SIMILAR  
TO PREVIOUS READINGS.

F. CABLE AND BUSWAY COMPARTMENT

- 47. ( ) INSPECT ALL POWER CABLE AND BUSWAY CONNECTIONS FOR SIGNS OF OVERHEATING.
- 48. ( ) INSPECT ALL CONNECTIONS FOR SECURITY.
- 49. ( ) INSPECT ALL BOLTS THAT HOLD CABLE TERMINALS TO THE CONNECTION BARS FOR SECURITY.
- 50. ( ) INSPECT THE NEUTRAL AND GROUND BUSES AND MOUNTING BOLTS FOR SECURITY.
- 51. ( ) INSPECT ALL SECONDARY CONTROL WIRING CONNECTION FOR SECURITY AND ENSURE THAT ALL CONTROL CABLING IS INTACT.

G. CIRCUIT BREAKER LIFTING MECHANISM

- 52. ( ) INSPECT CABLE FOR SIGNS OF DETERIORATION OR BROKEN STRANDS. REPLACE IF FOUND TO BE DEFECTIVE IN ANY WAY.

H. TRANSFORMER

- 53. ( ) INSPECT CONNECTIONS/WIRING FOR SECURITY AND SIGNS OF CORROSION OR OVERHEATING.
- 54. ( ) THOROUGHLY CLEAN UNIT WITH VACUUM AND CLEAN RAGS.

I. OVERALL SWITCHGEAR

- 55. ( ) CLEAN AND INSPECT ALL PAINTED SURFACES. REMOVE CORROSION AND REPAINT, AS REQUIRED.
- 56. ( ) INSPECT ALL ANCHOR AND STRUCTURAL BOLTS FOR SECURITY.
- 57. ( ) ENSURE ALL COMPARTMENT DOOR LATCHES OPERATE PROPERLY.
- 58. ( ) INSPECT HEATERS FOR PROPER OPERATION, AS APPLICABLE.
- 59. ( ) REMOVE ANY EXTERIOR VENT FILTERS AND CLEAN USING A WARM, SOAPY, WATER SOLUTION OR REPLACE, AS NEEDED.
- 60. ( ) RETURN UNIT TO SERVICE.
- 61. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

REFERENCE INFORMATION:

- 1. EMERGENCY GENERATOR SWITCHGEAR - GENERAL ELECTRIC INSTRUCTION MANUAL, GEK-100356, VOL. 7, OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
(continuation)

SWGR-1Y-A.txt

EMERGENCY GENERATOR SWITCHGEAR, VARIOUS SECTIONS.

2. 480 VOLT INDOOR SWITCHGEAR - GENERAL ELECTRIC INSTRUCTION MANUAL, GEK-100356, VOL. 2, OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR 15KV UNIT SUBSTATIONS, VARIOUS SECTIONS.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
 (continuation)  
 SWGR-1Y-B.txt

15KV SWITCHGEAR ANNUAL PREVENTIVE MAINTENANCE

THIS PM SHEET LINKED TO:

EQUIPMENT:            HHB-SWGR-01, KHB-SWGR-06  
                           HHB-SWGR-03, KHB-SWGR-07

PM TASK:                SWGR-1Y-B

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1			
2			
3			

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* * * * *
*
*   !                   ! SAFETY INFORMATION   !!
*
*  1. ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES.
*  2. THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND
*     OBSERVE WARNINGS, CAUTIONS AND NOTES.
*  3. ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE
*     OBSERVED.
*  4. PRIOR TO PERFORMING THIS TASK, COORDINATE WITH
*     CONTROL CENTER.
*  5. REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE
*     BEYOND THE SCOPE OF THIS PM TO MAINTENANCE
*     SUPERVISION.
*
* * * * *
  
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\* \* NOTE \* \*

PERIODICALLY, THIS PM CHECKSHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

1. ELECTRICAL TOOLS
2. LUBRICANT (GE-0282A2048P009, OR EQUIVIVANT)
3. VACUUM CLEANER
4. CLEANING TOOLS AND MATERIALS
5. ANSI-61 GRAY ACRYLIC ENAMEL PAINT (GE-0282A4534P001, OR EQUIVIVANT)
6. FILTERS
7. BURNISHING TOOL
8. MEGGER

WORK INSTRUCTIONS:

A. OVERALL SWITCHGEAR

1.        ( ) THOROUGHLY CLEAN EQUIPMENT USING A VACUUM CLEANER TO REMOVE ALL DUST AND OTHER ACCUMULATIONS.
2.        ( ) WIPE CLEAN THE BUSES AND SUPPORTS.
3.        ( ) CLEAN AND INSPECT ALL PAINTED SURFACES.    REMOVE

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

SWGR-1Y-B.txt

CORROSION AND REPAINT, AS REQUIRED.

4. ( ) INSPECT ALL ANCHOR AND STRUCTURAL BOLTS FOR SECURITY.
5. ( ) ENSURE ALL COMPARTMENT DOOR LATCHES OPERATE PROPERLY.
6. ( ) INSPECT HEATERS FOR PROPER OPERATION, AS APPLICABLE.
7. ( ) REMOVE ANY EXTERIOR VENT FILTERS AND CLEAN USING A WARM, SOAPY, WATER SOLUTION OR REPLACE, AS NEEDED.

B. POWER/VAC VACUUM CIRCUIT BREAKER

8. ( ) VISUALLY INSPECT THE BREAKER FOR LOOSE OR DAMAGED HARDWARE. INSPECT THE COMPARTMENT FLOOR FOR ANY HARDWARE THAT MAY HAVE FALLEN FROM THE BREAKERS.
9. ( ) PERFORM A SLOW CLOSING OPERATION BY INSTALLING THE CLOSING SPRING GAG ACCORDING TO THE O&M MANUAL AND THEN PUT THE MANUAL CHARGE HANDLE ON THE MANUAL CHARGE LEVER AND MOVE THE HANDLE UP AND DOWN. THE BREAKER WILL BE FULLY CLOSED WHEN THE SPRING CHARGE INDICATOR SHOWS "CHARGED".

\* \* CAUTION \* \*

WITH THE GAG PLATE INSTALLED, THE BREAKER CLOSED, AND OPENING SPRINGS CHARGED, THE BREAKER CAN BE TRIPPED AT FULL SPEED.

DIMENSIONAL CHECK - PRIMARY CONTACT EROSION

10. ( ) IN THE CLOSED POSITION, THE EROSION DISK BELOW THE OPERATING ROD INSULATOR IS ALIGNED WITH A REFERENCE ARM ON NEW INTERRUPTERS. AS CONTACT EROSION OCCURS THE EROSION DISK WILL MOVE UPWARD FROM THE ALIGNMENT WITH THAT REFERENCE ARM. WHEN EROSION REACHES 1/8 INCH REPLACE THE POWER/VAC INTERRUPTER.

DIMENSIONAL CHECK - SPRING WIPE

11. ( ) WITH THE BREAKER CLOSED AND THE CLOSING SPRING GAGGED, USE A FEELER GAUGE TO MEASURE AND RECORD THE DISTANCE BETWEEN THE TOP OF THE WIPE INDICATOR AND THE BOTTOM OF THE EROSION DISK FOR EACH PHASE.
12. ( ) TRIP THE BREAKER WITH THE CLOSING SPRING GAG PLATE INSTALLED AND MEASURE AND RECORD THE DISTANCE BETWEEN THE WIPE INDICATOR AND THE EROSION DISK.
13. ( ) SUBTRACT THE CLOSED POSITION MEASUREMENT FROM THE OPEN POSITION MEASUREMENT. THE RESULT IS THE AMOUNT OF WIPE ON EACH INDIVIDUAL POLE.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

SWGR-1Y-B.txt

14. ( ) IF THE RESULT IS LESS THAN 0.075, ADJUST THE WIPE ACCORDING TO PROCEDURES LOCATED IN THE O&M MANUAL.

VACUUM INTERRUPTER INTEGRITY TEST

\* \* CAUTION \* \*

X-RAY MAY BE PRODUCED IF AN ABNORMALLY HIGH VOLTAGE IS APPLIED ACROSS A PAIR OF ELECTRODES IN A VACUUM. DO NOT APPLY VOLTAGE THAT IS HIGHER THAN THE RECOMMENDED VALUE. DO NOT USE CONTACT SEPARATION THAT IS LESS THAN THE RECOMMENDED OPEN-POSITION BREAKER CONTACT GAP.

15. ( ) WITH THE BREAKER OPEN, INDIVIDUALLY CHECK EACH INTERRUPTER BY CONNECTING THE HI-POT MACHINE "HOT" LEAD TO THE UPPER STUD AND THE GROUND LEAD TO THE LOWER STUD.

\* \* NOTE \* \*

IF THE MACHINE HAS A CENTER POINT GROUND, THE CONNECTIONS MAY BE MADE EITHER WAY.

16. ( ) APPLY 36 KV (RMS) 60 HZ OR 50 KV DC AND HOLD FIVE (5) TO TEN (10) SECONDS. IF NO BREAKDOWN OCCURS, THE INTERRUPTER SHOULD BE REPLACED.

ELECTRICAL OPERATION

17. ( ) ATTACH A SECONDARY TEST COUPLER TO THE CIRCUIT BREAKER CONNECTOR. CHECK THE CONTROL VOLTAGE ON THE NAMEPLATE AND CLOSE AND OPEN THE BREAKER SEVERAL TIMES.

\* \* CAUTION \* \*

REPEATED OPERATIONS AT A RATE EXCEEDING TWO PER MINUTE MAY CAUSE CHARGING MOTOR OVERHEATING AND FAILURE.

LUBRICATION

18. ( ) APPLY A FEW DROPS OF LIGHT SYNTHETIC MACHINE OIL AT EACH BEARING.
19. ( ) APPLY A THIN LAYER OF GREASE ON THE FOUR CORNERS OF THE CLOSING SPRING GUIDE WHERE IT ENTERS INSIDE THE SPRING.

TRANSFER FINGER

20. ( ) WITH THE BREAKER OPEN, WIPE OFF EXCESSIVE LUBRICANT AND EXAMINE THE MOVING CONTACT ROD PROJECTING BELOW THE TRANSFER FINGERS. THEY SHOULD PRESENT A BURNISHED SILVER CONTACT WITHOUT COPPER APPEARANCE AT MORE THAN ONE

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
SWGR-1Y-B.txt

LOCATION. IF COPPER IS VISIBLE AT MORE THAN ONE LOCATION PER  
POLE OR THE SILVER PLATING IS TORN, REPLACE THE INTERRUPTER.

C. EJ CURRENT-LIMITING POWER FUSES

- 21. ( ) CHECK FUSE CLIPS FOR SECURITY.
- 22. ( ) INSPECT ALL CONTACT SURFACES FOR CORROSION OR CONTAMINATION.  
CLEAN OR REPALCE, AS NEEDED.
- 23. ( ) ENSURE CONTACTS HAVE A BRIGHT APPEARANCE.
- 24. ( ) INSPECT SECONDARY DISCONNECTING DEVICE CONTACTS AND STUDS.

D. RELAYS

AUXILIARY RELAYS

- 25. ( ) VISUALLY INSPECT PROTECTIVE RELAYS.
- 26. ( ) INSPECT FOR PROPER COIL AND RESISTANCE ACCORDING TO TABLE III IN  
O&M MANUAL.
- 27. ( ) ENSURE COIL IS CONNECTED PROPERLY USING BOTH COIL CONTACTS FOR DOUBLE  
BREAK ACTION.
- 28. ( ) ENSURE EACH COIL HAS A MINIMUM OF 1/4 INCH CONTACT GAP WHEN OPEN.
- 29. ( ) ENSURE ROLLERS SPIN FREELY ON LATCHING ASSEMBLY.
- 30. ( ) INSPECT WIRING TO ENSURE IT DOES NOT INTERFERE WITH THE LATCHING  
MECHANISMS AND WIRES ARE WITHIN OUTER EDGES OF BARRIERS.
- 31. ( ) INSPECT TIE BOLTS FOR SECURITY (25 INCH POUNDS).
- 32. ( ) INSPECT CONTACTS FOR CLEANLINESS. USE A FLEXIBLE BURNISHING TOOL  
FOR CLEANING, IF NECESSARY.

TIME OVERCURRENT RELAYS

- 33. ( ) INSPECT CONTACTS FOR CLEANLINESS. USE A FLEXIBLE BURNISHING TOOL  
FOR CLEANING, IF NECESSARY.
- 34. ( ) CLEAN CLEAR LEXAN COVER ( WHERE APPLICABLE) WITH A SOFT CLOTH AND  
WATER ONLY.
- 35. ( ) PERFORM AN OVERALL FUNCTIONAL SYSTEM TEST.
- 36. ( ) PERFORM PICK-UP TEST FOR THE TAP SETTING IN SERVICE, AS  
OUTLINED IN THE INSTALLATION SECTION OF THE O&M MANUAL.
- 37. ( ) PERFORM THE TIME TESTS AS DESCRIBED IN THE INSTALLATON  
SECTION OF THE O&M MANUAL. RECALIBRATE, AS REQUIRED.

(HIGH-SEISMIC INSTANTANEOUS UNIT)

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

SWGR-1Y-B.txt

38. ( ) CHECK THAT THE INSTANTANEOUS UNIT PICKED UP AT THE DESIRED CURRENT LEVEL, AS OUTLINED IN THE ACCEPTANCE TESTS SECTION OF THE O&M MANUAL.

(HIGH SEISMIC TARGET AND SEAL-IN UNIT)

39. ( ) CHECK THAT THE UNIT PICKS UP AT THE VALUES SHOWN IN TABLE XI OF THE O&M MANUAL.
40. ( ) CHECK THAT THE UNIT DROPS OUT AT 25% OR MORE OF TAP VALUE.

E. BREAKER COMPARTMENT INTERIORS

41. ( ) THOROUGHLY CLEAN THE INTERIOR OF THE COMPARTMENTS USING A VACUUM CLEANER AND CLEAN RAGS.

\* \* NOTE \* \*

DO NOT USE STEEL WOOL OR OXIDE PAPERS. COMPRESSED AIR IS ALSO NOT RECOMMENDED.

42. ( ) INSPECT INDICATING DEVICES, MECHANICAL AND KEY INTERLOCKS.
43. ( ) INSPECT PRIMARY DISCONNECTING DEVICE CONTACTS FOR SIGNS OF ABNORMAL WEAR OR OVERHEATING.
44. ( ) CLEAN AND LUBRICATE THE RACKING MECHANISM.
45. ( ) BEFORE REPLACING THE BREAKER, CLEAN AND APPLY A THIN LAYER OF LUBRICANT TO THE PRIMARY AND SECONDARY DISCONNECTING DEVICE CONTACTS AND STUDS.

F. SWITCHES

46. ( ) INSPECT SWITCHES FOR SIGNS OF BURNING ON CONTACTS.
47. ( ) IF CONTACTS APPEAR TO BE PITTED OR COATED WITH SULPHITE, SCRAPE THEM GENTLY WITH A SHARP KNIFE OR DRESS THEM WITH A FINE FILE.
48. ( ) REPLACE IF THE SHUNTS ARE BROKEN OR THE CONTACTS ARE BADLY PITTED.
49. ( ) IF THERE IS NO OPENING BETWEEN THE CONTACTS IT WOULD INDICATE THAT THE PARTS OF THE MOVING CONTACT SUPPORT THAT BEARS ON THE CAM OR THE CAM ITSELF HAS BECOME WORN AND NEEDS TO BE REPLACED.

G. BUS AREA

50. ( ) INSPECT THE BUSES AND CONNECTIONS FOR EVIDENCE OF OVERHEATING OR WEAKENING OF THE INSULATION SUPPORTS.
51. ( ) USING A 1000 OR 2500 VOLT MEGGER, RECORD THE RESISTANCE OF EACH PHASE TO GROUND AND BETWEEN



Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

SWGR-1Y-B.txt

PHASES OF THE INSULATION OF BUSES AND CONNECTIONS. RECORD RESULTS FOR COMPARISON WITH PREVIOUS READINGS TO UNCOVER ANY WEAKENING OF THE INSULATION.

\* \* NOTE \* \*

IF POSSIBLE, READING SHOULD BE TAKEN UNDER CONDITIONS SIMILAR TO PREVIOUS READINGS.

- 52. ( ) CLEAN RACKING MECHANISM AND LUBRICATE JACK SCREWS AND GEARS.
- 53. ( ) CHECK PRIMARY DISCONNECTING DEVICE CONTACTS FOR SIGNS OF ABNORMAL WEAR OR OVERHEATING.
- 54. ( ) INSPECT CONTACTS FOR CLEANLINESS. USE A FLEXIBLE BURNISHING TOOL FOR CLEANING, IF NECESSARY.

H. CABLE AND BUSWAY COMPARTMENT

- 55. ( ) INSPECT ALL POWER CABLE AND BUSWAY CONNECTIONS FOR SIGNS OF OVERHEATING.
- 56. ( ) INSPECT ALL CONNECTIONS FOR SECURITY.
- 57. ( ) INSPECT ALL BOLTS THAT HOLD CABLE TERMINALS TO THE CONNECTION BARS FOR SECURITY.
- 58. ( ) INSPECT THE NEUTRAL AND GROUND BUSES AND MOUNTING BOLTS FOR SECURITY.
- 59. ( ) INSPECT ALL SECONDARY CONTROL WIRING CONNECTIONS FOR SECURITY AND ENSURE THAT ALL CONTROL CABLING IS INTACT.

I. OVERALL SWITCHGEAR

- 60. ( ) OPERATE ALL HINGED PANELS AND DOORS TO VERIFY THEY OPERATE IN A SMOOTH AND SAFE MANNER, TRY ALL LATCHES AND KNOBS. ROTATE AND PUSH ALL SWITCHES THROUGH ALL POSITIONS TO ENSURE SMOOTH OPERATION.
  - 61. ( ) INSPECT CONNECTIONS/WIRING FOR SECURITY AND SIGNS OF CORROSION OR OVERHEATING.
  - 62. ( ) THOROUGHLY CLEAN UNIT WITH VACUUM AND CLEAN RAGS.
- 63. ( ) CLEAN AND INSPECT ALL PAINTED SURFACES. REMOVE CORROSION AND REPAINT, AS REQUIRED.
- 64. ( ) INSPECT ALL ANCHOR AND STRUCTURAL BOLTS FOR SECURITY.
- 65. ( ) OPERATE ALL HINGED PANELS AND DOORS TO VERIFY THEY OPERATE IN A SMOOTH AND SAFE MANNER, TRY ALL LATCHES AND KNOBS. ROTATE AND PUSH ALL SWITCHES THROUGH THROUGH ALL POSITIONS TO ENSURE SMOOTH OPERATION.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
(continuation)

SWGR-1Y-B.txt

- 66. ( ) INSPECT HEATERS FOR PROPER OPERATION, AS APPLICABLE.
- 67. ( ) REMOVE ANY EXTERIOR VENT FILTERS AND CLEAN USING A WARM, SOAPY, WATER SOLUTION OR REPLACE, AS NEEDED.
- 68. ( ) RETURN UNIT TO SERVICE.
- 69. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

**REFERENCE INFORMATION:**

- 1. GENERAL ELECTRIC INSTRUCTION MANUAL, GEK-100356, VOL. 3, OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR 15KV SWITCHGEAR, VARIOUS SECTIONS.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
 (continuation)

USS1Y^A.txt

UNIT SUBSTATION ANNUAL PREVENTIVE MAINTENANCE

THIS PM SHEET LINKED TO:

EQUIPMENT: C^USS^T2^2, D^USS^T2^1

PM TASK: USS1Y^A

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1			
2			
3			

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* * * * *
*
*           !! SAFETY INFORMATION !!
*
* 1.  ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES.
* 2.  THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND
*      OBSERVE WARNINGS, CAUTIONS AND NOTES.
* 3.  ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE
*      OBSERVED.
* 4.  PRIOR TO PERFORMING THIS TASK, COORDINATE WITH
*      CONTROL CENTER.
* 5.  REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE
*      BEYOND THE SCOPE OF THIS PM TO MAINTENANCE
*      SUPERVISION.
* * * * *
    
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\* \* NOTE \* \*

PERIODICALLY, THIS PM SHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

1. ELECTRICAL TOOLS
2. VACUUM CLEANER
3. CLEAN, DRY COMPRESSED AIR OR DRY NITROGEN
4. CLEANING TOOLS AND MATERIALS
5. LUBRICANT (SCH 32 MOBILTEMP, OR EQUILIVENT)
6. KEROSENE, ARSOL OR NAPHTHA

WORK INSTRUCTIONS:

TRANSFORMER

1. ( ) DE-ENERGIZE UNIT AND REMOVE SIDE PANELS.
2. ( ) INSPECT THE OVERALL CONDITION OF THE UNIT.
3. ( ) INSPECT FOR ACCUMULATION OF DIRT ON INSULATING SURFACES AND IN PLACES THAT COULD RESTRICT THE FLOW OF AIR.
4. ( ) INSPECT FOR LOOSE CONNECTIONS.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
USS-1Y-A.txt

5. ( ) INSPECT CONDITION OF TERMINAL BOARDS.
6. ( ) LOOK FOR SIGNS OF OVERHEATING AND OF VOLTAGE CREEPAGE OVER INSULATING SURFACES AS INDICATED BY TRACKING OR CARBONIZING.
7. ( ) MEASURE AND RECORD INSULATION RESISTANCE AND POWER FACTOR VALUES FOR FUTURE COMPARISON.
8. ( ) VACUUM ENTIRE UNIT TO REMOVE EXCESS DIRT ACCUMULATION TO PERMIT FREE CIRCULATION OF AIR OVER CRITICAL SURFACES.
9. ( ) USE CLEAN, DRY COMPRESSED AIR OR DRY NITROGEN TO REMOVE CONTAMINANTS FROM HARD TO REACH AREAS.
10. ( ) CLEAN LEAD SUPPORTS, TERMINAL BOARDS AND OTHER MAJOR INSULATING SURFACES WITH A CLEAN, DRY CLOTH.

\* \* NOTE \* \*

THE USE OF LIQUID CLEANERS IS NOT RECOMMENDED  
BECAUSE OF THE POSSIBLE DETERIORATING EFFECTS ON THE  
INSULATING MATERIALS.

FUSIBLE AIR-INTERRUPTER SWITCH EQUIPMENT

\* \* CAUTION \* \*

DISCONNECT AND REMOVE THE SWITCH FROM ALL SOURCES OF  
ELECTRICAL POWER SO THAT IT IS COMPLETELY DE-ENERGIZED  
BEFORE REMOVING ANY PANEL OR OPENING ANY DOOR THAT PROVIDES  
ACCESS TO THE HIGH VOLTAGE COMPARTMENTS.

11. ( ) THOROUGHLY CLEAN THE INTERIOR OF THE COMPARTMENT USING A VACUUM CLEANER AND CLEAN RAGS ONLY. DO NOT USE STEEL WOOL OR OXIDE PAPERS.
12. ( ) INSPECT CABLES FOR EVIDENCE OF OVERHEATING AND ENSURE ALL CONNECTIONS ARE CLEAN AND SECURE.
13. ( ) CHECK ALL CONTROL WIRING AND ENSURE ANY INSTALLED HEATERS ARE FUNCTIONING PROPERLY.
14. ( ) CHECK MECHANICAL AND KEY INTERLOCKS FOR PROPER OPERATION.
15. ( ) CHECK SWITCH OPERATING HARDWARE (CHAIN, ETC.) FOR DAMAGE, CORROSION, PROPER TENSION/ALIGNMENT, ETC.

FRAME MOUNTED LOAD BREAK INTERRUPTER SWITCH EQUIPMENT A. SWITCH  
BLADES AND ARC CHUTES

16. ( ) CHECK TORQUE ON INSULATOR MOUNTING BOLTS TO SWITCH FRAME (25-30 FT.LBS.).

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

USS-1Y-A.txt

- 17. ( ) CHECK TORQUE ON BOLTS MOUNTING CASTINGS TO INSULATORS (25-30 FT.LBS.).
- 18. ( ) INSPECT FOR PROPER ARC BLADE ALIGNMENT TO ARC CHUTE CONTACTS.
- 19. ( ) CHECK ARC BLADE ALIGNMENT WITH ARC CHUTES.
- 20. ( ) INSPECT SILVER PLATING ON SWITCH BLADES.

\* \* NOTE \* \*

DO NOT ATTEMPT TO GRIND THE BLADES WITH POWDERED EMERY FOR OTHER ABRASIVES.

- 21. ( ) CHECK SWITCH BLADE ALIGNMENT WITH JAW CASTING CONTACT.
- 22. ( ) ENSURE THAT THE CONTACT RESISTANCE MEASUREMENT BETWEEN THE JAW SPADE TERMINAL AND HINGE SPADE TERMINALS IS BETWEEN 35 AND 100 MICRO-OHMS.
- 23. ( ) ENSURE THAT THE BLADES CAN BE "OPENED" FROM JAW CASTING WITH A PULLING FORCE OF APPROXIMATELY 30-36 POUNDS MEASURED AT A POINT BETWEEN THE MAIN BLADES JUST BELOW THE JAW CONTACT.
- 24. ( ) INSPECT CONTACT GREASE ON CASTING CONTACTS.
  - A. ( ) THOROUGHLY CLEAN ALL SWITCHES, INSULTORS, AND OPERATING ARMS WITH A CLEAN, DRY CLOTH.
  - B. ( ) APPLY A LIGHT COAT OF NON-CORROSIVE, HIGH TEMPERATURE GREASE TO THE CONTACT SURFACES.
- 25. ( ) CHECK FOR PROPER ALIGNMENT OF SWITCH ASSEMBLY IN CUBICLE.

B. INSULATORS AND PUSHRODS

- 26. ( ) CHECK PUSHRODS FOR CRACKS, DEFORMITIES OR TRACKING.
- 27. ( ) CHECK PUSHRODS FOR COMPLETE COVERAGE OF INSULATING VARNISH.
- 28. ( ) ENSURE COTTER PIN FASTENERS ARE SPREAD APART.
- 29. ( ) INSPECT PORCELAINS FOR DEFECTS, DEFORMITIES OR TRACKING.
- 30. ( ) CHECK FOR TIGHTNESS OF NUT ON OPERATING ARMS.
- 31. ( ) INSPECT THE MAIN OPERATING SHAFT PUSHRODS FOR SIGNS OF DAMAGE AT EITHER END. REPLACE, AS REQUIRED.
- 32. ( ) CLEAN INSULATORS USING AN ALCOHOL CLEANER OR LIGHT DETERGENT.
- 33. ( ) INSPECT INSULATORS AND DISCARD ANY THAT SHOW SIGNS OF TREEING OR TRACKING.

C. HANDLE MECHANISM

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
USS-1Y-A.txt

- 34. ( ) CHECK CHAIN ON MECHANISM FOR PROPER TENSION.
  - 35. ( ) CHECK HANDLE "PULL TO OPERATE" KNOB FOR FREEDOM OF MOVEMENT.
  - 36. ( ) CHECK HANDLE POSITIONING TOP AND BOTTOM OF HOUSING.
  - 37. ( ) CHECK HANDLE UNIT FOR NAMEPLATES (OPEN, CLOSE, PULL, TO OPERATE, ETC.).
- D. MISCELLANEOUS INSPECTION ITEMS
- 38. ( ) CHECK LATCHES FOR FREEDOM OF MOVEMENT AND SPRING RETRUN ACTION.
  - 39. ( ) CHECK WELD OF MAIN SHAFT TO "A" CAM ASSEMBLY.
  - 40. ( ) CHECK LUBRICATION OF PLUNGER AND TUBE ASSEMBLY.
  - 41. ( ) CHECK REBOUND SPRING FOR PROPER LUBRICATION.
  - 42. ( ) INSPECT ALL INSULATION FOR SIGNS OF TRACKING, ESPECIALLY WHERE THE CONDUCTORS PASS THROUGH AN INSULATOR OR LAYS NEAR A BARRIER. REPLACE ANY INSULATION THAT SHOWS SIGNS OF CRACKS OR STREAKED DISCOLORATION.
  - 43. ( ) TO ENSURE THE CONTACTS ARE "WIPED" CLEAN, OPEN AND CLOSE THE SWITCHES SEVERAL TIMES IN SUCESSION, BUT DO NOT EXCEED THER RATED DUTY.

\* \* NOTE \* \*

DO NOT ATTEMPT TO GRIND THE BLADES WITH  
POWDERED EMERY FOR OTHER ABRASIVES.

- 44. ( ) INSPECT ALL BUSES AND CONNECTIONS FOR EVIDENCE OF OVERHEATING OR DAMAGE.
- 45. ( ) ENSURE THE STORED ENERGY MECHANISM LATCHES ROTATE FREELY UP AND DOWN BY USING FINGER RPESSURE ON THE ROLLERS. CHECK FOR LOOSE BEARING BOLTS.
- 46. ( ) MEASURE AND RECORD THE RESISTANCE TO GROUND AND BETWEEN PHASES OF THE INSULATION OF BUSES AND CONNECTIONS WITH A MEGGER FOR FUTURE REFERENCE.

FUSES

- 47. ( ) ENSURE INSULATORS AND FUSE TUBES ARE FREE OF CONTAMINANTS AND HAVE A BRIGHT APPEARANCE.

MISCELLANEOUS

- 48. ( ) CLEAN ENTIRE UNIT TO REMOVE ANY SIGNS OF CONTAMINANTS THAT COULD AFFECT THE UNIT'S OVERALL PERFORMANCE.
- 49. ( ) SECURE UNIT AND RETURN TO SERVICE.
- 50. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
(continuation)

USS-1Y-A.txt

**REFERENCE INFORMATION:**

1. GENERAL ELECTRIC OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR 15KV UNIT SUBSTATIONS, GEK-100356, VOL. 2, TABS 1-7.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
 (continuation)  
 USS-3M-A.txt

UNIT SUBSTATION QUARTERLY PREVENTIVE MAINTENANCE

THIS PM SHEET LINKED TO:

EQUIPMENT: C-USS-T2-2, D-USS-T2-1  
 PM TASK: USS-3M-A

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1			
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 \* ! ! SAFETY INFORMATION !! \* \* \* \* \*  
 \* \* \* \* \*  
 \* 1. ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES. \*  
 \* 2. THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND \*  
 \* OBSERVE WARNINGS, CAUTIONS AND NOTES. \*  
 \* 3. ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE \*  
 \* OBSERVED. \*  
 \* 4. PRIOR TO PERFORMING THIS TASK, COORDINATE WITH \*  
 \* CONTROL CENTER. \*  
 \* 5. REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE \*  
 \* BEYOND THE SCOPE OF THIS PM TO MAINTENANCE \*  
 \* SUPERVISION. \*  
 \* \* \* \* \*

\* \* NOTE \* \*

PERIODICALLY, THIS PM SHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

1. ELECTRICAL TOOLS
2. VACUUM CLEANER
3. CLEAN, DRY COMPRESSED AIR OR DRY NITROGEN
4. CLEANING TOOLS AND MATERIALS
5. LUBRICANT (SCH-32 MOBILTEMP, OR EQUIVLENT)
6. KEROSENE, ARSOL OR NAPHTHA

WORK INSTRUCTIONS:

1. ( ) INSPECT THE OVERALL CONDITION OF THE UNIT.
2. ( ) VACUUM ENTIRE UNIT TO REMOVE EXCESS DIRT ACCUMULATION TO PERMIT FREE CIRCULATION OF AIR OVER CRITICAL SURFACES.
3. ( ) INSPECT EXTERIOR CONNECTIONS FOR SECURITY.
4. ( ) LOOK FOR SIGNS OF OVERHEATING OR POTENTIAL PROBLEMS.
5. ( ) ENSURE SURROUNDING AREA IS CLEAN AND FREE OF OBSTACLES THAT COULD PRESENT A POTENTIAL HAZARD.



Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
(continuation)  
**USS-3M-A.txt**

6. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

**REFERENCE INFORMATION:**

1. GENERAL ELECTRIC OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR 15KV UNIT SUBSTATIONS, GEK-100356, VOL. 1.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
 (continuation)  
 XFMR-1Y-A.txt

**PADMOUNTED TRANSFORMER ANNUAL PREVENTIVE MAINTENANCE**

THIS PM SHEET LINKED TO:

EQUIPMENT:           E-XFMR-T3-1, -3, -5, -7 & -9  
                           E-XFMR-T3-HK & -HL

PM TASK:             XFMR-1Y-A

**PM SHEET REVISIONS:**

REV #	DATE	AUTHORIZED BY	REVISED BY
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*      !                ! SAFETY INFORMATION      !!
*
*  1.  ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES.
*  2.  THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND
*      OBSERVE WARNINGS, CAUTIONS AND NOTES.
*  3.  ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE
*      OBSERVED.
*  4.  PRIOR TO PERFORMING THIS TASK, COORDINATE WITH
*      CONTROL CENTER.
*  5.  REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE
*      BEYOND THE SCOPE OF THIS PM TO MAINTENANCE
*      SUPERVISION.
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\* \* NOTE \* \*

PERIODICALLY, THIS PM SHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

**TOOLS AND MATERIALS:**

1. ELECTRICAL TOOLS
2. DRY INSULATING LIQUID (GEK-5671 OR EQUILIVENT)
3. CLEANING TOOLS AND MATERIALS

**WORK INSTRUCTIONS:**

1. ( ) REMOVE THE HANDHOLE COVER OR BURN OFF THE TANK COVER.

\* \* WARNING \* \*

ALWAYS RELEASE ANY POSSIBLE PRESSURE IN TANK BY REMOVING A PIPE PLUG ABOVE LIQUID LEVEL OR VENTING THE PRESSURE RELIEF VALVE BEFORE ATTEMPTING TO REMOVE HANDHOLE COVERS OR SIMILAR COVERS, INCLUDING DIAPHRAMS AND SHIPPING COVERS WHEN USED.

\* \* NOTE \* \*

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
XFMR-1Y-A.txt

TAKE PROPER PRECAUTIONS TO PREVENT THE ENTRANCE OF MOISTURE AND OTHER FOREIGN MATTER INTO THE TRANSFORMER. REMOVE THE HOOD AND CLEAN OFF THE COVER.

2. ( ) PLACE THE HANDHOLE GASKET BOLTS AND WASHERS IN STORAGE FOR RE-USE.
3. ( ) EXAMINE THE UNDERSIDE OF THE COVER FOR ANY SIGNS OF MOISTURE.
4. ( ) LOOK INSIDE THE UNIT FOR BLOWN FUSES, BROKEN OR DAMAGED LEADS OR LOOSE PARTS.
5. ( ) REPLACE ANY BLOWN FUSES.
6. ( ) INSPECT BUSHINGS FOR DAMAGE. REPAIR OR REPAIR, AS NECESSARY.
7. ( ) AFTER INSPECTION, IF NECESSARY, REFILL THE UNIT WITH DRY INSULATING LIQUID TO THE 25C LEVEL IN A VACUUM CHAMBER.

\* \* NOTE \* \*

IF THE UNIT CANNOT BE FILLED UNDER VACUUM, FILL IT THROUGH THE HANDHOLE DIRECTING THE FLOW OF OIL IN SUCH A WAY AS TO PREVENT AERATION OF THE LIQUID. TILT THE UNIT DURING FILLING TO PREVENT ENTRAPMENT OF AIR IN THE COILS AND INSULATION.

8. ( ) REINSTALL HANDHOLE COVER. \* \* NOTE \* \*

USE CARE WHEN REINSTALLING THE GASKET TO AVOID DAMAGE AND/OR IMPROPER SEALING.

9. ( ) RETURN UNIT TO SERVICE.
10. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

REFERENCE INFORMATION:

1. GENERAL ELECTRIC COMPANY, H-3 OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR PADMOUNTED TRANSFORMERS, GEK-100356, VOL. 8, REV. 1, TABS 1 & 6.

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
 (continuation)  
**XFMR-1Y-B.txt**

POWER TRANSFORMER AND HIGH-VOLTAGE DISCONNECT ANNUAL  
 PREVENTIVE MAINTENANCE

THIS PM SHEET LINKED TO:

EQUIPMENT:           A-XFMR-T1-5/-6, B-XFMR-T1-7/-8,  
                           C-XFMR-T1-1/-2, D-XFMR-T1-3/-4

PM TASK:             XFMR-1Y-B

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
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*      !                ! SAFETY INFORMATION      !!
*
*  1.  ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES.
*  2.  THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND
*      OBSERVE WARNINGS, CAUTIONS AND NOTES.
*  3.  ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE
*      OBSERVED.
*  4.  PRIOR TO PERFORMING THIS TASK, COORDINATE WITH
*      CONTROL CENTER.
*  5.  REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE
*      BEYOND THE SCOPE OF THIS PM TO MAINTENANCE
*      SUPERVISION.
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\* \* NOTE \* \*

PERIODICALLY, THIS PM SHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

1. ELECTRICAL TOOLS
2. QUART, SMALL NECK BROWN BOTTLE
3. DRY HYDROCARBON SOLVENT (KEROSENE)
4. DISTILLED WATER
5. DRY INSULATING LIQUID (GEK-5671 OR EQUIVIVENT) 5. PORTABLE TEST SET (GE MODEL 9T11Y8454, OR EQUIVIVENT)
6. CLEANING TOOLS AND MATERIALS

WORK INSTRUCTIONS:

SAMPLING INSULATING LIQUIDS NOTE \* \*

IMPURITIES WHICH TEND TO AFFECT THE DIELECTRIC STRENGTH OF OIL WILL GENERALLY BE FOUND AT THE BOTTOM OF THE TRANSFORMER. THEREFORE, ON OIL-FILLED TRANSFORMERS, THE SAMPLING VALVE IS LOCATED ON THE MAIN DRAIN VALVE.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
XFMR-1Y-B.txt

1. ( ) OBTAIN A ONE (1) QUART, SMALL NECK BOTTLE (A BROWN GLASS BOTTLE IS PREFERRED). IF A METAL CONTAINER IS USED, BE SURE ALL TRACES OF SOLDERING FLUX IS REMOVED FROM THE SEAMS.

\* \* NOTE \* \*

DO NOT USE RUBBER OR A COMPOSITION OF RUBBER FOR THE GASKETS OR STOPPERS.

2. ( ) THOROUGHLY RINSE BOTTLES WITH A DRY, HYDROCARBON SOLVENT (SUCH AS KEROSENE) THEN WASH WITH STRONG SOAPSUDS. RINSE WITH DISTILLED WATER AND DRY IN AN OVEN AT 105-110 DEG C. FOR 8 HOURS. AFTER DRYING, SEAL TIGHTLY UNTIL USE.
3. ( ) CAREFULLY CLEAN THE SAMPLING VALVE OR PLUG AND ALLOW ENOUGH INSULATING LIQUID TO RUN FREE TO REMOVE ANY MOISTURE OR FOREIGN MATTER WHICH MAY HAVE COLLECTED IN THE VALVE.
4. ( ) RINSE THE SAMPLING BOTTLE AT LEAST THREE (3) TIMES WITH SMALL PORTIONS OF THE LIQUID DRAWN FROM THE SAMPLING VALVE. ALLOW THE BOTTLE TO THOROUGHLY DRAIN BETWEEN RINSES.
5. ( ) DRAW A SAMPLE INTO THE BOTTLE, LEAVING SUFFICIENT AIR SPACE TO ALLOW FOR POSSIBLE EXPANSION OF THE LIQUID (APPROXIMATELY ONE (1) INCH).
6. ( ) IMMEDIATELY RESEAL THE TRANSFORMER AND CONTAINER TO PREVENT EXPOSURE TO MOISTURE.

\* \* NOTE \* \*

WHEN MAKING REPEATED SAMPLINGS, OBSERVE TRANSFORMER LIQUID LEVEL AND ADD MAKE-UP LIQUID, AS REQUIRED, BY FILLING TO THE PROPER LEVEL INDICATED ON THE TRANSFORMER NAMEPLATE.

7. ( ) PERFORM VARIOUS TESTS OUTLINED IN MANUAL GEK-5878, USING PORTABLE TEST SET OR BY SENDING SAMPLE TO GE, ACCORDING TO INSTRUCTIONS IN MANUAL.

FORCED AIR COOLING EQUIPMENT

8. ( ) INSPECT FOR PROPER OPERATION.
9. ( ) CLEAN, IF NECESSARY, BUT DO NOT PAINT FAN BLADES. DOING SO COULD CAUSE THE BLADES TO BECOME DYNAMICALLY UNBALANCED THAT COULD CAUSE EXCESSIVE VIBRATION AND EVENTUAL DESTRUCTION OF THE BLADE AND/OR BEARINGS.

SURGE ARRESTERS

10. ( ) INSPECT ARRESTERS FOR CONTAMINATION.
11. ( ) THEY MAY BE HOT-WASHED, SUBJECT TO THE USUAL CARE AND TECHNIQUES USED IN HOT-WASHING INSULATION TO

Page2

Appendix A  
**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**  
(continuation)  
**XFMR-1Y-B.txt**

**AVOID EXTERNAL FLASHOVER.**

- 12. ( ) RETURN UNIT TO SERVICE.
- 13. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

**REFERENCE INFORMATION:**

- 1. GENERAL ELECTRIC COMPANY, H-3 OPERATION AND MAINTENANCE MANUAL COVERING ELECTRICAL EQUIPMENT FOR POWER TRANSFORMERS AND HIGH-VOLTAGE DISCONNECT, GEK-100356, VOL. 4, REV. 1, TABS 1, 2, 3 & 11.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

XFMR`3M`A.txt

PADMOUNTED TRANSFORMER QUARTERLY VISUAL PM INSPECTION

THIS PM SHEET LINKED TO:

EQUIPMENT: HXO`XFMR`T3`HL, KXO`XFMR`T3`HK, R`XMR`XPS1  
PM TASK: XFMR`3M`A

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1			
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\* !! SAFETY INFORMATION !! \*  
\*  
\* 1. ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES. \*  
\* 2. THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND \*  
\* OBSERVE WARNINGS, CAUTIONS AND NOTES. \*  
\* 3. ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE \*  
\* OBSERVED. \*  
\* 4. PRIOR TO PERFORMING THIS TASK, COORDINATE WITH \*  
\* CONTROL CENTER. \*  
\* 5. REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE \*  
\* BEYOND THE SCOPE OF THIS PM TO MAINTENANCE \*  
\* SUPERVISION. \*  
\* \* \* \* \*

\* \* NOTE \* \*

PERIODICALLY, THIS PM CHECKSHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

- 1.
- 2.
- 3.

WORK INSTRUCTIONS:

- 1. ( ) PERFORM A VISUAL INSPECTION.
- 2. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
ATS-1Y-A.txt

AUTOMATIC TRANSFER SWITCH ANNUAL PREVENTIVE MAINTENANCE

THIS PM SHEET LINKED TO:

EQUIPMENT: AUTOMATIC TRANSFER SWITCHES

PM TASK: ATS-1Y-A

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1			
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\* ! ! SAFETY INFORMATION !! \*  
\*  
\* 1. ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES. \*  
\* 2. THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND \*  
\* OBSERVE WARNINGS, CAUTIONS AND NOTES. \*  
\* 3. ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE \*  
\* OBSERVED. \*  
\* 4. PRIOR TO PERFORMING THIS TASK, COORDINATE WITH \*  
\* CONTROL CENTER. \*  
\* 5. REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE \*  
\* BEYOND THE SCOPE OF THIS PM TO MAINTENANCE \*  
\* SUPERVISION. \*  
\* \* \* \* \*

\* \* NOTE \* \*

PERIODICALLY, THIS PM CHECKSHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

1. ELECTRICAL TOOL KIT
2. CLEANING TOOLS AND MATERIALS
3. VACUUM CLEANER AND/OR CLEAN, DRY COMPRESSED AIR
4. LUBRICATION KIT 25-100
5. STOP WATCH

WORK INSTRUCTIONS:

1. ( ) DE-ENERGIZE ALL POWER SOURCES.
2. ( ) INSPECT EXTERIOR OF CABINET FOR DAMAGE, CORROSION OR SIGNS OF MORE SERIOUS PROBLEMS.
3. ( ) OPERATE ALL HINGED PANELS AND DOORS TO VERIFY THEY OPERATE IN A SMOOTH AND SAFE MANNER, TRY ALL LATCHES AND KNOBS. ROTATE AND PUSH ALL SWITCHES THROUGH ALL POSITIONS TO ENSURE SMOOTH OPERATION.
4. ( ) VISUALLY INSPECT ALL WIRING, CONNECTIONS AND FUSE BLOCKS FOR OBVIOUS SIGNS OF CHARRING, OVERHEATING, OR SHORT CIRCUITING.



Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)  
ATS-1Y-A.txt

5. ( ) USE VACUUM OR DRY COMPRESSED AIR TO REMOVE DUST OR OTHER MATERIAL WHICH MAY CAUSE SHORTS OR ARCING.
6. ( ) REMOVE TRANSFER SWITCH BARRIERS AND CHECK CONDITION OF CONTACTS. CLEAN, AS REQUIRED OR REPLACE ANY CONTACTS THAT ARE EXCESSIVELY PITTED OR WORN.
7. ( ) CAREFULLY REINSTALL BARRIERS.
8. ( ) TIGHTEN ALL CONNECTIONS TO MAIN BUS.
9. ( ) INSPECT ALL INTERLOCKS AND CONTROLS. CLEAN AND LIGHTLY LUBRICATE FRICTION POINTS AND WIPE OFF ANY EXCESS LUBRICANT.
10. ( ) IF APPLICABLE, INSPECT CONTACTOR/SWITCH ARC CHUTES FOR CRACKS OR PITTING. REPAIR AND CLEAN AS NEEDED.
11. ( ) OPERATE SWITCH IN NORMAL AND EMERGENCY MODES TO INSURE PROPER MAKING.
12. ( ) OPEN THE SWITCH COVER AND PLACE THE SWITCH IN THE "TEST" OR "SAFE" POSITION.
13. ( ) LOOK FOR ARCING OR IMPROPER CONTACTING.
14. ( ) PERFORM FUNCTIONAL CHECK-OUT OF TRANSFER SEVERAL TIMES FROM NORMAL TO EMERGENCY POWER AND FROM EMERGENCY BACK TO NORMAL POWER.
15. ( ) RE-ENERGIZE POWER SOURCES AND RETURN UNIT TO SERVICE.
16. ( ) NOTIFY CONTROL CENTER UPON COMPLETION.

REFERENCE INFORMATION:

1. OPERATING AND MAINTENANCE INSTRUCTIONS - 48 VOLT DC, POWER SUPPLY AND ASCO LOW VOLTAGE AUTOMATIC TRANSFER SWITCH, TAB 2, ASCO 940 AUTOMATIC TRANSFER SWITCH WITH MICROPROCESSOR CONTROL PANEL GROUP 6 OR 7 OPERATORS MANUAL, MCMXCIII.
2. GENERAL SERVICES ADMINISTRATION, BUILDING MAINTENANCE MANAGEMENT MANUAL, PBS P 5850.1B, APPENDIX "J", PREVENTIVE MAINTENANCE GUIDE X-39.
3. MEANS FACILITIES MAINTENANCE AND REPAIR COST DATA MANUAL, 1995, PREVENTIVE MAINTENANCE SECTION, ITEM PM9.1-210.

Appendix A  
ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY  
(continuation)

PROTECTIVE RELAY PM INSPECTION AND CALIBRATION

THIS PM SHEET LINKED TO:

EQUIPMENT: SOLID STATE/DIGITAL PROTECTIVE RELAYS

PM TASK:

PM SHEET REVISIONS:

REV #	DATE	AUTHORIZED BY	REVISED BY
1			
2			
3			

```
* * * * *  
*  
*           !! SAFETY INFORMATION !!           *  
*  
* 1. ALWAYS ADHERE TO ESTABLISHED SAFETY PROCEDURES. *  
* 2. THOROUGHLY REVIEW MANUFACTURER'S INSTRUCTIONS AND *  
*   OBSERVE WARNINGS, CAUTIONS AND NOTES. *  
* 3. ENSURE APPROPRIATE LOCKOUT & TAGOUT PROCEDURES ARE *  
*   OBSERVED. *  
* 4. PRIOR TO PERFORMING THIS TASK, COORDINATE WITH *  
*   CONTROL CENTER. *  
* 5. REPORT ANY CONDITIONS REQUIRING MAINTENANCE THAT ARE *  
*   BEYOND THE SCOPE OF THIS PM TO MAINTENANCE *  
*   SUPERVISION. *  
* * * * *
```

\* \* NOTE \* \*

PERIODICALLY, THIS PM CHECKSHEET WILL NEED TO BE REVIEWED AND UPDATED TO ENSURE IT CONTAINS THE MOST CURRENT/RELEVANT INFORMATION AND THAT IT CONFORMS TO LOCAL REGULATIONS, REQUIREMENTS AND CONDITIONS.

TOOLS AND MATERIALS:

- 1.
- 2.
- 3.

WORK INSTRUCTIONS:

- 1. ( ) EACH RELAY WILL BE CHECKED AND ADJUSTED TO CORRESPOND TO THE MANUFACTURER'S OPERATING TIME/CURRENT CURVES.
- 2. ( ) THE RELAY WILL BE CHECKED TO MAKE SURE IT IS CLEAN AND FREE OF FOREIGN CONTAMINATION.
- 3. ( ) THE RELAY EXTERNAL CONNECTIONS WILL BE CHECKED FOR PROPER TIGHTNESS OR OTHER DISCREPANCIES.
- 4. ( ) THE RELAY CONTACTS WILL BE CHECKED FOR PROPER CIRCUIT CONTINUITY.
- 5. ( ) THE MINIMUM PICK-UP OR OPERATING POINT OF EACH RELAY WILL BE CHECKED AND ADJUSTED AS REQUIRED.
- 6. ( ) THE INSTANTANEOUS UNITS WILL BE TESTED FOR PROPER ELECTRICAL OPERATION AND CALIBRATION.

Appendix A

**ROUTINE/PREVENTIVE MAINTENANCE, INSPECTION TASKS & FREQUENCY**

(continuation)

7. ( ) THE RELAYS WITH PHASE SENSITIVE FUNCTIONS WILL BE CHECKED WITH PROPER PHASE ANGLE RELATIONSHIP AND CONTRIBUTION TEST.

8. ( ) THE DATA SHEETS WILL INCLUDE THE INITIAL TEST AND FINAL CALIBRATED SETTINGS, REFLECTING ADJUSTMENTS NECESSARY TO CONFORM TO MANUFACTURER'S STANDARDS.

9. ( ) THE TEST DATA OBTAINED WILL BE INCLUDED AS PART OF THE ENGINEERING APPRAISAL REPORT.

## APPENDIX B- EQUIPMENT LIST

Type	ID	Description	Location ID
ATS	HHB-ATS-01	AUTOMATIC TRANSFER SWITCH 01 [EMER PNL]	LVL3-EMPNL
ATS	HHB-ATS-02	AUTOMATIC TRANSFER SWITCH 02 [LVL4-SWGR]	LVL4-SWGR
ATS	HKB-ATS-03	AUTOMATIC TRANSFER SWITCH 03 [EMER PNL]	LVL3-EMPNL
ATS	HKB-ATS-04	AUTOMATIC TRANSFER SWITCH 04 [LVL4-SWGR]	LVL4-SWGR
ATS	HXO-ATS-06	AUTOMATIC TRANSFER SWITCH 06 [VAULT]	HBRD-VAULT
ATS	KHB-ATS-07	AUTOMATIC TRANSFER SWITCH 07 [EMER PNL]	LVL3-EMPNL
ATS	KKB-ATS-08	AUTOMATIC TRANSFER SWITCH 08 [EMER PNL]	LVL3-EMPNL
ATS	KXO-ATS-10	AUTOMATIC TRANSFER SWITCH 10 [VAULT]	KBRD-VAULT
ATS	TOC-ATS-11	AUTOMATIC TRANSFER SWITCH 11 [UPS]	LVL1-UPS
ATS	TOC-ATS-12	AUTOMATIC TRANSFER SWITCH 12 [LVL2-ELEC]	LVL2-ELEC
ATS	TOC-ATS-13	AUTOMATIC TRANSFER SWITCH 13 [LVL2-ELEC]	LVL2-ELEC
ATS	TOC-ATS-14	AUTOMATIC TRANSFER SWITCH 14 [EMER GEN]	LVL2-GEN
ATS	X01-ATS-CP01	AUTOMATIC TRANSFER SWITCH CP01 [CP1XFMR]	CP01-XFMR
ATS	X03-ATS-CP03	AUTOMATIC TRANSFER SWITCH CP03 [CP3XFMR]	CP03-XFMR
ATS	X05-ATS-CP05	AUTOMATIC TRANSFER SWITCH CP05 [CP5XFMR]	CP05-XFMR
ATS	X07-ATS-CP07	AUTOMATIC TRANSFER SWITCH CP07 [CP7XFMR]	CP07-XFMR
ATS	X09-ATS-CP09	AUTOMATIC TRANSFER SWITCH CP09 [CP9XFMR]	CP09-XFMR

### Number of Machines for ATS - 17

Type	ID	Description	Location ID
SWGR	HHB-SWGR-02	SWITCHGEAR 02	LVL4-SWGR
SWGR	HKB-SWGR-04	SWITCHGEAR 04	LVL4-SWGR
SWGR	KHB-SWGR-05	SWITCHGEAR 05	LVL4-SWGR
SWGR	KKB-SWGR-08	SWITCHGEAR 08	LVL4-SWGR
SWGR	TOC-SWGR-09	SWITCHGEAR 09 [EMER GEN]	LVL2-GEN

### Number of Machines for 480V Switchgear - 5

Type	ID	Description	Location ID
SWGR	HHB-SWGR-01	SWITCHGEAR 01 15KVA	LVL4-SWGR
SWGR	KHB-SWGR-06	SWITCHGEAR 06 15KVA	LVL4-SWGR

### Number of Machines for 15KV Switchgear - 2

**APPENDIX B EQUIPMENT LIST (CONTINUATION)**

Type	ID	Description	Location ID
USS	HHB-USS-T1-1	UNIT SUBSTATION T1-1 12.47KVA	LVL4-XFM43
USS	HHB-USS-T1-2	UNIT SUBSTATION T1-2 12.47KVA	LVL4-XFM42
USS	HKB-USS-T1-3	UNIT SUBSTATION T1-3 12.47KVA	LVL4-XFM42
USS	HKB-USS-T1-4	UNIT SUBSTATION T1-4 12.47KVA	LVL4-XFM43
USS	KHB-USSR-T1-5	UNIT SUBSTATION T1-5 12.47KVA	LVL4-XFM42
USS	KHB-USS-T1-6	UNIT SUBSTATION T1-6 12.47KVA	LVL4-XFM43
USS	KKB-USS-T1-7	UNIT SUBSTATION T1-7 12.47KVA	LVL4-XFM43
USS	KKB-USS-T1-8	UNIT SUBSTATION T1-8 12.47KVA	LVL4-XFM42
USS	HKB-USS-T2-1	UNIT SUBSTATION T2-1 12.47KVA 480V3P60H	LVL4-SWGR
USS	HHB-USS-T2-2	UNIT SUBSTATION T2-2 12.47KVA 480V3P60H	LVL4-SWGR
USS	TOC-USS-DPHA	UNIT SUBSTATION T2-3 DPHA 12.47KVA [EXP TUNNEL]	LVL1-PARK
USS	KHB-USS-DPHU	UNIT SUBSTATION T2-4 DPHU 12.47KVA [EXP TUNNEL]	LVL4-MECH

**Number of Machines for Unit Substations (Transformer & Switchgear) - 12**

Type	ID	Description	Location ID
XFMR-1	X01-XFMR-T3-1	TRANSFORMER T3-1 150KVA	CP01-XFMR
XFMR-1	X03-XFMR-T3-3	TRANSFORMER T3-3 150KVA	CP03-XFMR
XFMR-1	X05-XFMR-T3-5	TRANSFORMER T3-5 150KVA	CP05-XFMR
XFMR-1	X07-XFMR-T3-7	TRANSFORMER T3-7 150KVA	CP07-XFMR
XFMR-1	X09-XFMR-T3-9	TRANSFORMER T3-9 150KVA	CP09-XFMR
XFMR-1	KXO-XFMR-T3-HK	TRANSFORMER T3-HK 150KVA	KBRD-VAULT
XFMR-1	HXO-XFMR-T3-HL	TRANSFORMER T3-HL 150KVA	HBRD-VAULT

**Number of Machines for Pad Mounted Transformers - 7**

**APPENDIX B EQUIPMENT LIST (CONTINUATION)**

**Intellegent Equipment Monitoring System**

**Devices**

<b>Item</b>	<b>Description (inc. GE model number)</b>	<b>Quantity</b>
1	Protective Relay (12) F60, (8) T60, (2) C30, (2) SR 750	24
2	Power Quality Meter (20) EPM9650	20
3	Primary Logic Controllers (8) RX3i	8

**Hardware**

<b>Item</b>	<b>Description</b>	<b>Quantity</b>
1	Portal Workstation (touch screen computer, UPS, switch)	4
2	O&M Workstation (computer, dual monitors, server cabinet, switch)	1
3	TOC Workstation (computer, dual monitors, server cabinet, switch, laptop)	1

**Software**

<b>Item</b>	<b>Description</b>	<b>Quantity</b>
1	GE envisage Pro Unlimited Development Server	2
2	GE envisage Viewer Runtime	6
3	GE envisage Energy Tracker Module	2
4	GE envisage Power Analytics Module	2
5	GE envisage Alarm Cost	2
6	GE envisage Redundancy Option	2
7	Proficy Cimplicity Machine Edition Logic Developer Suite	1
8	Microsoft Office Standard	9
9	Symantic End Point Protection	9

**Appendix C**  
**Sample – Routine/Preventive Maintenance and Inspection Report**

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION-OAHU DISTRICT

(pursuant to Sections 10.4(A)4 Routine/Preventive Maintenance and Inspection Report and Item No. 5, Section 10.13 of the Specifications, this report shall be submitted to the Engineer-Oahu District's representative (Point of Contact) three (3) working days after completion of each routine/preventive maintenance and inspection service.)

Project No.: HWY-OT-2020-06R Contract No: \_\_\_\_\_ Date (mm/dd/yy): \_\_\_\_\_ Sheet No. \_\_\_\_\_  
Project Title: Maintenance of Electrical Equipment at H-3 Freeway, Harano Tunnel, Island of Oahu

Time in at jobsite: \_\_\_\_\_ Time out at jobsite: \_\_\_\_\_

Location/Description of Equipment: \_\_\_\_\_  
\_\_\_\_\_

Person (s) Contacted: \_\_\_\_\_

Equipment Readings and Maintenance Performed (List all items serviced):  
Explain)

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

Remarks and Recommendation: \_\_\_\_\_

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

Contractor (name of company): \_\_\_\_\_

Electrician 's signature: \_\_\_\_\_

Printed Name of Electrician:

**Appendix D**  
**Sample - Trouble Call Ticket and Report**

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION-OAHU DISTRICT

(pursuant to Sections 10.4(B) Trouble Calls/Repairs and Item No. 6, Section 10.13, of the Specifications, this report shall be submitted to the Engineer-Oahu District's representative (Point of Contact) at the end of each day or each job whichever comes first.)

Project No.: HWY-OT-2020-06R Contract No: \_\_\_\_\_  
Project Title: Maintenance of Electrical Equipment at H-3 Freeway, Harano Tunnel, Island of Oahu

**Date** (mm/dd/yy): \_\_\_\_\_ **Time in at jobsite:** \_\_\_\_\_

**Weather:** \_\_\_\_\_ **Time out at jobsite:** \_\_\_\_\_

**Name of Person submitting the Trouble Call:** \_\_\_\_\_

**Reported Problem:**

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

**Work Required to Repair Equipment (explain):** \_\_\_\_\_

\_\_\_\_\_

**Materials/parts or equipment required to repair electrical equipment:**

\_\_\_\_\_

**Illustration (or photo) showing repair location:**

**COMMENTS:**

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

Contractor (name of company): \_\_\_\_\_

Electrician 's signature: \_\_\_\_\_

Printed Name of Electrician: \_\_\_\_\_



## Appendix D1

Sample – Notice to Proceed Letter for Miscellaneous Work

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
OAHU DISTRICT  
727 KAKOI STREET  
HONOLULU, HAWAII 96819

Electrical Maintenance Services  
1234 Any Street  
Honolulu, Hawaii 12345

Gentlemen:

Subject: Maintenance of Electrical Equipment at H-3 Freeway, Harano Tunnel,  
Island of Oahu  
Project No. HWY-OT-2020-06R, Contract No. \_\_\_\_\_

In accordance to Section 10.4(F) Miscellaneous Work, of the Specifications, you are hereby given notice to proceed with miscellaneous work at the agreed upon price of \$7,000.00, including State tax, to upgrade one (1) each Transformer Vault.

The funds will be paid from the “Allowance” for “Miscellaneous Work”, Bid Item No. 13, of the Proposal Schedule.

Sincerely,

---

George Abcede  
Oahu District Engineer

Enclosure (**attach price quotation, etc.**)

**Appendix E**  
**Sample – Monthly Invoice**  
**Electrical Maintenance Services**

1234 Any Street, Honolulu, Hawaii 12345 Phone: (808)123-1234 Fax: (808)123-1235 Email: name@email.com

Bill To: Tunnel Section  
c/o District Engineer  
Oahu District  
Highways Division  
Department of Transportation  
727 Kakoi Street  
Honolulu, Hawaii 96819

Date: \_\_\_\_\_  
Invoice No.: \_\_\_\_\_  
Contract No: \_\_\_\_\_  
Project No: HWY-OT-2020-06R

Project Title: Maintenance of Electrical Equipment at H-3 Freeway, Harano Tunnel, Island of Oahu

Periods Covered (full month pay period, head-to-tail format, first pay period from the NTP date to the following month similar to this sample): February 17, 2020 to March 16, 2020

Bid Item No.	Description	Qty	Unit	Unit Price	Amount
1	Automatic Transfer Switch, Annual Routine Preventative Maintenance & Inspection Service	17	Each	\$ _____	\$ _____
8	Trouble calls repair work, regular working hours, per man-hour, Journeyman Electrician and/or Field Engineer	8	Man-Hour	\$ _____	\$ _____
11	Replacement Parts			Allowance	\$ _____
13	Miscellaneous Work			Allowance	\$ _____
<b>Subtotal</b>					\$ _____
Less Liquidated Damages per Section 8.6 of the Special Provisions					\$ _____
<b>Subtotal</b>					\$ _____
Less 5% Retainage per Section 9.2 Retainage/ Deduction from Payment, of the Specifications. Refer to Section 9.2 of the Special Provisions for information on how to obtain payment for the total retainage amount.					\$ _____
<b>Total Amount Due</b>					\$ _____

Pursuant to Section 9.4 Progress Payments, of the Specifications and Section 9.4.e of the Special Provisions, I certify that services requested under the contract have been performed by Electrical Maintenance Services according to the contract.

\_\_\_\_\_  
First J. Name  
President  
Electrical Maintenance Services

**Appendix F**

(Pursuant to Item No. 11, Section 10.13 Submittals/Reports Summary, of the Specifications, the Contractor shall submit this report to the to the Engineer, Oahu District representative (Point of Contact) with the monthly invoice.)

DAGS ECF v1.0\_06/10

**SAMPLE - CERTIFIED PAYROLL REPORT**

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
Public Works Division

REPORT SUBMISSION DATE: **26-Aug-05**

Name is of: Contractor:  Subcontractor:  THIS IS AN AMENDED FORM  
PAYMENTS MADE ON SAME DAY TO ALL EMPLOYEES

PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION		PROJECT NO.	VENDOR CODE																
		CHERRY COURTHOUSE, CUSTODIAL SERVICE	000003-98																		
NAME OF EMPLOYEE	NO. OF WITHHOLDINGS EXEMPTIONS	WORK CLASSIFICATION (Refer to Class Title, Section 2.9 of the Special Provisions)	DAY AND DATE							TOTAL HOURS	RATE OF PAY	GROSS AMOUNT EARNED	TOTAL DEDUCTIONS				NET WAGES PAID FOR WEEK	DATE PAID TO EMPLOYEE			
			S	M	T	W	TH	F	S				FICA	FED. INTEL. HOLDING TAX	STATE INTEL. HOLDING TAX	MEDICARE			OTHER DEDUC.	TOTAL DEDUCT	
Jack Sprat		Janitor Supervisor	S	7.00	7.00	7.00	8.00	8.00	9.00	9.00	59.00	\$30.00	\$1,590.000	\$3.00	\$2.00	\$2.00	\$1.00	\$2.00	\$10.00	\$4,100.000	17-Jun-05
			O	8.00	8.00	8.00	8.00	8.00	8.00	8.00	56.00	\$45.00	\$2,520.000								
			T	15.00	15.00	15.00	15.00	16.00	16.00	17.00	109.00		\$4,110.000								
			TOTAL																		
Leap Frog		Janitor I	S	2.00						4.00	12	\$20.00	\$240.000	\$4.00	\$5.00	\$5.00	\$6.00	\$3.00	\$24.00	\$216.000	
			O								0	\$30.00	\$0.000								
			I	2.00	0.00	0.00	6.00	0.00	0.00	4.00	12.00		\$240.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		
			S							0		\$0.000									
			O							0	\$0.00	\$0.000									
			T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		\$0.000								
			TOTAL																		

**Appendix G**  
**Sample – Satisfactory Evidence by Affidavit for Final Payment**

(pursuant to Section 9.5.B of the Specifications, the Contractor must submit this affidavit to the Department in order for the Final Payment to be made)

**Electrical Maintenance Services**

1234 Any Street, Honolulu, Hawaii 12345 Phone: (808)123-1234 Fax: (808)123-1235 Email: name@email.com

Date:

State of Hawaii  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

Dear Sir/Madam:

Pursuant to Section 9.5.B, of the Specifications, I hereby certify that all debts resulting from Contract No. \_\_\_\_\_, Project No. HWY-OT-2020-06R, Project Title: Maintenance of Electrical Equipment at H-3 Freeway, Harano Tunnel, Island of Oahu, have been fully paid or satisfactorily secured.

Cordially,

\_\_\_\_\_  
First J. Name  
President  
Electrical Maintenance Services

Subscribed and sworn to me  
this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

\_\_\_\_\_  
Notary Public, First Judicial Circuit,  
State of Hawaii

My Commission Expires: \_\_\_\_\_

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HONOLULU, HAWAII

P R O P O S A L

PROPSAL TO THE STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

PROJECT: MAINTENANCE OF ELECTRICAL EQUIPMENT AT  
H-3 FREEWAY, HARANO TUNNEL, ISLAND OF  
OAHU

PROJECT NO: HWY-OT-2020-06R

CONTRACT TIME: Twelve (12) months from the date indicated in the  
Notice to Proceed from the Department unless extended  
at the option of the State as provided in Section 10.16,  
Option to Extend Term of the Specifications.

LIQUIDATED DAMAGES: Refer to Section 8.6 Liquidated Damages, of the Special  
Provisions

NOTE: **BID, PERFORMANCE AND PAYMENT BONDS  
ARE NOT REQUIRED FOR THIS PROJECT.**

Director of Transportation  
AliiAIMoku Hale  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Sir:

The undersigned bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.
2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two years.
3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e. an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.

The undersigned bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within 10 days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 103D-323, Hawaii Revised Statutes.

2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.
3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.
4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.
5. Agrees to begin work within 10 working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.
6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.

Receipt is hereby acknowledged and complete examination is hereby expressly guaranteed of the following listed items: the specifications, the notice to bidders, the special provisions, if any, the proposal, the plans, if any, and the contract form.



The undersigned acknowledges receipt of any addendum, issued by recording in the space below the date of receipt.

Addendum No. 1 \_\_\_\_\_ Addendum No. 3 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_ Addendum No. 4 \_\_\_\_\_

The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct, final and are net prices.

\_\_\_\_\_  
Bidder

By \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title

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

\_\_\_\_\_  
Business Telephone

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contact Person and Phone Number  
(If different from above.)

NOTE:

If bidder is a CORPORATION, the legal name of the corporation shall be set forth above, the corporate seal affixed, together with the signature(s) of the officer(s) authorized to sign contracts on behalf of the corporation. Please attach to this page current (not more than six months old) evidence of the authority of the officer(s) to sign on behalf of the corporation.

If bidder is a PARTNERSHIP, the true name of the partnership shall be set forth above with the signature(s) of the general partner(s) authorized to sign contracts on behalf of the partnership. Please attach to this page current (not more than six months old) evidence of the authority of the partner(s) to sign on behalf of the partnership.

If bidder is an INDIVIDUAL, the bidder's signature shall be placed in the space provided therefore on page PF-4.

If signature is by an agent, other than an officer of a corporation or a partner of a partnership, a POWER OF ATTORNEY must be on file with the Department prior to the opening of bids or submitted with the bid; otherwise, the bid may be rejected as irregular and unauthorized.

PROPOSAL SCHEDULE  
FOR  
MAINTENANCE OF ELECTRICAL EQUIPMENT AT  
H-3 FREEWAY, HARANO TUNNEL  
ISLAND OF OAHU  
PROJECT NO. HWY-OT-2020-06R

BID ITEM NO.	DESCRIPTION		QTY  (A)	UNIT	UNIT PRICE (B)	AMOUNT  (A) X (B)
1	AUTOMATIC TRANSFER SWITCH	ANNUAL ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE (refer to Appendix B Equipment List, of the Appendices and Section 10.4(A) of the Specifications)	17	EACH	\$ _____	\$ _____
2	EMERGENCY GENERATOR SWITCHGEAR AND 480 VOLT INDOOR SWITCHGEAR	ANNUAL ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE (refer to Appendix B Equipment List, of the Appendices and Section 10.4(A) of the Specifications)	5	EACH	\$ _____	\$ _____
3	15 KV SWITCHGEAR	ANNUAL ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE (refer to Appendix B Equipment List, of the Appendices and Section 10.4(A) of the Specifications)	2	EACH	\$ _____	\$ _____
4	UNIT SUBSTATIONS	QUARTERLY ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE (refer to Appendix B Equipment List, of the Appendices and Section 10.4(A) of the Specifications)	48	EACH	\$ _____	\$ _____
5		ANNUAL ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE	12	EACH	\$ _____	\$ _____
6	PAD MOUNTED TRANSFORMERS	QUARTERLY ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE (refer to Appendix B Equipment List, of the Appendices and Section 10.4(A) of the Specifications)	28	EACH	\$ _____	\$ _____
7		ANNUAL ROUTINE PREVENTATIVE MAINTENANCE & INSPECTION SERVICE	7	EACH	\$ _____	\$ _____

PROPOSAL SCHEDULE  
FOR  
MAINTENANCE OF ELECTRICAL EQUIPMENT AT  
H-3 FREEWAY, HARANO TUNNEL  
ISLAND OF OAHU  
PROJECT NO. HWY-OT-2020-06R

(CONTINUATION)

BID ITEM NO.	DESCRIPTION	QTY (A)	UNIT	UNIT PRICE (B)	AMOUNT (A) X (B)
8	TROUBLE CALL REPAIR WORK, REGULAR WORKING HOURS-PER MAN-HOUR, <b>JOURNEYPERSON ELECTRICIAN OR FIELD ENGINEER</b> (Refer to Section 10.4(B) of the Specifications)	40	MAN-HOUR	\$ _____	\$ _____
9	TROUBLE CALLS REPAIR WORK, REGULAR WORKING HOURS -PER MAN-HOUR, <b>APPRENTICE ELECTRICIAN OR HELPER</b> (Refer to Section 10.4(B) of the Specifications)	20	MAN-HOUR	\$ _____	\$ _____
10	INTELLIGENT EQUIPMENT MONITORING SYSTEM ROUTINE MAINTENANCE (Refer to Appendix B Equipment List, of the Appendices and Section 10.4(A) of the Specifications)	1	LUMP SUM	\$ _____	\$ _____
11	REPLACEMENT PARTS (Refer to Section 10.4(C) of the Specifications)	Allow	Allow	ALLOWANCE	\$ 100,000.00
12	TECHNICAL SUPPORT SERVICES (refer to Section 10.4(E) of the Specifications)	Allow	Allow	ALLOWANCE	\$ 10,000.00
13	MISCELLANEOUS WORK (Refer to Section 10.4(F) of the Specifications)	Allow	Allow	ALLOWANCE	\$ 100,000.00
<b>Total Amount for Comparison of Bids</b>					\$ _____

**Notes.** Bidders shall refer to the following notes.

- The bidder shall refer to Section 10.2(B) Schedule of Submitting Required Documents prior to submitting his or her bids. The bidder is required to submit specific documents prior to award.

**Failure by the bidder to submit.** The bidder maybe considered non-compliant with the requirements of the Special Provisions and the Specifications if the bidder fails to submit the documents to the Project Manager no later than **seven (7) working days** from the date of request (date of receipt of the written request) from the State. This failure may result in an adverse decision of an award by the Department of Transportation.

PROPOSAL SCHEDULE  
FOR  
MAINTENANCE OF ELECTRICAL EQUIPMENT AT  
H-3 FREEWAY, HARANO TUNNEL  
ISLAND OF OAHU  
PROJECT NO. HWY-OT-2020-06R

**Notes (continuation)**

2. **Bidder shall make no changes to the items.** Pursuant to the Hawaii Administrative Rule § 3-122-97(b) (2) (B), bids submitted with changes to the item(s) are considered rejectable bids.
3. **Any bid item lacking a price disqualifies the bidder and shall be grounds for rejection of bids.** Refer to Section 2.2 Rejection of proposals, Containing Alterations, Erasures or Irregularities for more information.
4. **In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.** Refer to pages PF-2 and PF-3 of the Proposal Schedule for other conditions that the bidder should agree with. To obtain the extension amount, the bidder shall use the formula as provided in this Proposal Schedule.
5. Bidder's bid price shall be inclusive of all direct and indirect costs **including taxes** (i.e. Federal, State, County and other applicable taxes) as specified in Section 10.18 Basis of Payment, of the Specifications.
- 5a. The awarding of contract shall be in accordance with Section 3.1 Award of Contract, of the Special Provisions. The "TOTAL AMOUNT FOR COMPARISON OF BIDS" bid price will be compared to determine the lowest and responsible bidder.
6. The number of hours of trouble call repair work, Bid Item Nos. 8 and 9 are estimate for bidding purposes only. Payments to the Contractor will be made based on actual number of performances and the unit bid price. Refer to 10.17 Basis of Payment, of the Specifications.
7. This project requires a Safety Plan in accordance with Section 10.12(C) Safety Plan, of the Specifications.
8. **Prior to commencing with the work, the successful Bidder is required to submit a Certificate of Insurance.** Refer to Section 7.8 Insurance, of the Specifications for more information.
9. By submitting a proposal, the Bidder acknowledges he has read and understands all the provisions of the Special Provisions and the Specifications and is fully aware of all the conditions to be encountered in performing the work.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HONOLULU, HAWAII

F O R M S

Contents:

Sample Contract

Certificate for Performance of Services

C O N T R A C T

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as “STATE”, and << CONTRACTOR >>, <<STATE\_OF\_INCORPORATION>> whose business/post office address is <<ADDRESS>>, hereinafter referred to as “CONTRACTOR”;

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to furnish, perform and/or deliver and pay for all labor, supplies, materials, equipment and services called for in “<<PROJECT\_NAME\_AND\_NO>>”, or such a part thereof as shall be required by the STATE, the total amount of which labor, supplies, materials, equipment and services shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of <<BASIC>>----- DOLLARS (\$<<BASIC\_NUMERIC>> ) as follows:

TOTAL FOR COMPARISON OF BIDS.....\$<<BASIC\_NUMERIC>>

which sum shall be provided from State funds, all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal and plans, if any, for << PROJECT NO ONLY >> on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to furnish, perform and/or deliver all labor, supplies, materials, equipment and services as provided herein for a period of <<WORKING DAYS>> from the date indicated in the Notice to Proceed from the State, with an option to extend for FOUR (4) additional ONE (1) YEAR periods subject to the terms specified in Section <<SECTION REFERENCING OPTION YEAR>> of the Specifications. The total term of this contract shall not exceed FIVE (5) YEARS.

For and in consideration of the covenants, undertakings and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of <<BASIC>>----- DOLLARS (\$<<BASIC NUMERIC>>) in lawful money, such payment to be made, subject to such additions hereto or deductions therefrom heretofore or hereafter made, in the manner and at the time prescribed in the specifications and this contract.

An additional sum of <<EXTRAS>>-----DOLLARS (\$<<EXTRA NUMERIC>>) is hereby provided for extra work and shall be provided from State funds.

The CONTRACTOR further agrees to execute the attached Certification of Compliance for Final Payment form prior to payment of the final payment by the STATE.



All words used herein in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

\_\_\_\_\_  
Director of Transportation

CONTRACTOR

(Seal)

\_\_\_\_\_  
Signature\*

\_\_\_\_\_  
Title

\*Signature must be acknowledged by a notary public.

CERTIFICATE FOR PERFORMANCE OF SERVICES

The undersigned bidder does hereby certify that in performing the services for the MAINTENANCE OF ELECTRICAL EQUIPMENT AT H-3 FREEWAY, HARANO TUNNEL, ISLAND OF OAHU, PROJECT NO. HWY-OT-2020-06R, it will fulfill the following conditions:

1. All applicable laws of the Federal and State governments relating to workers' compensation, unemployment compensation, payment of wages, and safety will be fully complied with; and

2. The services to be rendered shall be performed by employees paid at wages or salaries not less than the wages paid to public officers and employees for similar work, with the exception of professional, managerial, supervisory, and clerical personnel who are not covered by Section 103-55, HRS.

I understand that failure to comply with the above conditions during the period of the contract shall result in cancellation of the contract, unless such noncompliance is corrected within a reasonable period as determined by the Director of Transportation. Payment in the final settlement of the contract or the release of bonds, if applicable, or both shall not be made unless the Director of Transportation has determined that the noncompliance has been corrected; and

I further understand that all payments required by Federal and State laws to be made by employers for the benefit of their employees are to be paid in addition to the base wage required by Section 103-55, HRS.

DATED at Honolulu, Hawaii, this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Name of Corporation, Partnership, or Individual

\_\_\_\_\_  
Signature and Title of Signer

Subscribed and sworn before me  
this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Notary Public, \_\_\_\_\_ Judicial  
Circuit, State of Hawaii  
My Commission Expires: \_\_\_\_\_