SECTION 105 – CONTROL OF WORK

105.01 Authority.

(A) Authority of the Engineer. The Engineer is the representative of the Director and has all the authority of the Director with respect to the contract. The Engineer will make decisions on all questions that may arise regarding the contract, such as, but not limited to:

(1) Interpretation of the contract documents.

(2) Acceptability of the materials furnished and work performed.

(3) Manner of performance and rate of progress of the work.

(4) Acceptable fulfillment of the contract on the part of the Contractor.

(5) Compensation under the contract.

The Engineer’s decisions on questions, claims, and disputes will be final and conclusive subject to Subsection 107.15 – Disputes and Claims.

The Engineer may delegate specific authority to act for the Engineer to a specific person or persons. Such delegation of authority shall be established in writing and shall become effective upon delivery to the Contractor.

(B) Authority of the Resident Engineer. As the representative of the Engineer, the Resident Engineer has all the authority of the Engineer in matters involving the work.

(C) Authority of the Inspectors. Inspectors, as a representative of the Resident Engineer or other agencies, will inspect the work done and materials furnished. Such inspection may extend to the preparation, fabrication or manufacture of the materials to be used. The Inspector does not have authority vested in the Resident Engineer unless specifically delegated in writing. The Inspector may not alter or waive the provisions of the contract, issue instructions contrary to the contract, or act as agent or representative of the Contractor.

Failure of an Inspector at any time to reject non-conforming work shall not be considered a waiver of the State’s right to require work in strict conformity with the contract documents as a condition of final acceptance.
105.01

(D) Authority of the Consultant. The State may engage Consultants to perform duties in connection with the work. Unless otherwise specified in writing to the Contractor, such retained consultants shall have no greater authority than an Inspector.

105.02 Submittals. The contract contains the description of various items that the Contractor must submit to the Engineer for review and acceptance. The Contractor shall review all submittals for correctness, conformance with the requirements of the contract documents and completeness before submitting them to the Engineer. The submittal shall indicate the contract items and specifications subsections for which the submittal is provided. The submittal shall be legible and clearly indicate what portion of the submittal is being submitted for review if more than the required submissions at the earliest possible date. The Contractor shall provide six copies of the required submissions at the earliest possible date.

Failure to furnish acceptable submittal(s) may result in the suspension of payments due the Contractor.

The Contractor shall not add onto the submittals any conditions or disclaimers that conflict with the contract requirements.

105.03 Shop Drawings.

(A) Shop Drawing Requirements. The Contractor shall prepare, thoroughly check, approve, and submit all shop drawings to the Engineer for review. Whenever possible, electronic files in MS Word, MS Excel and Microstation format shall be submitted with the hard copies. The Contractor shall indicate its approval by stamping and signing each submittal of shop drawing. Any shop drawing submitted without being reviewed, stamped and signed will be returned as an incomplete submittal, and any delay caused thereby shall be the Contractor's responsibility.

All drawings, which require an engineering stamp, shall be stamped by professional engineers licensed in the State of Hawaii. Shop drawings shall indicate in detail all parts of an item of work, including erection and setting instructions and engagements with work of other trades or other separate contractors. Shop drawings for structural steel, millwork, pre-cast concrete and falsework, formwork or centering with heights of 40 feet or more or open spans of 20 feet or more shall consist of calculations, fabrication details, erection drawings and other shop drawings, as necessary, to show the details, dimensions, sizes of members, anchor bolt plans, insert locations and other information necessary for the complete fabrication and erection of the structure to be constructed. Shop drawings shall also include stress sheets, drawings, bending diagrams for reinforcing steel, and plans for erection, falsework,
framework, cofferdam, and other items or such other similar data required for the successful completion of the work.

All shop drawings as required by the contract, or as determined by the Engineer to be necessary to illustrate details of the work shall be submitted to the Engineer with such promptness as to cause no delay in the work or the work of any other Contractor. Delay caused by the failure of the Contractor to submit shop drawings on a timely basis to allow for review, possible resubmittal and acceptance will not be considered as a justifiable reason for a contract time extension. Contractor, at its own risk, may proceed with the work affected by the shop drawings after they are submitted but before receiving acceptance. The State shall not be liable for any increase in contract price or contract time required for the correction of work done without the benefit of accepted shop drawings.

The Contractor shall not make changes to the accepted shop drawings without submitting a written request to the Engineer and reviewing a written acceptance of the change by the Engineer.

By approving and submitting shop drawings, the Contractor thereby represents that it has determined and verified all field measurements and field construction criteria, or will do so, and that it has checked and coordinated each shop drawing with the requirements of the work and the contract documents. When shop drawings are prepared and processed before field measurements and field construction criteria can be or have been determined or verified, the Contractor shall make all necessary adjustments in the work or resubmit further shop drawings, all at no increase in contract price or contract time.

The shop drawing submitted must be accompanied by a transmittal giving a list of the titles and numbers of the drawings. Each series shall be numbered consecutively for ready reference and the submittal shall be marked with enough information to identify itself, including date, project name and number, name of the submitting Contractor or subcontractor, revision number, and revision box which gives date of the revision and what the revisions changed.

The size of the sheets that shop drawings are prepared on shall be appropriate to suit the drawing being presented so that the information is clearly and legibly depicted. The Engineer will determine what size is appropriate.

When required by the contract, the Contractor shall submit to the Engineer descriptive sheets such as brochures, catalogs and illustrations, which will completely describe the material, product, equipment, furniture or appliances to be used in the project as shown in
the drawings and specifications and indicate such conformity by marking, or stamping and signing each sheet.

**B) Submittal for Deviations and Variances.** The Contractor shall include with the submittal, written notification clearly identifying and summarizing all deviations or variances from the contract drawings, specifications and other contract documents. The variances shall also be clearly indicated on the shop drawing, descriptive sheet, and material sample or color sample. Failure to so notify of and identify such variance shall be grounds for rejection of the related work or materials, notwithstanding that the Engineer accepted the submittal. If the variances are not acceptable to the Engineer, the Contractor will be required to furnish the item as specified or indicated on the contract documents at no increase in contract price or contract time.

**105.04 Review and Acceptance Process.** The Engineer will complete the review of the submittal within 30 days from the date of receipt unless a different review time is established by the contract documents. The Engineer will advise the Contractor, in writing, as to the acceptability of the submittal. Should the Engineer partially or totally reject the submittal, the Contractor shall modify the submittal as required by the Engineer and resubmit the item within 15 days. At this time, the review and acceptance cycle described above shall begin again. The review and acceptance cycle shall begin again as described above each time the submittal is returned to the Contractor for modification. If the volume of the shop drawings submitted at any time for review is unusually large, the Contractor shall inform the Engineer of its preferred order for reviews, and the Engineer will use reasonable efforts to accommodate the Contractor's priority.

The acceptance by the Engineer of the Contractor's submittal relates only to their sufficiency and compliance with the intention of the contract. Acceptance by the Engineer of the Contractor's submittal does not relieve the Contractor of any responsibility for accuracy of dimensions, details, and proper fit, and for agreement and conformity of submittal with the contract drawings and specifications. Nor will the Engineer's acceptance relieve the Contractor of responsibility for variance from the contract documents unless the Contractor, at the time of submittal, has provided notice and identification of such variances required by this section. Acceptance of a variance shall not justify a contract price or time adjustment unless the contractor requests such adjustment at the time of submittal and the adjustment is explicitly agreed to in writing by the Engineer. Any such request shall include price details and proposed scheduling modifications. Acceptance of a variance is subject to all contract terms, stipulations and covenants, and is without prejudice to any and all rights under the surety bond.

If the Engineer returns a submittal to the Contractor that has been rejected, the Contractor, so as not to delay the work, shall promptly make a resubmittal conforming to the requirements of the contract documents and
indicating in writing on the transmittal and the subject submittal what portions of
the resubmittal have been altered in order to meet the acceptance of the
Engineer. Any other differences between the resubmittal and the prior
submittal shall also be specifically described in the transmittal.

No mark or notation made by the Engineer on or accompanying the return
of any submittal to the Contractor shall be considered a request or order for a
change in work. If the Contractor believes any such mark or notation
constitutes a request for a change in the work for which it is entitled to an
adjustment in contract price, contract time, or both, the Contractor must follow
the procedures established in Subsection 104.02 – Changes or lose its right to
claim for an adjustment.

105.05 Interpretations of the Contract Documents; Conflicts and
Ambiguity. The contract documents are complimentary. Any requirement
occurring in one document is as binding as though occurring in all. A stricter
requirement prevails over any less strict requirement. The stricter requirement
will be the requirement that provides the greater product life, durability, strength
and function.

The Contractor shall carefully study and compare the contract documents
with each other, with field conditions and with the information furnished by the
State and shall immediately report to the Engineer errors, conflicts, ambiguities,
inconsistencies, or omissions discovered. Should an item not be sufficiently
detailed or explained in the contract documents, the Contractor shall report to
the Engineer immediately and request the Engineer's clarification and
interpretation. The Engineer will issue a clarification or interpretation that is
consistent with the intent of and reasonably inferred from the contract
documents.

105.06 Priority Within Drawings.

(1) Numerical dimensions govern over scaled dimensions.

(2) Larger scale drawings govern over smaller scale drawings.

(3) Notations, directions, and dimensions (whether word or numerical)
control over schedules, and table references.

Any requirement occurring in one or more of the sheets is as binding as
though occurring in all applicable sheets.

105.07 Examination of Contract Documents and Project Site. The
Contractor shall examine carefully the project site to become familiar with the
conditions to be encountered in performing the work and the requirements of the
contract documents. The Contractor shall be charged with knowledge of all
conditions at the site that may affect the work, including the storage of materials
and equipment and access thereto, that would normally be discovered by a reasonable pre-bid site inspection.

When the contract drawings include a log of test borings showing a record of the data obtained by the State’s investigation of subsurface conditions, said log represents only the finding of the State as to the character of material encountered in its test borings and only at the location of each boring.

Underground site conditions in Hawaii vary widely. Accordingly there is no warranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the work or any part of it, or that other conditions may not occur.

Subsurface investigations, reports, explorations, and tests utilized by the State in preparation of the contract documents are not part of the contract documents, whether or not they are made available for review and inspection by the Contractor.

**105.08 Coordination Between the Contractor and the State.**

(A) Furnishing Drawings and Special Provisions. The State will furnish the Contractor 10 sets of the project plans and special provisions. The project plans furnished will be the same size as that issued for bidding purposes. The Contractor shall have and maintain at least one set of plans and specifications on the work site, at all times.

(B) Superintendent. The Contractor shall have a competent superintendent on the work site while work is being performed under the contract. The superintendent shall be able to read and understand the contract documents, shall be experienced in the type of project being undertaken and the work being performed, and shall be fluent in the English language. If a superintendent is not present at the work site, the Engineer shall have the right to suspend the work as described under Subsection 108.10 - Suspension of Work.

The Contractor shall provide the Engineer a written statement giving the name of the superintendents assigned to the project. The Contractor shall be responsible for notifying the Engineer in writing of any change in the superintendents in a timely manner.

**105.09 Coordination Between the Contractors.** Other work by other Contractors may be in progress within or near the project limits. Each Contractor shall conduct work so as not to hinder the progress of the work by other Contractors within or near the project limit. Each Contractor shall be responsible for any damage it causes to work of another Contractor. Contractors shall cooperate with each other, including but not limited to:

(1) Coordinating their work schedules and traffic control plans.
(2) Placing and disposing the materials used.

(3) Operating and storage of equipment.

105.10 Construction Stakes, Lines and Grades.

(A) General. The Contractor shall survey and stake out the work including verification and establishment of all lines, grades, dimensions, and elevations within the tolerances shown in Table 105.10-1 – Construction Survey and Staking Tolerances. The Contractor shall prepare and maintain field notes and supporting data in a manner acceptable to the Engineer. The field notes and supporting data shall be made available to the Engineer immediately upon request. The personnel doing the survey work and preparing the calculations derived therefrom shall be made available by the Contractor to the Engineer for explanation, clarification, or both, immediately upon request.

The Contractor shall immediately correct or replace deficient or inaccurate layout and construction work at no increase in contract price or contract time.

(B) Survey and Staking Requirements. The Engineer will furnish control points for the project limits, points of intersection, and benchmarks set by the Engineer or others. The Contractor shall be responsible for the laying out of all other necessary work from the given information. The Contractor shall reset the layout as many times as necessary to perform the work.

The Contractor shall preserve control points and stakes or marks that the Engineer or others have furnished. If the Contractor destroys or disturbs the control points, stakes, or marks, the State will charge the Contractor the cost of replacing the stakes or marks.

<table>
<thead>
<tr>
<th>Staking Phase</th>
<th>Horizontal</th>
<th>Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing State network control points</td>
<td>±0.06 feet</td>
<td>±0.035 feet × √M</td>
</tr>
<tr>
<td>Local supplemental control points</td>
<td>±0.03 feet</td>
<td>±0.01 feet × √N</td>
</tr>
</tbody>
</table>

Table 105.10-1 (Continued) Construction Survey and Staking Tolerances (1)
<table>
<thead>
<tr>
<th>Feature</th>
<th>Tolerance 1</th>
<th>Tolerance 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centerline points (4) — (PC), (PT), (POT), and (POC) including references</td>
<td>±0.03 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td>Other centerline points</td>
<td>±0.16 feet</td>
<td>±0.16 feet</td>
</tr>
<tr>
<td>Cross-section points and slope stakes (5)</td>
<td>±0.16 feet</td>
<td>±0.16 feet</td>
</tr>
<tr>
<td>Slope stake references (5)</td>
<td>±0.16 feet</td>
<td>±0.16 feet</td>
</tr>
<tr>
<td>Culverts, ditches, and minor drainage structures</td>
<td>±0.16 feet</td>
<td>±0.06 feet</td>
</tr>
<tr>
<td>Retaining walls and curb and gutter</td>
<td>±0.06 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td>Bridge substructures</td>
<td>±0.03 feet (6)</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td>Bridge superstructures</td>
<td>±0.03 feet (6)</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td>Clearing and grubbing limits</td>
<td>±2.00 feet</td>
<td>—</td>
</tr>
<tr>
<td>Roadway subgrade finish stakes (7) (8)</td>
<td>±0.16 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td>Roadway finish stakes (7) (8)</td>
<td>±0.16 feet</td>
<td>±0.03 feet</td>
</tr>
</tbody>
</table>

1. At 95% confidence level. Tolerances are relative to existing State network control points.
2. M is the distance in miles.
3. N is the number of instrument setups.
4. Centerline points: PC - point of curve, PT - point of tangent, POT - point on tangent, POC - point on curve.
5. Take the cross-sections normal to the centerline ±1 degree.
6. Bridge control is established as a local network and the tolerances are relative to that network.
7. Includes paved ditches.
8. Set stakes at the top of subgrade and the top of each aggregate course.

**105.11 Inspection of the Work and Materials.** Materials and each part or details of the work shall be subject to inspection by the Engineer. The Contractor shall furnish the Engineer information, assistance, and provide appropriate safeguards and equipment to allow a complete inspection to be made.

The Engineer may inspect the production, fabrication, and manufacture of materials and items that are to be incorporated into the work. The Contractor shall ensure that the producer, fabricator, and manufacturer provide access to the Engineer, without adjustment in contract price or contract time, at the source of such materials and items or at any other place such materials or
items may be located before they are incorporated into the work. The Engineer will comply with safety procedures established by the facility. When any government agency or any utility company is to pay a portion of the cost of the work covered by this contract, they shall have the right to inspect the work. Such inspection shall not make that government or utility company a party to this contract.

For any inspection, the Contractor shall expose or uncover such portions of the work as requested by the Engineer. After inspection, the Contractor shall restore that portion of the work to the standard required by the contract. When the Engineer orders an inspection that is not considered a normal daily, pre-final or final inspection, that requires uncovering, damage to or destruction of work in place:

1. If the exposed and inspected work conforms to the contract requirements, the State will reimburse the reasonable costs of exposing, inspecting and restoring the work, as extra work and extend contract time as appropriate.

2. If the exposed and inspected work is non-conforming or otherwise non-acceptable, the costs and time relating to exposing, inspecting and restoring the work is not reimbursable.

3. No reimbursement will be allowed for the costs and time of exposing, inspecting and restoring work that the Engineer had not been given reasonable opportunity to inspect before it was covered.

When the contract documents or a written directive from the Engineer requires that certain work not proceed until the Engineer is given notice and the opportunity to inspect, the Engineer may order the work done or materials used without the Engineer having been given notice and opportunity to inspect, to be removed and replaced at no increase in contract price or contract time.

Inspections are performed for the exclusive benefit of the State. The inspection of or the failure to inspect the work shall not relieve the Contractor of obligations to fulfill the contract as prescribed, to correct defective work, and to replace unsuitable or rejected materials regardless of whether payment for such work has been made.

105.12 Removal of Non-Conforming and Unauthorized Work. All work that does not conform to the requirements of the contract shall be remedied or removed and replaced by the Contractor at no increase in contract price, contract time, or both. No payment will be made for non-conforming work.

Any work done beyond the work limits shown on the drawings and specifications or established by the Engineer or any additional work done without written authority will be considered as unauthorized work. No payment will be
made for unauthorized work. Unauthorized work may be ordered removed at no increase in contract price, contract time, or both.

The Engineer may require that the Contractor submit a schedule acceptable to the Engineer for the performance of corrective or remedial work at the convenience of the State. Should the Contractor fail to submit an acceptable schedule or fail to comply with the accepted schedule for performance of corrective or remedial work, or otherwise fail to comply with any order of the Engineer regarding remedial, corrective, removal and replacement work, the Engineer shall have the authority, in addition to all other remedies, provided by contract or law, to cause non-conforming work to be remedied or removed and replaced, and unauthorized work removed, by someone other than the Contractor. The Engineer may charge the Contractor the cost of such work, or deduct the costs from any monies due or to become due the Contractor, or combination thereof.

105.13 Maintenance. The Contractor shall maintain the work including the removal of all graffiti and defacement, until final acceptance of the project. If the Contractor fails to remedy unsatisfactory maintenance after receipt of a written directive from the Engineer, the Engineer shall have the authority, in addition to other remedies by law, to have such maintenance performed by someone other than the Contractor, to charge the Contractor for such maintenance or deduct the cost of such maintenance from monies due or become due to the Contractor.

105.14 Storage and Handling of Materials and Equipment.

(A) Contractor's Responsibility. The Contractor as part of the contract price shall provide all storage space. Materials shall be stored and handled to preserve their quality and fitness for the work. The Contractor shall locate stored materials so as to facilitate their prompt inspection by the Engineer. No State land outside the project limits may be used without authority granted by the State agency having jurisdiction over the site. Prior to final inspection, the Contractor at no increase in contract price or contract time shall restore all storage sites within the project limits to their pre-existing or to a different condition approved by the Engineer.

(B) Permit. Consistent with State law and subject to the application of the Contractor, the State shall issue a permit for storage of materials and equipment within the State highway right-of-way.

(C) Designated Storage Area. The Contractor may store materials and equipment only within the areas designated in the contract documents.
(D) No Designated Storage Area. If no storage area is designated within the contract documents, materials and equipment may be stored anywhere within the State highway right-of-way, provided such storage and access to and from such site, within the sole discretion of the Engineer, does not create a public or traffic hazard or an impediment to the movement of traffic.

No State land outside the project limits may be used without authority granted by the State agency having jurisdiction over the site. Prior to final inspection, the Contractor at no increase in contract price or contract time shall restore all storage sites within the project limits to their pre-existing or to a different condition approved by the Engineer.

(E) Contractor’s Risk. The Contractor assumes all risk of loss or damage to the stored materials and equipment within the State highway right-of-way. Storage of materials and equipment within the highway right-of-way is an element of the Contractor’s “performance” as referred to in Subsection 107.14 – Responsibility for Damage claims; Indemnity herein. The failure of the Engineer to deny the Contractor the opportunity to store materials and equipment at any particular location at any particular time shall not relieve the Contractor of the primary responsibility to avoid creating traffic and public safety hazards.

105.15 Value Engineering Incentive Proposal. On any contract in an amount greater than $100,000, the Contractor shall be entitled to an equitable adjustment to share in cost savings resulting from the value engineering proposal, subject to the following conditions:

(1) A value engineering proposal must result in savings to the State by providing less costly items than those specified in the contract without impairing any of their essential functions and characteristics such as service life, reliability, substitutability, economy of operations, ease of maintenance, and necessary standardized features.

(2) A value engineering proposal shall not be deemed accepted until a change order has been issued establishing the proposed as part of the work;

(3) A value engineering proposal must be submitted in conformity with, and is subject to the terms and conditions of HAR §3-132.

105.16 Subcontracts.

(A) Subcontract Requirements. Nothing contained in the contract documents shall create a contractual relationship between the State and any subcontractor.
Subject to the provisions of HRS Chapter 103D-302, the Contractor may subcontract a portion of the work but the Contractor shall remain responsible for the work so subcontracted.

The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of any duty the Contractor may have pursuant to the contract without the written consent of the State.

The Contractor shall perform with his/her own organization work amounting to not less than 30 percent of the total contract cost, except that any items designated by the State in the contract as “specialty items”. Where an entire item is subcontracted, the value of work subcontracted will be based on the contract item bid price. When a portion of an item is subcontracted, the value of work subcontracted will be estimated by the Engineer and be based on the cost of such portion of the contract items.

No subcontract shall release the Contractor of any liability under the contract and bonds.

**(B) Substituting Subcontractors.** Under HRS Chapter 103D-302, the Contractor is required to list the names of persons or firms to be engaged by the Contractor as a subcontractor or joint contractor in the performance of the contract. Contractors may enter into subcontracts only with subcontractors listed in the proposal or with non-listed joint contractors/subcontractors permitted under Subsection 102.05 – Preparation of Proposal. No subcontractor may be added or deleted. Substitutions will be allowed only if the subcontractor:

1. Fails, refuses or is unable to enter into a subcontract.
2. Becomes insolvent.
3. Has its Contractor’s license suspended or revoked.
4. Has defaulted or has otherwise breached the subcontract in connection with the subcontracted work.
5. Or, is unable to comply with other requirements of law applicable to Contractors, subcontractors and public works projects.

Bids that do not comply with the above requirements may be accepted if acceptance is in the best interest of the State and the value of the work to be performed by the subcontractor or joint contractor is equal to or less than one percent of the total bid amount.
When the subcontractor is not prosecuting the work in accordance with the contract, the Contractor shall immediately remove the subcontractor from the project, upon receipt of a written notice from the Engineer. The subcontractor shall not again be employed on the project.

Requests to substitute a subcontractor shall be allowed only upon the written approval of the Engineer. The Contractor agrees to hold the State harmless, defend and indemnify the State for all claims, liabilities, or damages whatsoever, including attorney’s fees arising out of or related to the approval or disapproval of the substitution.

105.17 Dimensions, Performance Standards and Other Values Required by the Contract. When work required by the contract is subject to contractually established tolerances, the Contractor’s means and methods shall nevertheless by designed to meet the precise dimensions, performance standards and other values required by the contract. Contractor shall not intentionally attempt to provoke work that does not strictly meet the precise dimensions, performance standards and other values required by the contract.

END OF SECTION 105