

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION  
Honolulu, Hawaii

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CONTRACT SPECIFICATIONS AND PLANS

Job No. E00XM30A  
KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT  
MAUI, HAWAII

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# TABLE OF CONTENTS

TECHNICAL SPECIFICATIONS	SECTION NO.
<b><i>DIVISION 1 - GENERAL REQUIREMENTS</i></b>	
General Specifications	01019
Standard References	01090
Archaeological Protection and Monitoring	01100
Submittals	01300
Mobilization and Demobilization	01505
Barricades	01530
Environmental Protection	01567
Project Sign	01581
 <b><i>DIVISION 2 - SITEWORK</i></b>	
Site Preparation	02100
Earthwork	02200
Sand Dredging, Offloading, Conveyance, and Placement	02260

## SECTION 01019

### GENERAL SPECIFICATIONS

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS

Work shall consist of furnishing all labor, tools, materials, and equipment necessary and required to construct in place complete all work as indicated on the PLANS and as specified herein.

##### 1.2 GENERAL

- A. Examination of Premises: The Contractor shall contact the Engineer and obtain permission before visiting the site.
- B. All lines and grades shall be established by a licensed surveyor, or licensed Civil Engineer, registered in the State of Hawaii. The Contractor shall submit evidence of current and valid registration.
- C. Notices: The Contractor shall notify the Engineer and give at least three (3) working days notice before starting any work.
- D. Disruption of Utility Services: All work related to the temporary disconnection of electrical systems shall be pre-arranged with the Engineer so that any disruption of such services will be kept to a minimum. In the event temporary power hook-up is required, the Contractor shall provide the necessary services.
- E. Contractor's Operations
  - 1. The Contractor must employ, insofar as possible, such methods and means of carrying out the work so as not to cause any interruption or interference to the facility's operations. Where the Contractor's operations would result in interruptions which would hamper the operations of the facilities, the Contractor shall rearrange the schedule of work accordingly.
  - 2. The Contractor shall maintain safe passageway to and from the facility for the user agency personnel and the public at all times.
- F. Construction Schedule. Work on the Kā'anapali Beach Restoration and Berm Enhancement project shall be completed within 150 consecutive calendar days. The Contractor shall not commence construction until all approved material, tools, and equipment required for the project are ready to be used at the project site.

#### G. Lead Paint

1. When the project includes paint to be disturbed that was applied prior to 1980, it shall be assumed to contain lead. The Contractor shall inform its employees, subcontractors, and all other persons engaged in the project that lead containing paints are present in the existing buildings at the job site and to follow the requirements of the Department of Labor and Industrial Relations, Division of Occupational Safety and Health, Title 12, Subtitle 8, Chapter 148, Lead Exposure in Construction, Hawaii Administrative Rules (Chapter 12-148, HAR).

#### H. Parking Policy for Contractor

1. The Contractor and its employees will not be allowed to park in zones assigned to facility personnel.
2. Contractor shall arrange with Kaanapali Operations Association (KOA) for employee parking. Any lawn damaged by the Contractor shall be restored as instructed by KOA and the Engineer at no cost to the State.

I. Toilet Accommodations: Contractor is responsible for providing toilet accommodations for its employees.

J. Protection of Property: The Contractor shall continually maintain adequate protection of all its work from damage and shall protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, and utility systems located at and adjoining the job site. The Contractor shall repair, replace, or pay the expense of repair of damages resulting from its operations.

K. Use of Power Driven Equipment: The Contractor is cautioned to take all necessary safety precautions to protect the facility personnel and the public whenever power driven equipment is used.

L. Safety: The Contractor shall carefully read and strictly comply with the requirements of the Hawaii Occupational Safety and Health Law, Chapter 396, Hawaii Revised Statutes, as amended, is applicable and made a part of the Contract.

M. Clean Up Premises: The Contractor shall clean up and remove from premises all debris accumulated from operations as necessary or as directed. See also Section 7.25 of the General Conditions.

#### N. Responsibility

1. The State will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the prime Contractor in matters pertaining to other trades employed on the job. The Contractor shall be responsible for coordinating the work of all trades on the job.
2. Should the Contractor discover any discrepancy in the PLANS or specifications, the

Contractor shall immediately notify the Engineer before proceeding any further with the work, otherwise, the Contractor will be held responsible for any cost involved in correction of work placed due to such discrepancy.

- O. Cooperation With Other Contractors: The State reserves the right at any time to contract for or otherwise perform other or additional work within the contract zone limits of this Contract. The Contractor of this project shall, to the extent ordered by the State, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by other contractors.
- P. Division of the Work: The Divisions and Sections into which these Specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to all work specified within each Section.
- Q. Drawings and Specifications
1. The Contractor shall not make alterations in the PLANS and specifications. In the event the contractor discovers any errors or discrepancies, the Contractor shall immediately notify the Engineer in accordance with the General Conditions.
  2. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the work.
  3. Specifications and PLANS are prepared in abbreviated form and include incomplete sentences. Omission of words or phrases such as "the Contractor shall", "as shown on the drawings", "a", "an", and "the" are intentional. Omitted words and phrases shall be provided by inference to form complete sentences.
- R. Required Submittals
1. Required submittals as specified in the Technical Sections of these specifications include one or more of the following: Shop drawings; color samples; material samples; technical data; schedules of materials; schedules of operations; guarantees; operating and maintenance manuals; and as-built drawings.
  2. The Contractor shall make a comprehensive list of the required submittals, by Specification Section, and submit this list to the Engineer within 15 days after notice to proceed.
  3. As-Built Drawings: When as-built drawings are required for submittal, the following shall apply:
    - a. As-built drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be required.
    - b. All deviations from alignments, elevations and dimensions which are stipulated on the PLANS shall be recorded in red on the as-built drawings.

- c. The following procedure shall be followed:
- 1) Immediately after these changes are constructed in place, the Contractor shall record them on the field office PLANS.
  - 2) Within two weeks after final inspection of the project, the Contractor shall transfer the changes marked on the field office PLANS onto a clean copy of PLANS using a red pencil. Any deletions shall be so noted and redrawn as necessary. The Contractor shall stamp or mark the tracings "AS-BUILT", and also sign and date each drawing so marked.
  - 3) The Contractor shall submit the as-built drawings to the Engineer for review and approval. After the Engineer approves the as-built drawings, the Contractor shall submit an electronic copy in Adobe PDF format on CD ROM.
  - 4) Any as-built drawing which the Engineer determines does not accurately record the deviation shall be corrected by the State, and the Contractor shall be charged for the services.

END OF SECTION

## SECTION 01090

### STANDARD REFERENCES

#### PART 1 – GENERAL

Wherever used in the project, the following abbreviations will have the meanings listed:

<u>Abbreviation</u>	<u>Company</u>
AA	Aluminum Association Incorporated 818 Connecticut Avenue, N.W. Washington, D.C. 20006
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W., Suite 225 Washington, D.C. 20001
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI
AEIC	Association of Edison Illuminating Companies 51 East 42nd Street New York, NY 10017
AFBMA	Anti-Friction Bearing Manufacturer's Association 60 East 42nd Street New York, NY 10017
AGA	American Gas Association 8501 East Pleasant Valley Road Cleveland, OH 44131
AGMA	American Gear Manufacturer's Association 1330 Massachusetts Avenue, N.W. Washington, D.C.
AISC	American Institute of Steel Construction 101 Park Avenue New York, NY 10017
AISI	American Iron and Steel Institute 1000 16th Street, N.W. Washington, D.C. 20036
AITC	American Institute of Timber Construction 333 West Hampden Avenue Englewood, CO 80110

<u>Abbreviation</u>	<u>Company</u>
AMCA	Air Moving and Conditioning Association, Inc. 30 West University Drive Arlington Heights, IL 60004
ANSI	American National Standards Institute, Inc. 1430 Broadway New York, NY 10018
APA	American Plywood Association 1119 A Street Tacoma, WA 98401
API	American Petroleum Institute 1801 K Street N.W. Washington, DC 20006
ARI	Air-Conditioning and Refrigeration Institute 1814 North Fort Myer Drive Arlington, VA 22209
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017
ASCII	American Standard Code for Information Interchange United States of America Standards Institute 1430 Broadway New York, NY 10018
ASE Code	American Standard Safety Code for Elevators, Dumbwaiter and Escalators American National Standards Institute 1430 Broadway New York, NY 10018
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers United Engineering Center 345 East 47th Street New York, NY 10017
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103



<u>Abbreviation</u>	<u>Company</u>
AWPA	American Wood Preservers Association 1625 Eye Street Washington, DC 20006
AWS	American Welding Society 2501 N.W. 7th Street Miami, FL 33125
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
CBM	Certified Ballast Manufacturers 2120 Keith Building Cleveland, OH 44115
CMAA	Crane Manufacturers Association of America, Inc. (Formerly called: Overhead Electrical Crane Institute - OECI) 1326 Freeport Road Pittsburgh, PA 15238
CRSI	Concrete Reinforcing Steel Institute 180 North La Salle Street Chicago, IL 60601
CSA	Canadian Standards Association 178 Rexdale Boulevard Rexdale, Ontario, M9W 1R3, Canada
DEMA	Diesel Engine Manufacturer's Association 122 East 42nd Street New York, NY 10017
DIS	Division of Industrial Safety California Department of Industrial Relations 2422 Arden Way Sacramento, CA 95825
EEI	Edison Electric Institute 90 Park Avenue New York, NY 10016
EIA	Electronic Industries Association 2001 Eye Street N.W. Washington, DC 20006

<u>Abbreviation</u>	<u>Company</u>
EJMA	Expansion Joint Manufacturer's Association 331 Madison Avenue New York, NY 10017
ESO	Electrical Safety Orders, California Administrative Code, Title 8, Chap. 4, Subarticle 5 Office of Procurement, Publications Section P.O. Box 20191 8141 Elder Creek Road Sacramento, CA 95820
FEDSPEC	Federal Specifications General Services Administration Specification and Consumer Information Distribution Branch Washington Navy Yard, Bldg. 197 Washington, DC 20407
FEDSTDS	Federal Standards (see FEDSPECS)
FM	Factory Mutual Research 1151 Boston-Providence Turnpike Norwood, MA 02062
HEI	Heat Exchange Institute 122 East 42nd Street New York, NY 10017
HI	Hydraulic Institute 1230 Keith Building Cleveland, OH 44115
IAPMO	International Association of Plumbing and Mechanical Officials 5032 Alhambra Avenue Los Angeles, CA 90032
ICBO	International Conference of Building Officials 5360 South Workman Mill Road Whittier, CA 90601
ICEA	Insulated Cable Engineers Association P.O. Box P South Yarmouth, MA 02664

<u>Abbreviation</u>	<u>Company</u>
IEEE	Institute of Electrical and Electronics Engineers, Inc. 345 East 47th Street New York, NY 10017
IES	Illuminating Engineering Society C/O United Engineering Center 345 East 47th Street New York, NY 10017
ISA	Instrument Society of America 400 Stanwix Street Pittsburgh, PA 15222
JIC	Joint Industrial Council 7901 Westpark Drive McLean, VA 22101
MILSPEC	Military Specifications Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. 127 Park Street, N.E. Vienna, VA 22180
NAAMM	National Association of Architectural Metal Manufacturers 100 South Marion Street Oak Park, IL 60302
NACE	National Association of Corrosion Engineers P.O. Box 986 Katy, TX 77450
NEC	National Electric Code National Fire Protection Association 470 Atlantic Avenue Boston, MA 02210
NEMA	National Electrical Manufacturer's Association 155 East 44th Street New York, NY 10017

<u>Abbreviation</u>	<u>Company</u>
NESC	National Electric Safety Code American National Standards Institute 1430 Broadway New York, NY 10018
NFPA	National Forest Products Association (Formerly called: National Lumber Manufacturer's Association) 1619 Massachusetts Avenue, N.W. Washington, DC 20036
OSHA	Occupational Safety and Health Act U.S. Department of Labor San Francisco Regional Office 450 Golden Gate Avenue, Box 36017 San Francisco, CA 94102
PPIC	The Plumbing & Piping Industry Council, Inc. Suite 402 510 Shatto Place Los Angeles, CA 90020
SAE	Society of Automotive Engineers 2 Pennsylvania Street New York, NY 10001
SAMA	Scientific Apparatus Makers Association One Thomas Circle Washington, DC 20005
SBCC	Southern Building Code Congress 1116 Brown-Marx Building Birmingham, AL 35203
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc. 8224 Old Courthouse Road Tysons Corner Vienna, VA 22180
SSPWC	Standard Specifications for Public Works Construction Building News, Inc. 3055 Overland Avenue Los Angeles, CA 90034
TEMA	Tubular Exchanger Manufacturer's Association 331 Madison Avenue New York, NY 10017

<u>Abbreviation</u>	<u>Company</u>
UBC	Uniform Building Code Published by ICBO
UL	Underwriters Laboratories Inc. 207 East Ohio Street Chicago, IL 60611
UMC	Uniform Mechanical Code Published by ICBO
UPC	Uniform Plumbing Code Published by IAPMO
USBR	Bureau of Reclamation U.S. Department of Interior Engineering and Research Center Denver Federal Center, Building 67 Denver, CO 80225
WWPA	Western Wood Products Association (Formerly called: West Coast Lumberman's Association - WCLA) Yeon Building Portland, CA 97204

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

## SECTION 01100

### ARCHAEOLOGICAL PROTECTION AND MONITORING

#### PART 1 – GENERAL

- 1.1 This section covers the requirements for the protection and preservation of historical properties and values.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION

##### 3.1 CONSTRUCTION:

In the event that any previously unknown archaeological properties (such as artifacts; subsurface deposits of bone, shell or charcoal; or rock or coral alignments, paving or walls) or human remains are encountered, the Contractor shall suspend all work in the immediate area of the discovery and notify the Engineer and the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD) at (808) 243-5169 or (808) 692-8015 as soon as possible. If human remains are discovered, the Police Department shall be notified in addition to the Engineer and SHPD. No work in the immediate area of the find shall proceed until SHPD has been able to assess the discovery, has made all applicable determinations regarding treatment of the discovery as required under chapters 13-275 and 13-300, HAR, and concurs that work can continue. Subsequently, if the State requires it, the Contractor shall engage the services of a professional archaeologist to assist the State in meeting historic preservation requirements and in coordinating with SHPD.

##### 3.2 ARCHAEOLOGICAL MONITORING:

- A. Construction activities, methods, and excavation techniques will be monitored by a qualified archaeologist and which project area locations require such monitoring. An archaeological monitor shall be present during all on-land excavation activities that take place in the project area. During the course of archaeological monitoring, excavated soil material will be closely inspected.

The purpose of archaeological monitoring is to ensure that; (1) exposed cultural features will be recorded; (2) artifacts encountered are documented and/or collected; and (3) if human remains are encountered, that they are treated appropriately. A daily Archaeological Monitoring Log (AML) will be completed every day that archaeological work is conducted on site. The AML will form the official record of archaeological activities performed and shall specify who was working on site, times of work, and what was done. In addition, data will be recorded regarding all subsurface features encountered.

- B. The following archaeological procedures shall be undertaken as a minimum:

1. Intact Cultural Deposits and Features – Upon discovery of potentially significant cultural features, SHPD archaeological staff will be notified and the extent, content,

and associations of the discovery. The potential significance of the discovery will be agreed upon and mitigation needs, as appropriate for non-burial sites, will be discussed and resolved with the SHPD archaeological staff. Notes, scaled maps, and photographic documentation will be recorded of cultural features that are encountered during excavations. The stratigraphic context of the deposit or features will be determined, and any important associations with other natural or cultural strata will be noted. Where appropriate, samples for further analyses will be collected. The data recorded in the field, combined with documentary data will be used to assess the significance of the finding as per Hawaii Administrative Rules Chapter 13-275-6. These significance assessments will be presented in the draft and final reports.

2. Artifacts – Hawaiian artifacts that are encountered will be collected for further analysis. Diagnostic historic artifacts that are more than 50 years old will likewise be collected for further analysis. Non-diagnostic and recent historic artifacts will be documented in the field. The provenience of the finds will be plotted on a project map of the area, and any observed associations with cultural or natural strata will be noted.
3. Human Skeletal Remains – If human remains are inadvertently encountered during excavation, all work in the immediate vicinity will cease and the State Historic Preservation Division will be notified. Burial finds will be treated according to HRS 6E-43.6, and Hawaii Administrative Rules 13-300, and the SHPD staff will be consulted regarding the context of the discovery and its significance. Utmost care will be taken to ensure that any associated items or stratigraphic context are not further disturbed. No remains will be removed or further disturbed without SHPD determination. Any associated materials with the inadvertent human burial will be treated according to SHPD determination. SHPD will assume the lead in consulting with recognized descendents and the Maui Island Burial Council.

### 3.3 CULTURAL PERSPECTIVE

A kupuna, a person knowledgeable of the cultural area, and approved by the Engineer, should be invited to give a cultural perspective during preconstruction orientation. Cost to consult with Kupuna shall be considered incidental to the various contract items.

### 3.4 SUBMITTALS

If required, a draft Archaeological Monitoring Report shall be submitted within 90 days of completion of monitoring fieldwork to the State Historic Preservation Division (SHPD) for review and approval. A final report shall be submitted within 30 days of any review comments being received.

### 3.5 QUALIFICATIONS

- A. An archaeologist is required for this project. The archaeologist conducting or directing archaeological monitoring required for this project shall meet professional qualifications set forth in HAR section 13-282-3 and shall hold a current annual permit to conduct archaeological work in Hawaii in accordance with HAR chapter 13-282. The required professional qualifications for the project principal investigator are as follows:

1. A graduate degree from an accredited institution in archaeology, or anthropology, with a specialization in archaeology, or an equivalent field;
2. At least one year of cumulative archaeological experience in Hawaii or the Pacific;
3. At least four months of supervised archaeological field and analytic experience in Hawaii;
4. At least one year of archaeological research, administration, or management at a supervisory level with at least four months of field experience;
5. A demonstrated ability to carry research to completion, as shown by completed theses, publications, and manuscripts; and
6. A demonstrated knowledge of historic preservation laws, rules, and guidelines.

END OF SECTION



## SECTION 01300

### SUBMITTALS

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS

Submittals shall be required for work as called for in the PLANS, specifications, or by the Engineer.

##### 1.2 SUBMITTALS:

- A. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules or materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.
- B. Required Submittals: Provide a comprehensive list of the required submittals by Specification Section. Furnish this list to the Engineer within fifteen (15) calendar days after notice to proceed (NTP) or upon earlier written instructions from the Engineer.
  - 1. The listing, shall indicate and include the following:
    - a. The number of copies required for submittal.
    - b. Planned submittal date.
    - c. Approval date required by the Contractor.
    - d. A space where the "date of submittal" can be inserted.
    - e. A space where the "date of approval" can be inserted.
    - f. A space where an "action code" can be inserted.
  - 2. The schedule shall accommodate a minimum of twenty-one (21) calendar days for the State's review.
- C. The following listing of required submittals is provided for the contractor's convenience. The Contractor shall review the technical sections of this specification, prepare and submit a comprehensive listing of required submittals as described under Section 01019 – General Specifications.

## SUBMITTAL LIST

Section No.	Title	Description of Submittal	Copies
01567	Environmental Protection	Best Management Practices and Environmental Protection Plan	6
		Record of Protected Species Observations	6
01581	Project Sign	Shop Drawings	6
02060	Sand Dredging, Dewatering and Placement Plan	Work Plan and Schedule	6
		Daily Work Activities Log	4
		Sand Placement Survey Data	4

### 1.3 BIDDER'S SPECIAL RESPONSIBILITY FOR COORDINATING CONTRACTUAL WORK AND SUBMITTALS:

- A. The Contractor is responsible for the coordination of all contractual work and submittals.
- B. The Contractor shall have a rubber stamp made up in the following format:

#### CONTRACTOR NAME

PROJECT: \_\_\_\_\_

\_\_\_\_\_

JOB NO: \_\_\_\_\_

THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR. IT IS CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED CONTRACTORS AND SUPPLIERS ARE AWARE OF, AND WILL INTEGRATE THIS SUBMITTAL INTO THEIR OWN WORK.

DATE RECEIVED \_\_\_\_\_

SPECIFICATION SECTION \_\_\_\_\_

SPECIFICATION PARAGRAPH \_\_\_\_\_

DRAWING NUMBER \_\_\_\_\_

SUBCONTRACTOR NAME \_\_\_\_\_

SUPPLIER NAME \_\_\_\_\_

MANUFACTURER NAME \_\_\_\_\_

CERTIFIED BY: \_\_\_\_\_

- C. This stamp, "filled in", should appear on the title sheet of each shop drawing, on a cover sheet of submittals in an 8-1/2" x 11" format, or on one face of a cardstock tag (min. 3" x 6") tied to each sample. The tag on the samples should state what the sample is so that, if the tag is accidentally separated from the sample, it can be matched up again. The back of this tag will be used by the Engineer for his receipt, review, and log stamp and for any comments

that relate to the sample.

- D. All submittals for material, equipment, and shop drawings listed in the contract documents, including dimensioned plumbing shop drawings, shall be required and shall be reviewed by the Engineer, prior to any ordering of materials and equipment.
- E. Unless otherwise noted, the Contractor shall submit to the Engineer for his review six copies of all shop drawings, piping layout, and/or catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment) required for the construction. Drawings shall be submitted in sufficient time to allow the Engineer not less than twenty regular working days for examining the drawings.
- F. The drawing shall be accurate, distinct, and complete and shall contain all required information, including satisfactory identification of items, units and assemblies in relation to the contract drawings and specifications.
- G. Unless otherwise approved by the Engineer, shop drawings shall be submitted only by the Contractor, who shall indicate by a signed stamp on the drawings or other approved means that the Contractor has checked the shop drawings and that the work or equipment shown is in accordance with contract requirements and has been checked for dimensions and relationship with work of all other trades involved. All deviations from the PLANS and specifications shall be listed. The practice of submitting incomplete or unchecked shop drawings for the Engineer to correct or finish will not be acceptable, and shop drawings which, in the opinion of the Engineer, clearly indicate that they have not been checked by the Contractor will be considered as not complying with the intent of the contract documents and will be returned to the Contractor for resubmission in the proper form.
- H. When the shop drawings have been reviewed by the Engineer, two sets of submittals will be returned to the Contractor appropriately stamped. If major changes or corrections are necessary, the drawing may be rejected and one set will be returned to the Contractor with such changes or corrections indicated, and the Contractor shall correct and resubmit eight copies of the drawings, unless otherwise directed by the Engineer. No changes shall be made by the Contractor to the resubmitted shop drawings other than those changes indicated by the Engineer. The resubmittal shall be so indicated on the shop drawing.
- I. The review of such drawings and catalog cuts by the Engineer shall not relieve the Contractor from responsibility for correctness of the dimensions, fabrication details, and space requirements or for deviations from the contract drawings and specifications, unless the Contractor has called attention to such deviations, in writing, by a letter accompanying the drawings and the Engineer approved the change or deviations, in writing, at the time of submission; nor shall review by the Engineer relieve the Contractor from the responsibility for errors in the shop drawings. When the Contractor does call such deviations to the attention of the Engineer, he shall state in his letter whether or not such deviations involve any deduction or extra cost adjustment.
- J. The approval of the above drawings, lists, prints, specifications, or other data shall in no way release the Contractor from his responsibility for the proper fulfillment of the requirements of this contract nor for fulfilling the purpose of the installation nor from his liability to replace the same should it prove defective or fail to meet the specified requirements.

- K. Submission of documents in .pdf, .csv, or other approved format via email shall be allowed at the discretion of the Engineer. If allowed, Engineer will provide a list of email addresses.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

## SECTION 01505

### MOBILIZATION AND DEMOBILIZATION

#### PART 1 – GENERAL

##### 1.1 GENERAL REQUIREMENTS

- A. Description: This section covers the requirements for mobilization and demobilization.

1.2 MOBILIZATION: Mobilization shall consist of the transporting, assembling, constructing, installing, and making ready for use at the job site, all the equipment, machinery, structures, utilities, materials, labor, and incidentals necessary to do the work covered by this contract.

1.3 DEMOBILIZATION: Demobilization shall consist of the dismantling and removal of the above-mentioned equipment, machinery, structures, utilities, materials, and incidentals, and the cleaning up of the site.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION

3.1 GUIDELINES: If the Contractor utilizes private lands other than the sites provided by the Department for mobilization purposes, the provisions of this section shall apply, and the mobilization and demobilization work on said private lands shall be in accordance with the agreement between the Contractor and the land owner.

Any and all additional mobilization or demobilization costs in excess of the maximum amounts specified in the Proposal shall be included in the appropriate unit prices bid in the Proposal. The Contractor shall not receive any compensation for mobilization and demobilization in addition to those specified in the Proposal.

All equipment, machinery, buildings, utilities and incidentals mobilized and demobilized under this section shall remain the property of the Contractor.

END OF SECTION

## SECTION 01530

### BARRICADES

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS

- A. Description. This work shall consist of furnishing, installing and maintaining barricades in accordance with the requirements of the contract.

Barricade application shall be provided for in the latest edition of the FHWA publication, Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and as amended.

#### PART 2 - PRODUCTS

##### 2.1 MATERIALS

- A. Lumber: Lumber for rails, frames and braces shall be dry, sound, undamaged, well seasoned, and free from any defect which may impair their strength and durability.
- B. Hardware: Nails shall be galvanized wire nails. As many and as large a size as is practicable shall be used.
- C. Paints: Paints shall be exterior enamel paint of the best grade or first line as made by approved manufacturers.
- D. Sheet Reflecting Material: Sheet reflecting material shall conform to the applicable requirements of Subsection 712.20(C) of the "Standard Specifications for Road and Bridge Construction".
- E. Alternate Designs: Alternate barricade designs such as plastic molded barricades may be used subject to the Engineer's approval. The Contractor shall submit shop drawings or catalog cuts for approval.

#### PART 3 - EXECUTION

##### 3.1 CONSTRUCTION REQUIREMENTS

- A. General: Barricades shall be constructed in a first class, workmanlike manner in accordance with details shown on the PLANS and as specified herein.
  - a. Barricades shall be in good condition and approved by the Engineer for use within the project limits. Barricade application and installation shall be as shown on the PLANS and as directed by the Engineer in accordance with the guidelines provided in the latest edition of the FHWA publication, Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and any amendments or revisions thereof as may be made from time to time.

- b. Sand bags or other approved weights shall be provided where required or as directed by the Engineer. Sand bags or other approved weights shall not be placed on any striped barricade rail.
  - c. Steady burn and/or flashing lamps shall be required on selected barricades used during hours of darkness. Locations shall be as shown on the PLANS and as directed by the Engineer. Lamps shall be attached on the barricade ends closest to the traveled way and shall be visible to the motorist.
  - d. Barricades furnished and paid for as provided herein may be used for temporary detours, construction phasing, or other temporary traffic control work.
  - e. Barricades furnished and paid for use in temporary detours or construction phasing may be used for permanent location called for on the PLANS.
  - f. Upon completion of the construction work, barricades shall be left in place, relocated, or removed and disposed of as shown on the PLANS or as directed by the Engineer. Barricades left in place, or relocated to new permanent locations shall become the property of the State. Barricades directed to be removed and disposed of shall become the property of the Contractor.
- B. Painting: Wooden rails, frames and braces shall be given a prime coat and 2 finish coats of new white exterior enamel paint. Rail faces to be reflectorized may be left unpainted unless otherwise specified or directed.
- C. Reflectorization: Reflectorization of barricade rails shall be done in a first class, workmanlike manner and the attachment of reflective sheeting shall be as shown on the PLANS, specified herein, or as directed and approved by the Engineer.
  - a. Both vertical faces of each barricade rail shall be reflectorized as shown on the PLANS.
  - b. Wooden rails shall be reflectorized with one of the following:
  - c. Reflective sheeting specified in Subsection 712.20(C)(4) of the "Standard Specifications for Road and Bridge Construction" and backed with a 26 gage galvanized steel sheet, or
  - d. A hardened aluminum backed reflective sheeting as specified in Subsection 712.20(C)(5) of the "Standard Specifications for Road and Bridge Construction."
- D. Color: Rails, frames and braces shall be white.
  - a. The front and back faces of barricade rails shall have 6-inch wide alternative colored and white striped sloping downward toward the traveled way at an angle of 45 degrees with the vertical. The colored stripes shall be either orange or red in accordance with the following requirements:
  - b. Orange and white stripes shall be used in the following conditions:

- i. Construction work.
    - ii. Detours.
    - iii. Maintenance work.
  - c. Red and white stripes shall be used in the following conditions:
    - i. On roadways with no outlet (i.e., dead-ends, cul-de-sacs).
    - ii. Ramps or lanes closed for operational purposes.
    - iii. Permanent or semipermanent closure or termination of a roadway.
- E. Maintenance: Barricades shall be kept in good condition throughout their usage during construction until the end of the contract.
- F. The Contractor shall repair, repaint, clean or replace the barricades as required and as directed by the Engineer to maintain their effectiveness and appearance.
- G. The Constructor shall immediately replace all lost, stolen or damaged barricades, lamps, sand bags and other approved weights.
- H. Barricades used during construction phasing, temporary detours or other temporary traffic control work shall be cleaned and repaired as necessary, prior to being relocated to a permanent location shown on the PLANS or as directed.
- I. No extra payment will be made for any repair work, repainting, or cleaning of barricades. The Engineer shall determine the suitable condition of each barricade and shall determine when each barricade shall be repaired, repainted or cleaned.

END OF SECTION



## SECTION 01567

### ENVIRONMENTAL PROTECTION

#### PART 1 - GENERAL

##### 1.1 GENERAL:

This section covers the requirements of environmental and pollution control during construction activities. The Contractor shall be responsible for conformance to Title 11, Chapter 60 of the Public Health Regulations, Department of Health, State of Hawaii.

- A. With the exception of those measures set forth elsewhere in these specifications, environmental protection shall consist of the prevention of environmental pollution as the result of construction operations under this contract. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare, unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utilization of the environment for aesthetic and recreational purposes.
- B. The work under this section shall include, but is not limited to, the following:
  - 1. Make sure that all permits required for project construction and/or listed in these specifications are obtained and valid for the construction period.
  - 2. Provide water quality testing and monitoring work required by the permits during construction.
  - 3. Provide all facilities, equipment and structural controls for minimizing adverse impacts upon the environment during the construction period.

##### 1.2 GENERAL REQUIREMENTS:

- A. Applicable Regulations: In order to provide for abatement and control of environmental pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, the work performed shall comply with the intent of the applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement, including, but not limited to the following regulations:
  - 1. State of Hawaii, Department of Health, Administrative Rules, Title 11:
    - a. Chapter 44A, VEHICULAR NOISE CONTROL.
    - b. Chapter 54, WATER QUALITY STANDARDS.
    - c. Chapter 55: WATER POLLUTION CONTROL
    - d. Chapter 59, AMBIENT AIR QUALITY
    - e. Chapter 60, AIR POLLUTION CONTROL LAW.

2. State of Hawaii, Occupational Safety and Health Standards, Title 12, Department of Labor and Industrial Relations, Subtitle 8, Division of Occupational Safety and Health, Subparagraph 12-202-13, ASBESTOS DUST: Environmental Protection Agency, Code of Federal Regulations Title 40, Part 61 Subpart A, NATIONAL EMISSION STANDARDS FOR AIR POLLUTANTS and Subpart B, NATIONAL EMISSION STANDARDS FOR ASBESTOS; and U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Asbestos Regulations, Code of Federal Regulations Title 29, Part 1910.
- B. Required Permits. The Contractor shall comply with the following permits and complete any information required therein to effectuate the permits:
1. Department of the Army Permit, File No. POH-XXXX-XXXX, including all special conditions.
  2. Section 401 Water Quality Certification from the State Department of Health, File No. WQCXXXXXXXX, including the “Applicable Monitoring and Assessment Plan for Clean Water Act Section 401 Water Quality Certification.”
  3. National Pollutant Discharge Elimination System (NPDES) permit from the State Department of Health.
  4. State Department of Land and Natural Resources, Conservation District Use Permit MA-XXXX including all conditions.
  5. County of Maui Special Management Area (SMA) Permit.
  6. State Department of Health Disability and Communication Access Board (DCAB) Review.
  5. Coastal Zone Management Federal Consistency Determination Review from the State Office of Planning and Sustainable Development.

Copies of the above permits are attached to the end of this section. The permit applications or placeholders are attached where the permits are pending.

- C. The Contractor shall provide the Department of Health with any required general contractor’s information, including the general contractor’s legal name, address (location where papers can be hand-delivered), contact person(s), telephone numbers, and fax numbers.
- D. The Contractor shall be responsible for submitting any report, documents, or other submissions to the Department of Health (DOH) as required by the pertinent permits including but not limited to: Section 401 Water Quality Certification (WQC), Applicable Monitoring and Assessment Plan (AMAP), Department of the Army Permit (DA), etc.

### 1.3 SUBMITTAL:

- A. Submit under provisions of Section 01300 – SUBMITTALS.
- B. The Contractor shall provide the State with six (6) copies of the Best Management Practices

and Environmental Protection Plan for review and approval by the State. The submittal shall be made a minimum of twenty-one (21) calendar days prior to the proposed scheduled start of construction work.

C. The Contractor shall provide the State and the National Marine Fisheries Service (NMFS) with six (6) copies of the Record of Protected Species Observations for review. The submittal shall be made weekly.

#### 1.4 GUIDELINES AND CRITERIA:

The Contractor shall prepare and submit a Best Management Practice Plan (BMPP) specific to his proposed construction operations to help minimize adverse impacts to coastal water quality and the marine ecosystem. The project specifications will require the Construction Contractor to adhere to environmental protection measures, including, but not limited to, the Guidelines, Criteria, and Environmental Protection Requirements in this specification section and in the attached permits.

#### 1.5 GENERAL BEST MANAGEMENT PRACTICES

##### A. SUITABLE MATERIAL

1. All equipment and material shall be free of contaminants of any kind including: excessive silt, sludge, anoxic or decaying organic matter, clay, dirt, oil, floating debris, grease or foam or any other pollutant that would produce an undesirable condition to the shoreline or water quality. The equipment will be brought to the site in clean condition.
2. All materials shall be free from any objectionable sludge, oil, grease, scum, excessive silt, organic material or other floating material.

##### B. HISTORIC OR CULTURAL FEATURES

1. No adverse impacts to any historical or cultural features are expected.
2. Should any unanticipated archaeological site(s), such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of charcoal or shells be uncovered by the work activity, all work shall cease in the immediate area and the contractor shall notify the State Historic Preservation Office at (808) 692-8015 or (808) 243-5169. No work shall resume until the owner/contractor obtains clearance from the State Historic Preservation Office.

##### C. ENVIRONMENTAL PROTECTION

1. All permits and clearances shall be obtained prior to the start of any project activities. The contractor and sub-contractors shall ensure that all restoration work complies with all permit conditions and commitments made with environmental agencies.
2. The contractor shall perform the work in a manner that minimizes environmental pollution and damage as a result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of

permanent work shall be protected during the entire duration of the project activities.

3. The contractor shall complete daily inspection of equipment for conditions that could cause spills or leaks; clean equipment prior to operation near the water; properly maintain site storage, refueling, and servicing sites; and implement spill response procedures and stormy weather preparation plans.
4. The project shall be completed in accordance with all applicable Federal, State and County health and safety regulations.
5. The Contractor shall provide notifications to the National Marine Fisheries Services, 808.725.5000, including the Protected Resources Division, at least 72 hours prior to the scheduled start of project activities.
6. Project operations must cease if unusual conditions, such as large tidal events and high surf conditions, affect the project site, except for efforts to avoid or minimize resource damage.

D. DEBRIS MANAGEMENT AND REMOVAL

1. Project site inspection and debris sweeps will be completed by the Contractor at the end of each work day. A full inspection of the project site will be conducted by the Contractor at the end of the project to ensure that no visible debris introduced by recovery efforts or project waste is present at the site upon completion of the project.

E. SOLID WASTE AND DISPOSAL

1. Any project activity related debris that is not a part of the design must be removed from the project site if not actively being used and/or at the conclusion of the project.
2. The Contractor shall not dispose of any concrete, steel, wood, and any other debris into State or Federal waters.
3. No contamination (trash or debris disposal, alien species introductions, etc.) of marine (reef flats, lagoons, open oceans, etc.) environments adjacent to the project site shall result from project related activities.
4. The Contractor shall remove all floating or submerged materials and/or debris at the end of each day, with the exception of any silt containment devices, as needed.
5. No contamination of the marine environment shall result from the permitted activities. Particular care must be taken to ensure that no petroleum products, trash, or other debris enter near-shore and open ocean waters. When such material is found within the project area, the Contractor, or his designated construction agent, shall collect and dispose of this material at an approved upland disposal site.
6. Waste materials and waste waters directly derived from project activities shall not be allowed to leak, leach, or otherwise enter marine waters.

F. WASTE WATERS

1. Project operations shall be conducted so as to prevent discharge or accidental spillage of pollutants, solid waste, debris, and other objectionable wastes in surface waters and underground water sources.

G. EROSION CONTROL

1. Silt fences will be left in place each night.
2. The Contractor is responsible for the proper handling, storage and/or disposal of all waste generated by project activities.
3. The Contractor shall confine all project activities to areas defined by the drawings and specifications. No materials shall be stockpiled in the marine environment.
4. The Contractor shall keep project activities under surveillance, management and control to avoid pollution of surface or marine waters. Daily visual inspection of the project site and its environs will be conducted by a designated individual, or his representative, to verify that the permitted activities do not result in uncontrolled adverse environmental impacts.
5. Visual inspections will include monitoring of the effectiveness of the silt curtains and/or booms to ensure proper function.
6. Visual inspections will be documented with photographs, a photo-orientation map, and written descriptions.
7. Sand recovery/placement shall not be done during storms or periods of high surf.
8. Visual monitoring will include ongoing inspections for turbidity outside of the confines of the silt curtain(s). In the event that turbidity is observed outside of the silt curtains, work shall stop, and the silt curtains shall remain in place until the turbidity dissipates. Silt curtains shall be inspected after dissipation and prior to returning to project operations.
9. Wherever equipment and/or vehicles leave the site and enter surrounding paved streets, the contractor shall prevent any material from being carried onto the pavement. There will be no washing of equipment on the beach or near the shoreline.

H. PUBLIC SAFETY

1. Operational bounds on land will be marked with and patrolled by contractor's employees as needed to ensure that members of the public do not enter the project area.
2. A contractor's representative will be available at the project site during construction hours to answer questions the public may have.
3. Contractor shall provide crossing guards placed at designated crossings along the

shoreline to assist the public in transiting across the access route while trucks are operating.

4. Project implementation will not interfere with the public's right to reasonable navigation.
5. Materials stored or stockpiled shall not interfere with public beach access.
6. Signs will be posted at the project site to educate the public of project activities.
7. Hotels nearby will be informed of the project's purpose and approximate duration.

#### I. NOISE CONTROL

1. Best management practices shall be utilized to minimize adverse effects to air quality and noise levels, including the use of emission control devices and noise attenuating devices.
2. Noise shall be kept within acceptable levels at all times in conformance with HAR Title 11 § 46 Community Noise Control, State Department of Health, Public Health Regulations. The contractor shall obtain and pay for a community noise permit from the State Department of Health when equipment or other devices emit noise at levels exceeding the allowable limits.
3. Equipment shall be equipped with suitable mufflers to maintain noise within levels complying with applicable regulations.
4. Starting of land-based equipment meeting allowable noise limits shall not be done prior to 6:30 a.m. without prior approval.
5. Starting of ocean-based equipment meeting allowable noise limits shall not be done prior to 5:00 a.m. without prior approval.
6. Pursuant to HAR §11-46-7 construction exceeding permissible sound levels shall not occur before 7:00 a.m. or after 6:00 p.m. Monday through Friday; and before 9:00 a.m. or after 6:00 p.m. on Saturday, Sunday, and holidays.

#### J. DUST CONTROL

1. Dust, which could damage property, or cause nuisance to persons, shall be abated and control measures shall be performed.
2. The Contractor, for the duration of the contract, shall maintain all excavations, embankments, paved roads, plant sites, waste disposal areas, and all other work areas within or without the project limits free from dust which would cause a hazard to the work, or the operations of other contractors, or to persons or property. Industry accepted methods of stabilization suitable for the area involved, such as sprinkling or similar methods will be permitted. Chemicals or oil treating shall not be used.
3. The Contractor shall prevent dust from becoming airborne at all times including

non-working hours, weekends and holidays in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60 - Air Pollution Control.

K. AIR POLLUTION CONTROL

1. Emission: The Contractor shall not be allowed to operate equipment and vehicles that show excessive emissions of exhaust gases until corrective repairs or adjustments are made.

L. OIL AND SPILL CONTAINMENT

1. The Contractor shall ensure that the Oil Spill Response Plan, detailed in this document, is in place which shall detail procedures for managing the accidental release of petroleum products to the aquatic environment during construction. Fueling of project related vehicles and equipment should take place away from the water. Absorbent pads, containment booms, and skimmers will be stored on site to facilitate the cleanup of petroleum spills.
2. Any spills or other contaminations shall be immediately reported to the DOH Clean Water Branch (808-586-4309) and through email: [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov).

M. MONITORING/MEASURES FOR VISUALLY DETECTED CONTAINMENT

1. All work operations shall be performed in conformance with the applicable provisions of the Hawaii Administrative Rules (HAR), Title 11 Chapter 55 Water Pollution Control and Title 11, Chapter 54 Water Quality Standards, and to the Erosion and Sedimentation Control Standards and Guidelines of the Department of Public Works, County of Maui, Hawaii.
2. The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface or marine waters. Daily visual inspection of the construction site and its environs will be conducted by a designated individual, or his representative, to verify that the permitted activities do not result in uncontrolled adverse environmental impacts. Visual inspections will be documented with photographs and written descriptions.
  - i. Daily Inspection: The project site will be inspected daily to ensure BMPs are maintained to confine and isolate potential pollutants from being discharged into surrounding areas. The site will be inspected to ensure that materials are properly stored, rubbish is being collected and disposed of properly, etc.
  - ii. Deficiencies identified by daily inspections shall be corrected immediately. Work activities will stop and remain stopped until the deficiencies have been corrected.
3. Prior to delivery to the site, all construction material shall be inspected to ensure they are free of contaminants of any kind including: excessive silt, sludge, anoxic or decaying organic matter, turbidity, temperature or abnormal water chemistry,

clay, dirt, organic material, oil, floating debris, grease or foam or any other pollutant that would produce an undesirable condition to the beach or water quality.

4. No contamination of the marine environment shall result from the permitted activities. Particular care must be taken to ensure that no petroleum products, trash or other debris enter near-shore and open ocean waters. When such material is found within the project area, the Contractor, or his designated construction agent, shall collect and dispose of this material at an approved upland disposal site.
5. Waste materials and waste waters directly derived from construction activities shall not be allowed to leak, leach or otherwise enter marine waters.
6. The Contractor shall ensure that the Oil Spill Response Plan (below) is in place and shall detail procedures for managing the accidental release of petroleum products to the aquatic environment during construction. Absorbent pads, containment booms, and skimmers will be available to facilitate the cleanup of petroleum spills.
7. Any spills or other contaminations shall be immediately reported to the DOH Clean Water Branch (808-586-4309).
8. In the event that floating hydrocarbon (oil, gas) products are observed, the Contractor or his designated individual will be responsible for directing that in-water work be halted so that appropriate corrective measures are taken in accordance with the Oil Spill Response Plan. The Department of Land and Natural Resources shall be notified as soon as practicable, and the activity causing the plume will be modified by containment. The responsible individual will document the event and the measures taken to correct the issue and will report the incident (with photographs) to the Office of Conservation and Coastal Lands and the Department of the Army Regulatory Office as soon as is practicable. Work may continue only after the issue is no longer visible.

#### N. WATER QUALITY MONITORING

1. Water quality monitoring during construction shall be conducted in accordance with the Section 401 Water Quality Certification from the State Department of Health and the "Applicable Monitoring and Assessment Plan for Clean Water Act Section 401 Water Quality Certification."
2. The Contractor shall visually monitor the nearshore for turbidity or other water quality issues that may be associated with the project operations.
3. The Contractor shall incorporate all erosion control measures shown in the drawings and the BMP Plan for this project. The PLANS may be modified as necessary to adjust to conditions that develop during construction. Any changes to the BMP Plan must immediately be submitted to the DA for review.
4. The water quality will be quantitatively measured following the plan set forth by the approved Applicable Monitoring and Assessment Plan by a qualified



individual.

O. PROTECTED SPECIES

1. The project manager shall designate a competent observer to survey the areas adjacent to the proposed action for ESA-listed species, including but not limited to the green sea turtle, hawksbill sea turtle, and Hawaiian monk seal.
2. Visual surveys for ESA-listed species shall be made prior to the start of work each day, and prior to resumption of work following any break of more than one half hour, to ensure that no protected species are in the area (typically within 50 yards of the proposed work).
3. Work shall be postponed or halted when ESA-listed species are within 50 yards of the proposed work and shall only begin/resume after the animals have voluntarily departed the area. If ESA-listed species are noticed after work has already begun, that work may continue only if there is no way for the activity to adversely affect the animal(s).
4. Do not attempt to feed, touch, ride, or otherwise intentionally interact with any ESA listed species.
5. All on-site project personnel must be apprised of the status of any listed species potentially present in the project area and the protections afforded to those species under federal laws. A brochure explaining the laws and guidelines for listed species in Hawaii, American Samoa, and Guam may be downloaded from: [http://www.nmfs.noaa.gov/prot\\_res/MMWatch/Hawaii.htm](http://www.nmfs.noaa.gov/prot_res/MMWatch/Hawaii.htm). A list of protected species in Hawaii can be found at <http://www.wpcouncil.org/managed-fishery-ecosystems/hawaii-archipelago/protected-species-hawaii/>
6. The Contractor shall keep a record of all protected species sightings, incidents of disturbance, or injury, and shall provide a report to the State and the National Marine Fisheries Service (NMFS) weekly. Contractor's representative will be the contact person for any issues involving green sea turtles during project activities.
7. Upon sighting of a monk seal or turtle within the safety zone during project activity, immediately halt the activity until the animal has left the zone. In the event that a protected species enters the safety zone and the project activity cannot be halted, conduct observations and immediately contact NMFS staff in Honolulu to facilitate agency assessment of collected data. For monk seals contact the Marine Mammal Response Coordinator at (808) 944-2269, as well as the monk seal hotline at (888) 256-9840. For turtles, contact the turtle hotline at (808) 983-5730.
8. The Contractor shall immediately report any incidental take of marine mammals. The incident must be reported immediately to NOAA Fisheries' 24-hour hotline at 1-888-256-9840, and the Regulatory Branch of the USACE at 808-835-4303. In Hawaii, any injuries, incidents of disturbance, or injury to sea turtles must be immediately reported and must include the name and phone number of a point of

contact, the location of the incident, and nature of the take and/or injury. The incident should also be reported to the Pacific Island Protected Species Program Manager, Southwest Region (Tel: 808-973-2987, fax: 808-973-2941).

9. Equipment operators shall employ “soft starts” when initiating work that directly impacts the bottom. Buckets and other equipment shall be sent to the bottom in a slow and controlled manner for the first several cycles before achieving full operational impact strength or tempo.
10. For any equipment used in undertaking the authorized work, the 160 dB and 120 dB isopleths shall not exceed the 50-yard shut-down range for impulsive and continuous sounds sources, respectively.

#### 1.6 OPERATIONAL CONTROLS

- A. The BMP Plan will be reviewed with the project field staff prior to the start of work.
- B. All activities impacting the environment will not begin until appropriate BMPs are properly installed.
- C. Construction will be immediately stopped, reduced, or modified; and/or new or revised BMPs will be immediately implemented as needed to stop or prevent polluted discharges to receiving waters. New or revised BMPs will be approved by appropriate regulatory agencies prior to re-commencing work.

#### 1.7 STRUCTURE, AUTHORITY, AND RESPONSIBILITY

- A. The Project Manager/Superintendent/Project Engineer will ensure compliance with the BMP Plan.
- B. The Project Manager/Superintendent/Project Engineer will appoint and train one (1) additional individual to properly install all BMPs and to comply with all aspects of this BMP Plan.
- C. The Property Owner(s) is also responsible for compliance with the BMP Plan.

#### 1.8 TRAINING

- A. Employees will be instructed on the proper installation of the BMP materials.
- B. BMPs will be covered in a toolbox safety meeting.
- C. BMPs will be discussed, as applicable, for each new phase of work.

#### 1.9 INSPECTION AND MONITORING

- A. The Project Manager/Superintendent/Project Engineer or the assigned trained individual will conduct a visual inspection of all BMPs daily.
- B. All minor repairs and maintenance of the BMPs will be completed within 48 hours of detection. Major repairs of BMPs shall be completed as soon as practical, and in-water

work shall be stopped until repairs are complete.

- C. If any BMP is damaged, work will immediately be stopped and shall not resume until repairs to the BMP have been completed.

#### 1.10 EMERGENCY PROCEDURES

- A. Natural disaster related pollutant discharge: See Contingency Plan in this section.
- B. Spill prevention and control: See Emergency Spill Response Plan in this section.

#### 1.11 RECORD KEEPING AND DOCUMENTATION

- A. A copy of the BMP Plan will be kept on site.
- B. All BMP inspection reports will be kept on site.
- C. Records of inspection and repair of control measures will be retained in the project files for a minimum of five years.

#### 1.12 SITE-SPECIFIC MANAGEMENT PRACTICES

##### A. Material Management

1. Only a minimum quantity of materials necessary for the work will be stored on site.
2. All flammable and reactive liquids will be kept in sealed and clearly labeled original or compatible containers and stored under cover more than fifty (50) feet from the edge of the property and away from the nearest drain and receiving waters.
3. Storage area will be kept clean and well organized.
4. Materials will be used in strict accordance with the manufacturer's instructions.

##### B. Waste Management

1. All waste will be collected and placed daily in the container located in the staging area.
2. The Contractor will arrange for pick up and disposal of the filled container as necessary.
3. Any spillage on pavement and concrete surfaces will be cleaned up immediately. Cleanup of waste will be conducted through sweeping, shoveling, or vacuuming operations only.
4. Care shall be exercised in the removal and transporting of debris and rubbish for disposal. Loads will be covered when transported.
5. Removed materials stored or stockpiled shall not interfere with public beach

access.

6. There will be no effluent, storm discharge, or dewatering caused by this activity.

C. Hazardous Waste Management

**Note:** No hazardous wastes are anticipated for this project. The following will apply should hazardous waste be encountered:

1. Non-hazardous or less hazardous materials should be used whenever possible.
2. Hazardous waste shall be placed in secondary containment.
3. Hazardous waste shall not be mixed with other waste and repair debris placed in the dumpster.
4. Flammable or reactive waste will be placed in a separate area more than 50 feet from the edge of the property, nearest drain inlet, and the shoreline.

D. Vehicle and Equipment Management

1. Fueling operations will be monitored to prevent spills, leaks and overflows. Equipment will be fueled away from any drain or shoreline. A spill pan will be used to catch spill/leaks. Equipment will not be "topped off". Spill cleanup materials will be readily accessible.
2. Vehicles and construction equipment (except small tools and generators) shall be maintained off-site. If emergency repairs or maintenance on large equipment (e.g., bulldozer) must be performed, drip pans or drop cloths will be placed under the vehicle or equipment to catch any spills/leaks.

E. Erosion and Sediment Control Measures

1. Silt curtains shall be deployed as shown on the construction PLANS. The length of the silt curtains will be adequate to completely contain the area where sand recovery work is taking place.

1.13 SUSPENSION OF WORK

- A. Violations of any of the above requirements or any other pollution control requirements which may be specified in the Technical Specifications herein shall be cause for suspension of the work creating such violation. No additional compensation shall be due to the Contractor for remedial measures to correct the offense. Also, no extension of time will be granted for delays caused by such suspensions.
- B. If no corrective action is taken by the Contractor within 72 hours after a suspension is ordered by the State, the State reserves the right to take whatever action is necessary to correct the situation and to deduct all cost incurred by the State in taking such action from monies due to the Contractor.

- C. The Owner may also suspend any operations which he feels are creating pollution problems although they may not be in violation of the above-mentioned requirements. In this instance, the work shall be done by force account.

#### 1.14 CONTINGENCY PLAN

- A. The following plan will be implemented by the Contractor to prevent/respond to polluted discharges resulting from a severe storm or natural disaster. It is the Contractor's responsibility to abide by the following plan as well as any other binding plan, agreement, regulation, rule, law, or ordinance applicable.
- B. All contractors associated with the following construction project, Kaanapali Beach Restoration and Berm Enhancement, will follow this plan when a severe storm is either forecast or anticipated. Contractors must:
  - 1. Regularly monitor local weather reports for forecasted and/or anticipated severe storm events, advisories, watches, warnings, or alerts. The contractor shall inspect and document the condition of all erosion control measures on that day prior, during, and after the event. The contractor shall prepare for forecasted and/or anticipated severe weather events to minimize the potential for polluted discharges.
  - 2. Secure the construction site. Securing the site should generally include:
    - i. Removing or securing equipment, machinery, and maintenance materials.
    - ii. Cleaning up all maintenance debris.
    - iii. Implementing all Best Management Practices detailed in the BMP Plan. This includes BMPs for materials management, spill prevention, and erosion and sediment control.
  - 3. In the event of a severe weather advisory (hurricanes, tropical storms, natural disasters) or when deemed necessary, cease regular construction operations. Work crews must finalize securing the project site and evacuate until the severe weather condition has passed.
  - 4. Upon return to the site, all BMPs shall be inspected, repaired and/or re-installed as needed. If repair is necessary, it shall be initiated immediately after the inspection and repairs or replacement will be complete within 24 hours. To facilitate repair or replacement, the contractor will be required to store surplus material on the project site if the site is located where replacement materials will not be readily available.
  - 5. When there either has been a discharge which violates Hawaii Water Pollution rules and regulations OR there is an imminent threat of a discharge which violates Hawaii Water Pollution rules and regulations and/or endangers human and/or environmental health, the contractor shall at a minimum execute the following steps:

- i. Assess whether construction needs to stop or if additional BMPs are needed to stop or prevent a violation.
- ii. Take all reasonable measures to protect human and environmental health.
- iii. Notify the engineer and responsible parties listed below and immediately notify the DOH of the incident. The notification shall also include the identity of the pollutant sources and the implemented control or mitigation measures.
  - a. Chris Conger, Project Manager, Sea Engineering Inc.  
1-808-460-3440
  - b. Michael Cain, Acting Administrator, DLNR-OCCL,  
1-808-587-0381
  - c. Department of Health: Clean Water Branch (During regular working hours): 808-586-4309
  - d. Document corrective actions, take photographs of discharge and receiving waters.
- iv. Take representative samples of the affected water, as resulted from the discharge(s), and submit analytical reports to the Department of Health Clean Water Branch.
- v. Revise BMP Plan to prevent future discharges of a similar nature.

#### 1.15 EMERGENCY SPILL RESPONSE PLAN

##### A. Pre-Emergency Planning

1. An initial and periodic assessment shall be made of the project site and potential hazardous spills that may be encountered during the normal course of work. This plan is not intended to address issues relating to materials such as PCB, Lead, Asbestos, etc. since these types of materials would have specific work PLANS already developed. This plan should be revised as necessary to correspond to the assessment and resubmitted to the appropriate regulatory agencies.
2. A Hazardous Materials inventory list and MSDS sheets, to include subcontractors' materials, will be filed in a binder and located in the Project Office. The inventory list and MSDS sheets will be updated and maintained by the Project Manager and site safety officer as new materials are added.
3. Personnel will consult the applicable MSDS sheet prior to its use.
4. Personnel will handle hazardous materials safely and use personal protective equipment (PPE), recommended/required by the MSDS when handling hazardous materials.
5. Personnel will receive "Hazard Communication" training within three (3) working days of arrival and "product specific" training prior to the initial use/exposure of a product. This training will be conducted by the Project Manager/Superintendent

or site safety officer.

6. All personnel will be trained on the contents of this plan within the first month of maintenance and at least annually thereafter. The training should include a rehearsal of this plan. An attendance sheet will be kept on file at the Project Office.
7. Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved safety cans or DOT approved containers shall be used the handling and use of flammable liquids in quantities of five (5) gallons or less. For quantities of one (1) gallon or less, only the original container or approved metal safety can shall be used, for storage, use and handling of flammable liquids.
8. Flammable or combustible liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of people.

**B. Personal Protective and Emergency Spill Response Equipment**

1. ABC fire extinguishers will be located in the project field office and in each of the company vehicles. There will be at least one fire extinguisher, rated at not less than 10B, within 50 feet of any stockpile of 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas storage.

**NOTE: Fire extinguishers should not be located “directly” with hazardous materials, so as to endanger first responders.**

2. Spill kits will be located at the project field office and/or within 50 feet of the hazardous material storage area. The spill kit contents shall be determined by the Project Manager/Superintendent based on the anticipated hazardous materials to be stored and/or used on the project. The spill kits will be inventoried quarterly, and appropriate logbook entries made.
3. Emergency response personal protective equipment (PPE) shall consist of:
  - i. Face shield
  - ii. Tyvex coveralls
  - iii. Rubber gloves
  - iv. Air-purifying respirators with HEPA and organic vapor combination cartridges will be issued to the Emergency Response Team members and maintained in the project office. Separate Respiratory Protection Equipment shall be designated and labeled as such; this equipment will be inspected at least every 30 calendar days and appropriate logbook entries made.

**C. Personnel Roles, Lines of Authority and Communication**

1. Emergency Response Coordinator (ERC)
  - i. The Project Superintendent is the designated ERC. If the Project Superintendent is not available, the safety officer is the designated ERC.
  - ii. The ERC will be in charge of and will coordinate the appropriate emergency response procedures in this plan.
2. Emergency Response Team (ERT)
  - i. The ERT consists of Construction General Foreman, Labor Foreman, and a Laborer designated by the Project Superintendent.
  - ii. The ERT will appropriately respond to the emergency in accordance with this plan at the direction of the ERC.

D. Emergency Alerting and Response Procedures

1. Any person causing or discovering a known hazardous or unknown release or spill will:
  - i. Immediately alert nearby personnel who may be exposed to the effects of the release or spill.
  - ii. Report the release or spill immediately to the ERC and the ERT. All pertinent information regarding the release should be provided to the ERC, such as the amount and type of material released, location of the release, and other factors, which may affect the response operation.
  - iii. If the spill or release is a petroleum product or known non-toxic chemical, the person will take immediate and appropriate measures to stop or limit the rate of release, (i.e. close the spigot to the drum or form oil or curing compound) and or contain or stop the migration of the release (e.g., create a berm of dirt around the release) until the ERC and ERT arrive.
  - iv. If the spill release is a toxic, highly flammable, or unknown chemical, the person will first notify the ERC before approaching the spill area from upwind to determine the source, type, and quantity of the release. The person should monitor the spill until the ERC and ERT arrive.
  - v. The ERC will assess possible hazards to human health or the environment that may result from the release, fire, or explosion.
  - vi. If the spill or release is less than 25 gallons of a known petroleum product or non-toxic chemical, the ERC will direct the ERT to contain and cleanup the spill or release.
  - vii. If the spill or release is toxic or unknown, the ERC will immediately notify the Maui County Fire Department and ask for assistance from the HAZMAT Response Team.



- viii. Immediately after the emergency, the ERC will arrange for disposing of the recovered waste, contaminated soil, or any other material that results from the release, fire, or explosion at the project site in accordance with Maui County and State regulations and manufacturer's instructions (if source of spill or release is known).

E. Emergency Notification and Reporting Procedures

1. In the event that a release enters the storm or sewer system, the ERC will immediately notify the engineer, the Nation Response Center (NRC) at 1.800.424.8802, the Hawaii Department of Health, Hazard Evaluation and Emergency Response Office (HEER) at 808.586.4249 and Maui County Local Emergency Planning Committee (LEPC) at 808.870.7404.
2. The ERC will immediately notify appropriate agencies and submit written follow-up notification in accordance with the Hazardous Substance Release Notification Guideline.

F. Safe Distance Staging Area

1. A staging area at safe distance upwind and higher than the location of the spill or release and its source will be immediately established.
2. Access to the spill or release location will be cleared for emergency vehicles and equipment to be used to contain and clean up the spill or release.

G. Site Security and Control

1. If the spill or release is located on or near the roadway, stop all traffic until the release is cleaned up.
2. If the spill or release is located away from vehicle or pedestrian traffic, install barricades/safety fencing around the affected area.
3. If the spill or release occurs during night operations, provide adequate light and use ground guides to escort emergency vehicles to the affected area.

H. Evacuation Routes and Procedures

1. Persons injured during the emergency condition will be evacuated to the staging area where they will be treated and or further evacuated to the nearest medical facility. The appropriate MSDS(s) will be provided to emergency service personnel and are intended to be delivered to the emergency room physicians.
2. Persons working at the affected area and who are not needed in the response effort; will report the staging areas for accountability.

I. Decontamination and Disposal Procedures

1. Persons involved in the spill clean-up are required to perform personal hygiene, utilizing soap and fresh water prior to eating, drinking, or smoking.

2. Contaminated PPE shall be appropriately cleaned and disinfected if possible. If this is not possible it shall be disposed of per the same requirements of the contaminated substance.
3. Sorbent pads/materials and the spilled substance will be placed in appropriate containers and disposed of as specified by the appropriate MSDS.
4. Contaminated soil will be placed in an appropriate container(s) or on plastic sheeting. The ERC will arrange with an environmental services company to properly characterize, prepare the manifest, label the containers, transport, and dispose of the contaminated soil. The generator's copy of the manifest will be kept in the project files for a minimum of three (3) years.
5. In the event of a substantial release (25 gallons or more) of a suspected or known toxic chemical, the Fire Department HAZMAT Response Team will be called to control/cleanup the release. They will establish and provide the decontamination operations as required.

J. Emergency Medical Treatment and First Aid

1. First aid kits will be maintained at the project field office, all company vehicles, and gang boxes.
2. Injured person(s) will be treated at the staging area by a certified first aid trained individual at the project site until the ambulance arrives or they are evacuated to the nearest medical facility.
3. The appropriate MSDS(s) will be provided to emergency service personnel and are intended to be delivered to the emergency room physicians.

K. After the Spill Procedures

1. The ERC will review what happened and implement changes and/or corrections to prevent spill from occurring and to improve the spill response and clean-up procedures. This Plan will be revised to reflect those changes/corrections/improvements implemented.
2. The ERC will prepare a record of the spill response and keep it in the project files for a minimum of three (3) years.
3. The ERC will submit Follow-up Notification to HEER when required.
4. Spill response kits shall be replenished directly after the emergency.

#### 1.16 EMERGENCY CONTACTS

National Response Center (NRC)	<i>1-800-424-8802</i>
Coast Guard Station Maui	
(working hours)	<i>1-808-986-0023</i>
(after hours)	<i>1-808-927-0830</i>
Hawaii State Department of Health	
Hawaii Evaluation and Emergency Response (HEER)	<i>1-808-586-4249</i>
Maui County Fire Department	<i>911</i>
In the event that a release enters the storm or sewer system, the ERC will immediately notify NRC, HEER, and LEPC	<i>1-808-870-7404</i>
State Historic Preservation Division	<i>1-808-692-8015</i>
DLNR Office of Conservation and Coastal Lands	<i>1-808-587-0377</i>
DLNR Engineering Division	<i>1-808-587-0230</i>
(name), Contactor Project Manager, (company)	<i>TBD</i>

#### 1.17 MEASUREMENT AND PAYMENT

The cost for any environmental protection activity specified above or deemed necessary by the State will not be measured nor paid for directly but will be considered as incidental to and included in the total sum bid.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

# **MANAGEMENT PLAN**

## **KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT**

**LĀHAINĀ, MAUI, HAWAII**

**SEAWARD OF TMK’S**

(2) 4-4-013:007

(2) 4-4-013-006

(2) 4-4-013:008

(2) 4-4-013:013

(2) 4-4-013:002

(2) 4-4-013:001

(2) 4-4-008:022

(2) 4-4-008:019

(2) 4-4-008:001

(2) 4-4-008:002

(2) 4-4-008:003

(2) 4-4-008:005

APRIL 18, 2022

## **Purpose**

Kā'anapali Beach has been negatively impacted by chronic erosion and extreme seasonal erosion over the previous four decades. Sand loss is expected to continue and even accelerate with sea level rise. As an adaptation measure, the beach may be maintained with either sand restoration, or managed retreat, or both. Managed retreat is a multidecadal process. In the meantime, the beach can be maintained through sand nourishment utilizing best practices to ensure protection of the nearshore marine environment.

The purpose of the project is to mitigate the impacts of coastal erosion and high water levels, which are increasing with sea-level rise (SLR), by providing a nature based adaptation solution that increases protection for the Kā'anapali Resort community while restoring recreational resources and natural habitat by bringing the beach back to its former width and volume.

The project area is seaward of TMKs: (2) 4-4-013:007; (2) 4-4-013-006; (2) 4-4-013:008; (2) 4-4-013:013; (2) 4-4-013:002; (2) 4-4-013:001; (2) 4-4-008:022; (2) 4-4-008:019; (2) 4-4-008:001; (2) 4-4-008:002; (2) 4-4-008:003; and (2) 4-4-008:005.

This Best Management Practices Plan (BMPP) is designed to prevent, if possible, or minimize adverse impacts on the environment. The project specifications will require the Contractor to adhere to environmental protection measures, including, but not limited to, those included in this plan. This BMPP is inclusive of the appropriate measures identified in the Pac-SLOPES documents.

## **Project Name**

Kā'anapali Beach Restoration and Berm Enhancement

## **Project Description**

The proposed project includes removing 75,000 cubic yards of sand from 8.5 acres of an offshore sand recovery area for use in restoring the beach in the Hanaka'ō'ō Littoral Cell (HLC) and enhancing the beach berm in the Kā'anapali Littoral Cell (KLC).

### *Beach Restoration*

The presently narrow beach, chronic erosion, and limited seasonal sand transport make the HLC section of shoreline suitable for beach restoration. Beach restoration will include the addition of beach quality sand from the current beach face out to the former extent of the beach in the 1980s. The proposed project will use approximately 50,000 cubic yards of beach compatible marine carbonate sand to restore the beach to the approximate position shown in the 1988 aerial photograph. This is intended to widen the dry beach by between 41 and 78 feet.

### *Berm Enhancement*

Berm enhancement, or raising the elevation of the beach berm, will create a new reservoir of sand along the backshore of the KLC to augment the current sediment system with additional volume and help offset temporary beach loss during the natural seasonal erosion cycles. Sand placed at

the north end of the beach will be seasonally eroded during the winter months, while sand placed at the south end of the littoral cell, at Hanaka‘ō‘ō Point, will be released during summer months. Both berm enhancement areas will provide a buffer during extreme erosion events by increasing total beach sand volume within the broader littoral cell. The proposed project will use approximately 25,000 cubic yards of sand to raise the beach berm elevation by 3.5 feet within the Kā‘anapali Littoral Cell. The berm enhancement area will extend from the vegetation in the backshore to the berm crest, at the mauka edge of the beach face.

## **Work Plan**

### *Pre-Construction*

1. Conduct water quality sampling of the offshore and nearshore waters in accordance with the Applicable Monitoring and Assessment Plan.
2. Take photographs of the coral monitoring sites.
3. Distribute information about the project including a link to the project website to all businesses landward of the project area. This information will assist businesses in their planning efforts, safety, knowledge, and ability to refer people to the site for additional information.

### *Mobilization*

1. Two deck barges, or scow barges, and a crane barge will transit to Maui and moor in the configuration shown in the construction drawings. The deck barges, or scow barges, will have offloading mooring stations in approximately 15 feet of water depth.
2. If deck barges are used, they will be equipped with concrete wear decks and containment fences.
3. A bridge structure or floating platform will be brought to the site and erected between the deck barges mooring station and the shoreline. Bridge structures may be temporary floating bridges, trestles, or similar structures.
4. A series of 13 beach profile elevations will be measured before sand placement work begins to determine baseline pre-construction conditions. The profiles will be performed by measuring the land along a transect perpendicular to the shoreline and may extend as far shoreward or seaward as necessary to capture specific project features. For this project, the profiles will extend from the Kā‘anapali Beachwalk to a seaward point past the intersection of the beach slope with the existing natural sea bottom. Recoverable benchmarks will be established at each profile location to ensure that all profiles are measured at the same location, azimuth, and with the same elevation control. These profiles will be collocated with the profile locations established during the project planning and investigation efforts. The profiles will be measured using standard survey equipment and techniques. The profiles will be plotted, and a summary and discussion of the results will be prepared following each survey.
  - a. Six (6) profiles within the HLC
  - b. One (1) profile at Hanaka‘ō‘ō Point
  - c. Five (5) profiles within the KLC
  - d. One (1) profiles on the north side of Pu‘u Keka‘a
  - e. Additional profile locations or measurement times may be added as deemed warranted by the project coastal engineer in order to more fully measure the performance of the project, e.g., should an atypical or unusual shoreline formation or change occur or should changes occur more rapidly than anticipated.

5. Install BMPs detailed in the Best Management Practices Plan.

*Sand Recovery and North Berm Enhancement – KLC*

1. Begin each day with a survey of the materials, equipment, and BMPs .
2. Implement the Archaeological Monitoring Plan.
3. The crane barge will recover sand from the seafloor and place it onto two 1,500 cubic yard capacity deck barges or scows, or similar.
4. The deck barges will rotate between the sand recovery area and the off-loading site so dredging and offloading operations can be performed simultaneously.
5. The sand will be transferred to shore along the bridge/trestle system.
6. Land-based equipment will then transfer the sand from the offloading location to the placement area. Sand placement will start at the offloading locations and progress down the beach in each direction.
7. Bulldozers and crews will spread sand along the shore to create the design beach plan and section or berm plan and section.
8. At the completion of sand placement (withing 72 hours), a series of beach profile elevations will be measured to determine as-built sand volumes and beach elevations.
9. Remove any temporary BMPs (fencing, signs, silt curtains).

*Sand Recovery and Beach Nourishment – HLC*

1. Install BMPs detailed in the Best Management Practices Plan.
2. Begin each day with a survey of the materials, equipment, and BMPs.
3. Implement the Archaeological Monitoring Plan.
4. Regularly take photographs of the coral monitoring sites to document coral health during contruction.
5. A series of beach profile elevations will be measured before sand placement work begins to determine baseline pre-construction conditions.
6. The crane barge will recover sand from the seafloor and place it onto two 1,500 cubic yard capacity deck barges or scows, or similar.
7. The deck barges will rotate between the sand recovery area and the off-loading site so dredging and offloading operations can be performed simultaneously.
8. The sand will be transferred to shore along the bridge/trestle system.
9. Land-based equipment will transfer the sand from the offloading location to the placement area. Sand placement will start at the offloading locations and progress down the beach in each direction.
10. Bulldozers and crews will spread sand along the shore to create the design beach plan and section or berm plan and section.
11. At the completion of sand placement (withing 72 hours), a series of beach profile elevations will be measured to determine as-built sand volumes and beach elevations.
12. Remove any temporary BMPs (fencing, signs, silt curtains).

*Sand Recovery and South Berm Enhancement – Hanaka‘ō‘ō Point*

1. Install BMPs detailed in the Best Management Practices Plan.
2. Begin each day with a survey of the materials, equipment, and BMPs.
3. Implement the Archaeological Monitoring Plan.
4. Remove any temporary BMPs (fencing, signs, silt curtains)
5. A series of beach profile elevations will be measured before sand placement work begins to determine baseline pre-construction conditions.

6. The crane barge will recover sand from the seafloor and place it onto two 1,500 cubic yard capacity deck barges or scows, or similar.
7. The deck barges will rotate between the sand recovery area and the off-loading site so dredging and offloading operations can be performed simultaneously.
8. The sand will be transferred to shore along the bridge/trestle system.
9. Land-based equipment will transfer the sand from the offloading location to the placement area. Sand placement will start at the offloading locations and progress down the beach in each direction.
10. Bulldozers and crews will spread sand along the shore to create the design beach plan and section or berm plan and section.
11. At the completion of sand placement (withing 72 hours), a series of beach profile elevations will be measured to determine as-built sand volumes and beach elevations.

#### *Demobilization*

1. Remove any temporary BMPs (fencing, signs, silt curtains).
2. The bridge structure or floating platform will be removed from the site.
3. The deck barge containment fencing and moorings will be removed.
4. The two deck barges and a crane barge will transit back to their point of origin.

#### *Post-Constriction*

1. Additional coral monitoring and post-construction beach profiles will be measured to evaluate project performance. The beach monitoring program will provide information to determine the performance and impacts of the project, if any, as well as helping to establish a timetable for possible future beach maintenance activities. The schedule for coral monitoring and beach monitoring profiles will be as follows:
  - a. 30 days post-construction
  - b. 6 months post-construction
  - c. 12 months post-construction
  - d. After the first year, measure annually for 10 years.
  - e. Additional profile locations or measurement times may be added as deemed warranted by the project coastal engineer in order to more fully measure the performance of the project, e.g., should an atypical or unusual shoreline formation or change occur or should changes occur more rapidly than anticipated.

#### Schedule

The proposed project will take place during the fall and winter months of 2022.

Table 1 shows a preliminary project construction timeline. Work is expected to proceed 7 days per week and 12 hours per day. The anticipated duration for placing 75,000 cubic yards of sand, including time for site mobilization and demobilization, is approximately 63 to 75 calendar days. This is based on an estimated rate of dredging and delivery to the beach of between 1,500 cy to 2,000 cy per day. Operational weather windows have been maximized by using multiple barges for the sand recovery and transfer system. Having one barge anchored over the recovery site, and separate barges used explicitly for sand delivery and transfer to shore allows more flexibility with both beach restoration and berm enhancement.

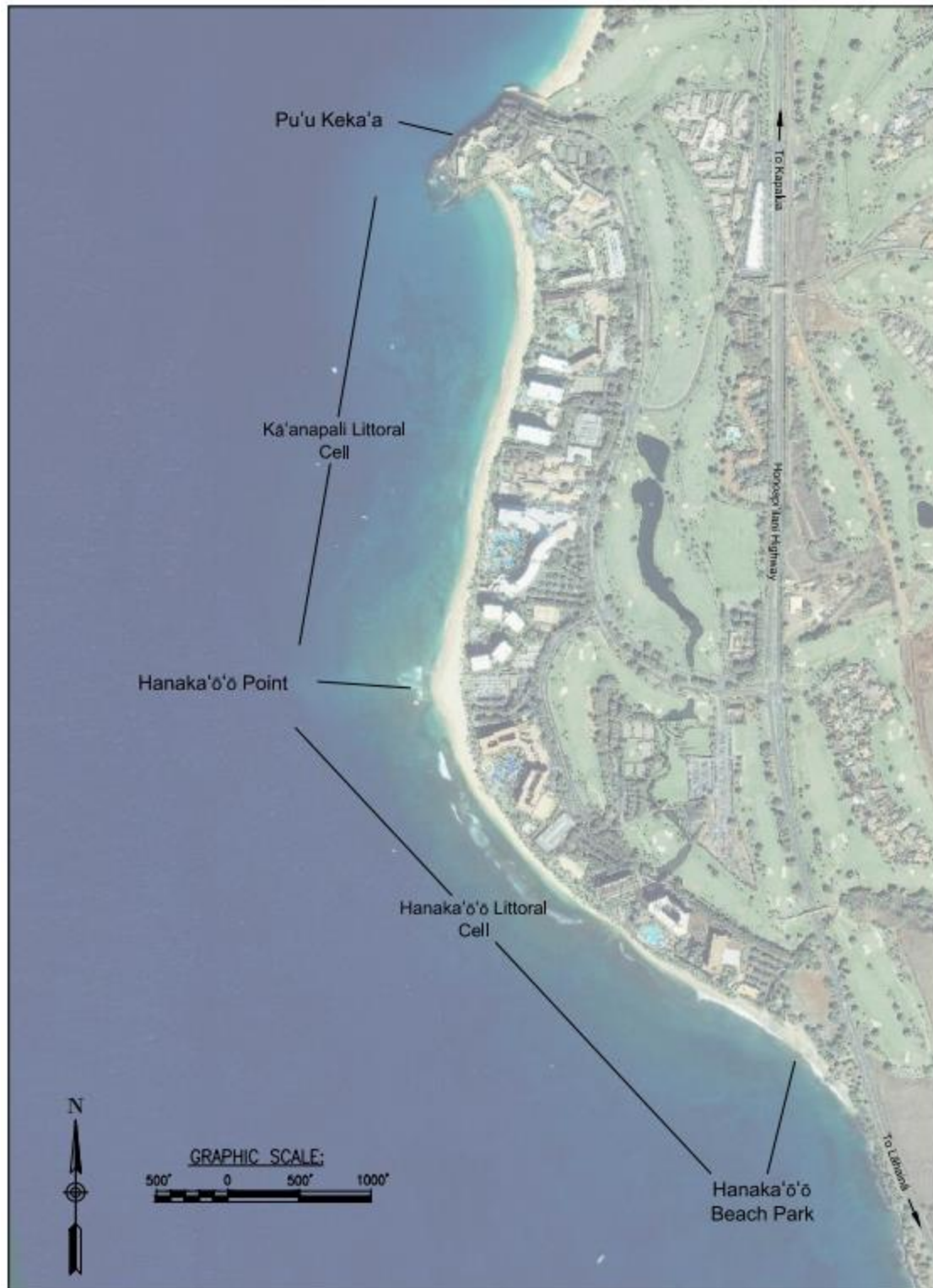


**Table 1. Preliminary project timeline**

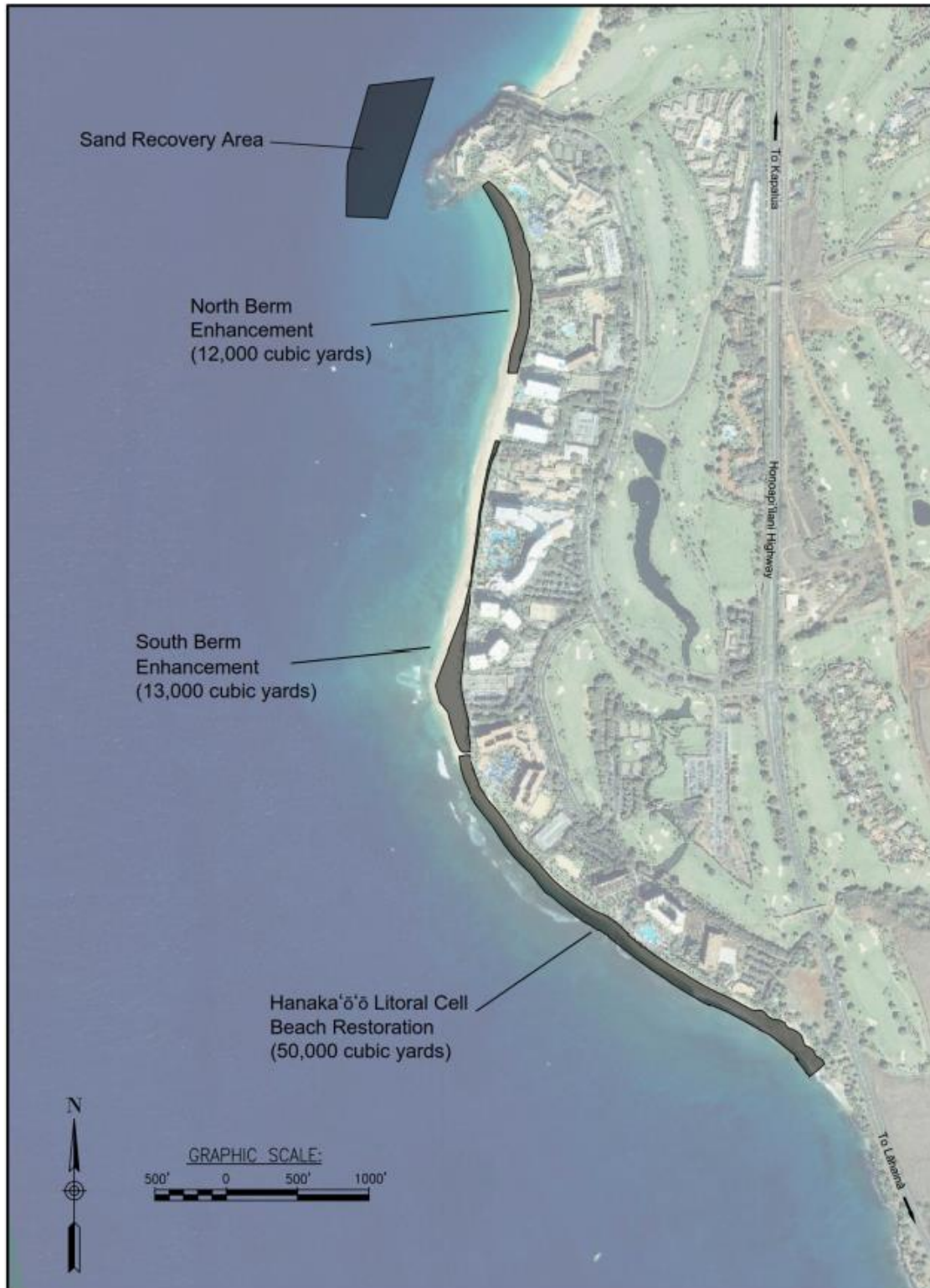
Activity	Duration
Mobilization	5 days
Move and place sand	38 - 50 days
Weather delays	5 days
Safety factor	10 days
Demobilization	5 days
<b>Total</b>	<b>63 - 75 days</b>



**Figure 1. Location map showing the project site on Maui Island.**

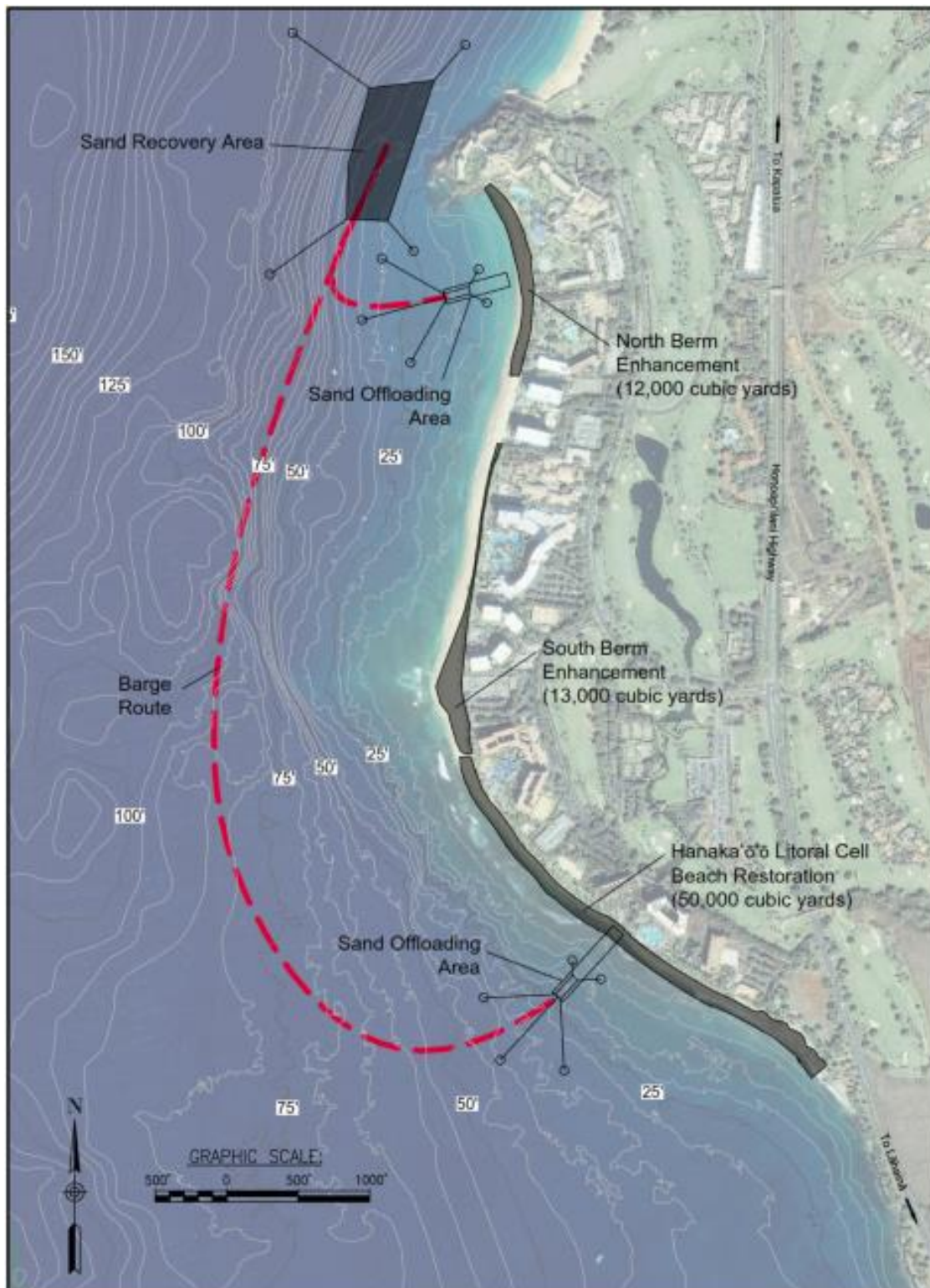


**Figure 2. Vicinity map showing the project area in Kā'anapali.**



**Figure 3. Project map showing the project tasks in Kā'anapali.**





**Figure 4. Map of offshore sand transfer pathways**

## GENERAL REQUIREMENTS

This section covers the requirements of environmental and pollution control during construction activities. The Contractor shall be responsible for conformance to all appropriate State of Hawaii Statutes.

1. With the exception of those measures set forth elsewhere in this plan, environmental protection shall consist of the prevention of environmental pollution as the result of construction operations under this project. For the purpose of this plan, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare, unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utilization of the environment for aesthetic and recreational purposes. This includes Water Pollution, as defined by Hawaii Revised Statute Title 19, Chapter 342D.1.
2. The work shall include the following:
  - A. Make sure that all permits required for this plan are obtained and valid for the construction period.
  - B. Provide all facilities, equipment and structural controls for minimizing adverse impacts upon the environment during the construction period.
3. Applicable Regulations: In order to provide for abatement and control of environmental pollution arising from the construction activities, the Contractor and his subcontractors in the performance of the work shall comply with the intent of the applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement, including, but not limited to the following regulations:
  - A. State of Hawaii, Department of Health, Administrative Rules. Chapter 55. WATER POLLUTION CONTROL: Chapter 54, WATER QUALITY STANDARDS.
  - B. State of Hawaii, Department of Health, Administrative Rules, Chapter 59, AMBIENT AIR QUALITY: Chapter 60, AIR POLLUTION CONTROL LAW.
  - C. State of Hawaii, Occupational Safety and Health Standards, Title 12, Department of Labor and Industrial Relations, Subtitle 8, Division of Occupational Safety and Health, Subparagraph 12-202-13, ASBESTOS DUST: Environmental Protection Agency, Code of Federal Regulations Title 40, Part 61 Subpart A, NATIONAL EMISSION STANDARDS FOR AIR POLLUTANTS and Subpart B, NATIONAL EMISSION STANDARDS FOR ASBESTOS; and U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Asbestos Regulations, Code of Federal Regulations Title 29, Part 1910.

## **DEPARTMENT OF THE ARMY – Recommendations from the Nationwide Permit Program Regional Conditions**

### **1. Pre-construction BMPs:**

- a. Prior to commencement of the authorized work in wetlands, other special aquatic sites and other waters, the geographic limits of such waters (i.e., High Tide Line, Mean High Water Mark, Ordinary High-Water Mark, approved wetland boundary) affected by the authorized work and as approved by the Corps and demarcated on your drawings must be clearly identified in the field. The delineation of these geographic bounds may be accomplished by staking, flagging, painting, silt fencing, signage, buoys, etc. and in all cases must be maintained and remain observable throughout the construction period. The project limits of the Corps-authorized fill footprint must also be demarcated in the field to ensure that dredged or fill material is not discharged beyond the authorized limits. No activity will be conducted in or such that it affects wetlands, other special aquatic sites and other waters that require prior authorization from the Corps, outside of the permitted limits of disturbance (as shown on the permit drawings).

### **2. During Construction BMPs:**

- a. Turbidity and the suspension or re-suspension of sediment from project-related work will be minimized and contained to the immediate vicinity of the authorized activity through the appropriate use of effective containment devices or measures and based on project-specific conditions. Silt fences, silt curtains, or other diversion or containment devices will be installed to contain sediment and turbidity at the work site (a) parallel to, and along the toe of any fill or exposed soil which may introduce sediment to an adjacent aquatic site; and (b) adjacent to any fill placed or soil exposed within an aquatic site. All silt curtains, and other devices will be installed according to the manufacturer's guidelines and properly maintained throughout the construction period and until the impact area is stabilized and/or elevated turbidity levels have returned to ambient levels.
- b. All project-related materials (e.g., fill, rocks, landscaping, structures, etc.) and equipment (e.g., dredges, barges, backhoes, etc.) authorized to be used or placed in wetlands, other special aquatic sites and other waters, will be free of pollutants and invasive plant and animal species.
- c. Any temporary tethering, anchoring, mooring or similar in-water structural components will be placed in a manner to avoid direct physical impact to coral and seagrass beds during installation and throughout the duration of its use in wetlands, other special aquatic sites and other waters.
- d. Any temporary in-water structures will be removed in their entirety upon completion of the authorized work in or affecting wetlands, other special aquatic sites and other waters. The authorized work is not complete until these temporary structures are removed.
- e. Unless specifically authorized, stockpiling of project-related materials (e.g., fill, dredged material, revetment rock, pipe, etc.) or unsuitable materials (e.g., trash, debris, car bodies, asphalt, etc.) in or in close proximity to wetlands, other special aquatic sites and other

waters such that the stockpiled materials could be carried into such waters by wind, rain, or high surf is prohibited.

- f. Upland containment areas, if sited in uplands near wetlands, other special aquatic sites and other waters for the purpose of stockpiling, dewatering, etc. will be bounded by impermeable material to prevent return flows of dewatered effluent into such waters. The runoff or overflow from a contained disposal area into such waters requires separate authorization. There is no anticipated return flow for the proposed project.

## **PROJECT RELATED PRACTICES**

### **Material Management**

1. All equipment and material shall be free of contaminants of any kind including excessive silt, sludge, anoxic or decaying organic matter, clay, dirt, oil, floating debris, grease, foam, or any other pollutant that would produce an undesirable condition to the beach or water quality.
2. All materials shall be free from any objectionable sludge, oil, grease, scum, excessive silt, organic material or other floating material.
3. Only a minimum quantity of materials necessary for the work will be stored on site.
4. Mean higher high water (mhhw), also representing mean high water mark, will be marked along the shoreline prior to conducting operations to ensure that no unauthorized fill is placed, nor unauthorized equipment operated below mhhw.
5. All flammable and reactive liquids will be kept in sealed and clearly labeled original or compatible containers and stored under cover more than fifty (50) feet from the edge of the property and away from the nearest drain and receiving waters.
6. Storage and stockpiling area on land or onboard boats will be kept clean and well organized to prevent spills or run out.
7. Materials will be used in strict accordance with the manufacturer's instructions.
8. Submit Material Safety Data Sheets (MSDS) for all hazardous materials to be brought to the work site to the construction project manager who will keep a copy of them on site. This includes, but is not limited to, paints, solvents, welding rods and fluxes, petroleum products, caulking, and sealant. This submittal shall also include a list showing the quantities of hazardous materials to be stored on-site.

### **Waste Management**

**Note:** No hazardous wastes are anticipated for this project.

1. The project staging area will be used as the primary point of collection of all waste derived from project construction. Rubbish and construction debris will be collected and confined to waste bins. The containers will be serviced as needed to prevent the build-up of large amounts of waste stored on-site.
2. Portable chemical toilets will be located on-site and will be serviced weekly, at a minimum.
3. All waste will be collected and placed daily in the container located in the upland area inshore of the project area or on a vessel a safe distance away from the edge and then disposed of off-site.
4. The Contractor will arrange for pick up and disposal of the filled container(s) as necessary.



5. Pick up solid wastes, and place in covered containers which are regularly emptied. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Recycling is encouraged.
6. Manage spent hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, as per environmental law.
7. Non-hazardous or less hazardous materials should be used whenever possible.
8. Hazardous waste shall not be mixed with other waste and repair debris placed in the dumpster.
10. The Contractor and the owner are responsible for the proper handling, storage and/or disposal of all waste generated by project activities.
11. Any beach restoration and berm enhancement related debris that may pose an entanglement hazard to marine protected species must be removed from the project site if not actively being used and/or at the conclusion of the activity.
12. The Contractor shall not dispose of any concrete, steel, wood, and any other debris into State or Federal waters. Any debris that falls into the State and Federal water shall be removed at the Contractor's own expense.
13. No contamination (trash or debris disposal, alien species introductions, etc.) of marine environments adjacent to the project site shall result from project related activities.
14. The Contractor shall remove all floating or submerged debris generated by project activities at the end of each day.
15. In the event that floating hydrocarbon (oil, gas) products are observed, the Contractor or his designated individual will be responsible for directing that in-water work be halted so that appropriate corrective measures are taken in accordance with the Oil Spill Response Plan. The Department of Land and Natural Resources and Department of Health Hazard Evaluation and Emergency Response Office shall be notified as soon as practicable, and the activity causing the plume will be modified by containment. The responsible individual will document the event and the measures taken to correct the issue and will report the incident (with photographs) to the Office of Conservation and Coastal Lands and the Department of the Army Regulatory Office as soon as is practicable. Work may continue only after the issue is no longer visible.
16. All debris shall have a sheet of plastic under the pile and plastic over the pile to prevent exposure to rainwater and the generation of runoff into the existing drainage system.
17. One or more job site dumpsters will remain on site throughout the duration of the project to collect any construction-related waste or debris.

18. Beach restoration and berm enhancement operations shall be conducted so as to prevent the discharge or accidental spillage of pollutants, solid waste, debris, and other objectionable wastes in surface waters and underground water sources.
19. Care shall be exercised in the removal and transporting of debris and rubbish for disposal.
20. Any spillage on the work surfaces will be cleaned up immediately.
21. Loads will be covered when transported.
22. Project site inspection and debris sweeps will be completed at the end of each work day. A full inspection of the project site will be conducted at the end of the project to ensure that no visible debris or project waste is present at the site upon completion of the project.

### **Vehicle and Equipment Management**

1. The contractor shall be responsible for the clearing and removal of all debris generated by their construction work and deposited and accumulated on roadways and other areas.
2. Fueling operations will be monitored to prevent spills, leaks, and overflows. Equipment will be fueled away from any drain or shoreline. A spill pan will be used to catch spill/leaks. Equipment will not be “topped off.” Spill cleanup materials will be readily accessible.
3. Construction equipment (except small tools, generators, welders, etc.) shall be maintained off-site. If emergency repairs or maintenance on large equipment must be performed, drip pans or drop cloth will be placed under the vehicle or equipment to catch any spills/leaks.
4. Conduct the fueling and lubricating of equipment and motor vehicles in a manner that protects against spills and evaporation. Manage all used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. Used oil containing 1000 parts per million of solvents will be considered a hazardous waste and disposed of at Contractor's expense. Used oil mixed with a hazardous waste will also be considered a hazardous waste.
5. Wherever trucks and/or vehicles leave the site and enter surrounding paved streets, the Contractor shall prevent any material from being carried onto the pavement. Wastewater shall not be discharged into existing streams, waterways, or drainage systems such as gutters and catch basin unless treated to comply with the State Department of Health water pollution regulations.
6. Fuel tanks are required to have secondary containment in accordance with 40 CFR 112 (SPCC). Secondary containment design includes but is not limited to berms and double wall construction.
7. An operators daily checklist shall be filled out prior to operation of equipment on a daily basis. Any leaks or deterioration of hoses shall be noted and corrected prior to operation on equipment.

## **Marine Vessel Operations**

1. The contractor shall notify the United States Coast Guard of planned vessel movements and operations at least fourteen (14) days prior to departure from the point of origin to Kā'anapali.
2. All marine vessels must have a copy of the emergency action plan and this best management practices plan onboard.
3. A first aid kit must be onboard all vessels.
4. All employees onboard the vessels must wear applicable personal protection equipment (steel toe boots, hard hats, lifejackets) during operations.
5. A project manager onboard each vessel must conduct daily visual inspections of the equipment, best management practices, personal protection equipment, and correct any deficiencies before resuming work.
6. All vessels must not contain bilge or ballast waters from locations outside of the Hawaiian Islands.
7. Before any equipment, anchors(s), or material enters the water, a responsible party shall verify that no ESA-listed species are in the area where the equipment, anchor(s), or materials are expected to contact the substrate. If practicable, the use of divers to visually confirm that the area is clear is preferred.
8. Equipment operators shall employ “soft starts” when initiating work that directly impacts the bottom. Buckets and other equipment shall be sent to the bottom in a slow and controlled manner for the first several cycles before achieving full operational impact strength or tempo.
9. All objects lowered to the bottom shall be lowered in a controlled manner. This can be achieved through the use of buoyancy controls such as lift bags, or the use of cranes, winches, or other equipment that affect positive control over the rate of descent.
10. Equipment, anchor(s), or material shall not be deployed in areas containing live corals, seagrass beds, or other significant resources.
11. In-water tethers and mooring lines for vessels and marker buoys shall be kept to the minimum lengths necessary and shall remain deployed only as long as needed to properly accomplish the required task.
12. Vessel operators shall alter course to remain at least 100 yards from whales, and least 50 yards from other marine mammals and sea turtles.
13. Vessel operators shall reduce vessel speed to 10 knots or less when piloting vessels in the proximity of marine mammals, and to 5 knots or less when piloting vessels in areas of known or suspected turtle activity.

14. If approached by a marine mammal or turtle, the vessel operator shall put the engine in neutral and allow the animal to pass.
15. Vessel operators shall not encircle or trap marine mammals or sea turtles between multiple vessels or between vessels and the shore.
16. Unless specifically covered by a separate permit that allows activity in proximity to protected species, all in-water work will be postponed when whales are within 100 yards or other protected species are within 50 yards. Activity will commence only after the animal(s) depart the area.

### **Historic or Cultural Features**

1. Should any unanticipated archaeological site(s), such as walls, platforms, pavements, mounds, or remains such as artifacts, burials, or concentrations of charcoal or shells be uncovered by the work activity, all work shall cease in the immediate area and the contractor shall notify the State Historic Preservation Division at 808-692-8015. No work shall resume until the owner/contractor obtains clearance from the Historic Preservation Division.

### **Environmental Protection**

1. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of the project. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.
2. All permits and clearances shall be obtained prior to the start of any beach restoration and berm enhancement activities. The Contractor and his sub-contractors shall ensure that all work complies with all permit conditions and commitments made with environmental agencies.
3. All project activities shall be confined to areas defined by the drawings and specifications. No project materials shall be stockpiled in the marine environment outside of the immediate project area.
4. Visual inspections will be documented with photographs and written descriptions, if necessary.
5. The contractor shall complete daily inspection of equipment for conditions that could cause spills or leaks; clean equipment prior to operation near the water; properly site storage, refueling, and servicing sites; and implement spill response procedures and stormy weather preparation plans.

6. The project shall be completed in accordance with all applicable State and County health and safety regulations.
7. Project operations must cease if unusual conditions, such as large tidal events and high surf conditions affect the project site, except for efforts to avoid or minimize resource damage.
8. Do not intentionally disturb fish and wildlife. Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as indicated or specified.
9. All dive gear, if used, shall be washed as part of mobilization for the project.
10. No blasting will be allowed on this project.

### **Protected Species**

1. The project manager shall designate a competent observer, who has been apprised of any listed species potentially present in the project area and the protections afforded to those species under federal laws, to survey the marine areas adjacent to the proposed action for ESA-listed marine species, including but not limited to the green sea turtle, hawksbill sea turtle, and Hawaiian monk seal. All on-site project personnel must be apprised of the status of any listed species potentially present in the project area and the protections afforded to those species under federal laws.
2. There will be at least one protect species observer onboard the dredge barge and at least one observer on the beach where equipment is being used.
3. Constant vigilance shall be kept for the presence of Federally Listed Species.
4. Visual surveys for ESA-listed species shall be made prior to the start of work each day, and prior to resumption of work following any break of more than one-half hour, to ensure that no protected species are in the area (typically within 50 yards of the proposed work). During the survey period, the Observer shall record the environmental and project-related information, including but not limited to date, time, weather, action undertaken, and any ESA-listed marine animals. If no ESA-listed marine animal is sighted during the survey period, the project activities may commence. If an ESA-listed marine animal is sighted during the survey period, the Observer shall alert the on-site project manager immediately, and the animal shall be monitored continuously. If the animal is within 50 yards (150 feet) of the work area, animal behavior observations shall be recorded. Work may not commence until the animal departs the area voluntarily or after 30 minutes passed since the last animal sighting.
5. Work shall be postponed or halted when ESA-listed species are within 50 yards of the proposed work, and shall only begin/resume after the animals have voluntarily departed the area. If ESA-listed marine species are noticed after work has already begun, that work may continue only if there is no way for the activity to adversely affect the animal(s). For

example, divers performing surveys or underwater work (excluding the use of toxic chemicals) is likely safe. The use of heavy machinery is not.

6. Do not attempt to feed, touch, ride, or otherwise intentionally interact with any ESA listed species.
7. The Contractor shall immediately report any incidental take of marine mammals. The incident must be reported immediately to NOAA Fisheries' 24-hour hotline at 1-888-256-9840, and the Regulatory Branch of the USACE at 808-438-9258. In Hawaii, any injuries incidents of disturbance or injury to sea turtles must be immediately reported and must include the name and phone number of a point of contact, the location of the incident, and the nature of the take and/or injury. The incident should also be reported to the Pacific Island Protected Species Program Manager, Southwest Region (Tel: 808-973-2987, fax: 808-973-2941).
8. For any equipment used in undertaking the authorized work, the 160 dB and 120 dB isopleths shall not exceed the 50-yard shut-down range for impulsive and continuous sounds sources, respectively.
9. Should protected species enter the area while in-water work is already in progress, the activity may continue only when that activity has no reasonable expectation to adversely affect the animal(s).

### **Oil and Spill Containment**

1. The Contractor shall ensure that the Emergency Spill Response Plan, detailed in this document, is in place which shall detail procedures for managing the accidental release of petroleum products to the aquatic environment during construction. Fueling of project related vehicles and equipment should take place away from the water. Absorbent pads, containment booms, and skimmers will be stored on site to facilitate the cleanup of petroleum spills.
2. Any spills or other contaminations shall be immediately reported to the DOH Clean Water Branch (808-586-4309) and through email: [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov).
3. Prevent oil or hazardous substances from entering the ground, drainage areas, or navigable waters. In accordance with 40 CFR 112, surround all temporary fuel oil or petroleum storage tanks with temporary berms or containment of sufficient size and strength to contain the contents of the tanks, plus 10 percent freeboard for precipitation. The berm will be impervious to oil for 2 hours and be constructed so that any discharge will not permeate, drain, infiltrate, or otherwise escape before cleanup occurs.
4. Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated by environmental law. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release.

5. Maintain spill cleanup equipment and materials at the work site. Clean up all hazardous and non-hazardous waste spills.
6. Photographs of the coral at the coral monitoring sites in the Hanaka‘ō‘ō Littoral Cell, similar to those created for the initial marine assessment, shall be taken before, during, and after construction.

### **Monitoring/Measures for Visually Detected Containment**

1. All work operations shall be performed in conformance with the applicable provisions of the Hawaii Administrative Rules (HAR), Title 11 Chapter 55 Water Pollution Control and Title 11, Chapter 54 Water Quality Standards, and to the Erosion and Sedimentation Control Standards and Guidelines of the Department of Public Works, State of Hawaii.
2. The Contractor shall keep construction activities under surveillance, management and control to avoid pollution of surface or marine waters. Daily visual inspection of the construction site and its environs will be conducted by a designated individual, or his representative, to verify that the permitted activities do not result in uncontrolled adverse environmental impacts. Visual inspections will be documented with photographs, a photo orientation map, and written descriptions, if necessary.
  - a. Daily Inspection: The project site will be inspected daily to ensure BMP's are maintained to confine and isolate potential pollutants from being discharged into surrounding areas. The site will be inspected to ensure that materials are properly stored, rubbish is being collected and disposed of properly, etc.
  - b. Deficiencies identified by daily inspections shall be corrected immediately. Work activities will stop and remain stopped until the deficiencies have been corrected.

### **Water Quality Monitoring**

1. The Contractor shall incorporate all erosion control measures shown in the drawings and the BMPP for this project. The plans may be modified as necessary to adjust to conditions that develop during construction. Any changes to the BMPP must be submitted immediately to the DOH for review. The project may only proceed after DOH issues a written acceptance of the modified BMPP.
2. Turbidity outside the active project site shall not exceed the baseline turbidity geometric value. The Contractor shall cease all work if unusual turbidity is observed and take the necessary remedial action to correct the problem.
3. The Contractor shall follow the accepted Applicable Water Quality Monitoring and Assessment Program: Trained professionals (with degrees in marine sciences) will be conducting the monitoring, including pre-construction, during construction and post-construction monitoring. Monitoring and sample testing shall comply with the DOH CWB – “General Monitoring Guideline for Section 401 Water Quality Certification Projects.”

## **Erosion and Sediment Control Measures**

1. A silt curtain will be installed around the active beach sand placement area in the Hanaka‘ō‘ō Littoral Cell.
2. Silt curtains, biosocks, booms, and/or silt fences will be individually anchored and regularly inspected during project operations.
3. Silt curtains, biosocks, booms, and/or silt fences will be left in place each night. All anchors will be inspected prior to sunset.
6. Visual inspections will be documented with photographs and written descriptions, if necessary.
7. Visual monitoring will include ongoing inspections for turbidity outside of the confines of the silt curtains and/or booms. In the event that turbidity is observed outside of the silt curtains, work shall stop and the silt curtains shall remain in place until the turbidity dissipates. Silt curtains, booms, and anchors shall be inspected after dissipation and prior to returning to beach restoration and berm enhancement operations.
8. Should excessive siltation or turbidity, as defined in HAR Title 11 Chapter 54.4 and HAR Title 11 Chapter 54.6, result from the Contractor's method of operation, the Contractor shall install additional silt curtains or other silt contaminant devices as required to correct the problem.

## **Noise Control**

1. Best management practices shall be utilized to minimize adverse effects to air quality and noise levels, including the use of emission control devices and noise attenuating devices.
2. Noise shall be kept within acceptable levels at all times in conformance with HAR Title 11 Chapter 46 Community Noise Control, State Department of Health, Public Health Regulations. The contractor shall obtain and pay for a community noise permit from the State Department of Health when equipment or other devices emit noise at levels exceeding the allowable limits.
3. Equipment shall be equipped with suitable mufflers to maintain noise within levels complying with applicable regulations.
4. Starting of equipment meeting allowable noise limits shall not be done prior to 6:00 a.m. without prior approval. Equipment exceeding allowable noise limits shall not be started up prior to 7:30 a.m. Equipment meeting allowable noise limits shall not be done after 9:00 p.m. without prior approval.
5. Equipment located offshore of the coastline may utilize nighttime hours as determined through coordination with the local landowners.
6. Make the maximum use of low-noise-emission products, as certified by the EPA.



## **Dust Control**

1. The Contractor, for the duration of the contract, shall maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, and all other work areas within or without the project limits free from dust which would cause a hazard to the work, or the operations of other contractors, or to persons or property in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60 - Air Pollution Control. Industry accepted methods of stabilization suitable for the area involved, such as sprinkling or similar methods will be permitted. Chemicals or oil treating shall not be used.

## **Air Pollution Control**

1. Emission: The Contractor shall not be allowed to operate equipment and vehicles that show excessive emissions of exhaust gases until corrective repairs or adjustments are made.

## **Operational Controls**

1. This plan will be reviewed with the project field staff prior to the start of work.
2. All activities significantly impacting the environment will not begin until appropriate BMP's are properly installed.
3. Construction will be immediately stopped, reduced or modified; and/or new or revised BMP's will be immediately implemented as needed to stop or prevent polluted discharges to receiving waters. New or revised BMP's will be approved by appropriate regulatory agencies prior to re-commencing work.
4. The Contractor is responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. Submit copies of all regulatory notifications to the Contracting Officer prior to the commencement of work activities.
5. The Contractor is responsible for meeting all permit requirements and including how they will be addressed in the work plans. The Contractor will provide the personnel, materials, and equipment necessary to meet the permit requirements for the project.
6. The contractor shall coordinate their haul route, staging area, and all associated requirements, such as use permits, with the contracting officer and the affected landowners.
7. The contractor shall take extreme care in performing work near existing concrete electrical/communication ducts and overhead wires. Appropriate protection shall be implemented as required to prevent damage to those lines.
8. All existing utilities, concrete walkways, steps, and walls, whether or not shown on the drawings, shall be protected from damage at all times during construction and grading work. Any damages to them shall be repaired by the contractor at his expense.

9. The contractor shall provide for access to and from all existing driveways and walkways at all times.

### **Structure, Authority, and Responsibility**

1. The Project Manager/Superintendent/Project Engineer will ensure compliance with this plan.
2. The Project Manager/Superintendent/Project Engineer will appoint and train one (1) additional individual to properly install all BMP's and to comply with all aspects of this plan.
3. The Project Sponsors are also responsible for compliance to the BMPP.

### **Training**

1. Employees will be instructed in the proper installation of the BMPP materials. Documentation of this training and personnel who were present will go in an Environmental Records binder that will be kept on site.
2. Employees will be instructed on the contents of the Emergency Action Plan. Documentation of this training and personnel who were present will go in the Environmental Records binder.
3. Employees will be instructed on Marine Protected Species BMPs. Documentation of this training and personnel who were present will go in the Environmental Records binder.
4. BMP's will be discussed, as applicable, for each new phase of work. Documentation of these meetings will go in the Environmental Records binder.

### **Health and Safety Plan**

1. Contractor shall comply with Federal and State of Hawaii safety and health regulations.
2. Areas of operation upon the shoreline will be clearly marked with fencing, barricades, caution tape, or other approved devices, to protect the public from the hazards of construction.
3. All work areas will have posted signs advising the public of current construction activities and related hazard warnings and be patrolled by project staff as needed to ensure that members of the public do not enter the project area.
4. Crossing guards will be provided by the Contractor to assist the public with transiting safely across the beach.
5. Project implementation will not interfere with the public's right to reasonable navigation.

6. Public access along the shoreline during construction shall be maintained so far as practicable and within the limitations necessary to ensure safety.
7. The contractor is responsible for safety at the job site.
8. Fire department fire lanes, access to all laydown areas and construction areas shall be maintained at all times. Emergency vehicles shall always have access. Do not block egress.

### **Inspection and Monitoring**

1. The Project Manager/Superintendent/Project Engineer or the assigned trained individual will conduct a visual inspection of all BMPP's daily.
2. All minor repairs and maintenance of the BMP's will be completed within 48 hours of detection. Major repairs of BMP's shall be completed as soon as practical, and in-water work shall be stopped until repairs are complete.
3. If any BMPP is damaged, work will immediately be stopped and shall not resume until repairs to the BMPP have been completed.

### **Emergency Procedures**

1. Natural disaster-related pollutant discharge: See Contingency Plan
2. Spill prevention and control: See Emergency Spill Response Plan.
3. An Emergency Action Plan shall be kept on site and updated for use in other types of emergencies. The Emergency Action Plan should be given to all project managers during the kick-off meeting.

### **Record Keeping and Documentation**

1. An Environmental Records binder will be kept on site. This binder shall contain a copy of this plan, BMP inspection reports (Exhibit A of this BMPP), all permit approvals, water quality monitoring records, training records, design drawings, a marked up version of the design drawings showing any deviations from the plan, and a contact information list. The binder shall be updated daily and the contents should be scanned and stored digitally offsite as a backup whenever possible.
2. The Environmental Records binder shall be maintained by the Environmental Manager.
3. The Environmental Records binder and Emergency Action Plan shall be made available to any inspector who visits the site.
4. Records of inspection and repair of control measures will be retained in the project files for a minimum of five years.

5. In addition to other records required under the contract, the Contractor shall maintain at the job site two sets of full-size drawings, marking them in red to show all variations between the construction actually provided and that indicated or specified in the contract documents, including buried or concealed construction. Where a choice of materials or methods is permitted herein, or where variations in scope or character of work differ from that of the original contract are authorized, mark the drawings to define the construction actually provided. Show on the drawings the size, manufacturer's name, model number, and power input or output characteristics of the equipment installed. The representations of such changes shall conform to standard drafting practice and shall include such supplementary notes, legends, and details as necessary to clearly portray the as-built construction. Update drawings on a daily basis.
6. Submit a copy of the designated personnel and their contact information to all permitting agencies after the kick-off meeting. If any changes are made to the personnel list, submit an addendum to the agencies. The necessary personnel list to be designated is given in Exhibit D.
7. Topographic surveys should be conducted before and after sand placement to document the material that was added to beach.

### **Suspension of Work**

1. Violations of any of the above requirements or any other pollution control requirements which may be specified in the Technical Specifications herein shall be cause for suspension of the work creating such violation. No additional compensation shall be due to the Contractor for remedial measures to correct the offense. Also, no extension of time will be granted for delays caused by such suspensions.
2. If no corrective action is taken by the Contractor within 72 hours after a suspension is ordered by the Owner, the Owner reserves the right to take whatever action is necessary to correct the situation and to deduct all cost incurred by the Owner in taking such action from monies due to the Contractor.
3. The Project Sponsors may also suspend any operations which they feel are creating pollution problems although they may not be in violation of the above-mentioned requirements. In this instance, the work shall be done by force account.

## Contingency Plan

The following plan will be implemented by the Contractor to prevent/respond to polluted discharges resulting from a severe storm or natural disaster. It is the Contractor's responsibility to abide by the following plan as well as any other binding plan, agreement, regulation, rule, law, or ordinance applicable.

All contractors associated with the following construction project, Kā'anapali Beach Restoration and Berm Enhancement, will follow this plan when a severe storm is either forecast or anticipated. Contractors must:

- a. Regularly monitor local weather reports for forecasted and/or anticipated severe storm events, advisories, watches, warnings or alerts. The contractor shall inspect and document the condition of all erosion control measures on that day prior, during, and after the event. The contractor shall prepare for forecasted and/or anticipated severe weather events to minimize the potential for polluted discharges.
- b. Secure the construction site. Securing the site should generally include:
  - i. Removing or securing equipment, machinery, and maintenance materials.
  - ii. Cleaning up all maintenance debris.
  - iii. Implementing all Best Management Practices (BMPs) detailed in this BMPP. This includes BMPs for materials management, spill prevention, and erosion and sediment control.
- c. In the event of a severe weather advisory (hurricanes, tropical storms, natural disasters) or when deemed necessary, cease regular construction operations. Work crews must finalize securing the project site, and evacuate until the severe weather condition has passed.
- d. Upon return to the site, all BMPs shall be inspected, repaired, and/or re-installed as needed. If repair is necessary, it shall be initiated immediately after the inspection and repairs or replacement will be completed within 48 hours. To facilitate repair or replacement, the contractor will be required to store surplus material on the project site if the site is located where replacement materials will not be readily available.
- e. When there either has been a discharge which violates Hawaii Water Pollution rules and regulations or there is an imminent threat of a discharge which violates Hawaii Water Pollution rules and regulations and/or endangers human and/or environmental health, the permittee shall at a minimum execute the following steps:
  - i. Assess whether construction needs to stop or if additional BMPs are needed to stop or prevent a violation.
  - ii. Take all reasonable measures to protect human and environmental health.
  - iii. Immediately notify the DOH of the incident. The notification shall also include the identity of the pollutant sources and the implemented control or mitigation measures.
    1. Department of Health Clean Water Branch (during regular working hours): 808-586-4309;
    2. Hawaii State Hospital Operator (after hours): 808-247-2191
  - iv. Document corrective actions, take photographs of discharge and receiving waters.
  - v. Revise BMPP to prevent future discharges of a similar nature.

## Emergency Spill Response Plan

### Pre-Emergency Planning

- a. An initial and periodic assessment shall be made of the project site and potential hazardous spills that may be encountered during the normal course of work. This plan is not intended to address issues relating to materials such as PCB, Lead, Asbestos, etc., since these types of materials would have specific work plans already developed. This plan should be revised as necessary to correspond to the assessment and resubmitted to the appropriate regulatory agencies.
- b. A Hazardous Materials inventory list and MSDS sheets, to include subcontractors' materials, will be filed in a binder and located in the Project Office. The inventory list and MSDS sheets will be updated and maintained by the Project Manager and site safety officer as new materials are added.
- c. Personnel will consult the applicable MSDS sheet prior to its use.
- d. Personnel will handle hazardous materials safely and use personal protective equipment (PPE), recommended/required by the MSDS, when handling hazardous materials.
- e. Personnel will receive "Hazard Communication" training within three (3) working days of arrival and "product specific" training prior to the initial use/exposure of a product. This training will be conducted by the Project Manager/Superintendent or site safety officer.
- f. All personnel will be trained on the contents of this plan within the first month of maintenance and at least annually thereafter. The training should include a rehearsal of this plan. An attendance sheet will be kept on file at the Project Office.
- g. Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved safety cans or DOT approved containers shall be used for the handling and use of flammable liquids in quantities of five (5) gallons or less. For quantities of one (1) gallon or less, only the original container or approved metal safety can shall be used, for storage, use and handling of flammable liquids.
- h. Flammable or combustible liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of people.

### Personal Protective and Emergency Spill Response Equipment

- a. ABC fire extinguishers will be located in the project field office and in each of the company vehicles. There will be at least one fire extinguisher, rated at not less than 10B, within 50 feet of any stockpile of 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas storage.

**NOTE: Fire extinguishers should not be located "directly" with hazardous materials, so as to endanger first responders.**

- b. Spill kits will be located at the project field office and/or within 50 feet of the hazardous material storage area. The spill kit contents shall be determined by the Project Manager/Superintendent based on the anticipated hazardous materials to be stored and/or used on the project. The spill kits will be inventoried quarterly and appropriate logbook entries made.
- c. Emergency response personal protective equipment (PPE) consists of:

- i. Face shield
- ii. Tyvex coveralls
- iii. Rubber gloves
- iv. Air-purifying respirators with HEPA and organic vapor combination cartridges will be issued to the Emergency Response Team members and maintained in the project office. Separate Respiratory Protection Equipment shall be designated and labeled as such; this equipment will be inspected at least every 30 calendar days and appropriate logbook entries made.

#### Personnel Roles, Lines of Authority and Communication

- a. Emergency Response Coordinator (ERC)
  - i. The Project Superintendent is the designated ERC. If the Project Superintendent is not available, the safety officer is the designated ERC.
  - ii. The ERC will be in charge of and will coordinate the appropriate emergency response procedures in this plan.
- b. Emergency Response Team (ERT)
  - i. The ERT consists of Construction General Foreman, Labor Foreman, and a Laborer designated by the Project Superintendent.
  - ii. The ERT will appropriately respond to the emergency in accordance with this plan at the direction of the ERC.

#### Emergency Alerting and Response Procedures

- a. Any person causing or discovering a known hazardous or unknown release or spill will:
  - i. Immediately alert nearby personnel who may be exposed to the effects of the release or spill.
  - ii. Report the release or spill immediately to the ERC and the ERT. All pertinent information regarding the release should be provided to the ERC, such as the amount and type of material released, location of the release, and other factors, which may affect the response operation.
  - iii. If the spill or release is a petroleum product or known non-toxic chemical, the person will take immediate and appropriate measures to stop or limit the rate of release, (i.e., close the spigot to the drum or form oil or curing compound) and or contain or stop the migration of the release (i.e., create a berm of dirt around the release) until the ERC and ERT arrive.
  - iv. If the spill release is a toxic, highly flammable, or unknown chemical, the person will first notify the ERC before approaching the spill area from upwind to determine the source, type, and quantity of the release. The person should monitor the spill until the ERC and ERT arrive.
  - v. The ERC will assess possible hazards to human health or the environment that may result from the release, fire, or explosion.
  - vi. If the spill or release is less than 25 gallons of a known petroleum product or non-toxic chemical, the ERC will direct the ERT to contain and cleanup the spill or release.
  - vii. If the spill or release is toxic or unknown, the ERC will immediately notify the County of Maui Fire Department and ask for assistance from the HAZMAT Response Team.

- viii. Immediately after the emergency, the ERC will arrange for disposing of the recovered waste, contaminated soil or any other material that results from the release, fire, or explosion at the project site in accordance with the County of Maui and State regulations and manufacturer's instructions (if source of spill or release is known).

#### Emergency Notification and Reporting Procedures

- a. In the event that a release enters the storm or sewer system, the ERC will immediately notify the National Response Center (NRC) at 1-800-424-8802, and the Hawaii Department of Health, Hazard Evaluation and Emergency Response Office (HEER) at 808-586-4249.
- b. The ERC will immediately notify appropriate agencies and submit written follow-up notification in accordance with the Hazardous Substance Release Notification Guideline.

#### Safe Distance Staging Area

- a. A staging area at a safe distance upwind and higher than the location of the spill or release and its source will be immediately established.
- b. Access to the spill or release location will be cleared for emergency vehicles and equipment to be used to contain and clean up the spill or release.

#### Site Security and Control

- a. If the spill or release is located on or near the roadway, stop all traffic until the release is cleaned up.
- b. If the spill or release is located away from vehicle or pedestrian traffic, install barricades/safety fencing around the affected area.
- c. If the spill or release occurs during night operations, provide adequate light and use ground guides to escort emergency vehicles to the affected area.

#### Evacuation Routes and Procedures

- a. Persons injured during the emergency condition will be evacuated to the staging area where they will be treated and or further evacuated to the nearest medical facility. The appropriate MSDS(s) will be provided to emergency service personnel and are intended to be delivered to the emergency room physicians.
- b. Persons working at the affected area and who are not needed in the response effort will report to the staging areas for accountability.

#### Decontamination and Disposal Procedures

- a. Persons involved in the spill clean-up are required to perform personal hygiene, utilizing soap and fresh water prior to eating, drinking, or smoking.
- b. Contaminated PPE shall be appropriately cleaned and disinfected if possible. If this is not possible it shall be disposed of per the same requirements of the contaminated substance.
- c. Sorbent pads/materials and the spilled substance will be placed in appropriate containers and disposed of as specified by the appropriate MSDS.



- d. Contaminated soil will be placed in an appropriate container(s) or on plastic sheeting. The ERC will arrange with an environmental services company to properly characterize, prepare the manifest, label the containers, transport, and dispose of the contaminated soil. The generator's copy of the manifest will be kept in the project files for a minimum of three (3) years.
- e. In the event of a substantial release (25 gallons or more) of a suspected or known toxic chemical, the Fire Department HAZMAT Response Team will be called to control/cleanup the release. They will establish and provide the decontamination operations as required.

#### Emergency Medical Treatment and First Aid

- a. First aid kits will be maintained at the project field office, all company vehicles, and gang boxes.
- b. Injured person(s) will be treated at the staging area by a certified first aid trained individual at the project site until the ambulance arrives or they are evacuated to the nearest medical facility.
- c. The appropriate MSDS(s) will be provided to emergency service personnel and are intended to be delivered to the emergency room physicians.

#### After the Spill Procedures

- a. The ERC will review what happened and implement changes, corrections, and/or improvements to prevent the spill from occurring and to improve the spill response and clean-up procedures. This plan will be revised to reflect those changes, corrections, and/or improvements implemented.
- b. The ERC will prepare a record of the spill response and keep it in the project files for a minimum of three (3) years.
- c. The ERC will submit Follow-up Notification to HEER when required.
- d. Spill response kits shall be replenished directly after the emergency.

## Emergency Contacts

National Response Center (NRC)	<i>1-800-424-8802</i>
Coast Guard Station Maui	
(working hours)	<i>1-808-986-0023</i>
(after hours)	<i>1-808-927-0830</i>
Hawaii State Department of Health	
Hawaii Evaluation and Emergency Response (HEER)	<i>1-808-586-4249</i>
State Historic Preservation Division	<i>1-808-692-8015</i>
Maui Fire Department	<i>911</i>
DLNR Office of Conservation and Coastal Lands	<i>1-808-587-0377</i>
DLNR Engineering Division	<i>1-808-587-0230</i>
<i>(name)</i> , Contactor Project Manager, <i>(company)</i>	<i>TBD</i>

In the event that a release enters the storm or sewer system, the ERC will immediately notify NRC and HEER at the numbers listed above.

**ATTACHMENTS:**

**Exhibit A**

**INSPECTION AND MAINTENANCE REPORT FORM**

**KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT**

LĀHAINĀ, MAUI, HAWAII

SEAWARD OF TMK’S

(2) 4-4-013:007

(2) 4-4-013:006

(2) 4-4-013:008

(2) 4-4-013:013

(2) 4-4-013:002

(2) 4-4-013:001

(2) 4-4-008:022

(2) 4-4-008:019

(2) 4-4-008:001

(2) 4-4-008:002

(2) 4-4-008:003

(2) 4-4-008:005

APRIL 18, 2022

**Best Management Practice Plan (BMPP)**  
**Inspection and Maintenance Report Form**

Report No. \_\_\_\_\_ Weather: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Activities: \_\_\_\_\_

Type of Report: ☐ Daily ☐ Weekly ☐ Other: \_\_\_\_\_

IN-WATER CONFINEMENT MEASURES:	YES	NO	N/A
Are silt curtains deployed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are stakes placed in correct locations and orientation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are joints between curtain segments securely connected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is turbidity apparent outside of the silt curtains?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the turbidity values at the IDU exceed the thresholds?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the control measures adequate to prevent water and/or sediment from being discharged into the ocean?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN-WATER CONFINEMENT MEASURES REQUIRED:			

-----  
Performed by: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

PROTECTION AROUND CRITICAL AREAS:	YES	NO	N/A
Is there someone on-site during construction to monitor for endangered species?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did the on-site observer observe any protected and/or endangered species (i.e. green sea turtle, hawksbill sea turtle, Hawaiian Monk seal, etc.) prior to start of work? Time and Description: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If protected and endangered species present, were photographs taken to assist with identification of the protected and endangered species?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If protected and endangered species present, was work ceased until the species voluntarily left the project site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If protected and endangered species present, were any agencies notified of the species? If yes, agency: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have any historic properties been identified in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROTECTION OF CRITICAL AREAS REQUIRED:			

-----  
Performed by: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

HOUSEKEEPING:	YES	NO	N/A
Are areas kept clean of rubbish, construction debris, spills, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is waste frequently vacuumed/cleaned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSEKEEPING REQUIRED:			

-----  
Performed by: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**MATERIAL/WASTE MANAGEMENT:**

Are materials stored under shelter or covered and above ground?  
Are flammable/reactive materials stored properly?  
Are material containers in good condition (not rusted, damaged or leaking)?  
Are all construction debris collected and placed daily in the covered dumpster?

YES	NO	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CORRECTIVE MEASURES REQUIRED:**

-----  
Performed by: \_\_\_\_\_ Date: \_\_/\_\_/\_\_

**VEHICLE AND EQUIPMENT MANAGEMENT:**

Are vehicles and equipment cleaned before being brought on-site?  
Is equipment fueled away from any drain or the shoreline?  
Are spill cleanup materials readily accessible?  
Is all equipment leak free or if leaking, a spill pan placed to catch the leaks?

YES	NO	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CORRECTIVE MEASURES REQUIRED:**

-----  
Performed by: \_\_\_\_\_ Date: \_\_/\_\_/\_\_

**PUBLIC PROTECTION:**

Are protective measures installed around the work site to prevent pedestrians from entering?  
Are there signs informing the public of the project activities?

YES	NO	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**MAINTENANCE PUBLIC PROTECTION REQUIRED:**

-----  
Performed by: \_\_\_\_\_ Date: \_\_/\_\_/\_\_

Photographs shall be date stamped and attached to the applicable Report Form.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Inspected by: \_\_\_\_\_ Title: \_\_\_\_\_

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

# **Exhibit B**

## **Pac-SLOPES GENERAL CONDITIONS**

**As Applicable**

**KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT**

**LĀHAINĀ, MAUI, HAWAII**

**SEAWARD OF TMK’S**

(2) 4-4-013:007

(2) 4-4-013:006

(2) 4-4-013:008

(2) 4-4-013:013

(2) 4-4-013:002

(2) 4-4-013:001

(2) 4-4-008:022

(2) 4-4-008:019

(2) 4-4-008:001

(2) 4-4-008:002

(2) 4-4-008:003

(2) 4-4-008:005

# **Exhibit C**

## **Pac-SLOPES SPECIAL CONDITIONS**

**As Applicable**

### **KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT**

**LĀHAINĀ, MAUI, HAWAII**

**SEAWARD OF TMK’S**

(2) 4-4-013:007

(2) 4-4-013:006

(2) 4-4-013:008

(2) 4-4-013:013

(2) 4-4-013:002

(2) 4-4-013:001

(2) 4-4-008:022

(2) 4-4-008:019

(2) 4-4-008:001

(2) 4-4-008:002

(2) 4-4-008:003

(2) 4-4-008:005

# **Exhibit D**

## **DESIGNATED PERSONNEL**

### **KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT**

LĀHAINĀ, MAUI, HAWAII

SEAWARD OF TMK’S

(2) 4-4-013:007

(2) 4-4-013:006

(2) 4-4-013:008

(2) 4-4-013:013

(2) 4-4-013:002

(2) 4-4-013:001

(2) 4-4-008:022

(2) 4-4-008:019

(2) 4-4-008:001

(2) 4-4-008:002

(2) 4-4-008:003

(2) 4-4-008:005

APRIL 18, 2022



## PROJECT MANAGER DESCRIPTION

### ENVIRONMENTAL MANAGER

Appoint in writing an Environmental Manager for the project site. The Environmental Manager is directly responsible for coordinating contractor compliance with federal, state, local, and installation requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the EPP; ensure environmental permits are obtained, maintained, and closed out; ensure compliance with Stormwater Program requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position; however, the person in this position must be trained to adequately accomplish the following duties: ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out. Submit Environmental Manager Qualifications to the Contracting Officer.

# **BMPP Exhibit E**

## **BEACH PROFILES**

### **KĀ‘ANAPALI BEACH RESTORATION AND BERM ENHANCEMENT**

LĀHAINĀ, MAUI, HAWAII

SEAWARD OF TMK’S

(2) 4-4-013:007

(2) 4-4-013:006

(2) 4-4-013:008

(2) 4-4-013:013

(2) 4-4-013:002

(2) 4-4-013:001

(2) 4-4-008:022

(2) 4-4-008:019

(2) 4-4-008:001

(2) 4-4-008:002

(2) 4-4-008:003

(2) 4-4-008:005

A series of 13 beach profile elevations will be measured before sand placement work begins to determine baseline pre-construction conditions. The profiles will be performed by measuring the land along a transect perpendicular to the shoreline and may extend as far shoreward or seaward as necessary to capture specific project features. For this project, the profiles will extend from the Kā'anapali Beachwalk to a seaward point past the intersection of the beach slope with the existing natural sea bottom. These profiles will be collocated with the profile locations established during the project planning and investigation efforts. The profiles will be measured using standard survey equipment and techniques. The profiles will be plotted, and a summary and discussion of the results will be prepared following each survey.

1. Six (6) profiles within the HLC
2. One (1) profile at Hanaka'ō'ō Point
3. Five (5) profiles within the KLC
4. One (1) profiles on the north side of Pu'u Keka'a
5. Additional profile locations or measurement times may be added as deemed warranted by the project coastal engineer in order to more fully measure the performance of the project, e.g., should an atypical or unusual shoreline formation or change occur or should changes occur more rapidly than anticipated.

The locations of the 13 profiles used during the project planning and investigation efforts is given below.



**Beach Profile Locations**

### Profile K1

This profile is within Hanaka‘ō‘ō Beach Park. The landward end of this profile is at a mag nail located on shower pad near street at intersection of expansion joints; the apex of mauka most triangle on north side of curve around "Plantation Pioneers" placard. The coordinates of the landward end of the profile in State Plane, HI Zone 2, US survey feet are:

X	1632593.464
Y	209838.264
Z	12.008

### Profile K2

The landward end of this profile is a mag nail on mauka side of expansion joint on the Kā‘anapali Beachwalk; joint is the second from the 3rd bench from the beach access at the north end of the backshore bridge. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1631787.821
Y	210177.635
Z	11.142

### Profile K3

The landward end of this profile is a "Y" cut in grout near seaward edge of lounge chair line; seaward of rope swing bridge over kiddie pool area (north of Grotto Bar); south side of middle (of 3) cocount trees in area. The coordinates of the "Y" in State Plane, HI Zone 2, US survey feet are:

X	1631375.276
Y	210474.628
Z	11.183

### Profile K4

The landward end of this profile is a "+" cut in flagstone path, on NW edge of walkway from green turf to beachwalk, just over 6' mauka of the beachwalk. The coordinates of the "+" in State Plane, HI Zone 2, US survey feet are:

X	1630968.033
Y	210793.161
Z	9.625

### Profile K5

The landward end of this profile is a mag nail on mauka side of expansion joint in the Kā'anapali beachwalk, mauka of sandy beach access path. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1630668.033
Y	211127.516
Z	10.41

### Profile K6

The landward end of this profile is at the intersection of expansion joint and mauka edge of Kā'anapali beachwalk, next to flagstone. The coordinates of the intersection in State Plane, HI Zone 2, US survey feet are:

X	1630355.201
Y	211587.532
Z	9.873

### Profile K7

The landward end of this profile is a mag nail on mauka side of expansion joint on the Kā'anapali beachwalk that is in line with northern face of the Marriott building. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1630267.743
Y	212121.15
Z	11.057

### Profile K8

The landward end of this profile is a mag nail on mauka side of expansion joint on the Kā'anapali beachwalk that is in line with northern face of the Kā'anapali Alii's northernmost building. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1630347.662
Y	212713.08
Z	11.491

### Profile K9

The landward end of this profile is a mag nail on mauka side of off-color expansion joint on the

Kā'anapali beachwalk; joint is makai of beach services tent and coral reef info placard. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1630393.187
Y	213139.184
Z	12.824

#### Profile K10

The landward end of this profile is a mag nail on mauka side of expansion joint on the Kā'anapali beachwalk; joint is near the south end of the pool deck of the Aston Kaapanali Shores and end of main sticker hedge, 1 joint north of the pool access path. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1630625.661
Y	214092.293
Z	11.205

#### Profile K11

The landward end of this profile is a mag nail on mauka side of expansion joint on the Kā'anapali beachwalk; joint is in line with north side of Kā'anapali Beach Hotel building. The coordinates of the mag nail in State Plane, HI Zone 2, US survey feet are:

X	1630782.688
Y	214846.085
Z	10.375

#### Profile K12

The landward end of this profile is a triangular grout point, facing south between mauka end of seat wall (4.8') and shower (9.4'). The coordinates of the grout point in State Plane, HI Zone 2, US survey feet are:

X	1630573.257
Y	215595.663
Z	10.768

#### Profile K13

The landward end of this profile is a mag nail on south corner of golf path intersection with beach path, mauka side of beach path near manhole cover. The coordinates of the grout point in State Plane, HI Zone 2, US survey feet are:

X	1631299.45
Y	216678.402
Z	12.623



## SECTION 01581

### PROJECT SIGN

#### PART 1 – GENERAL

##### 1.1 GENERAL REQUIREMENTS

Furnish all labor, materials and equipment necessary to construct and install all project sign as specified hereinafter.

##### 1.2 SUBMITTAL

The contractor shall provide the Engineer with six (6) shop drawings of the project sign for review and approval by the Engineer prior to ordering the sign.

##### 1.3 LETTER STYLE

Copy is centered and set in Adobe Type Futura Heavy. If this specific type is not available, Futura Demi Bold may be substituted. Copy should be set and spaced by a professional typesetter and enlarged photographically for photo stencil screen process.

##### 1.4 ART WORK

Constant elements of the sign layout - frame, outline, stripe, and official state information - may be duplicated following drawing measurements, or be reproduced and enlarged photographically using a layout template if provided. The "STATE OF HAWAII" masthead should be reproduced and enlarged as specified, using the artwork provided.

##### 1.5 TITLES

The specific major work of the project under construction is emphasized by using 3-3/4" type, all capitals. Secondary information such as location or buildings uses 2-1/4" type, all capitals. Other related information of lesser importance uses letter heights as indicated on 01581-3, upper / lower case letters.

Design should follow the example on page 01581-3.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

#### A. LUMBER

1. Panel is 3/4" exterior grade high density overlaid plywood, with resin-bonded surfaces on both sides.
2. 4"x4" sign posts shall be Douglas Fir No. 1 or better.

#### B. PAINTS & INKS

Screen print inks are matte finish. Paints are satin finish, exterior grade. References to Ameritone Color Key Paint are for color match only.

COLOR:	1.	1BL10A	Bohemian Blue
	2.	2H16P	Softly (White)
	3.	2VR2A	Hot Tango (Red)
	4.	1M52E	Tokay (Gray)

#### C. CONCRETE

Concrete shall be class B with a 2,500 psi 28-day compressive strength.

## PART 3 - EXECUTION

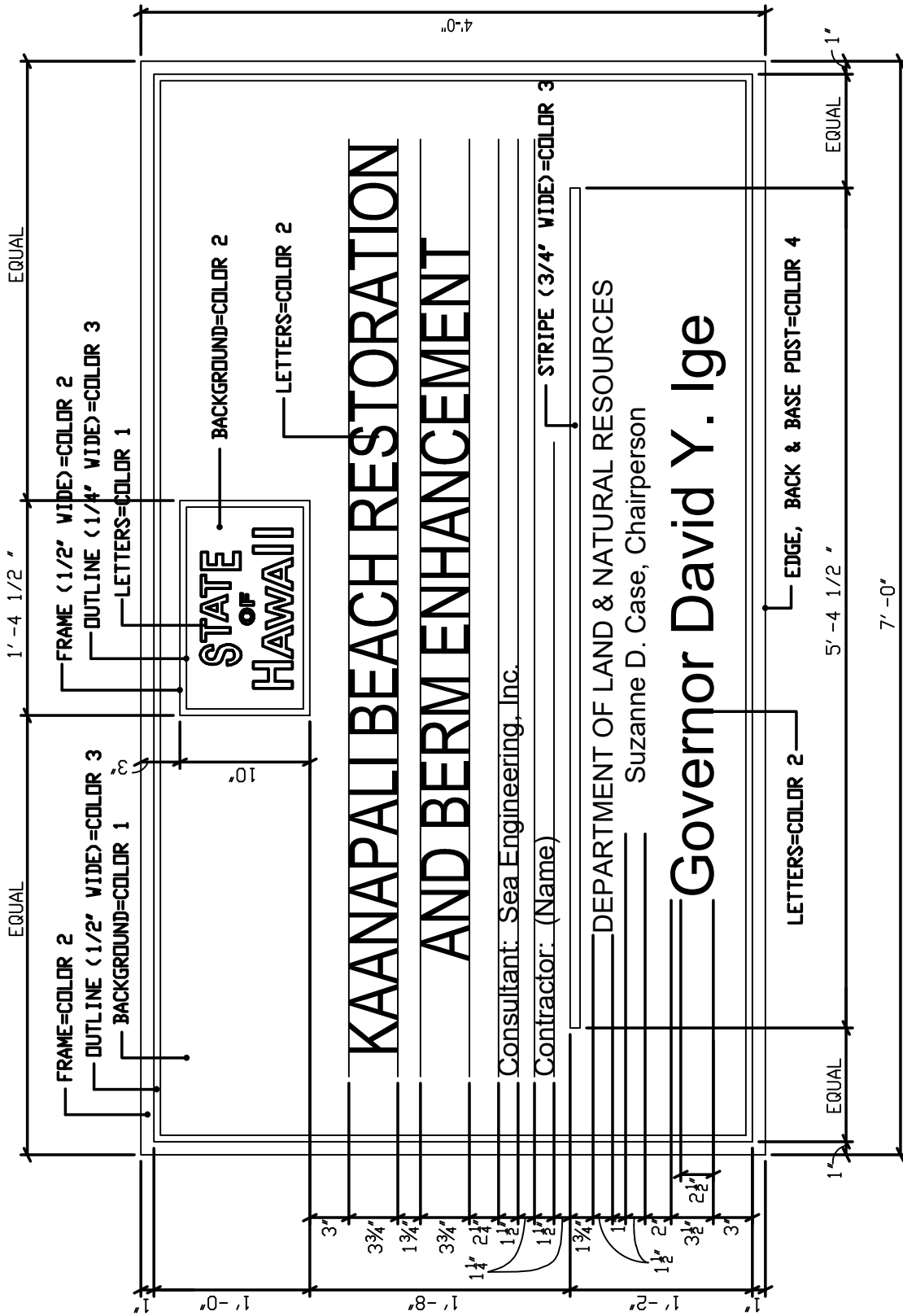
### 3.1 GENERAL

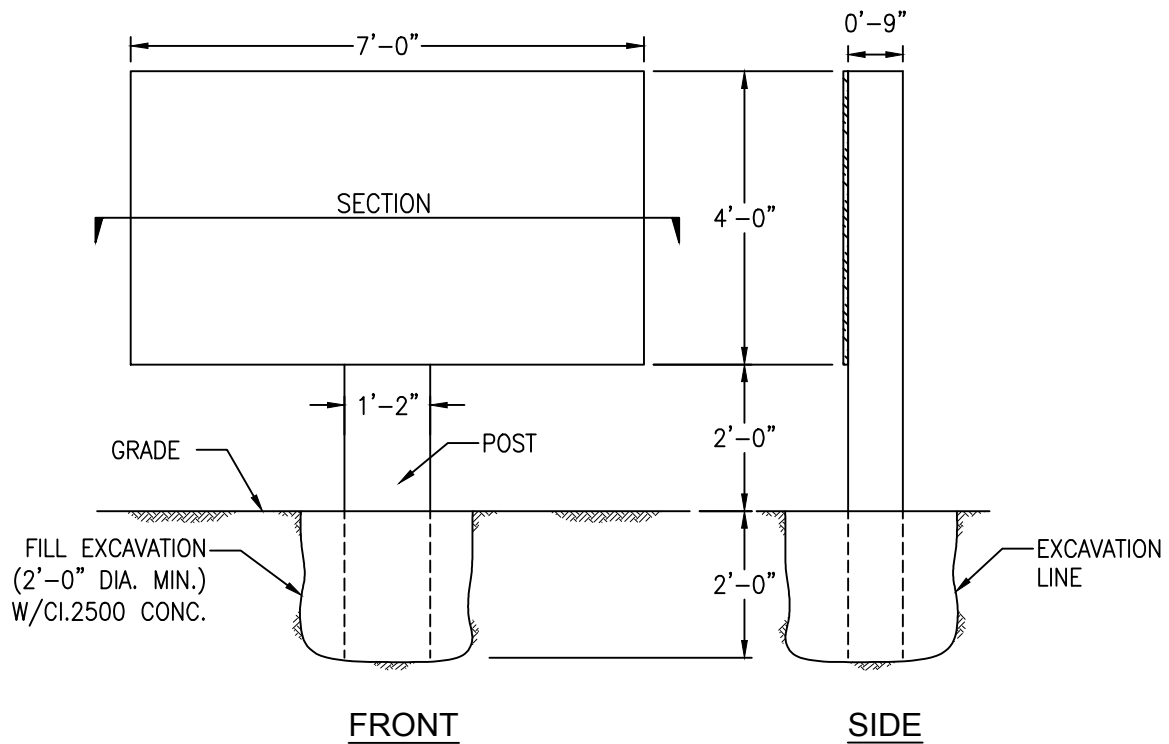
- A. The Project Sign shall be constructed with new materials as specified above.
- B. The Project sign shall be installed at the location indicated on the drawings or as designated by the Engineer. The project sign shall be erected upon commencement of work.

### 3.2 MEASUREMENTS AND PAYMENT

The construction of the project sign, including all equipment, labor and material necessary to furnish and install the project sign will be paid for under the "Project Sign" proposal item.

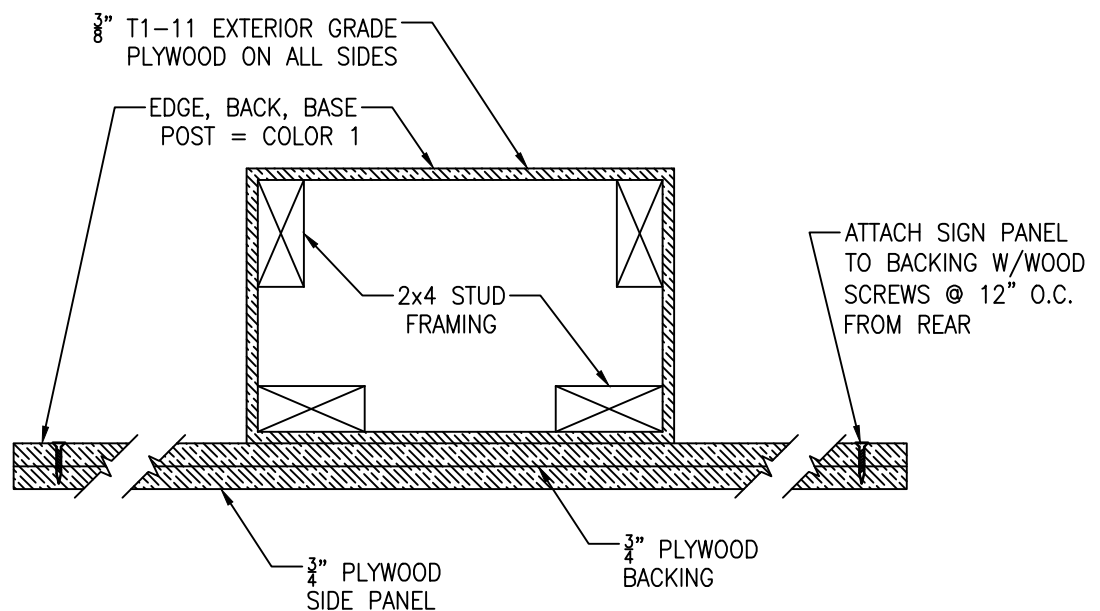
END OF SECTION





## ELEVATIONS

NOT TO SCALE



## SECTION

NOT TO SCALE

Project Sign  
01581-4

## SECTION 02100

### SITE PREPARATION

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS

The work to be performed under this section shall include clearing the premises of all obstacles and obstructions, the removal of which will be necessary for the proper reception, construction, execution and completion of the other work included in this contract.

##### 1.2 COORDINATION WITH OTHER SECTIONS

- A. Earthwork is specified in Section 02200 - EARTHWORK.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION

##### 3.1 GENERAL

- A. Maintenance of Traffic: The Contractor shall conduct operations with minimum interference to streets, driveways, sidewalks, passageways, etc. Approved access routes are shown on the PLANS. Operations affecting traffic shall be coordinated with the State of Hawaii Department of Transportation, County of Maui Department of Transportation, and other departments as necessary.

When necessary, the Contractor shall provide and erect barriers, signage, etc., with special attention to protection of personnel and the public. A safety fence shall completely surround the work area(s) to control access and protect public safety.

- B. Protection: Throughout the progress of the work protection shall be provided for all property and equipment, and temporary barricades shall be provided as necessary. Work shall be done in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, and the State of Hawaii's Occupational Safety and Health Standards, Rules and Regulations.
- C. Fires: No burning of fires of any kind will be allowed.
- D. Reference Points: Benchmarks, etc., shall be carefully maintained, but if disturbed or destroyed, shall be replaced as directed, at the Contractor's expense.
- E. The Contractor shall protect from damage all improvements, including but not limited to roads, curbs, sidewalks, walls, and foundations. Any damage to existing improvements shall be repaired or replaced by the Contractor to the satisfaction of the Engineer.
- F. The Contractor shall protect from injury and damage all surrounding trees, plants, etc., and

shall leave all in as good a condition as at present. Any damage to existing trees, plants, etc., shall be repaired or replaced by the Contractor to the satisfaction of the Engineer.

- G. Disposal: All materials resultant from operations under this Section shall become the property of the Contractor and shall be removed from the site. Loads of materials shall be trimmed to prevent droppings.

### 3.2 EXISTING UTILITY LINES

- A. The existence of active underground utility lines within the construction area is not definitely known other than those indicated in their approximate locations on the PLANS. Should any unknown line be encountered during excavation, the Contractor shall immediately notify the Engineer of such discovery. The Engineer shall then investigate and issue instructions for the preservation or disposition of the unknown line. Authorization for extra work shall be issued by the Engineer only as he deems necessary.

### 3.3 CLEAN UP OF PREMISES

- A. Clean up and remove all debris accumulated from construction operations from time-to-time as necessary. Upon completion of the construction work and before final acceptance of the contract work, remove all surplus materials, equipment, etc., and leave entire job site raked clean and neat to the satisfaction of the Engineer.

END OF SECTION

## SECTION 02200

### EARTHWORK

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS

This section covers the requirements for earthwork.

- A. It shall be the responsibility of the Contractor to examine the project site and determine for himself the existing conditions.
- B. Obvious conditions of the site existing on the date of the bid opening shall be accepted as part of the work, even though they may not be clearly indicated on the PLANS and/or described herein or may vary therefrom.
- C. All debris of any kind accumulated from clearing shall be disposed of from the site, and the whole area left clean. The Contractor shall be required to make all necessary arrangements relative to the proposed place of disposal.

##### 1.2 REMOVAL AND REPAIR WORK

- A. General

The Contractor shall exercise every precaution to preserve and protect all structures, walkways or utility improvements which are to remain or be relocated. Portions of walkway and pavement which are to remain shall be saw cut neat and true to line. Restore all pavement and curbs upon completion of the work.

##### 1.3 SEQUENCE OF WORK

All sequence of work shall be subject to the approval of the Engineer.

##### 1.4 PROTECTION

- A. Barricade: Erect temporary barricade and/or safety fence to prevent people from entering into project area, to the extent as approved by the Engineer. Such barricade shall be as defined in Section 01530 - BARRICADES. The extent of barricades may be adjusted as necessary with the approval of the Engineer. This work shall be accomplished at no extra cost to the State of Hawaii.
- B. Take all precautions and safety measures as required to protect the State of Hawaii free and harmless from liability of any kind. Conduct operations with minimum interference to streets, driveways, sidewalks passages, etc.
- C. Adequate precautions shall be taken before commencing and during the course of the work to ensure the protection of life, limb, and property.

- D. The Contractor shall protect from damage all surrounding structures, trees, plants, grass, walks, pavements, etc. Any damage will be repaired or replaced by the Contractor to the satisfaction of the Engineer at no cost to the State.

#### 1.5 PERMITS

Necessary Federal and State permits for construction of the project have been obtained by the State. The Contractor shall adhere to all permit requirements and conditions. Any additional local permit requirements, such as for temporary road closure, are the responsibility of the Contractor. The Contractor shall obtain and pay for all necessary additional permits prior to the commencement of work.

#### 1.6 MAINTAINING TRAFFIC

- A. The Contractor shall conduct operations with minimum interference to streets, driveways, sidewalks, traffic activities, etc. Approved access routes are shown on the PLANS. Operations affecting traffic shall be coordinated with the County of Maui Department of Transportation or other departments as necessary.
- B. When necessary, the Contractor shall provide, erect and maintain lights, barriers, etc., as required by traffic and safety regulations with special attention to protection of life.

#### 1.7 CONSTRUCTION LINES, LEVELS AND GRADES

- A. The Contractor shall verify all lines, levels and elevations indicated on the PLANS before any clearing, excavation or construction begins. Any discrepancy shall be immediately brought to the attention of the Engineer and any changes shall be made in accordance with his instructions. The Contractor shall not be entitled to extra payment if he fails to report the discrepancies before proceeding with any work whether within the area affected or not.
- B. The laying out of base lines, establishment of grades and staking out the entire work shall be done by a licensed Surveyor or a licensed Civil Engineer, registered in the State of Hawaii. He shall be solely responsible for their accuracy. Erect and maintain substantial batter boards showing construction lines and levels.

#### 1.8 CLEANUP

Clean up and remove all debris accumulated from construction operations from time to time, as directed by the Engineer. Upon completion of the construction work and before final acceptance of work, remove all surplus materials, equipment, etc., and leave entire jobsite clean and neat.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Beach Sand Fill: Beach Sand fill materials shall be obtained from the offshore sand recovery site shown on the Plans.



## PART 3 - EXECUTION

### 3.1 EXCAVATION

#### A. Protective Measures

1. All excavation shall be protected and guarded against danger to life, limb, and property.
2. Shoring, cribbing, and logging, as required to safely preserve the excavations and earth banks, free from damages resulting from the work shall be provided and installed by the Contractor.
3. Grading shall be controlled so that the ground surface is properly sloped to prevent water run-off into structural foundations and open trenching excavations.
4. No underground utilities lines traversing the construction area are known to exist by the designer. Should any be encountered during excavation, the Contractor shall not disconnect same without authorization from the Engineer but shall inform the latter immediately of each discovery. The Engineer shall investigate and issue proper authorization for procedure.

### 3.2 BEACH SAND FILL

#### A. Sand Fill Area

1. Sand fill shall be placed to the lines and grades shown on the plans.
2. Rough grading shall prevent the drainage of water into construction areas.

END OF SECTION

## SECTION 02260

### SAND DREDGING, OFFLOADING, CONVEYANCE, AND PLACEMENT

#### PART 1 – GENERAL

##### 1.1 GENERAL REQUIREMENTS

The work shall include the furnishing of all labor, materials, and equipment necessary to dredge sand from the designated offshore deposit, transfer it via barge to the designated offloading locations, convey the sand from barge to shore, transfer the sand along the shoreline, and place the sand to the lines and grades shown on the PLANS, and all other work required to complete the work as indicated on the PLANS.

##### 1.2 SUBMITTALS:

- A. No later than 30 days after notice to proceed (NTP) the Contractor shall submit six (6) copies and one (1) digital copy of the Work Plan and Schedule to the State for approval. No work shall commence until the operation and performance schedule has been approved by the State. The Work Plan shall include, but not be limited to, the following information: dredge equipment type and specifications; turbidity containment types; positioning, anchoring, and dredging methodology; estimated daily sand recovery production rate; offloading conveyance equipment type, deployment methodology and anchoring methodology; sand conveyance and placement methodology; surveying and volume calculation; sand placement grade stake recovery plan; and public safety plan during dredging, conveyance, and sand placement.
- B. The Contractor shall maintain a Daily Log of work activities, to include but not be limited to work activities conducted that day, problems encountered or issues of concern, inspection of critical equipment, equipment operation and performance, work stoppage and reason why (e.g., equipment malfunction, turtle sighting in work vicinity), estimated volumes of sand dredged and transferred to shore, and actual sand placement on the beach. The Daily Log shall cover a 24-hour period beginning at 4:00 am each day, and four (4) copies shall be submitted to the State within 24 hours following each log period.
- C. Sand placement profile survey data and volume calculations shall be submitted to the State within 24 hours following each placement increment. The survey data shall be in graphical format and shall show the design lines and grades and the surveyed pre- and post-fill profiles, and shall be referenced to the vertical datum and horizontal baseline shown on the PLANS. Submittal shall include digital files of the survey data in .csv format.

##### 1.3 CONTRACTOR'S RESPONSIBILITY

- A. The Contractor shall comply with a) all permit requirements and conditions for this project, b) all applicable Federal, State and County laws, rules, and regulations, including Hawaii Public Health regulations, and c) all laws, rules, and regulations concerning pollution control and abatement.
- B. The Contractor shall provide, erect, and maintain, at no cost to the State, warning signs, lights, barricades, fences, or other means as necessary to prevent unauthorized persons

and the general public from entering onto the site where they may suffer injury or create a hazard to construction operations. The Contractor shall also take all necessary precautions for safety in his operations and to prevent injury to his employees and to others having lawful access to the site. The Contractor shall provide barriers, fences, and safety personnel as necessary to ensure public safety during sand placement on the beach.

- C. The Contractor shall give written notice to the U.S. Army Corps of Engineers, Honolulu District, Attn: CEPOH-EC-R, Building 230, Ft. Shafter, HI 96858-5440 and to the Commander, 14<sup>th</sup> Coast Guard District, 300 Ala Moana Blvd., Room 9-236, Honolulu, HI 96850-4982, at least two (2) weeks in advance whenever anchored equipment or other obstructions will be placed in navigable waters, and shall give immediate notice when such obstructions have been removed.
- D. The Contractor shall use all proper precautions and methods of procedure in his operations to ensure that no debris or other deleterious materials be allowed to fall, flow, leach, or otherwise enter the water. The Contractor shall promptly retrieve any misplaced materials/equipment. The Contractor shall maintain complete control of the movement of all equipment and material on and below the surface of the water. No loose floating or submerged equipment or material will be permitted.
- E. All work shall be confined to the Contractor work areas and construction easements as shown on the PLANS. The contractor shall exclude the public from the work area in the immediate vicinity of his operations. Any damage to private or public property or structures caused by the Contractor in his execution of the work shall be repaired promptly at the expense of the Contractor. Recognizing that the project area is a very heavily utilized public beach, the Contractor shall endeavor to accomplish the project with the least adverse impact to public and commercial beach activities as is practicable, reasonable, and necessary for the accomplishment of the work.
- F. Contractor equipment working hours are as follows:
  - (1) 5:00 a.m. to 8:00 p.m.: Sand recovery and transfer to shore.
  - (2) 6:30 a.m. to 6:30 p.m.: Heavy equipment operation at the offloading areas.
  - (3) 6:30 a.m. to 6:30 p.m.: Sand truck haul on the beach.
  - (4) 6:30 a.m. to 6:30 p.m.: Sand grading on the beach, maximum 100-foot increments.

## PART 2 – PRODUCTS (NOT USED)

## PART 3 – EXECUTION

### 3.1 DREDGING

- A. Inspection: The Contractor shall inspect the work, keep records of work performed, and ensure that gauges, targets, ranges, and other markers are in place and usable for their intended purpose. The Contractor shall as requested furnish transportation for the State and their representatives from the shore to the dredge operations for the purpose of inspection and supervision.

- B. Material to be Dredged: Only loose, unconsolidated sand from within the sand recovery areas as shown on the PLANS shall be dredged. The sand may contain coral pieces and rubble. No hard reef rock shall be removed. Sand shall only be dredged from within the designated sand recovery areas as shown on the PLANS. Care shall be exercised to not damage exposed hard rock bottom around the perimeter of the sand recovery area boundaries. The total amount of sand to be dredged is up to 75,000 cubic yards.

No more than 1% of material (by volume) from a single barge-load may be greater than 1 inch in any dimension ("coarse material"). To show acceptability of the sand, Contractor shall test 10 cy from each barge load for coarse material using a screen, Grizzly, or other apparatus that can adequately segregate the coarse material. If more than 1% of the material tested (by volume) is coarse material, the entire barge-load of sand shall be screened to remove coarse material. All coarse material shall be disposed of at an approved on-land disposal site.

- C. Dredge Equipment: The dredging shall be accomplished utilizing mechanical dredging equipment only (e.g., a clamshell dredge). The dredge should utilize an environmental sealing bucket to reduce the amount of material lost during transit from seafloor to surface. No use of mechanical cutter heads will be permitted. Blasting is not permitted. The dredge equipment shall be sufficient to maintain a minimum daily average production rate of 1,500 to 2,000 cubic yards of sand delivered to the on-shore offloading location for a period not to exceed 150 days from the start of dredging, excluding down time as a result of high surf (significant wave height or average of the highest one-third waves exceeding four (4) feet), or 10-minute average wind speeds exceeding 20 mph, for a period greater than four (4) hours. The Contractor shall maintain the dredge plant, boats, barges, and associated equipment to meet the requirements of the work.
- D. Sand Transfer Equipment: The contractor shall use a maximum of two deck barges or scows with minimum capacity of 500 cubic yards each to transfer the sand from the dredging location to the offloading locations.
- E. Interference with Navigation: The Contractor shall avoid interfering with navigation and recreational use of the nearshore waters in the project vicinity to the maximum extent practicable. Each night, between sunset and sunrise and during periods of restricted visibility, the Contractor shall provide lights for floating plant, pipelines, ranges, buoys, and markers. Lighting shall conform to United States Coast Guard requirements for location, number, visibility, and color.
- F. Ranges and Markers: The Contractor shall place and maintain markers as necessary to ensure that all work activities are conducted within the designated sand recovery areas and pipeline corridor as shown on the PLANS, including dredge plant anchoring, dredging, sand transport pipeline placement, and turbidity containment devices.

### 3.2 OFFLOADING

- A. Sand Offloading Equipment: The contractor may use a bridge structure (floating, trestle, etc.), floating platform, or conveyor belt for transporting sand to shore. All offloading equipment

must be confined to the areas shown in the PLANS. Deck barges are to be moored in water depths greater than 15 feet during offloading operations.

### 3.3 SAND CONVEYANCE AND PLACEMENT

- A. Sand Conveyance Along the Shore: The dredged sand shall be conveyed from the offloading locations along the shore for placement to the lines and grades shown on the PLANS by truck haul or other means of sand conveyance, such as a conveyor belt system.
- B. Sand Placement: Sand shall be placed to the design beach profiles in 100-foot-long increments along the project baseline. The required placed sand volume between adjacent stations along the baseline is shown on the PLANS. Contractor shall perform the North Berm Enhancement first, followed by the Beach Restoration, and then the South Berm Enhancement. Any change in the construction sequence shall require prior approval by the Engineer.

Sand shall be graded to the lines, grades, and elevations shown on the PLANS using as small equipment as is practicable in order to minimize noise and other disturbance to adjacent properties.

- C. Placement Plan Update: Contractor shall perform a topographic survey of each placement area within seven (7) days prior to start of sand placement in each area. Survey data shall be transmitted to the State no less than three (3) days prior to start of construction in each area. The State reserves the right to modify or revise the sand placement lines and grades shown on the PLANS as necessary to accommodate changes in the existing beach conditions and to achieve the required sectional fill volumes. The total volume of sand placed in each of the three areas is expected to be unchanged from the PLANS.
- D. Dressing and Tolerance: Immediately following each alongshore incremental placement of sand the Contractor shall grade, level, and dress the beach fill to meet the required elevations and dimensions indicated on the PLANS and achieve the sectional fill volumes specified on the PLANS. The dressing for payment shall include the removal of humps and depressions, and shall be made prior to survey measurements for payment. A tolerance of three (3) inches plus or minus from the design beach crest elevation and beach slope will be acceptable. The total volume of material placed between 100-foot station intervals shall be within ten (10) percent plus or minus from the design volume shown on the PLANS; however, cumulative volumes between adjacent reaches and over the entire project length shall not deviate by more than plus two (2) percent and minus five (5) percent from the cumulative volumes shown on the PLANS. Total sand volume placed shall not exceed 75,000 cubic yards.
- E. Equipment: Equipment used to move, distribute, and compact the sand to the design beach profiles shall be the smallest and quietest practicable equipment suitable to accomplish the work in order to minimize noise and inconvenience to beach users and adjacent properties. Equipment shall be outfitted with white noise reverse signals where appropriate. No equipment shall operate on the beach between 6:30 p.m. and 6:30 a.m. No land-based equipment shall operate in the water or below the mean higher high water elevation (+2.25 feet mllw).

- F. Grade Stakes: Grade stakes and any other stakes for any purpose shall be made of material that can and will be removed after filling to the design cross sections and accepted by the State. All stakes shall have sufficient length above grade so they will not be accidentally covered by the sand fill. Grade stakes shall be removed from each 100-foot incremental section in their entirety upon completion and acceptance of each section. The Contractor's Work Plan shall contain a grade stake recovery plan to insure accountability for and complete removal of all grade stakes.
- G. Lost or Misplaced Material: Any fill sand which is lost in transit prior to being placed as designed will not be subject to payment. If any material is deposited elsewhere than as designated or approved, the Contractor may be required to remove such misplaced material and redeposit it where directed by the State at his expense.

#### 3.4 ENVIRONMENTAL CONTROLS

- A. Turbidity containment devices as shown on the PLANS shall be maintained at all times during dredging. Regular inspection of the devices shall be conducted by the Contractor, and should any leaks or breaks occur the associated work activities shall cease until the leaks are repaired. All work shall be accomplished in accordance with specification "01567 Environmental Protection."

#### 3.5 PLANT REMOVAL

- A. Upon completion of the work the Contractor shall promptly remove all dredging equipment, markers and buoys, turbidity containment devices, offloading equipment, and any other ancillary equipment or materials.

#### 3.6 MEASUREMENT

- A. Measurement of sand quantity placed for pay purposes will be based on the incremental pre- and post-placement surveys. The surveys and sand quantity determinations shall be made by a surveyor licensed in the State of Hawaii. Surveys for payment shall be made at the Contractor's expense. The survey methodology and qualifications of the surveyor shall be included in the Contractor's Work Plan submittal for approval by the State.
- B. Beach profiles shall be surveyed at each daily sand placement increment along the baseline. Surveyed profiles shall be spaced no greater than 25 feet apart. Spacing shall be reduced as necessary to properly capture the sand placement planform. The profile surveys shall extend from 10 feet landward of the landward-most sand placement limit to 20 feet seaward of the seaward-most sand placement limit. The profile surveys shall be accomplished no more than 3 hours prior to initiation of sand placement each day and no more than 3 hours post-placement each day to determine and verify the quantity of sand placed. The profiles shall at a minimum contain spot elevations at maximum 10-foot intervals along the profile and at any slope change points. It is understood that there is potential for sand movement after placement; thus, the Contractor shall perform the pre- and post-placement beach profile surveys in a timely manner.
- C. The Contractor shall maintain detailed survey logs, and the volume difference between pre-beach fill and post-beach fill surveys shall form the basis for measurement and payment for

sand dredged and placed. Beach fill satisfactorily placed will be measured for payment by use of the average end area measurement between alongshore beach profiles or by using earthwork utilities such as that included with Autodesk Civil3D. The quantities shall be computed by the Contractor. The profile survey data and volume calculations shall be submitted to the State within 24 hours following each placement increment. Each survey and volume calculation submittal to the State shall contain the statement "I hereby certify that this submittal is a correct representation of the work accomplished." The submittal shall be signed by an authorized Contractor's representative.

- D. For purposes of expediency and efficiency, it is the State's intent to utilize the Contractor's surveys and volume calculations for purposes of assessing the work's conformance to the job requirements and for payment. However, the State reserves the right to conduct independent surveys, at its own expense, for the purposes of verifying the Contractor's measurements. In the event that survey discrepancies are developed that cannot be otherwise resolved, the State reserves the right to request the Contractor to re-survey portions of the work at no additional cost to the State; and/or utilize the State's survey for measurement.

### 3.7 PAYMENT

- A. The actual measured volume of sand dredged and complete in place, including all equipment, labor, materials, temporary barricades, protection of the environment, water quality monitoring, surveying, cleanup and all incidental items necessary to complete the work, will be paid for at the lump sum price on the offer form for base work and the per cubic yard unit price for Additive 1 in the PRICE PROPOSAL.

END OF SECTION