STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
Honolulu, Hawai`i
June 3, 2019

FILE NO.: SSBN MA-19-3830
Acceptance Date: January 30, 2019
180-Day Expiration Date: July 29, 2019

Chairperson's Office
Department of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

REGARDING: Conservation District Use Application for Category II Small Scale Beach Nourishment (SSBN) MA-19-3830 for the Kauai Kailani Small Scale Beach Nourishment Project, located seaward of 4-856 Kuhio Highway, Kapa'a, Kaua'i 96746, TMKs: (4) 4-3-009:050

APPLICANT: Oceanit Laboratories, Inc.
828 Fort Street Mall, Suite 600
Honolulu, Hawaii 96813
On behalf of Association of Unit Owners (AOUO) of Kauai Kailani Condominiums

LANDOWNER: Association of Unit Owners (AOUO) of Kauai Kailani Condominiums

LOCATION: 4-856 Kuhio Highway, Kapa'a, Kaua'i

TMK: Shoreline fronting TMK (4) 4-3-009:050; drainage canal within TMK (4) 4-3-008:017

AREA OF USE: 3,300 ft^2 borrow site (0.08 acres); 6,274 ft^2 placement site (0.14 acres)

SUBZONE: Resource Subzone

BACKGROUND

Oceanit, Inc. on behalf of the Association of Unit Owners (AOUO) of Kauai Kailani Condominiums is proposing a Category II Small Scale Beach Restoration (SSBN) project to take place seaward of the Kauai Kailani Association premises located in Kapa'a on the east side of the island of Kauai **(Exhibits 1 and 2).** The proposed project includes installation of a temporary sandbag groin structure and placement of approximately 1,140 cubic yards (cy) of beach-quality sand sourced from the Waipouli Drainage Canal. The sand intended for fill is compatible with the existing beach following OCCL *Guidelines for SSBN Cat II General Application.* Beach

nourishment is proposed to take place over one preliminary nourishment, followed by several smaller periodic nourishments that would ensue over a 10-year period. Approximately 540 cy of sand would be used for the initial nourishment and for groin construction, and 100-200 cubic yards of sand would be used for each nourishment event thereafter; totaling approximately 940-1,140 cubic yards of total sand nourishment.

The project was developed in response to severe erosion that ensued following removal of a groin in 2012 that was located at the northern boundary of the project site **(Exhibit 3)**. The removed structure consisted of a 70-foot long concrete groin that served to shelter the subject beach from near-shore currents and in-turn served to slow longshore littoral drift. Upon removal of the concrete groin, the resulting increase in longshore littoral drift exacerbated erosion such that approximately 500 cubic yards of sand was transported away from the subject beach over a two-year period **(Exhibit 4 and 5)**. In response to the erosion, a temporary emergency erosion control structure was installed in 2017 with authorization from the DLNR **(Exhibit 6)**. The emergency structure was authorized to remain in place for a period of three years while a long-term solution could be developed; the project proposed here represents the long-term erosion management strategy devised.

Restoration of the beach will have the benefit of providing additional sandy beach that will provide a broader opportunity for beach use and recreation, and potentially produce safer conditions for beach activities.

DESCRIPTION OF AREA

The proposed project site is located in Kapa'a along the shoreline of Waipouli Beach on the east side of Kauai, fronting TMK: (4) 4-3-009:050 and within the Waipouli Drainage Canal at TMK (4) 4-3-008:017. The location of proposed groin placement is seaward of the northern boundary of the Kauai Kailani property line. The location of proposed beach nourishment is located directly seaward of Kauai Kailani property and would extend approximately 140 feet along the beach stretch. The nourishment site is located within the Resource Subzone of the State Land Use Conservation District. Surrounding land use is generally urban and consists of residential areas of condominiums and private residences. The Waipouli Drainage Canal is the proposed site in which sand would be sourced and is located approximately 850 feet south of the placement site. The project site is located in a critical habitat for the United States Fish and Wildlife (USFWL) Service Rare, Threatened and Endangered (RTE) Species for the Hawaiian monk seal.

The shoreline fronting Kauai Kailani property hosts a very limited beach composed mainly of calcareous material such as coral and shell detritus. Overall, the site features mainly hard strata and hosts limited recreational use, consisting mainly of beachgoers at periods of low tide. During high tide, waves and currents produce unsafe conditions for walking and swimming. No surfing sites are present near the project area.

The proposed sand source site within the Waipouli Drainage Canal hosts accreted sand that extends from the beach to approximately 600 ft upstream of the canal mouth. Sand present from the canal mouth to 200 ft upstream is similar in color, composition and size distribution to sand present at the nourishment site. Results of sand analyses indicate an acceptable match to existing beach sand at the project site based on OCCL SSBN grain size analysis guidelines.

DESCRIPTION OF PROPOSED ACTION

The proposed project entails two main phases that would occur over a period of ten (10) years; the initial phase would include sand placement and groin construction **(Exhibit 7),** while the second phase would include smaller periodic sand placement projects. During the initial project phase approximately 540 cubic yards (cy) of beach quality sand would be obtained from the Waipouli Drainage Canal for placement on the beach and for use in groin construction. Subsequent nourishment events would occur periodically three to four years following the preliminary nourishment, or when 60% of the nourished sand is lost, whichever occurs first; during these events 100-200 cubic yards of sand sourced from the Waipouli Drainage Canal would be placed such that the total amount of sand used would amount to 940 – 1,140 cubic yards. Re-nourishment interval rates were predicted based on past erosion observations. According to University of Hawaii erosion maps, Waipouli Beach, along which Kauai Kailani is located, has experienced erosion at an average rate of 0.5 ft per year since 1927, not considering erosion following groin removal in 2012[1].

The proposed shore-perpendicular groin placed during the initial project phase would be comprised of a Tensar Triton Filter Mattress base and 29 geotextile sand bags stacked such that the structure would have an overall footprint of 80 x 12 feet. The footprint of the groin would be 12 feet wide at the base and tapered to 6 ft wide at the top; the top elevation would be +6.6 feet above mean lower low water (MLLW) **(Exhibit 8)**. The structure is anticipated to occupy the same footprint and have the same function as a preexisting groin that was removed in 2012, in which removal caused severe erosion of the shoreline. The design of the groin is intended to accommodate site-specific currents at the Kauai Kailani site. The proposed structure is intended to retain the nourished sand for approximately three years until a permanent concrete or rock groin can be potentially authorized and constructed. The proposed sand source for use in nourishment and groin construction is the seaward 200 feet and seaward 600 feet, respectively, of the Waipouli Drainage Canal in which only the upper three feet of sand would be used. As part of the proposed project, material would be dredged and temporarily stockpiled for dewatering; following which it would be placed along the beach over a length of approximately 140 feet and over an area of approximately 6,274 square feet. An emergency erosion control structure was authorized by the DLNR on Dec 15, 2016 and installed in 2017 (DLNR Ref Emer. CDUA KA-17-16). This structure is proposed to be removed approximately three years following the initial nourishment effort as part of the first periodic nourishment of the second project phase.

The proposed sand source consists of sand that has been pushed into the Waipouli Drainage canal by wave action, forming a sand bar that reaches approximately 600 ft inland of the canal mouth **(Exhibit 9 and 10)**. For the purpose of analyzing sand quality, sediment cores were taken from the sand surface down to three feet below the sand surface; cores were taken at the canal mouth and 100, 200, 400, and 600 ft upstream **(Exhibit 11 and 12)**. Ensuing grain size analyses confirmed the presence of high-quality sand between the canal mouth and 200 ft upstream; the sand is highly similar to sand present at the nourishment site in accordance with SSBN standards **(Exhibit 13)**. It was determined that the sand located between 200-400 ft upstream is in

[1] University of Hawaii Coastal Geology Group, Hawaii Coastal Erosion Website: http://www.soest.hawaii.edu/coasts/erosion/

accordance with DLNR SSBN standards, however the material was found to be of lesser quality than sand located within 200 ft of the river mouth as sand featured higher concentrations of fine sediment. Sand located beyond 400 ft upstream was found to include elevated concentrations of organic material which was considered more suitable for groin construction.

The initial phase of the project, entailing nourishment and groin construction, would be completed in stages. During the first stage, approximately 540 cubic yards of sand would be obtained from the drainage canal using a long arm excavator and stockpiled to allow sand to dry. Dredging would take place from the canal mouth to 200 ft upstream and would be carried out down to a depth of three feet below the original sand surface. The excavator would move along the south bank of the canal and would not enter the canal itself. Between the canal mouth and 200 ft upstream, sand would be excavated in 1-foot depth increments down to 3 ft below the original sand surface with qualified personnel onsite to determine whether the sand is appropriate for placement on the beach. The material to be used as beach fill would be transported to the stockpile location in a dump truck to be dewatered. Approximately 100 cubic yards of the lowest quality sand would be stockpiled separately for use in filling Elcorock sand bags that would comprise the temporary groin structure. Note that all sand used for both groin construction and nourishment shall meet State sand quality standards. Elcorock sand bags would be filled by hand at the stockpile site.

During the second stage of the project, sand and sandbags would be transported from the stockpile site to the nourishment site using a backhoe, excavator, and dump truck. The groin structure would be constructed by clearing debris from the groin footprint and placing a foundation layer of Tensar Triton Filter Mattresses on hardpan. Not more than 29 3.5 cy Elcorock sand bags would be used to produce the temporary sandbag groin, which would be installed using a backhoe to place the sandbags from the shoreline seaward. Following groin construction, approximately 440 cubic yards of beach quality sand would be placed and graded. Placement and grading would be employed using a front-end loader. Sand placement would begin at the shoreline and extend seaward. Groin construction and beach nourishment activities would take place during low tide and low wave conditions. The duration of construction activities will be approximately three weeks including mobilization and construction. As a pollution control measure, a temporary fiber roll barrier with a minimum 8-inch diameter would be placed along the top bank (approximately 170 linear feet) and anchored with 2" x 2" wood or metal stakes spaced 4 feet apart. The temporary fiber roll barrier and all stakes would be removed following completion of the initial beach nourishment.

SUMMARY OF COMMENTS

The application was referred to the following agencies for their review and comment:

- DLNR Division of Boating and Ocean Recreation
- DLNR Division of Aquatic Resources
- HP
- Kauai Land Division
- Department of Health, Clean Water Branch
- HI CZM
- USACE

- USFWS
- NMFS
- Office of Hawaiian Affairs

The following comments were received:

DLNR Division of Boating and Ocean Recreation

No comments.

DLNR Aquatic Resources (DAR)

The endangered Hawaiian monk seal (Neomonachus schauinslandi) and threatened Green Sea Turtle (Chelonia mydas) are known to come ashore along this coastline and very near the project area. Care should be taken to not disturb these animals during the construction phase of this project. The Hawaiian monk seal is known to enter the Waipouli Drainage Canal.

DAR has a concern with using/moving the surface layer of sand from the Waipouli Drainage Canal. There are many feral cats in the area and Toxoplasmosis is a concern not only for humans, but the Hawaiian monk seal as well. Toxoplasmosis is known to have been the cause of deaths for the Hawaiian monk seals in the past.

DAR requests more information on the "permanent" groin that is proposed to replace the temporary groin (described in the application). Information, such as: when is the temporary groin going to be replaced; its dimensions; materials used for the "permanent" groin; and the location (GPS location) of the "permanent" groin.

Applicant's Response

Thank you for your comments dated March 12, 2019 regarding the Kauai Kailani Restoration Small Scale Beach Nourishment Application. On behalf of Association of Unit Owners at the Kauai Kailani Condominiums, Oceanit offers the following responses to your comments:

Comment 1: "The endangered Hawaiian Monk Seal (Neomonachus Schauislandi) and threatened Green Sea Turtle (Chelonia mydas) are known to come ashore along this coastline and very near the project area. Care should be taken to not disturb these animals during the construction phase of this project. The Hawaiian monk seal is known to enter the Waipouli Drainage Canal."

Response: The contractor will be responsible for visually inspecting the work area and surrounding areas for monk seals, sea turtles, and other wildlife of concern prior to any work activities. Construction BMPs, such as orange fencing, shall be erected around the work areas to prevent any animals or unauthorized persons from entering the construction zone. Should any of these marine animals come into the construction area, work will stop immediately until the animal leaves on its own accord. No attempts will be made to move or disrupt the animal.

Comment 2: "DAR has a concern with using/moving the surface layer of sand from the Waipouli Drainage Canal. There are many feral cats in the area and Toxoplasmosis is a concern not only for humans, but the Hawaiian monk seal as well. Toxoplasmosis is known to have been the cause of deaths for Hawaiian monk seals in the past."

Response: With the help of Mr. Paul Murakawa from DAR, Oceanit reached out to Dr. Thierry Work from the USGS-NWHC-HFS and Dr. Michelle Barbieri from NOAA IRC NMFS/PIFSC/PSD about mitigating Hawaiian Monk Seal risk to Toxoplasmosis. Both Dr. Work and Dr. Barbieri stated that there are no known short-term construction BMPs to prevent viably persistent Toxoplasma gondii oocytes. A sand plug will be left between the dredging site and the ocean to act as a natural BMP filter for sediment and other contaminants from reaching the ocean waters, but it is unclear if this will have an effect on mitigating the risk of toxoplasmosis. The federal contacts identified the reduction and elimination of feral felines as the only long-term mitigation strategy for T. gondii at the present. Feral feline control is outside the scope of this project. If any construction BMPs are identified to mitigate exposure to and risk of Toxoplasmosis that can be implemented for this project, Oceanit respectfully requests notification to be able to implement them.

Comment 3: "DAR requests more information on the "permanent" groin that is proposed to replace the temporary groin (described in the application). Information, such as: when is the temporary groin going to be replaced, its dimensions, materials used for the "permanent" groin, and the location (GPS location) of the "permanent" groin."

Response: The "permanent" groin and its dimensions, location, and construction materials are not covered under the SSBN will be covered under another regulatory permit, at which time these specifications will be presented to DAR and other regulatory agencies for comment. Permanent structures are not permitted under an SSBN permit.

At the completion of the SSBN project, the shoreline will be monitored to gauge the effectiveness of the temporary groin design. A plan to replace the temporary groin with a permanent structure will be developed. Generally, such structures are constructed out of boulder stone and/or concrete. The dimensions and location (22°3'43.24N, -159°19'6.68W) will be similar to the temporary structure, unless monitoring data indicate a design change is beneficial. After this design phase, independent permits for the permanent groin will be pursued.

Thank you for your review and comments. If you require additional information or should you have questions and/or comments, please contact me at (808) 531-3017 or at mfoley@oceanit.com.

Kauai County Planning Department

Ka'aina Hull:

Based on the information provided, the Applicant should submit a Special Management Area Assessment form to the department as a SMA permit may be required for the staging and stockpile areas. Attached please find additional comments from Ruby Pap, Sea Grant Agent.

Ruby Pap, Coastal Land Use Extension Agent:

This site is in need of beach nourishment to help bring back the beach and also to protect the condominium complex and sandbag wall. However, in addition I think it is important to have the applicant conduct beach profile surveys (or similar technology track coastal processes, beach width, sand volume etc.) pre and post nourishment. The surveys should continue monthly (or a few times a year) during the lifetime of the groin and sandbag wall to evaluate the effectiveness of the groin in retaining the sand. The surveys should be conducted on the nourished beach as well as the neighboring beach to the south to determine whether there are effects of the groin on neighboring beaches.

I believe the data that would result from such a monitoring effort is necessary to evaluate the long-term effectiveness and impacts of the groin, or any other long term solutions for the area.

I am happy to work with the applicant and DLNR on this project, so thank you for passing on my comment.

Applicant's Response to Ka'aina Hull

Oceanit is in the process of preparing a Special Management Area Minor permit as well as a Shoreline Setback Assessment Form for the stockpile (TMK 4-3-007:027), dredging staging area (TMK 4-3-0007:011), and nourishment staging area (TMK 4-3-009:050) as requested by the County of Kaua'i Planning and Permitting Department. We have been consulting with Ms. Jody Galinato from the County on the permit requirements.

Thank you for your review and comments. If you require additional information or should you have questions and/or comments, please contact me at (808) 531-3017 or at mfoley@oceanit.com.

Applicant's Response to Ruby Pap

We concur that beach monitoring is a powerful tool to evaluate the long-term effectiveness and any unintentional impacts of the proposed beach restoration. Rather than performing numerous physical surveys; however, Oceanit recommends application of new field camera technology. Oceanit's engineers have developed a computer vision technology, called iBeach, which monitors the beach size with a high degree of temporal resolution. Utilizing input from low-cost cameras connected to a cloud-based network, iBeach can chart long-term changes in beach width with relatively low labor costs. This technique also allows for quantification of impacts of individual weather events on the beach formations. In addition, iBeach may be programmed to alert project managers if emergency situations arise.

Oceanit proposes to investigate the feasibility of using the iBeach technology to monitor this beach restoration project. If video monitoring is found advantageous over traditional profile surveys, Oceanit will propose the installation of field cameras that will monitor the nourished beach and the neighboring beach to the south before the construction of the replacement groin. At least one physical beach survey would be conducted to calibrate the iBeach monitoring program. If installation of field cameras is unfeasible, Oceanit will recommend beach profile surveys on a seasonal frequency. Your feedback on the described plan is important at this stage of our planning process.

Thank you for your review and comments. If you require additional information or should you have questions and/or comments, please contact me at (808) 531-3017 or at mfoley@oceanit.com.

The application was also made available for 30-day public review and comment in the Office of Environmental Quality and Control (OEQC) Environmental Bulletin on February 23, 2019[2].

All required permits are currently being processed, including Department of the Army (DA) Section 10 and Section 404 permits, the State of Hawaii Department of Health Section 401 Water Quality Certification (WQC), Special Management Area (SMA) Minor and Shoreline Setback Area (SSA) Permits, a County of Kauai Stockpiling Permit, the State of Hawaii Coastal Zone Management (CZM) Federal Consistency Determination, and the Conservation District Use Permit (CDUP).

ANALYSIS

After reviewing the application, the Department finds that:

1. The proposed activities are identified land uses within the Resource subzone of the Conservation District, according to Hawaii Administrative Rules (HAR) §13-5-22 (P-16) *Beach Restoration*;

2. The project is consistent with the purpose of the Conservation District and consistent with the goals and objectives of the Hawaii Coastal Erosion Management Plan (COEMAP) adopted by the Board of Land and Natural Resources in 1999. It is a major goal of COEMAP to promote appropriate erosion control and beach restoration efforts such as this.

3. The beach restoration approach taken has been to develop an effective design with the smallest environmental and community "footprint" possible and follows the SSBN and COEMAP guidelines and policies.

4. The project is consistent with the Environmental Assessment and Statewide Conservation District Use Permit (CDUP ST-3000) for Small-Scale Beach Nourishment projects in Hawaii. A Finding of No Significant Impact (FONSI) for the Final Environmental Assessment supporting the Statewide CDUP and State Program General Permit for Small Scale Beach Nourishment Projects in the Hawaiian Islands was issued by DLNR in May, 2000.

DISCUSSION:

The proposed project is intended to restore the beach located seaward of Kauai Kailani Condominiums by placing up to 1,140 cy of beach-quality sand on the shoreline located seaward of the subject property. The project would utilize beach quality sand to 1) enhance the beach for public use, 2) to improve access and safety for beachgoers, and 3) to provide an erodible buffer to the Kauai Kailani Condominiums. The project would take place over a 10-year period in which groin construction and an initial nourishment effort using 540 cy of beach quality material would take place over the first three months of the project; this initial project phase would be followed by periodic nourishment efforts of approximately 100-200 cy of beach-quality material.

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[2] Office of Environmental Quality Control (February 23, 2019). The Environmental Notice. http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2019-02-23-TEN.pdf

The periodic nourishment efforts would be undertaken every three to four years, or when 60% of the nourished sand is lost, whichever occurs first.

The project would also include construction of a shore-perpendicular groin comprised of a Tensar Triton Filter Mattress base and not more than 29 geotextile sand bags stacked such that the structure would have an overall footprint of 80 x 12 feet. The structure is anticipated to occupy the same footprint and have the same function as a preexisting groin that was removed in 2012, in which removal caused severe erosion of the shoreline. The proposed structure is intended to retain the nourished sand for approximately three years until a permanent concrete or rock groin can be potentially authorized and constructed.

The proposed sand source for use in nourishment and groin construction is seaward of 200 feet and seaward of 600 feet, respectively, within the Waipouli Drainage Canal in which only the upper three feet of sand would be used. Sand samples from the borrow location between the canal mouth and 200 feet upstream indicate an acceptable match to the existing beach at the project site. As part of the proposed project, material would be dredged and temporarily stockpiled for dewatering; following which it would be placed along the beach over a length of approximately 140 feet and over an area of approximately 6,274 square feet. An emergency erosion control structure was authorized by the DLNR on Dec 15, 2016 and installed in 2017 (DLNR Ref. Emer. CDUA KA-17-16). This structure is proposed to be removed as part of the second nourishment effort, approximately three years following the initial nourishment effort.

Comments regarding this project were received from DAR, Kauai County and UH Sea Grant Extension Agent, Ruby Pap. DAR raised concerns regarding the use of sand dredged from the Waipoli Drainage Canal, citing potential for disturbance of Green Sea Turtles and Monk Seals, as well as potential for the release of Toxoplasmosis from the sand excavation site. In response, the Applicant worked with staff at DAR and other experts to develop BMPs that would limit the potential for impacts. Following review of the Applicant's response, staff at DAR have stated that the Applicant had sufficiently addressed their concerns.

A comment was received by Ruby Pap, Sea Grant Extension Agent working with Kauai County, in which she suggested that the project include beach surveying to assess post-nourishment beach behavior. The Applicant has suggested the use of iBeach monitoring methods instead of standard beach profiling methods for beach monitoring, which would likely provide ample data to monitor the success of the nourishment effort and behavior of the nourished beach.

It is understood that extensive care has been taken in designing the project and choosing the location of the sand placement and quality in order to minimize user conflicts and environmental impacts, including impacts on water quality and local flora and fauna including coral reefs.

As such, Staff recommends the following:

RECOMMENDATION

Based on the preceding analysis, Staff recommends that the Chair of the Board of Land and Natural Resources **Approve** Category II Small Scale Beach Nourishment (SSBN) application

KA-19-3830 for the Kauai Kailani Groin and Sand Placement Project, at Kapa 'a Kaua'i; fronting TMKs: (4) 4-3-009:050 and (4) 4-3-008:017.

TERMS AND CONDITIONS

If approved, the project will be subject to the following Terms and Conditions:

1. The applicant shall comply with all applicable statutes, ordinances, rules, and regulations of the Federal, State, and County governments, and applicable parts of Chapter 13- 5, HAR;

2. The applicant shall comply with all applicable Department of Health administrative rules;

3. Any work or construction to be done on the land shall be initiated within one (1) year of the approval of such use, in accordance with construction plans that have been signed by the Chairperson, and, unless otherwise authorized, shall be completed within ten (10) years of the approval of such use;

4. The applicant understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;

5. Work shall be conducted at low tide during minimal rainfall and calm weather periods to the most practical extent possible and no work shall occur if there is high surf or ocean conditions that will create unsafe work or beach conditions;

6. Authorization of the sand use and placement is contingent upon review and approval of the sand by the Department. The sand shall meet the following State quality standards:
    a. The proposed fill sand shall not contain more than six (6) percent fines, defined as the #200 sieve (0.074 mm);
    b. The proposed beach fill sand shall not contain more than ten (10) percent coarse sediment, defined as the #4 sieve (4.76 mm) and shall be screened to remove any non-beach compatible material and rubble;
    c. No more than 50 (fifty) percent of the fill sand shall have a grain diameter less than 0.125 mm as measured by #120 Standard Sieve Mesh;
    d. Beach fill shall be dominantly composed of naturally occurring carbonate beach or dune sand. Crushed limestone or other man-made or non-carbonate sands are unacceptable;
7. Sand used for beach maintenance shall be screened of course material (rocks) and any non-beach compatible material;

8. To avoid encroachments upon the area, the applicant shall not use artificially accreted areas due to nourishment as indicators of the shoreline;

9. The applicant shall implement Best Management Practices (BMPs) to minimize dirt and silt from entering the ocean and the ability to contain and clean up fuel, fluid, or oil spills immediately for projects authorized under this authorization and immediately report any

spill(s) or other contamination(s) that occurs at the project site to the Department of Health and other appropriate agencies;

10. A beach monitoring program shall be carried out to monitor and evaluate post-construction project performance of the nourished beach. The program shall capture pre-construction beach conditions in addition to post-construction beach conditions at monthly intervals for a period of two years following the initial phase of nourishment.

11. The applicant shall ensure that excessive siltation and turbidity is contained or otherwise minimized to the satisfaction of the all appropriate agencies, through silt containment devices or barriers, high sand quality and selective sand placement;

12. Appropriate safety and notification procedures shall be carried out. This shall include high visibility safety fencing, tape or barriers to keep people away from the active construction site and a notification to the public informing them of the project;

13. All placed material shall be 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;

14. A survey of the project area shall be conducted prior to commencement of the proposed activities to ensure no protected marine species are in the project area. If protected species are detected activities shall be postponed until the animal(s) voluntarily leave the area. All on-site personnel shall be apprised of the status of any protected species;

15. At the conclusion of work, the applicant shall clean and restore the site to a condition acceptable to the Chairperson;

16. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;

17. The permittee, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;

18. The permittee shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;

19. The permittee shall comply with all applicable department of health administrative rules;

20. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent

to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;

21. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;

22. Obstruction of public roads, trails, lateral shoreline access, and pathways shall be avoided or minimized. If obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;

23. For all landscaped areas, landscaping and irrigation shall be contained and maintained within the property, and shall under no circumstances extend seaward of the shoreline as defined in section 205A-1, HRS;

24. Artificial light from exterior lighting fixtures, including but not limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes, shall be prohibited if the light directly illuminates or is directed to project across property boundaries toward the shoreline and ocean waters, except as may be permitted pursuant to section 205A-71, HRS. All exterior lighting shall be shielded to protect the night sky;

25. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law;

26. Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact HPD (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary;

27. Other terms and conditions as prescribed by the chairperson;

28. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

Respectfully submitted,

SAMUEL J. LEMMO, Administrator
Office of Conservation and Coastal Lands (OCCL).

Under the authority of §13-5-22 (P-16), Hawai`i Administrative Rules, this request for a Departmental Permit for SSBN MA-15-2 is hereby:

☒ Approved

☐ Disapproved

Dated at Honolulu, Hawai`i 6/4/19

SUZANNE D. CASE, Chairperson
Board of Land and Natural Resources

EXHIBIT 1: Project Location

EXHIBIT 2: Overview of Project Site

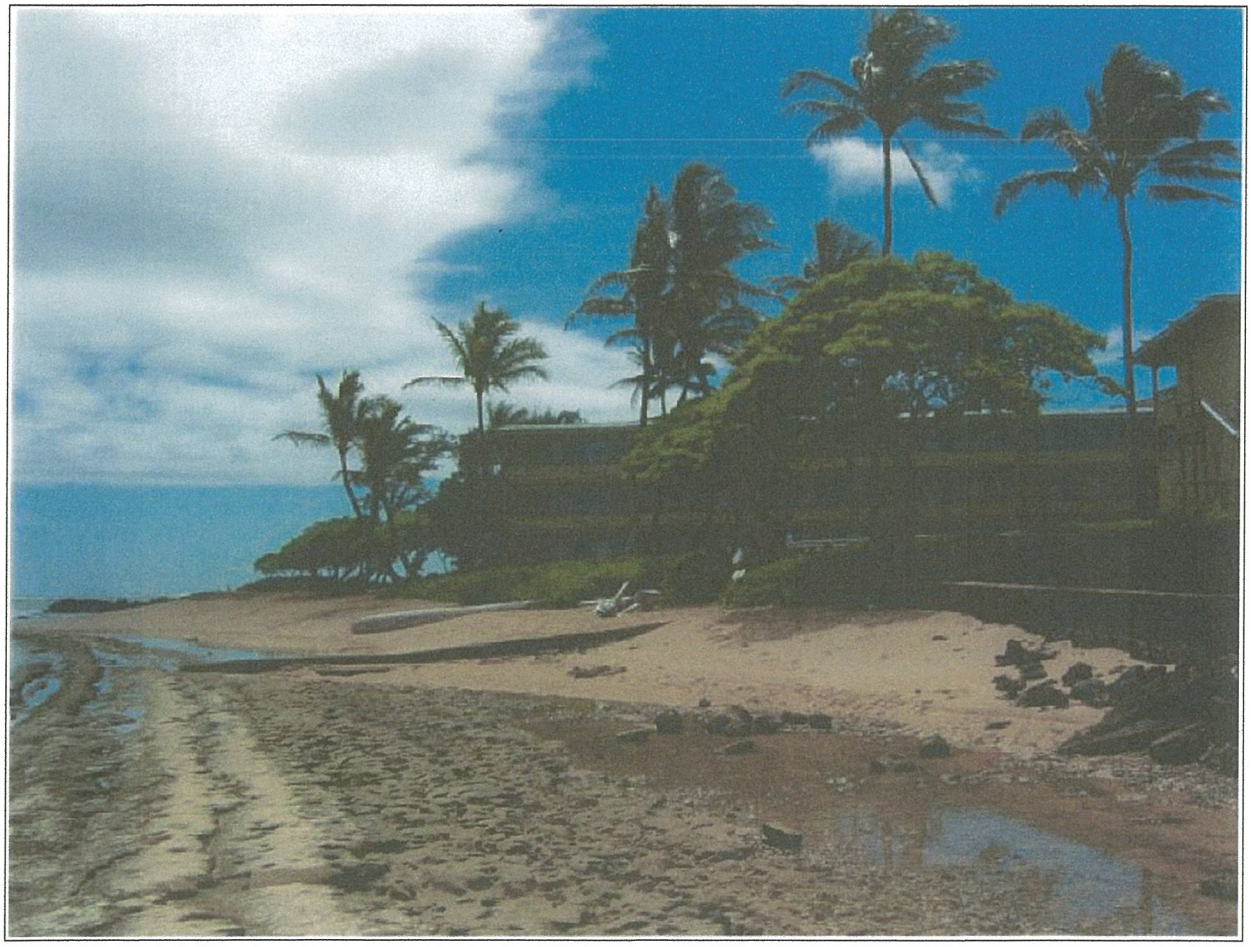
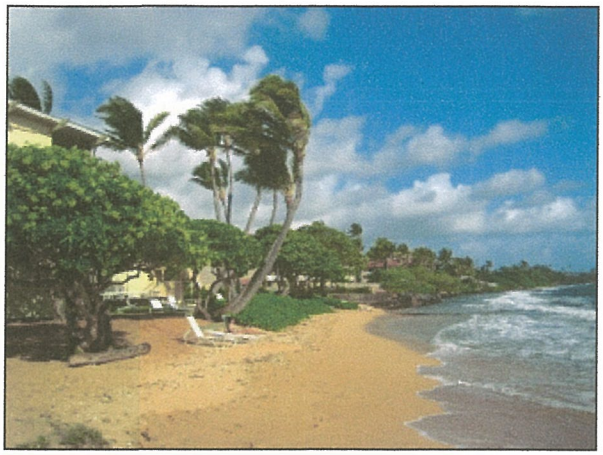


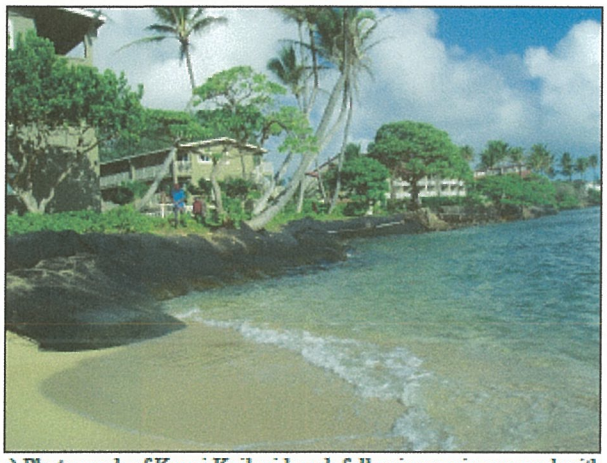
EXHIBIT 3: Groin removed in 2012

EXHIBIT 4: Exposure of roots and threat to property by erosion prior to placement of erosion control.



a) Photograph of Kauai Kailani beach taken prior to groin removal.

b) Aerial photograph of Kauai Kailani beach taken prior to groin removal.



c) Photograph of Kauai Kailani beach following groin removal with emergency erosion protection taken on October 31, 2018

d) Photograph of Kauai Kailani beach following groin removal looking down from the Kauai Kailani Apartment buildings taken on October 31, 2018.

EXHIBIT 5: Photographs Taken Before (a,b) and After (c,d) Groin Removal

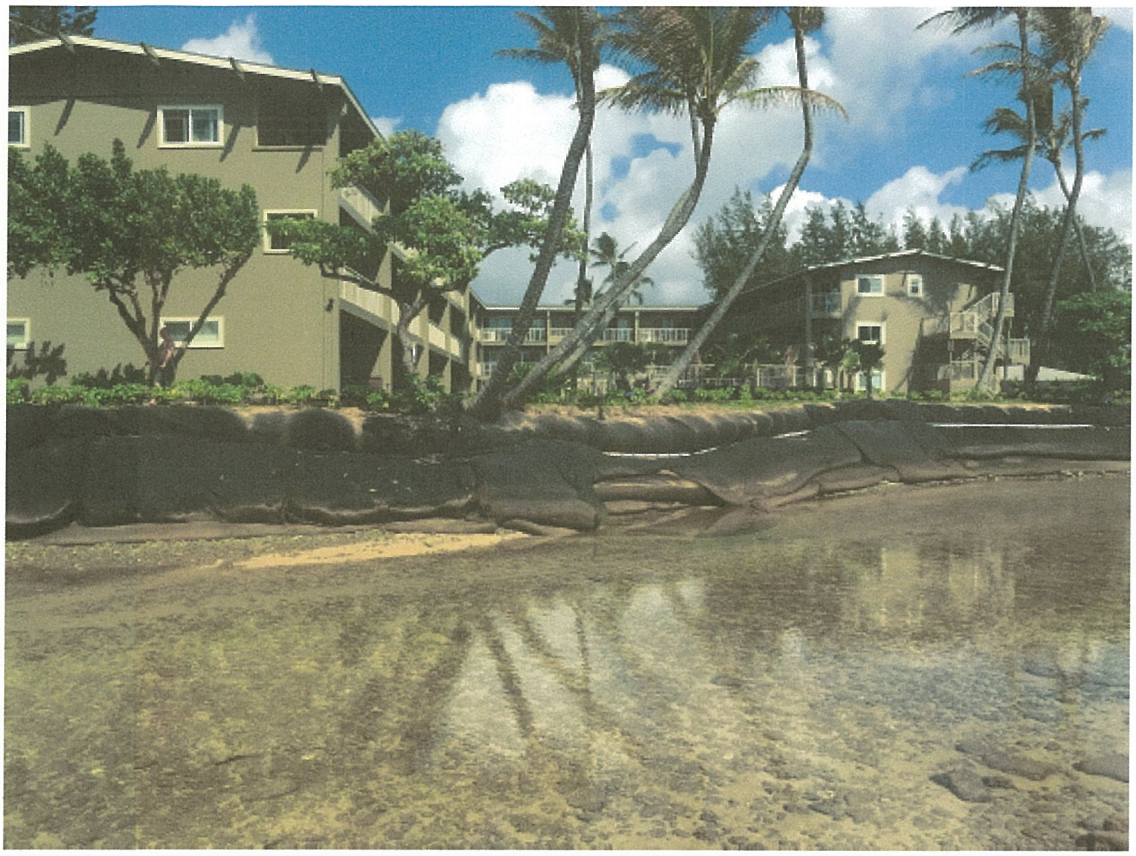


EXHIBIT 6: Sand placement site seaward of Kauai Kailani Condominiums featuring erosion control measures (May 2018 photo)

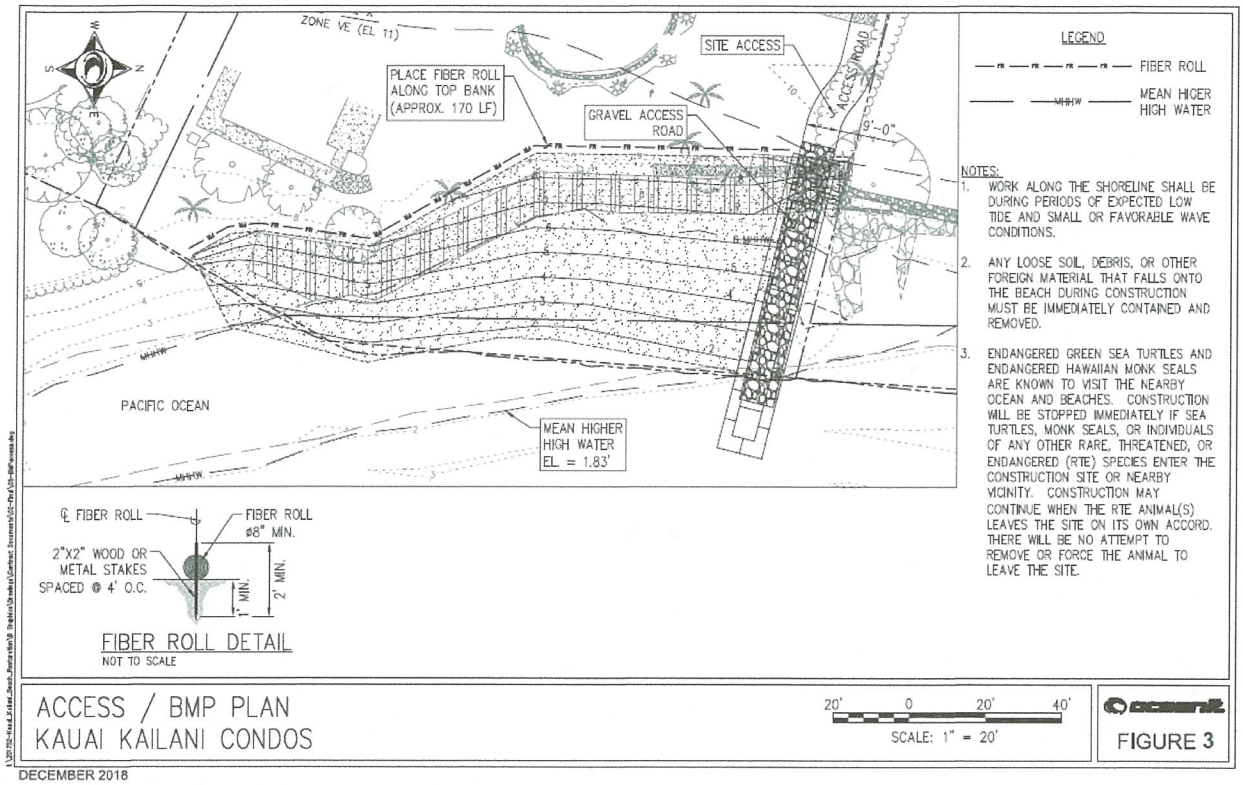


EXHIBIT 7: Map showing project site plan.

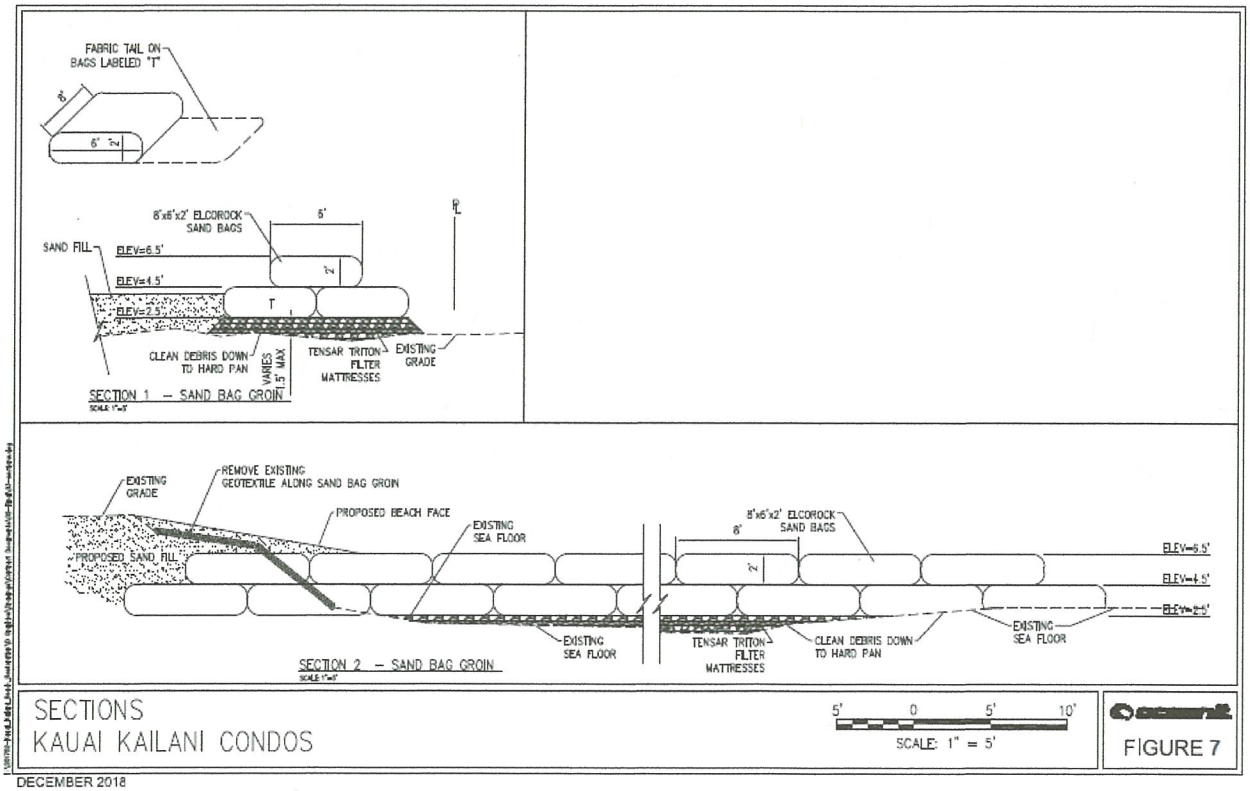


EXHIBIT 8: Project design including groin placement and fill profile

EXHIBIT 9: Waipouli Canal, Sand recovery site (2018)

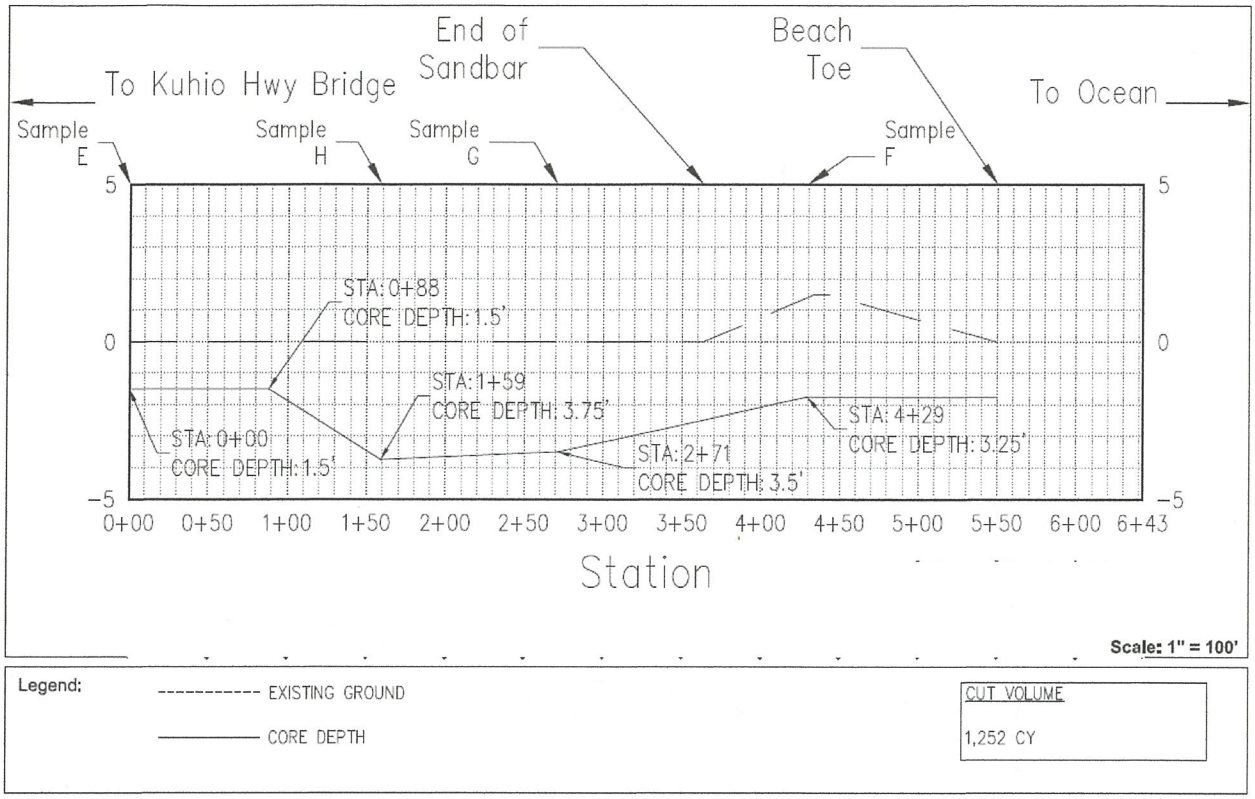


EXHIBIT 10: Waipouli Drainage Canal Sediment Sampling Profile View

Location upstream (ft)	Photograph	Location upstream (ft)	Photograph
0		400	
100		600	
200			

EXHIBIT 11: Sand samples from Waipouli Canal. Samples taken from 0, 200, 400 and 600 feet upstream of the canal mouth are represented by samples F, G, H, and E, respectively as shown in Exhibit 12.

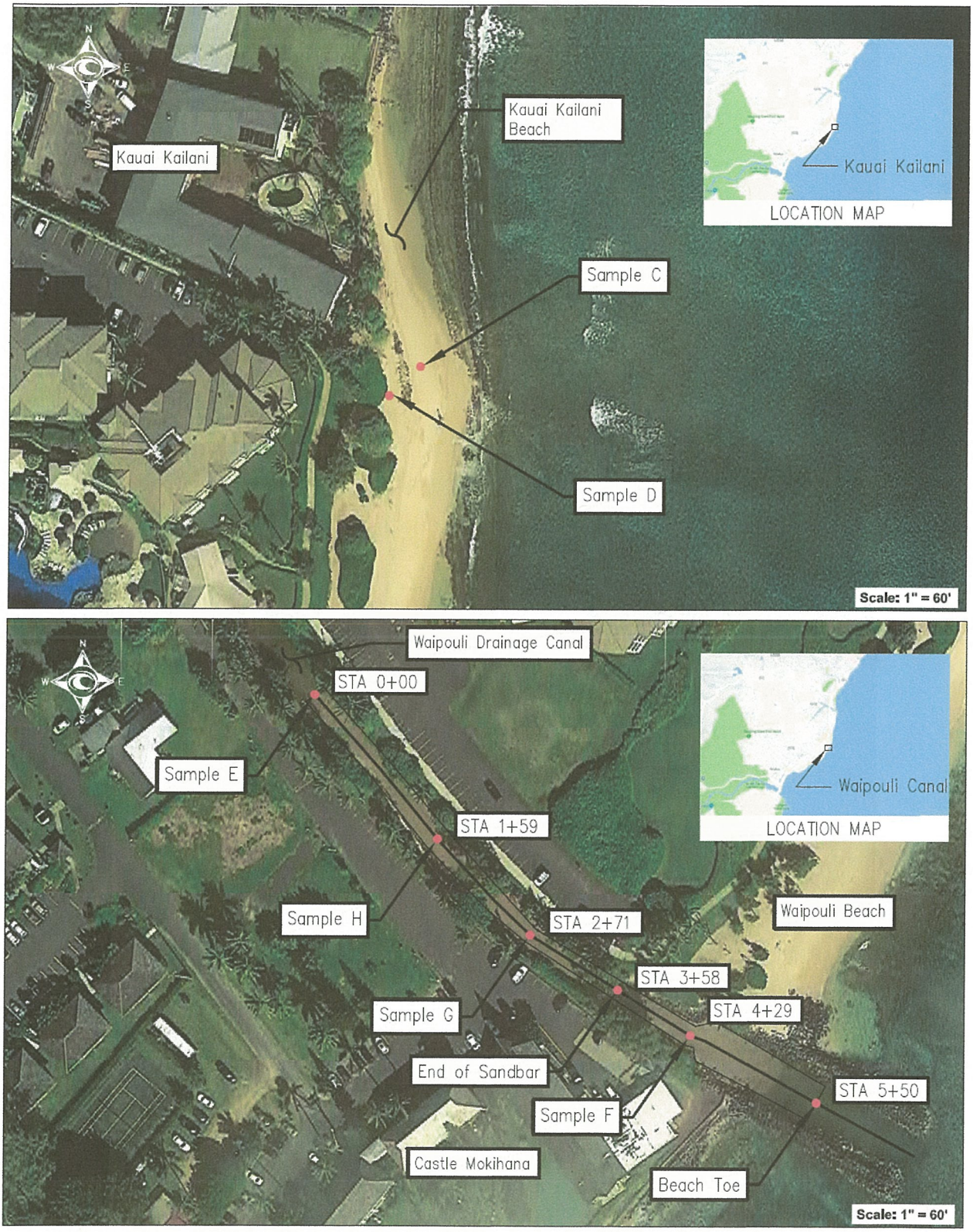


EXHIBIT 12: Sand sampling locations at extraction and placement sites.

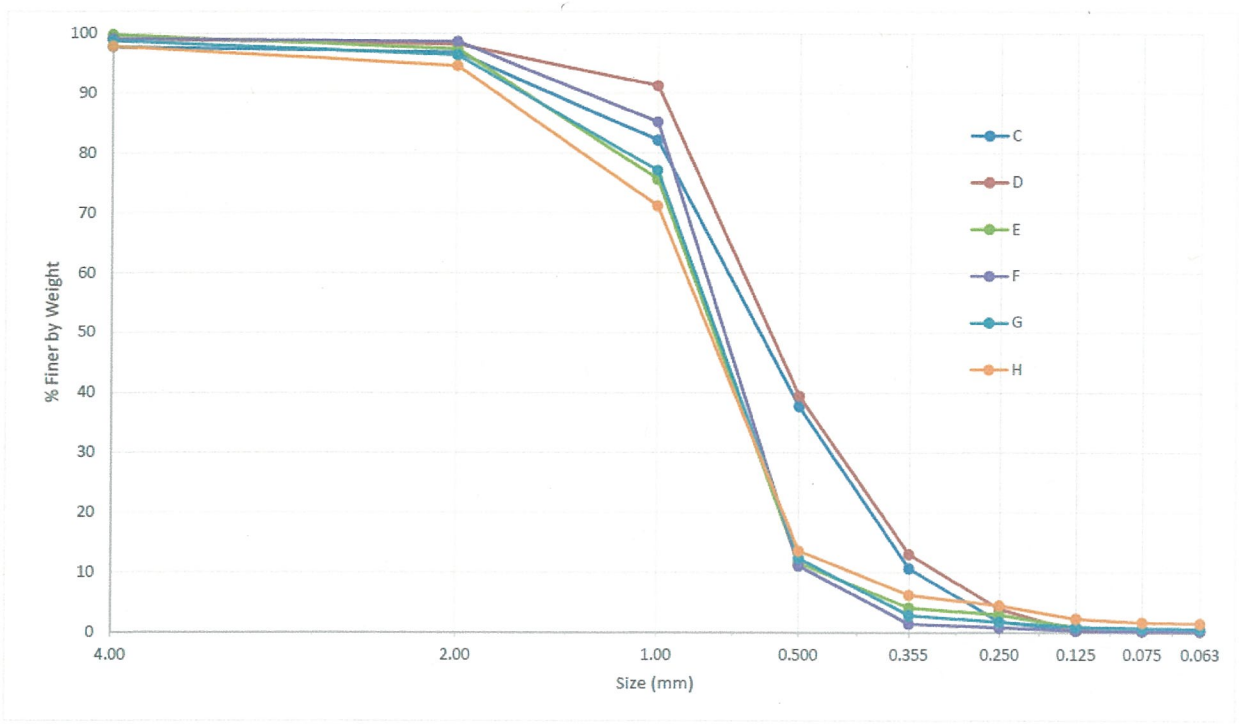


EXHIBIT 13: Grain size analysis of sand samples taken from sand extraction and placement sites.