

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Boating and Ocean Recreation
Honolulu, Hawaii 96819

July 26, 2024

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: APPROVE INSTALLATION OF TWO (2) NEW OFFSHORE MOORINGS OUTSIDE OF AN ESTABLISHED OFFSHORE MOORING AREA, MAKAIWA BAY, KAMUELA, ISLAND OF HAWAII, HAWAII, FOR DHL MAHI OPCO, LLC

REQUEST:

The Division of Boating and Ocean Recreation (“DOBOR”) is requesting that the Board of Land and Natural Resources (“Board”) approve the installation of two (2) new offshore moorings within Makaiwa Bay offshore of Mauna Lani Resort on the Island of Hawaii. As required by HAR 13-235-9, any applicant requesting to moor a vessel outside of an established offshore mooring area must obtain approval from the Board.

The applicant, DHL Mahi OPCO, LLC under management by Mr. Bullet Obra, Mr. Ikaika Vivas, and Mr. Rick Gaffney (“Applicant”), are requesting that the Board approve installation of two (2) new offshore moorings outside of an established offshore mooring zone, due to there being no designated offshore mooring areas, as identified in rule, on the Island of Hawaii, as required by HAR 13-235-9. The proposed location in Makaiwa Bay is currently only occupied by one (1) other existing offshore mooring and the two (2) proposed offshore moorings do not conflict with or obstruct access to the existing mooring. The Applicant’s request is attached with **Exhibit A**.

PERMITS AND COMPLIANCE WITH STATE AND FEDERAL LAW:

In order to comply with Federal Law (Section 10 of the Rivers and Harbors act of 1899), DOBOR is requiring that all offshore moorings under their jurisdiction obtain a permit from the U.S. Army Corps of Engineers (“USACE”). In addition, to ensure that the mooring system is structurally sound, DOBOR is requiring that all offshore mooring permittees submit an Offshore Mooring Installation Plan, prepared by a licensed structural engineer, for approval.

The Applicant has obtained a Nationwide Permit Verification Letter from USACE authorizing the installation and use of the existing mooring. An Offshore Mooring Installation Plan, prepared by a licensed structural engineer, has also been submitted to and approved by DOBOR Engineering Branch. The USACE Permit and approved Mooring Installation Plan are attached with Exhibit A.

In accordance with HAR 13-235-6, the National Marine Fisheries Service (NMFS) and DLNR, Division of Aquatic Resources (DAR) must determine whether an offshore mooring is detrimental to the habitat or spawning ground of marine life. Through the USACE permitting process, NMFS has

Item J-1

been consulted and determined the offshore moorings have no detrimental effect to the habitat or spawning ground of marine life. DAR has also been consulted and concurred that the offshore moorings have no detrimental effect to the habitat or spawning ground of marine life.

HRS CHAPTER 343 - ENVIRONMENTAL ASSESSMENT:

The proposed action and use of the offshore moorings is exempt from the preparation of an environmental assessment under HRS Chapter 343 and HAR Chapter 11-200.1 because it is considered to be de minimis and is under the Exemption List for the Department of Land and Natural Resources, concurred on by the Environmental Council on March 3, 2020, Exemption Class 3, Part 1, Item 20:

“Placement or construction of accessory structures such as office trailers, trash enclosures, bus shelters, picnic shelters, parking and fee collection facilities, dock boxes, mooring cleats, bumpers, and mooring buoys, blocks and piles, and other similar structures accessory to existing facilities.”

RECOMMENDATION:

Approve the use of an existing offshore mooring within Makaiwa Bay, Kamuela, Island of Hawaii, located outside of an established offshore mooring area, after-the-fact.

Respectfully Submitted,



MEGHAN L. STATTS, Administrator
Division of Boating & Ocean Recreation

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APPROVED FOR SUBMITTAL:



DAWN N.S. CHANG, Chairperson
Board of Land and Natural Resources

Attachment:

- A. Applicant's request for approval of mooring, approved Offshore Mooring Installation Plan, Nationwide Permit Verification Letter from Army Corps of Engineers

EXHIBIT A

May 8, 2024

DHL Mahi OPCO, LLC
68-1400 Mauna Lani Drive
Waimea, HI 96743

SUBJECT: Request for Approval of 2 new New Offshore Moorings Outside of a Designated Offshore Mooring Area and to Declare the Moorings Exempt from Requirement for Preparation of Environmental Assessment

Maka'iwa Bay, Kohala, Island of Hawaii

Submitted to:
Board of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

Submitted by:
For: DHL Mahi OPCO, LLC, by Bullet Obra, Ikaika Vivas and Rick Gaffney

Request:

In accordance with HAR 13-235-9, DHL Mahi OPCO, LLC hereby requests approval from the Board of Land and Natural Resources ("Board") to install two new offshore moorings within Maka'iwa Bay, outside of a designated offshore mooring area. In accordance with HRS Chapter 343 and HAR 200.1-8, DHL Mahi OPCO, LLC further requests that the Board declare installation and use of the mooring exempt from the requirement to prepare an environmental assessment due to the use of submerged state land.

Reason and Justification for Request:

Installation of two Offshore Moorings Outside of an Existing Offshore Mooring Area:

There are no designated mooring areas in the vicinity of the two proposed new mooring locations.

Environmental Assessment Exemption:

The proposed offshore moorings fall under the Department of Land and Natural Resources' Exemption List, approved by the Environmental Council on June 5, 2015 under the following exemption:

Class 6: Construction or placement of minor structures accessory to existing facilities.

Item 13: Placement of construction of accessory structures such as utility sheds, storage or maintenance sheds, office trailers, trash enclosures, comfort stations or sanitation facilities and related individual wastewater disposal systems, bus shelters, pavilions or picnic shelters, parking and fee collection facilities, checking stations, interpretive kiosks and displays, dock boxes, mooring cleats, bumpers, and mooring buoys, blocks, and piles, and other similar structures accessory to existing facilities on state lands and waters.

Permitting and DOBOR Approval:

A permit from the U.S. Army Corps of Engineers has been obtained, see attached permit verification letter Department of the Army File No. POH-2024-00070 and POH-2024-00071

An offshore mooring plan, prepared by a licensed structural engineer in the State of Hawaii, has been approved by the Division of Boating and Ocean Recreation, see attached approved offshore mooring plans.

Description of Offshore Mooring:

The two new offshore moorings will each consist of a 3-point mooring constructed using three 4200# concrete blocks, connected to a single point using 3/4" galvanized chain through each block, then inter-connected by a 7/8" galvanized shackle, and a 1" eye-to-eye swivel. The single 3/4" chain runs up to a A-4 Polyform float at mid-depth, then to a 24" Jim Buoy 4403 mooring buoy at the surface. The mooring chain on Mooring #1, located in 20' of water, will be 40' long. The mooring chain on Mooring # 2, located in 30' of water will be 60' long. The mooring pendants will consist of 7/8" blue steel line with eye splices on galvanized thimbles on one end, shackled to a 1" weldless ring, attached to the mooring buoy using 7/8" shackles. Mooring pendants will be 20' long (minimum) and finished with 1' eye splices at the bitter end, and will have chafe guards at any points of contact. All shackles will be seized with wire.

Location of Offshore Mooring:

Maka'iwa Bay, Kohala, Island of Hawaii

Mooring # 1: 19°56' 40.05"N 155°52' 19.78"W
Mooring # 2: 19°56' 3.02" N 155°52' 118.97"W

Purpose of Offshore Mooring:

Securing of vessel in Maka'iwa Bay

Impact on Coastal Ecosystem and Marine Habitat:

The impact of the offshore mooring is negligible. The mooring site is not within the Special Management Area or Shoreline Setback Area. The site does not provide habitat for any known endangered species, plants, birds, or mammals. The site is not within, and does not border any National Area Reserve, Marine Conservation District or estuary. The site is not on or close to, any coral reef or coral colonies. No dredge or fill activities will be involved with use of the mooring. The mooring is installed in an area approved for the installation of offshore moorings by the DLNR Division of Boating and Ocean Recreation.

Impact on Historic Properties:

There are no historic properties located in the vicinity of the proposed offshore mooring.

Impact on Cultural Resources and Practices:

The proposed offshore mooring will not adversely impact cultural resources or practices.



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
230 OTAKE STREET
FORT SHAFTER, HAWAII 96858-5440

May 7, 2024

SUBJECT: Nationwide Permit Verification for DHL Mahi OPCO, LLC., Commercial Mooring Buoys, Makaiwa Bay, Kohala, Island of Hawaii, HI; Department of the Army File No. POH-2024-00070 and POH-2024-00071

Pat Fitzgerald
DHL Mahi OPCO, LLC.
68-1400 Mauna Lani Drive
Waimea, HI 96743

Dear Mr. Fitzgerald:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Branch has completed review of your Pre-Construction Notification dated April 8, 2024, requesting authorization for the proposed installation of two commercial mooring buoys located in Makaiwa Bay, Kohala, Island of Hawaii, HI. Please reference Department of the Army (DA) file number POH-2024-00070 and POH-2024-00071 in any future correspondence related to this permit.

This letter verifies your activity complies with the terms and conditions of Nationwide Permit (NWP) 09, (Structures in Fleeting and Anchorage Areas) issued on February 25, 2022. This NWP verification letter is being issued pursuant to Section 10 of the Rivers and Harbors Act of 1899 for work or structures in or affecting navigable waters of the U.S. You are authorized to conduct the following work below the Mean High Water Mark (MHWM) as described below and as depicted on the enclosed drawings (Enclosure 1):

POH-2024-00070 (Mooring 1): 19.94361°, -155.87195°
POH-2024-00071 (Mooring 2): 19.94454°, -155.87224°

The installation of two new moorings for up to a 42-foot-long vessel intended for commercial use deployed in waters of the U.S. below the Mean High Water Mark (MHWM). Each mooring would be located in approximately 30-foot-deep water with a maximum swing circle radius of the vessel of 112 feet. Each mooring anchor system would be comprised of three (3) 4-foot-wide by 4-foot-long by 18-inch-thick precast concrete block anchors. The concrete anchor blocks would be chained together and attached to the main mooring chain with a mid-line float and a 24-inch-diameter surface buoy. Two (2) 20-foot-long pendants would be attached to the surface buoy for vessel securement.

Based upon the information and plans you provided, we hereby verify that the work described above, which would be performed in accordance with the enclosed plan (sheets 1-3), dated March 29, 2024, is authorized by Nationwide Permit (NWP) No. 09,

Structures in Fleeting and Anchorage Areas. NWP No. 09 and its associated Regional and General Conditions can be accessed at: <https://www.poh.usace.army.mil/Missions/Regulatory/Permits/Nationwide-Permits/>. You must comply with all terms and conditions associated with NWP No. 09, as well as with the special conditions listed below:

a. You must implement and abide by the applicable Pac-SLOPES BMPs (Enclosure 2) including completion of the monitoring form (Enclosure 3).

b. You must implement and abide by the applicable EFH Conservation Recommendations (Enclosure 4).

c. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the U.S.

d. You must install and maintain, at your expense, any safety lights and signals prescribed by the U.S. Coast Guard (USCG), through regulations or otherwise, on your authorized facilities. The USCG may be reached at D14-DG-PJ-dpw@uscg.mil.

e. You understand and agree that, if future operations by the U.S. require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

Verification of your project under this NWP is valid until **March 15, 2026** unless this NWP is modified, reissued, or revoked prior to that date. It is incumbent upon you to remain informed of changes to the NWPs. If the Corps modifies, reissues, or revokes any NWP at an earlier date, we will issue a public notice announcing the changes. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of the Rivers and Harbors Act and subsequent enforcement action. This authorization does not relieve you of the responsibility to obtain any other federal, state, and/or local authorizations required by law.

Your project complies with the requirements of the Clean Water Act, Section 401 Blanket Water Quality Certification (WQC) WQC0901.FNL.20 issued for this Nationwide Permit by the State of Hawaii Department of Health, Clean Water Branch. You are

responsible for complying with the attached General Conditions of this WQC (Enclosure 5).

Your project complies with the requirements of the Coastal Zone Management Consistency Concurrence for this Nationwide Permit issued by the State of Hawaii Department of Business, Economic Development and Tourism, Office of Planning during the Nationwide Permit reissuance process in 2021.

Finally, General Condition #30 requires a signed certification be submitted to this office upon completion of work. Therefore, please sign, date and return the enclosed *Compliance Certification* form (Enclosure 6) within 30 days of completion of work to the email address specified below or to the mailing address indicated on the letterhead above.

Thank you for your cooperation with the Honolulu District Regulatory Program. Should you have any questions related to this authorization, please contact me at 808-835-4307 or via e-mail at Kirsten.F.Lara@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Office by accessing our web-based customer survey form at <https://regulatory.ops.usace.army.mil/ords/f?p=136:4>.

Sincerely,



Kirsten Lara
Regulatory Specialist, Regulatory Branch

Enclosures

Electronic cc:

U.S. Coast Guard, SecHonoWaterWays@uscg.mil

USCG District 14 Waterways Management, d14-dg-pj-dpw@uscg.mil

State of Hawaii Department of Health, Clean Water Branch

Darryl C Lum darryl.lum@doh.hawaii.gov

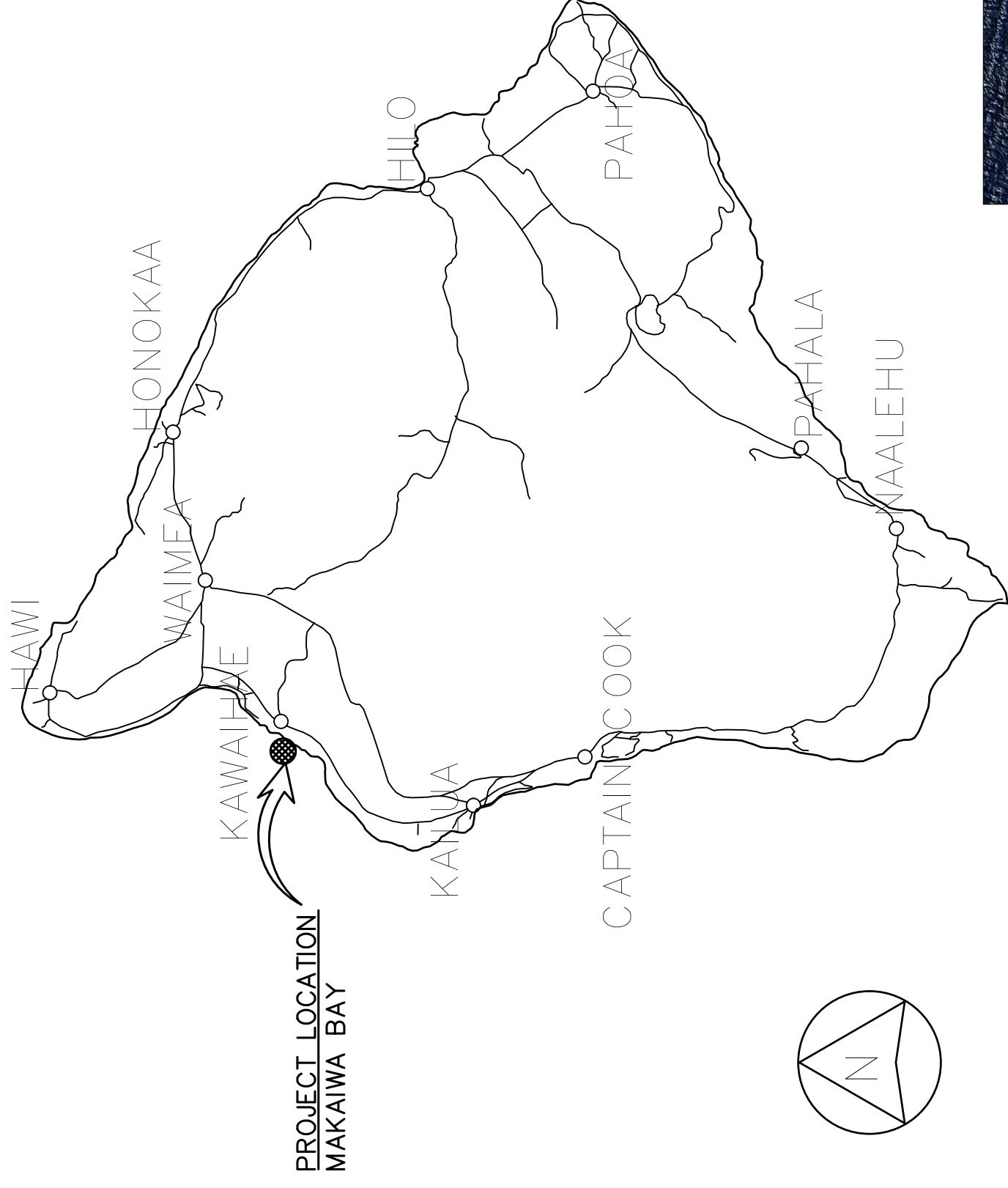
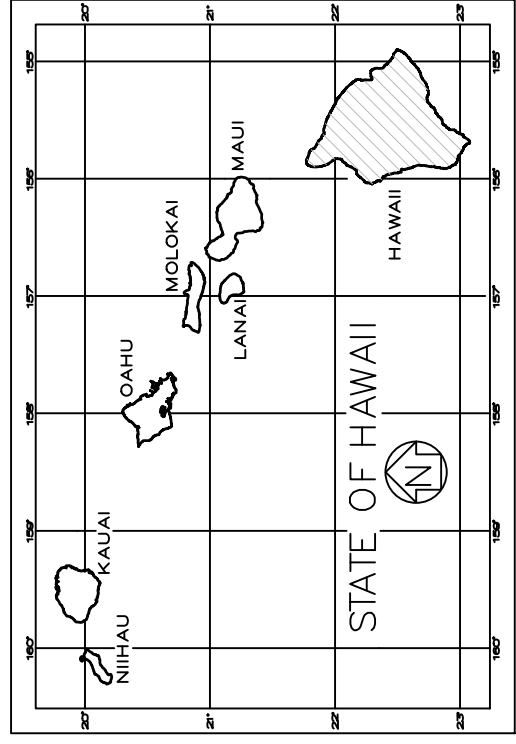
CleanWaterBranch@doh.hawaii.gov

State of Hawaii Office of Planning, Coastal Zone Management Program

Debra.L.Mendes@hawaii.gov

OFFSHORE MOORING - MAKAIWA BAY FOR: MAUNA LANI

GPS COORDINATES OF MOORING : 19°56'37.02"N, 155°52'18.97"W
APPROXIMATE WATER DEPTH : 20'



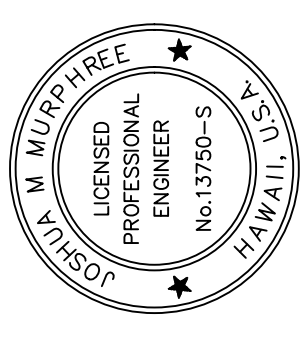
VICINITY MAP



LOCATION MAP

INDEX TO DRAWINGS	
SHEET NUMBER	DESCRIPTION
1	T-1 TITLE, INDEX TO DRAWINGS, AND VICINITY MAP
2	S-1 MOORING PLAN
3	S-2 SWING CIRCLE

ALLSHORE ENGINEERING, LLC.
61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990



JM
EXPIRES DATE OF THE LICENSE 4/30/2028
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

GENERAL NOTES
CONTRACTOR/OWNER SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE BEFORE PROCEEDING WITH THE WORK AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AND THE LATEST COUNTY OF HAWAII/STATE OF HAWAII AMENDMENTS AND ORDINANCES AND/OR THE CITY AND COUNTY OF WHERE THIS PROJECT IS LOCATED AND HAVING JURISDICTION.

REVISION MARK • DATE • DESCRIPTION

PROJECT
PROPOSED
MAKAIWA BAY
OFFSHORE MOORING
FOR:
MAUNA LANI

CONTACT:
BULLET OBRA - (808) 430-0400
RICK GAFFNEY - (808) 960-6767
DHL MAHI OPCO, LLC
68-1400 MAUNA LANI DRIVE
KAMUELA HI, 96743

GPS COORDINATES:
19°56'37.02"N 155°52'18.97"W

SHEET TITLE

TITLE SHEET

JOB NO. 2015-0007.187A DRAWING NO. **T-1**
DRAWN JMM
CHECKED JMM
DATE MAR. 29, 2024 SHEET 1 OF 3

GENERAL:

- A. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE BUILDING CODE AS STATED BELOW. HOWEVER, WHERE REFERENCE IS MADE TO PERFORMANCE CONFORMING TO OTHER STANDARDS THE MORE STRINGENT SHALL APPLY.
 1. COUNTY OF HAWAII: AMENDED IBC, 2006
- B. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY.
- D. DETAILS NOTED AS TYPICAL ON THE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED.
- E. PRODUCT DATA REQUIRED BY THESE NOTES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

DESIGN CRITERIA:

- A. MINIMUM DESIGN CRITERIA FOR MOORING IN ACCORDANCE WITH UFC 4-159-03:
 1. TYPE IIB STORM MOORING
- B. WIND DESIGN DATA:
 1. BASIC WIND SPEED: 105 MPH
- C. CURRENT:
 1. MAX CURRENT: 1.5 KNOTS
- D. WAVES AND TIDAL VARIATIONS:
 1. PEAK OFFSHORE WAVE HEIGHT: 5 FEET

WATER DEPTH 20'±

DESIGN VESSEL: "KALAMA KAI"

1. LENGTH: 42'-0"
2. WIDTH: 12'-0"
3. DRAFT: 6'-0"
4. WEIGHT: 20 TONS

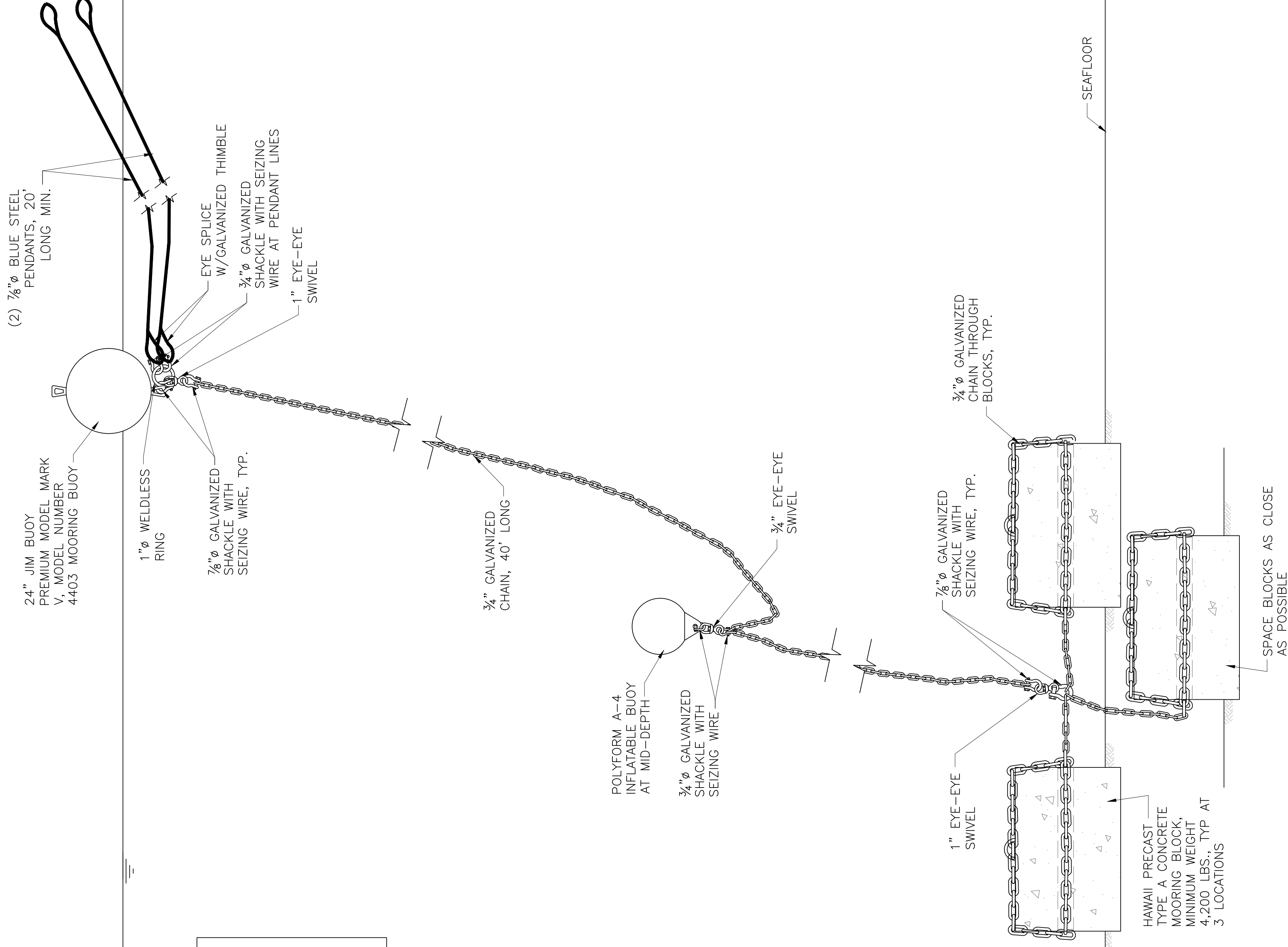
*MOORING IS DESIGNED FOR DESIGN VESSEL ONLY, ANY CHANGE IN MOORED VESSEL REQUIRES RE-ANALYSIS.

CHAIN, HARDWARE, ROPE, AND MOORING COMPONENTS

- A. ALL CHAIN AND HARDWARE SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
- B. THIMBLES OR CHAFE GUARDS SHALL BE USED WITH ROPES AT ALL POINTS OF CONTACT.
- C. SUBMIT PRODUCT DATA OF ALL CHAINS, HARDWARE, ROPE, AND MOORING COMPONENTS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

MOORING, HARDWARE, MAINTENANCE AND INSPECTION

- A. THE VESSEL OWNER SHALL BE RESPONSIBLE FOR MAINTAINING THE VESSEL'S MOORING HARDWARE. ANY FAILURE RESULTING FROM NON MAINTAINED COMPONENTS OR UNREPAIRED DAMAGE OF THE MOORING RESULTING FROM NORMAL USE SHALL BE THE RESPONSIBILITY OF THE VESSEL OWNER.
- B. THE VESSEL OWNER SHALL INSPECT ALL MOORING HARDWARE, ROPES, AND CHAINS FROM SEA FLOOR TO PENDANT FOR SAFETY AND SECURITY NO LESS THAN TWO TIMES PER YEAR. INSPECTION REPORT/RECORDS SHALL BE KEPT BY VESSEL OWNER AND REPORTED TO HARBORMASTER/DLNR AS REQUIRED.
- C. THE VESSEL OWNER IS RESPONSIBLE FOR INSTALLING AND MAINTAINING CHAFING GEAR ON ALL MOORING LINES.



NOTES:

1. THIS IS AN NEW MOORING LOCATION. ALL HARDWARE AND COMPONENTS ARE NEW UNLESS NOTED OTHERWISE.
2. FOR STORM OR LONG TERM MOORING USE ONE ADDITIONAL, 25' LONG MIN., 1" DOUBLE BRAIDED NYLON PENDANT AS BACKUP. USE CHAFE GUARDS AT ALL POINTS OF CONTACT.
3. THE SWING CIRCLE OF THIS MOORING SHALL NOT INTERSECT THE SWING CIRCLE OF ANY ADJACENT MOORING. THE OWNER AND INSTALLER SHALL ASSURE ADEQUATE CLEARANCE IS PROVIDED.

ALLSHORE ENGINEERING, LLC.

61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990



JM
EXPIRES DATE OF THE LICENSE 4/30/2028
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

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FOR:
MAUNA LANI

CONTACT:
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GPS COORDINATES:
19°56'37.02"N 155°52'18.97"W

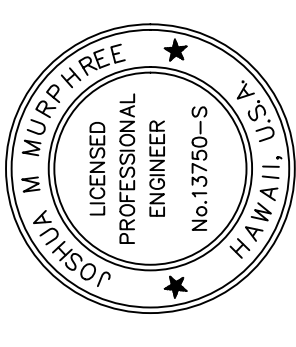
SHEET TITLE
MOORING PLAN

JOB NO. 2015-0007.187A DRAWING NO. **S-1**

DRAWN JMM
CHECKED JMM
DATE MAR. 29, 2024 SHEET 2 OF 3

MOORING DETAILS
NOT TO SCALE

**ALLSHORE
ENGINEERING, LLC.**
61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990



JM
EXPIRES DATE OF THE LICENSE 4/30/2028
THIS WORK WAS PREPARED BY
JOSHUA M. MURPHY, LICENSED PROFESSIONAL
ENGINEER, UNDER THE CLOSE PERSONAL
SUPERVISION AND DIRECTION OF THIS PROJECT
AND CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.

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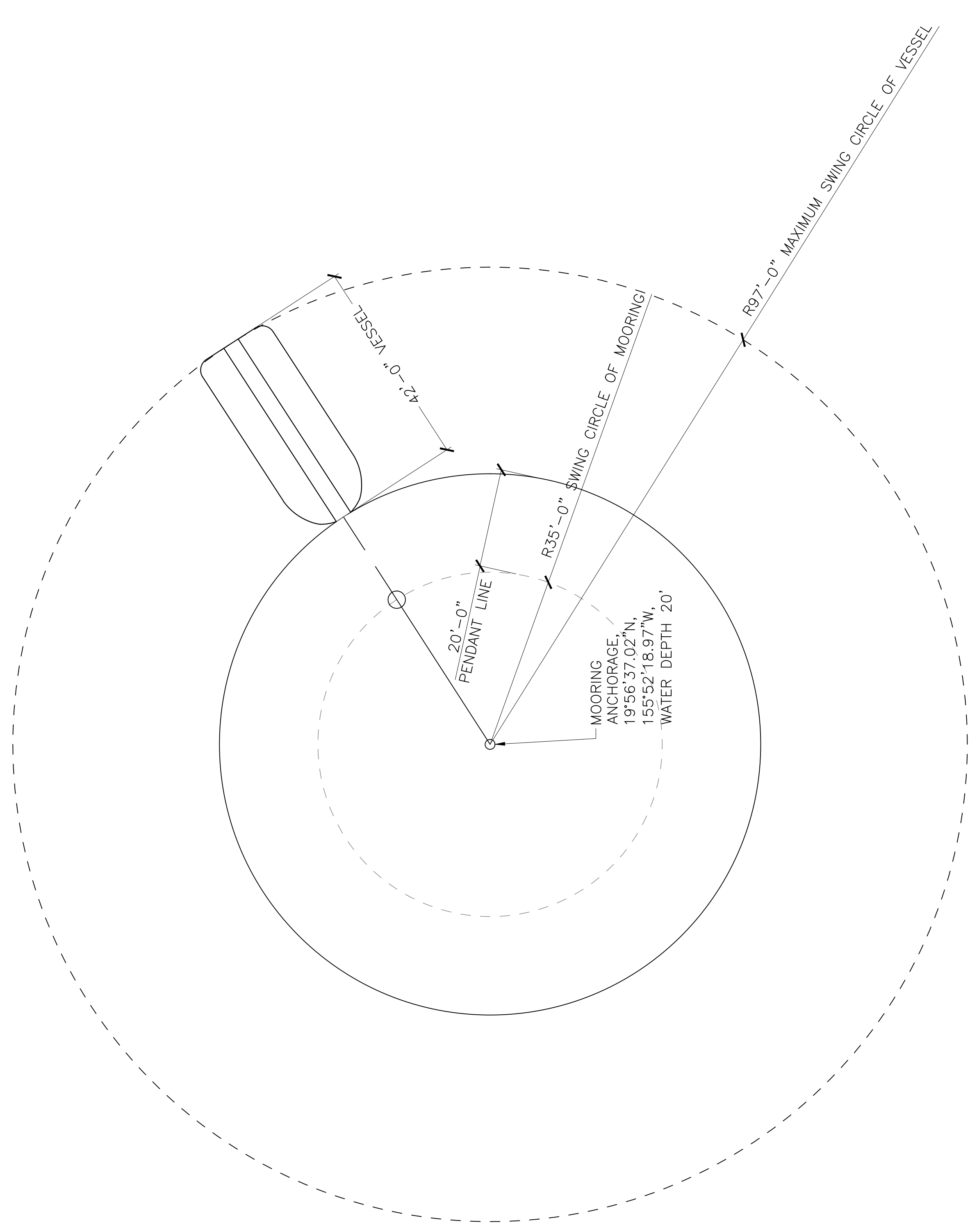
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SHEET TITLE

SWING CIRCLE

JOB NO. 2015-0007.187A DRAWING NO.
DRAWN JMM
CHECKED JMM
DATE MAR. 29, 2024 SHEET 3 OF 3

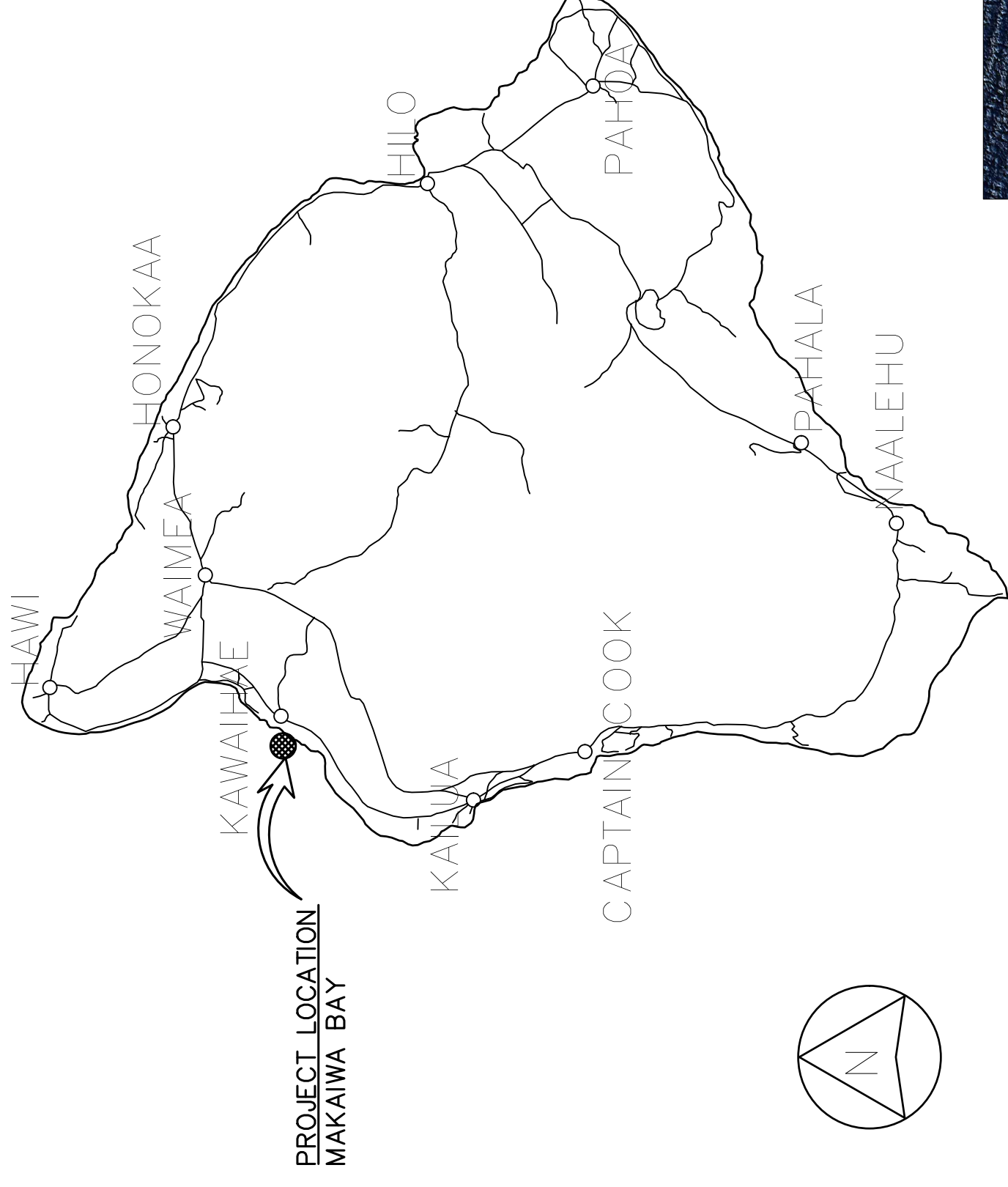
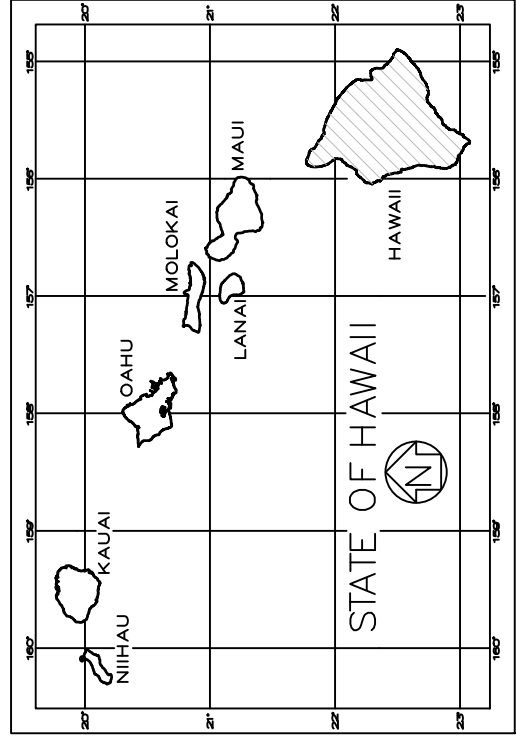


NOTE:
THE SWING CIRCLE OF THIS MOORING
SHALL NOT INTERSECT THE SWING CIRCLE
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AND INSTALLER SHALL ASSURE ADEQUATE
CLEARANCE IS PROVIDED.

MOORING PLAN
SCALE: 1/8" = 1'-0"

OFFSHORE MOORING - MAKAIWA BAY FOR: MAUNA LANI

GPS COORDINATES OF MOORING : 19°56'40.05"N 155°52'19.78"W
APPROXIMATE WATER DEPTH : 30'



VICINITY MAP



LOCATION MAP

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DRAWN JMM
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DATE MAR. 29, 2024 SHEET 1 OF 3

**Department of Land and Natural Resources
Division of Boating and Ocean Recreation
PLAN REVIEW:**

Approved
 Rejected

Approved, as noted
 Revise & Resubmit

By: *JMM* Date: 04/04/2024

Corrections, comments or approval of plans shall not relieve the contractor from other local, state, federal or other agency regulations or permit conditions. This review is for general conformance with engineering design guidelines. The contractor is responsible for confirming all dimensions, quantities, fabrication requirements, and coordination with all other trades.

GENERAL:

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 1. COUNTY OF HAWAII: AMENDED IBC, 2006
- B. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY.
- D. DETAILS NOTED AS TYPICAL ON THE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED.
- E. PRODUCT DATA REQUIRED BY THESE NOTES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

DESIGN CRITERIA:

- A. MINIMUM DESIGN CRITERIA FOR MOORING IN ACCORDANCE WITH UFC 4-159-03:
 1. TYPE IIB STORM MOORING
- B. WIND DESIGN DATA:
 1. BASIC WIND SPEED: 105 MPH
- C. CURRENT:
 1. MAX CURRENT: 1.5 KNOTS
- D. WAVES AND TIDAL VARIATIONS:
 1. PEAK OFFSHORE WAVE HEIGHT: 5 FEET

WATER DEPTH 30'±

DESIGN VESSEL: "KALAMA KAI"

1. LENGTH: 42'-0"
2. WIDTH: 12'-0"
3. DRAFT: 6'-0"
4. WEIGHT: 20 TONS

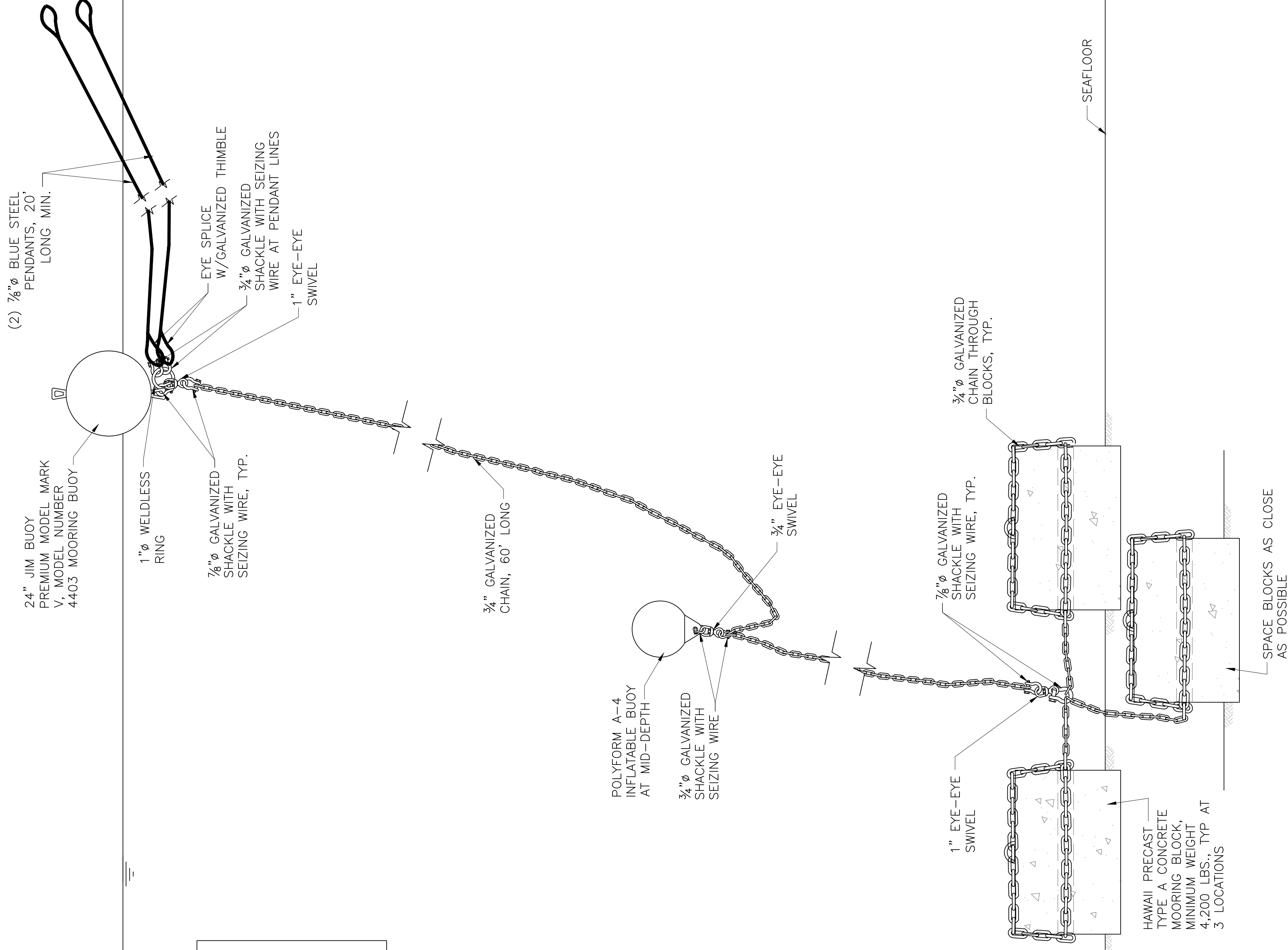
*MOORING IS DESIGNED FOR DESIGN VESSEL ONLY, ANY CHANGE IN MOORED VESSEL REQUIRES RE-ANALYSIS.

CHAIN, HARDWARE, ROPE, AND MOORING COMPONENTS

- A. ALL CHAIN AND HARDWARE SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
- B. THIMBLES OR CHAFE GUARDS SHALL BE USED WITH ROPES AT ALL POINTS OF CONTACT.
- C. SUBMIT PRODUCT DATA OF ALL CHAINS, HARDWARE, ROPE, AND MOORING COMPONENTS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

MOORING, HARDWARE, MAINTENANCE AND INSPECTION

- A. THE VESSEL OWNER SHALL BE RESPONSIBLE FOR MAINTAINING THE VESSEL'S MOORING HARDWARE. ANY FAILURE RESULTING FROM NON MAINTAINED COMPONENTS OR UNREPAIRED DAMAGE OF THE MOORING RESULTING FROM NORMAL USE SHALL BE THE RESPONSIBILITY OF THE VESSEL OWNER.
- B. THE VESSEL OWNER SHALL INSPECT ALL MOORING HARDWARE, ROPES, AND CHAINS FROM SEA FLOOR TO PENDANT FOR SAFETY AND SECURITY NO LESS THAN TWO TIMES PER YEAR. INSPECTION REPORT/RECORDS SHALL BE KEPT BY VESSEL OWNER AND REPORTED TO HARBORMASTER/DLNR AS REQUIRED.
- C. THE VESSEL OWNER IS RESPONSIBLE FOR INSTALLING AND MAINTAINING CHAFING GEAR ON ALL MOORING LINES.



NOTES:

1. THIS IS AN NEW MOORING LOCATION. ALL HARDWARE AND COMPONENTS ARE NEW UNLESS NOTED OTHERWISE.
2. FOR STORM OR LONG TERM MOORING USE ONE ADDITIONAL, 25' LONG MIN., 1" DOUBLE BRAIDED NYLON PENDANT AS BACKUP. USE CHAFE GUARDS AT ALL POINTS OF CONTACT.
3. THE SWING CIRCLE OF THIS MOORING SHALL NOT INTERSECT THE SWING CIRCLE OF ANY ADJACENT MOORING. THE OWNER AND INSTALLER SHALL ASSURE ADEQUATE CLEARANCE IS PROVIDED.

ALLSHORE ENGINEERING, LLC.

61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990



JM
EXPIRES DATE OF THE LICENSE 4/30/2028
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

GENERAL NOTES

CONTRACTOR/OWNER SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE BEFORE PROCEEDING WITH THE WORK AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.

ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AND THE LATEST COUNTY OF HAWAII/STATE OF HAWAII AMENDMENTS AND ORDINANCES AND/OR THE CITY AND COUNTY OF WHERE THIS PROJECT IS LOCATED AND HAVING JURISDICTION.

REVISION MARK • DATE • DESCRIPTION

PROJECT
PROPOSED
MAKAIWA BAY
OFFSHORE MOORING
FOR:
MAUNA LANI

CONTACT:
BULLET OBRA - (808) 430-0400
RICK GAFFNEY - (808) 960-6767
DHL MAHI OPGO, LLC
68-1400 MAUNA LANI DRIVE
KAMUELA HI, 96743

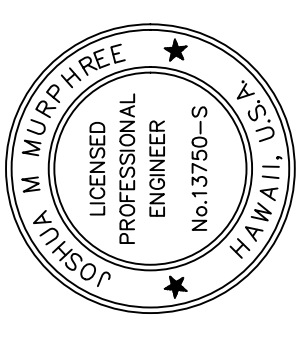
GPS COORDINATES:
19°56'40.05"N 155°52'19.78"W

SHEET TITLE
MOORING PLAN

JOB NO. 2015-0007.187B DRAWING NO. **S-1**
DRAWN JMM
CHECKED JMM
DATE MAR. 29, 2024 SHEET 2 OF 3

MOORING DETAILS
NOT TO SCALE

**ALLSHORE
ENGINEERING, LLC.**
61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990



JM
EXPIRES DATE OF THE LICENSE 4/30/2028
THIS WORK WAS PREPARED BY
JOSHUA M. MURPHY, LICENSED PROFESSIONAL ENGINEER
AND CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION

GENERAL NOTES
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GPS COORDINATES:
19°56'40.05"N 155°52'19.78"W

SHEET TITLE

SWING CIRCLE

JOB NO. 2015-0007.187B DRAWING NO.

DRAWN JMM

CHECKED JMM

DATE MAR. 29, 2024 SHEET 3 OF 3

MOORING PLAN

SCALE: 1/8" = 1'-0"

NOTE:
THE SWING CIRCLE OF THIS MOORING
SHALL NOT INTERSECT THE SWING CIRCLE
OF ANY ADJACENT MOORING. THE OWNER
AND INSTALLER SHALL ASSURE ADEQUATE
CLEARANCE IS PROVIDED.

