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

January 12, 2018

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

Land Board Members:

SUBJECT: APPROVE THE INSTALLATION OF THREE EXISTING OFFSHORE MOORINGS DECLARE EXEMPTION FROM REQUIREMENTS OF CHAPTER 343, HAWAII REVISED STATUES, AND TITLE 11, CHAPTER 200, HAWAII ADMINISTRATIVE RULES, LAHAINA ROADSTEAD OFFSHORE MOORING AREA, LAHAINA, ISLAND OF MAUI, FOR HONE HEKE CORPORATION DBA EXPEDITIONS

REQUEST:

The Division of Boating and Ocean Recreation ("DOBOR") is requesting that the Board of Land and Natural Resources ("Board") approve the installation of three (3) existing offshore moorings within the Lahaina Roadstead Offshore Mooring Area and declare the installation exempt from the requirements of Chapter 343, Hawaii Revised Statutes, and Title 11, Chapter 200, Hawaii Administrative Rules to prepare an Environmental Assessment ("EA"), due to the use of submerged State land.

The applicant, Hone Heke Corporation DBA Expeditions ("Applicant"), uses three (3) existing offshore moorings installed within the Lahaina Roadstead Offshore Mooring Zone that have been in place for several years. They are requesting that the Board approve the installation of the offshore moorings and declare their installation exempt from the requirement to prepare an EA, as required by Chapter 343, HRS, and Chapter 11-200, HAR due to the use of submerged State land. The Applicant's request is attached as Exhibit A.

PERMITS AND CONDITIONS:

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 ("ACOE"). 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 from the ACOE authorizing the installation and use of the existing moorings. Mooring Installation Plans for all three (3) moorings, prepared by a licensed structural engineer, have also been submitted to and approved by DOBOR Engineering Branch. The ACOE Permit and approved Mooring Installation Plan are also attached with Exhibit A.

ENVIRONMENTAL ASSESSMENT EXEMPTION:

In accordance with Hawaii Administrative Rule (HAR) Section 11-200-8(A) and the Exemption List for the Department of Land and Natural Resources (DLNR), approved by the Environmental Council, on June 5, 2015, it has been determined that the installation of the existing mooring is exempt from the preparation of an EA pursuant to the following exemptions:

Item No. 13 of Exemption Class 6: "Placement or 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 land and waters."

Consultations with the U.S. Army Corps of Engineers for this EA Exemption have been conducted as required by HAR 11-200-8.

**RECOMMENDATION**

Approve the installation of three (3) existing offshore moorings within Lahaina Roadstead Offshore Mooring Area and declare that, after considering the potential effects of the installed moorings as provided by Chapter 343, HRS, and Chapter 11-200, HAR, this project will probably have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.

Respectfully Submitted,

EDWARD R. UNDERWOOD, Administrator
Division of Boating & Ocean Recreation

APPROVED FOR SUBMITTAL:

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

Attachment:
Exhibit A – Applicant's request for approval of mooring, approved Mooring Installation Plans, Nationwide Permit Verification Letter from Army Corps of Engineers

**EXPEDITIONS**

658 Front Street #127
Lahaina, HI 96761

(808) 661-3756
1-800-695-2624
Fax (808) 661-0544

Request for Exemption from Requirement for Preparation of Environmental Assessment for and Approval for the Installation and Modification of Existing Offshore Moorings within Lahaina Bay, Lahaina on the Island of Maui.

Submitted in compliance with Hawaii Revised Status Chapter 343 and HAR §§11-200-8; 11-200-8(b)

Submitted to:

Board of Land & Natural Resources, State of Hawaii, Department of Land & Natural Resources (DLNR) Division of Boating and Ocean Recreation, 4 Sand Island Access Road, Honolulu, HI 96819
Email: finn.d.mccall@hawaii.gov Phone: (808) 587-3520

Submitted by:

Bill Caldwell, President Hone Heke Corporation dba Expeditions. Email: bill@go-lanai.com Ph. 808-264-5111

Request:

Bill Caldwell (hereinafter referred to as "Petitioner") requests approval for installation and modification of (3) three existing offshore moorings within Lahaina Bay and exemption from requirement for environmental assessment report associated with the proposed mooring installations, as the proposed moorings will have little to no environmental impact, as discussed herein below:

Reasoning and Justification for Request

Environmental Assessment Exemption

1) The reason for the Environmental Assessment is due to the use of State submerged lands

2) Petitioner requests exemption from requirement for environmental assessment report associated with the proposed mooring installations, as the proposed installations will have little or no impact on the environment in the proposed locations.

3) The current exemption list for the Department of Land and Natural Resources data June 5, 2015 provides as follows under Exemption Class 6:

"13. Placement or construction of accessory structures such as...mooring, cleats, bumpers, and mooring buoys, blocks and piles, and other similar structures accessory to existing facilities on state land and waters."

Project Description-

Installation/modification of (3) three private offshore mooring buoys in the Lahaina Bay, Lahaina, Maui, HI.

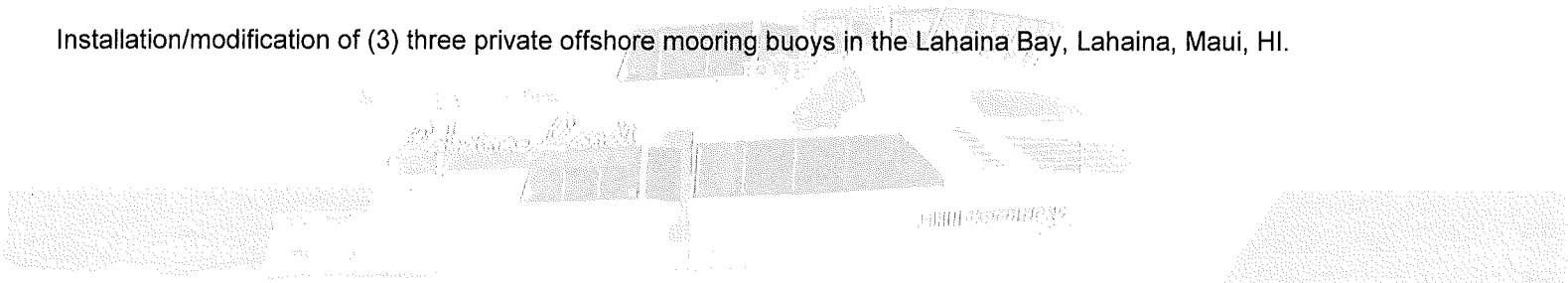


EXHIBIT A

Technical Description of Proposed Installations/Modifications –

a. Expeditions 4: This project is in references to an already installed (2003) single point mooring buoy for commercial vessels deployed in approximately 56-foot deep water, located approximately 2,243-linear feet from the shoreline in Lahaina Bay near Lahaina, near the Island of Maui at 20.8696 N, -156.6841° W. The existing mooring anchoring system is comprised of two 3800 pound concrete blocks with one MR-SR Manta anchor installed at a minimum of 7-linear feet below the seafloor. The anchor is attached to one of the cement blocks via 3/4-inch galvanized mooring chain which is segmented at the sea floor surface and connected via 3/4-inch galvanized bolt anchor shackles and seizing wires. The dimensions for the concrete blocks are 5-linear feet in length by 18-inches in height by 5-linear feet in width. A 3/4-inch galvanized "Campbell" dock chain 10-linear feet in length is wrapped around and connected at the center of both cement blocks via 3/4-inch galvanized bolt-anchor-shackles and seizing wire. A 5/8-inch mooring chain 4-linear feet in length connects to a 12-inch float via a 1-inch swivel and 3/4-inch shackle. The float is connected to a 1 1/2-inch "blue steel" 3 strand rope approximately 54-linear feet in length with thimble eyes on both ends and a second float attached to the rope near the terminus of the rope. The rope, in turn, connects to a 5/8-inch galvanized mooring chain via a 5/8-inch galvanized bolt-anchor-shackle and seizing wire which is connected to 1-inch forged eye-to-eye swivel to the rope. The mooring chain is 50-linear feet in length and connects to the 1-inch swivel via a 5/8-inch shackle then to a 32-inch mooring buoy. The mooring buoy has a 1-inch Masterlink which attaches via two 7/8-inch shackles with seizing wire to two 30-linear feet in length, 1 1/4-inch 3-strand nylon ropes. The mooring chain threads through the center of the buoy and connects to the Masterlink via a 7/8-inch bolt shackle with seizing wire. The total length of working chain and rope is approximately 145 feet. All of the mentioned hardware has replaced the old and is new per the approved drawings since 2017. The mooring anchors will be installed by "Maui Mooring Service", in accordance with the attached Army Corps of Engineers permit.

b. Expeditions 5: This project is in references to an already installed (2015) single point mooring buoy for commercial vessels deployed in approximately 53-foot deep water, located approximately 2,000-linear feet from the shoreline in Lahaina Bay near Lahaina, near the Island of Maui at 20.8775° N, 156.6886° W. The existing mooring anchoring system is comprised of two (2) 3800 pound concrete blocks with one MR-SR Manta anchor installed at a minimum of 7-linear feet below the seafloor. The anchor is attached to the cement block via 3/4-inch galvanized mooring chains which are segmented at the surface and connected via 3/4-inch galvanized bolt anchor shackles and seizing wire.
The dimensions for the concrete block are 5-linear feet in length by 18-inches in height by 5-linear feet in width. A 3/4-inch galvanized "Campbell" dock chain 10-linear feet in length is wrapped around and connected at the center of both blocks via 3/4-inch galvanized bolt anchor shackles and seizing wire. A 5/8-inch mooring chain 15-linear feet in length connects to 12 inch float via a 1-inch swivel with a 3/4-inch shackle. The float is connected to a 1 1/2-inch "blue steel" 3-strand rope approximately 40-linear feet in length with thimble eyes on both ends and a second float attached to the rope. The rope, in turn, connects to a 5/8-inch mooring chain via a 3/4-inch galvanized bolt anchor shackle and seizing wire which is connected to 1-inch forged eye-to-eye swivel to the rope. The mooring chain is 30-linear feet in length and connects to a 32-inch mooring buoy. The mooring buoy has a 1-inch Masterlink which would attach to two 7/8-inch shackles to two 30-linear feet in length, 1 1/4-inch 3-strand nylon ropes with eye

splices and hawser thimbles on the shackle ends and eye splices on the other end. The mooring chain threads through the center of the buoy and connects to the Masterlink via a 7/8-inch bolt shackle with seizing wire. The total length of working chain and rope is approximately 115 feet. All of the mentioned hardware has replaced the old and is new per the approved drawings since 2017.The mooring anchors will be installed by "Maui Mooring Service", in accordance with the attached Army Corps of Engineers permit.

c. Expeditions 6: This project is in references to an already installed (2006) single point mooring buoy for commercial vessels deployed in approximately 76-foot deep water, located approximately 2,630-linear feet from the shoreline in Lahaina Bay near Lahaina, near the Island of Maui at 20.8691° N, 156.6851 ° W. The existing mooring anchoring system is comprised of two 3800 pound concrete blocks with two MR-SR Manta anchors installed at a minimum of 7-linear feet below the seafloor. The anchors are attached to each of the cement blocks individually via 3/4-inch galvanized mooring chain which is segmented once it extends out of the sea floor and is connected via a 3/4-inch galvanized bolt anchor shackle and seizing wire to another 3/4-inch galvanized mooring chain that in turn is connected to one of the cement blocks via a 3/4-inch shackle.

The dimensions for the concrete blocks are 5-linear feet in length by 18-inches in height by 5-linear feet in width. A 3/4-inch galvanized "Campbell" dock chain 22-linear feet in length is wrapped around and connected at the center of both cement blocks via 3/4-inch galvanized bolt anchor shackles and seizing wire. A 5/8-inch mooring chain 46-linear feet in length connects to a 5/8-inch galvanized chain via 3/4-shackle which connects to a 12-inch float via a 3/4-inch shackle. The float is connected to a 1 1/2-inch "blue steel" 3-strand rope 75-linear feet in length with thimble eyes on both ends and a second float attached to the rope near the terminus of the rope. The rope connects to a 3/4-inch galvanized mooring chain via a 3/4-inch galvanized bolt anchor shackle and 1-inch swivel. The mooring chain is 50-linear feet in length and connects to a 32-inch mooring buoy. The mooring buoy has a 1-inch Masterlink which would attach to two 30-linear feet in length, 1 1/4-inch 3-strand nylon ropes via 7/8-inch shackles with seizing wire. The mooring chain threads through the center of the buoy and connects to a 1-inch Masterlink via a 7/8-inch bolt shackle with seizing wire. The total length of working chain and rope is approximately 205 feet. All of the mentioned hardware has replaced the old and is new per the approved drawings since 2017, except that there are two blocks instead of three and two mantas instead of one attached to each block. The mooring anchors will be installed by "Maui Mooring Service", in accordance with the attached Army Corps of Engineers permit.

Location of Proposed Installations/Modifications –
a. Mooring Buoy one (1), identified as Expeditions 4, 20.8696° N, -156.6841° W
b. Mooring Buoy two (2), identified as Expeditions 5, 20.8775° N, -156.6886° W
c. Mooring Buoy three (3), identified as Expeditions 6, 20.8691° N, -156.6851° W

Purpose of Proposed Installations/Modifications –

The proposed moorings (3) three, will be used by the Petitioner solely for the purpose of mooring

Expeditions Four, Expeditions Five and Expeditions Six for commercial ferry purposes.

Impact on Coastal Ecosystems-

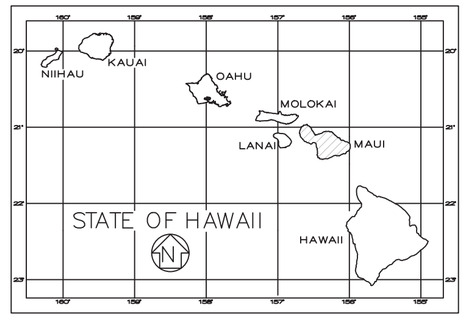
NEGLIGIBLE- The proposed mooring sites are 2,243, 2,000 and 2,630 linear feet respectfully from the nearest shore and is not within the Special Management Area or Shoreline Setback Area, nor is the site within a State Conservation District. This site does not provide habitat for any known endangered species of plants, birds, or mammals. The site is not within, and does not boarder any National Area Reserve, Marine Conservation District, or estuary. The sites are not on or close to any reef or coral colonies. No material will be placed or discharged in the project area. MANTA RAY anchors will be utilized in order to protect the natural resources in the area. The MANTA RAY anchors are an environmentally friendly anchor system that installs easily under water with conventional equipment. No dredge or fill activities will be involved in the installation of the MANTA RAY mooring anchors. The moorings will be placed within an existing designated DLNR "Offshore" mooring area.

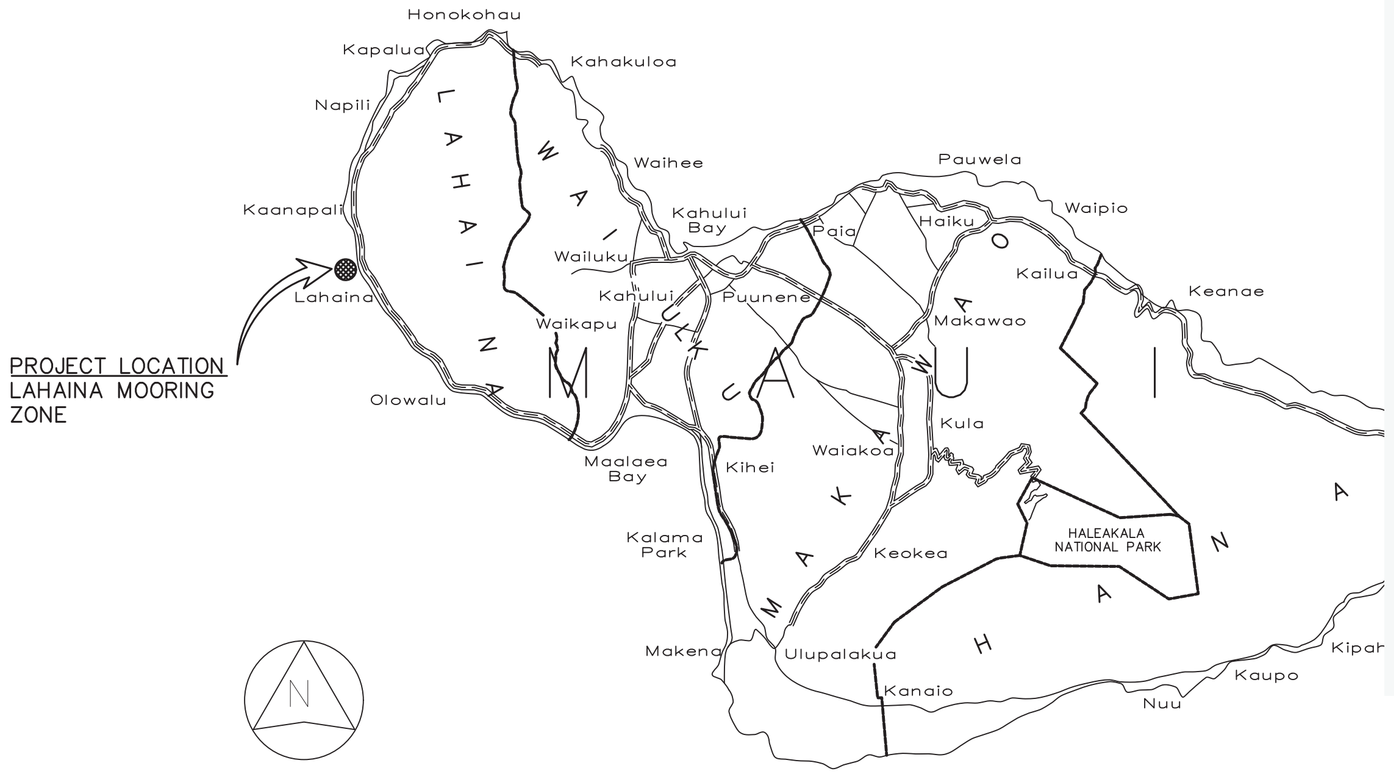
EXHIBIT A

# OFFSHORE MOORING - LAHAINA MOORING ZONE
# FOR BILL CALDWELL - EXPEDITIONS 6

GPS COORDINATES OF MOORING : 20°52'08.8"N, 156°41'06.7"W

APPROXIMATE WATER DEPTH : 76'



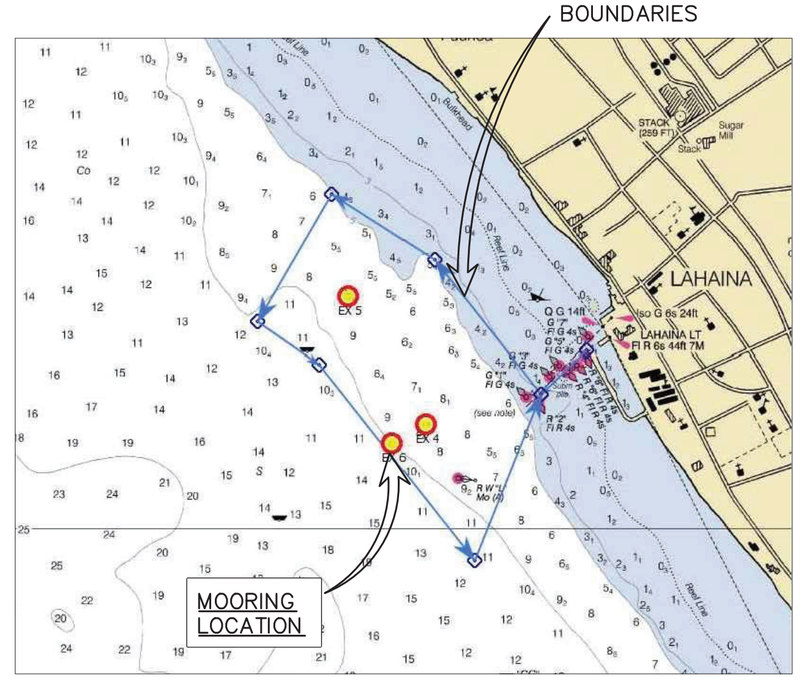

VICINITY MAP

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

☒ Approved ☐ Approved, as noted
☐ Rejected ☐ Revise & Resubmit

By: _____ Date: 12/2/16

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.




LOCATION MAP

## INDEX TO DRAWINGS

| SHEET NUMBER | DRAWING NUMBER | DESCRIPTION |
|---|---|---|
| 1 | T-1 | TITLE, INDEX TO DRAWINGS, AND VICINITY MAP |
| 2 | S-1 | MOORING NOTES AND ELEVATION |
| 3 | S-2 | MOORING PLAN |
| | | |
| | | |


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


JOSHUA M MURPHREE
LICENSED PROFESSIONAL ENGINEER
No.13750-S
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2018
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

GENERAL NOTES

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

ALL CONSTRUCTION SHALL CONFORM TO THE 2006 INTERNATIONAL BUILDING CODE AND THE LATEST COUNTY OF MAUI/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
OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
PHONE: (808) 661-3756

GPS COORDINATES: 20°52'08.8"N
156°41'06.7"W

SHEET TITLE

TITLE SHEET

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
T-1
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 MAUI 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: 2 KNOTS
D. WAVES AND TIDAL VARIATIONS:
   1. PEAK WAVE HEIGHT: 8 FEET

DESIGN VESSEL: EXPEDITIONS 6
   1. LOA: 66'-8"
   2. BEAM: 25'-6"
   3. DRAFT: 6'-4"
   4. WEIGHT: 43 TONS.

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

EARTH ANCHORS:

A. SELECTION OF ANCHOR TYPE SHALL BE BASED UPON SURVEY SITE AND SOIL PROBING TO MINIMUM DEPTH OF 10' AT PROPOSED ANCHOR LOCATION. CONTRACTOR SHALL PROVIDE RESULTS OF SURVEY, SOIL PROBING, AND PROPOSED ANCHOR TYPE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

B. INSTALL ANCHORS PER MANUFACTURERS INSTRUCTIONS. PROOF TEST TO MINIMUM UPLIFT CAPACITY STATED ON DESIGN DRAWINGS. SUBMIT DOCUMENTATION OF PROOF LOAD TESTING TO ENGINEER FOLLOWING INSTALLATION.

C. MANTA ANCHORS SHALL NOT BE INSTALLED IN LOCATIONS WHERE SHIFTING SAND MAY RESULT IN REDUCED SOIL COVER OVER ANCHOR HEAD.

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.

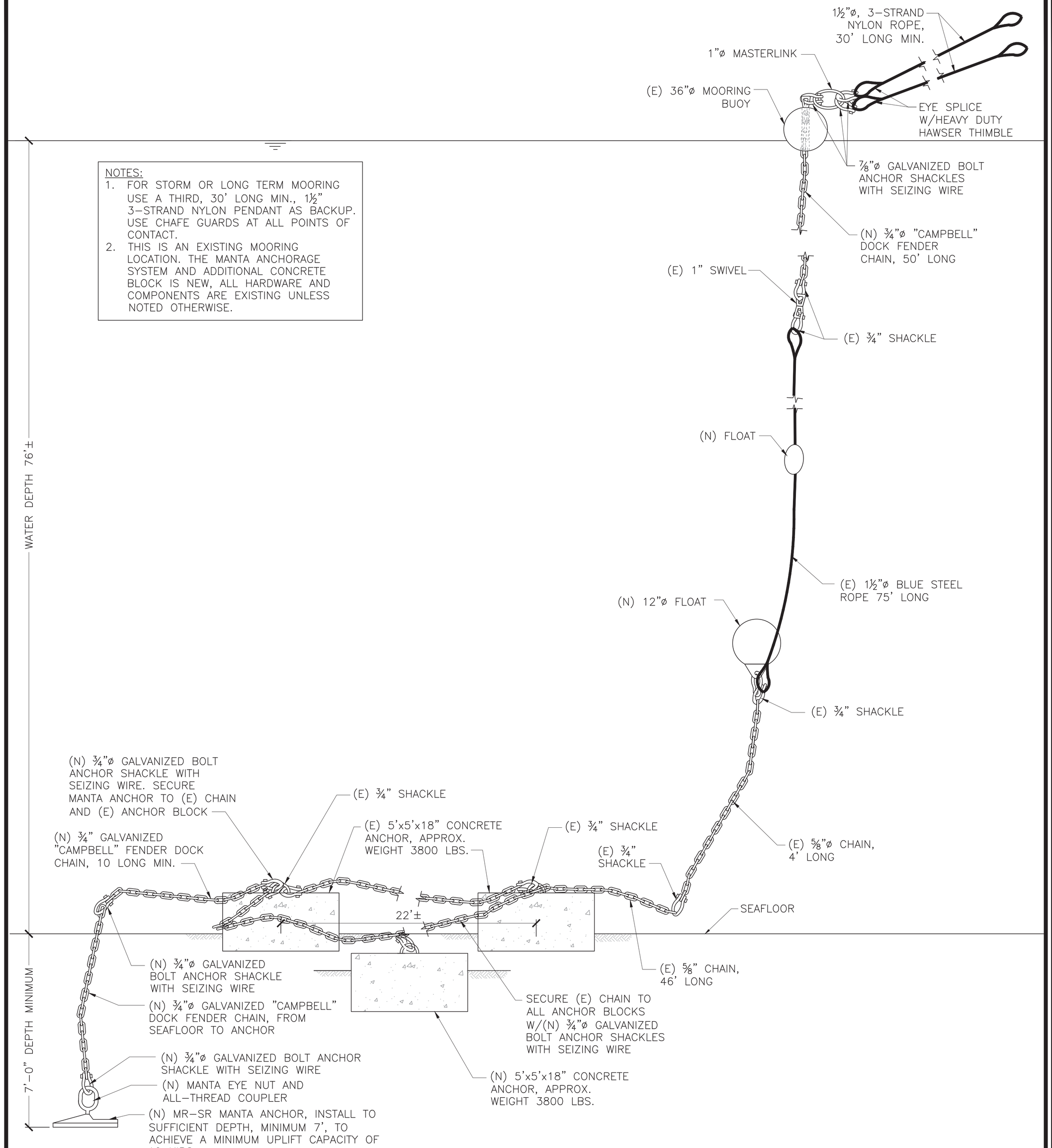
MOORING HARDWARE, MAINTENANCE AND INSPECTION

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.

C. THE VESSEL OWNER IS RESPONSIBLE FOR INSTALLING AND MAINTAINING CHAFING GEAR ON ALL MOORING LINES.

NOTES:
1. FOR STORM OR LONG TERM MOORING USE A THIRD, 30' LONG MIN., 1½" 3-STRAND NYLON PENDANT AS BACKUP. USE CHAFE GUARDS AT ALL POINTS OF CONTACT.
2. THIS IS AN EXISTING MOORING LOCATION. THE MANTA ANCHORAGE SYSTEM AND ADDITIONAL CONCRETE BLOCK IS NEW, ALL HARDWARE AND COMPONENTS ARE EXISTING UNLESS NOTED OTHERWISE.




MOORING ELEVATION

NOT TO SCALE


PHREE CREATIONS, LLC.

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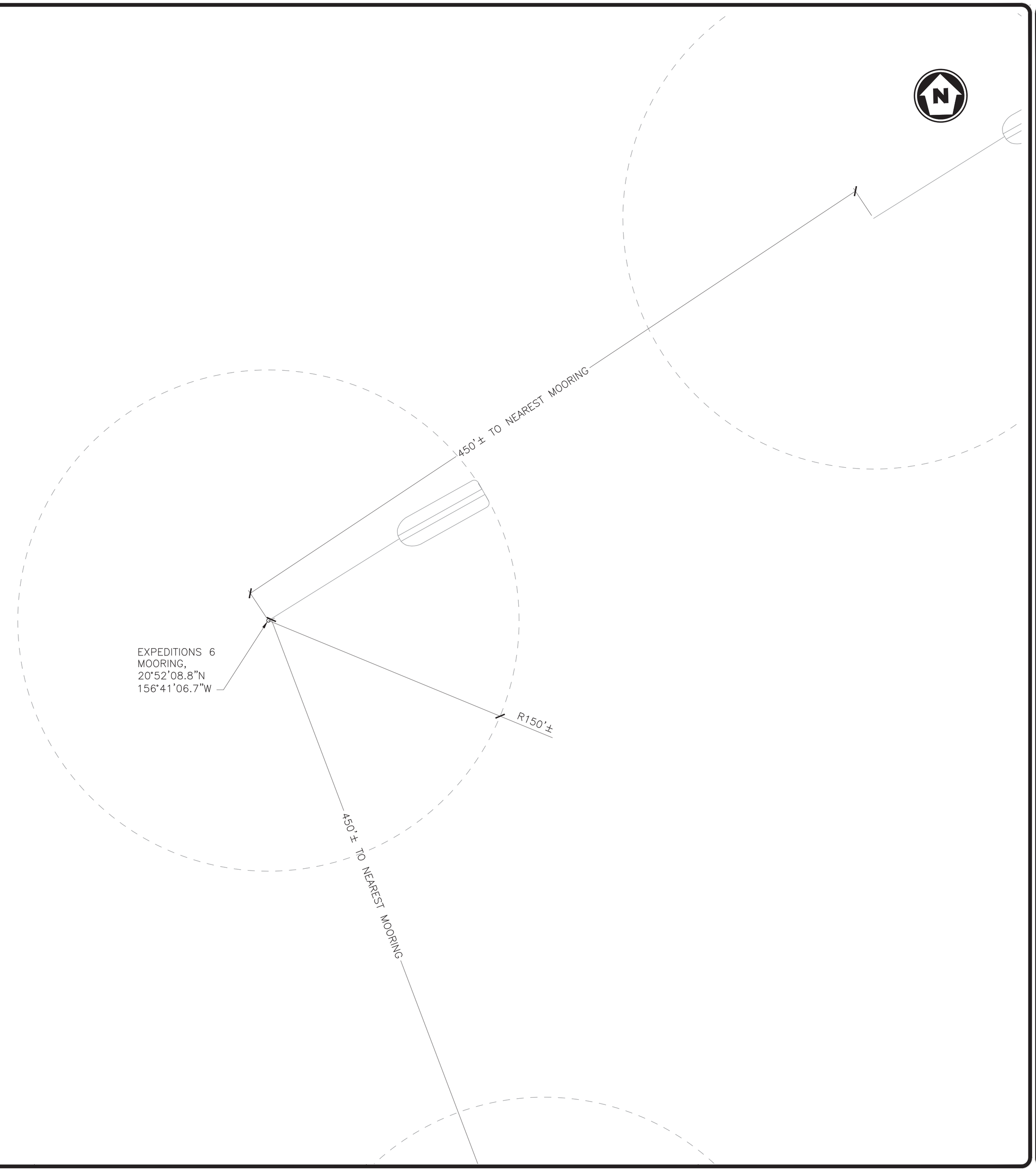
SHEET TITLE

MOORING NOTES AND ELEVATION

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
S-1
SHEET 2 OF 3




## MOORING PLAN

SCALE: 1/32" = 1'-0"

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

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MOORING PLAN

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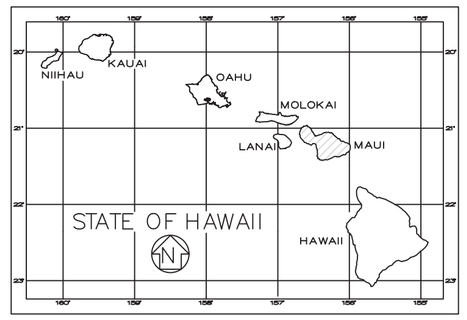
DRAWING NO.
S-2
SHEET 3 OF 3

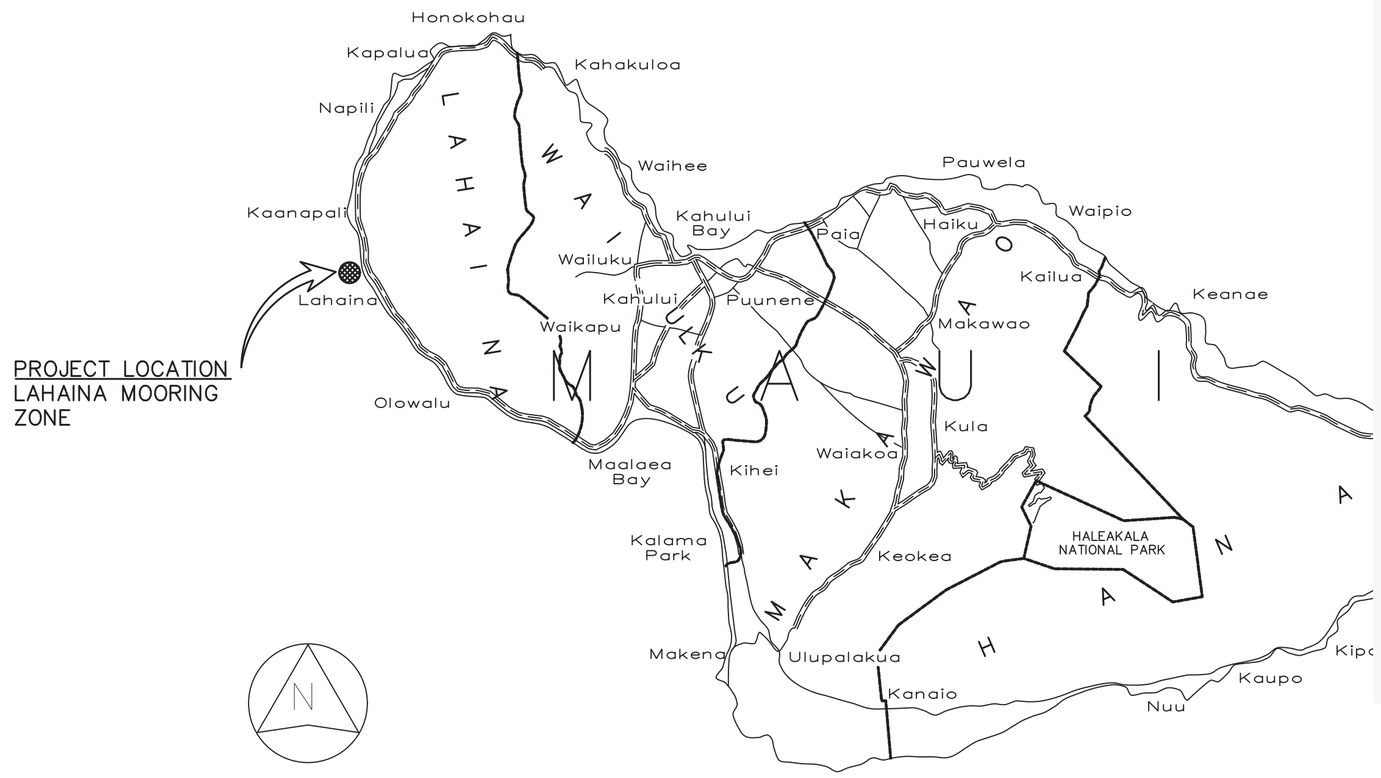
EXHIBIT A

# OFFSHORE MOORING - LAHAINA MOORING ZONE
# FOR BILL CALDWELL - EXPEDITIONS 5

GPS COORDINATES OF MOORING : 20°52.39667'N, 156°41.19167'W

APPROXIMATE WATER DEPTH : 53'




VICINITY MAP




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

☒ Approved ☐ Approved, as noted
☐ Rejected ☐ Revise & Resubmit

By: _____ Date: 12/2/16

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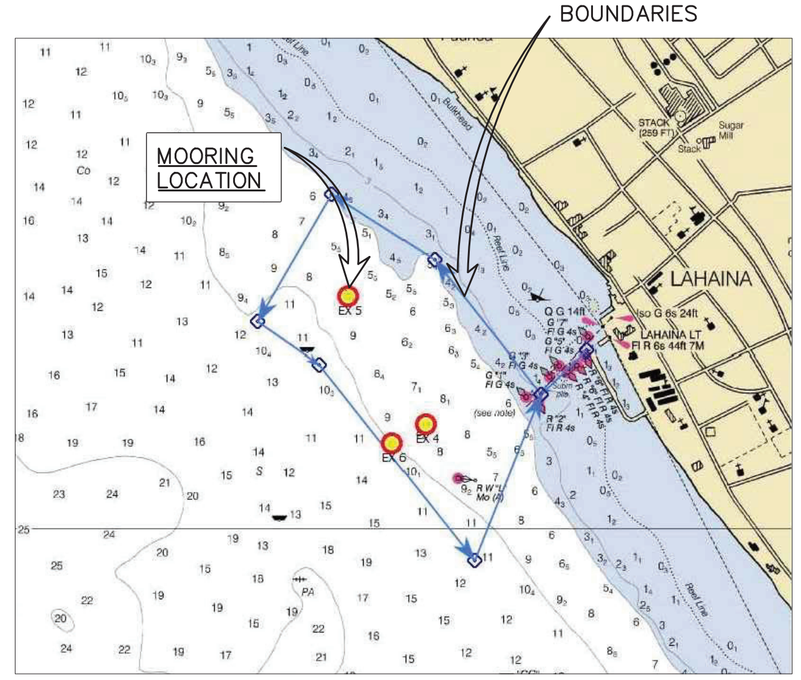


LOCATION MAP

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


JOSHUA M MURPHREE
LICENSED PROFESSIONAL ENGINEER
No.13750-S
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2018
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

GENERAL NOTES

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

ALL CONSTRUCTION SHALL CONFORM TO THE 2006 INTERNATIONAL BUILDING CODE AND THE LATEST COUNTY OF MAUI/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
OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL

EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
PHONE: (808) 661-3756

GPS COORDINATES: 20°52.39667'N
156°41.19167'W

SHEET TITLE

TITLE SHEET

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
T-1
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 MAUI 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.

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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: 2 KNOTS
D. WAVES AND TIDAL VARIATIONS:
   1. PEAK WAVE HEIGHT: 8 FEET

DESIGN VESSEL: EXPEDITIONS 5
   1. LOA: 55'-8"
   2. BEAM: 20'-8"
   3. DRAFT: 5'-0"
   4. WEIGHT: 26 TONS.

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

EARTH ANCHORS:

A. SELECTION OF ANCHOR TYPE SHALL BE BASED UPON SURVEY SITE AND SOIL PROBING TO MINIMUM DEPTH OF 10' AT PROPOSED ANCHOR LOCATION. CONTRACTOR SHALL PROVIDE RESULTS OF SURVEY, SOIL PROBING, AND PROPOSED ANCHOR TYPE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

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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.

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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.

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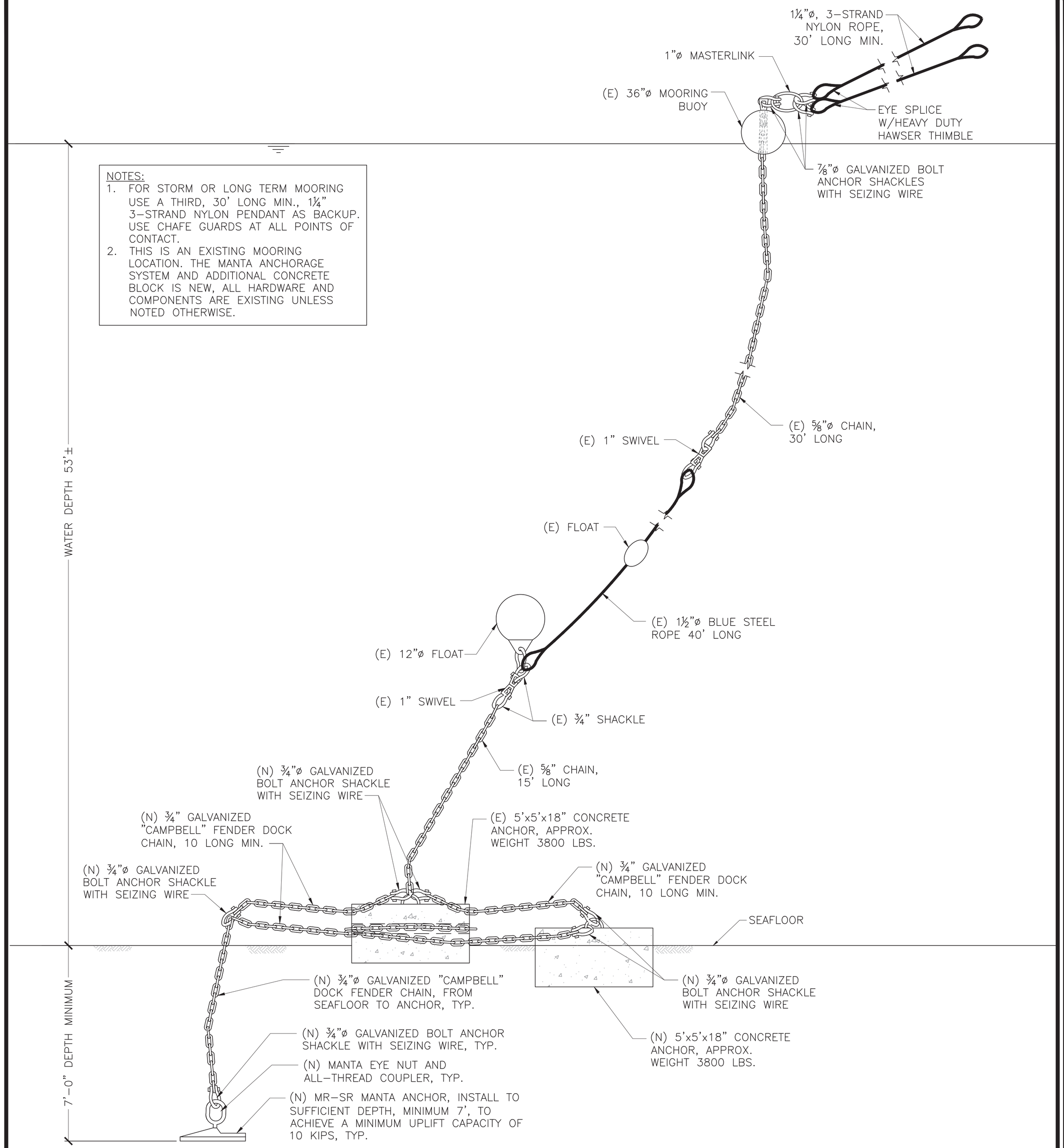
NOTES:
1. FOR STORM OR LONG TERM MOORING USE A THIRD, 30' LONG MIN., 1¼" 3-STRAND NYLON PENDANT AS BACKUP. USE CHAFE GUARDS AT ALL POINTS OF CONTACT.
2. THIS IS AN EXISTING MOORING LOCATION. THE MANTA ANCHORAGE SYSTEM AND ADDITIONAL CONCRETE BLOCK IS NEW, ALL HARDWARE AND COMPONENTS ARE EXISTING UNLESS NOTED OTHERWISE.




## MOORING ELEVATION

NOT TO SCALE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REVISION MARK • DATE • DESCRIPTION

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LAHAINA MOORING ZONE
FOR:

BILL CALDWELL

EXPEDITIONS
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LAHAINA, HI 96761
PHONE: (808) 661-3756

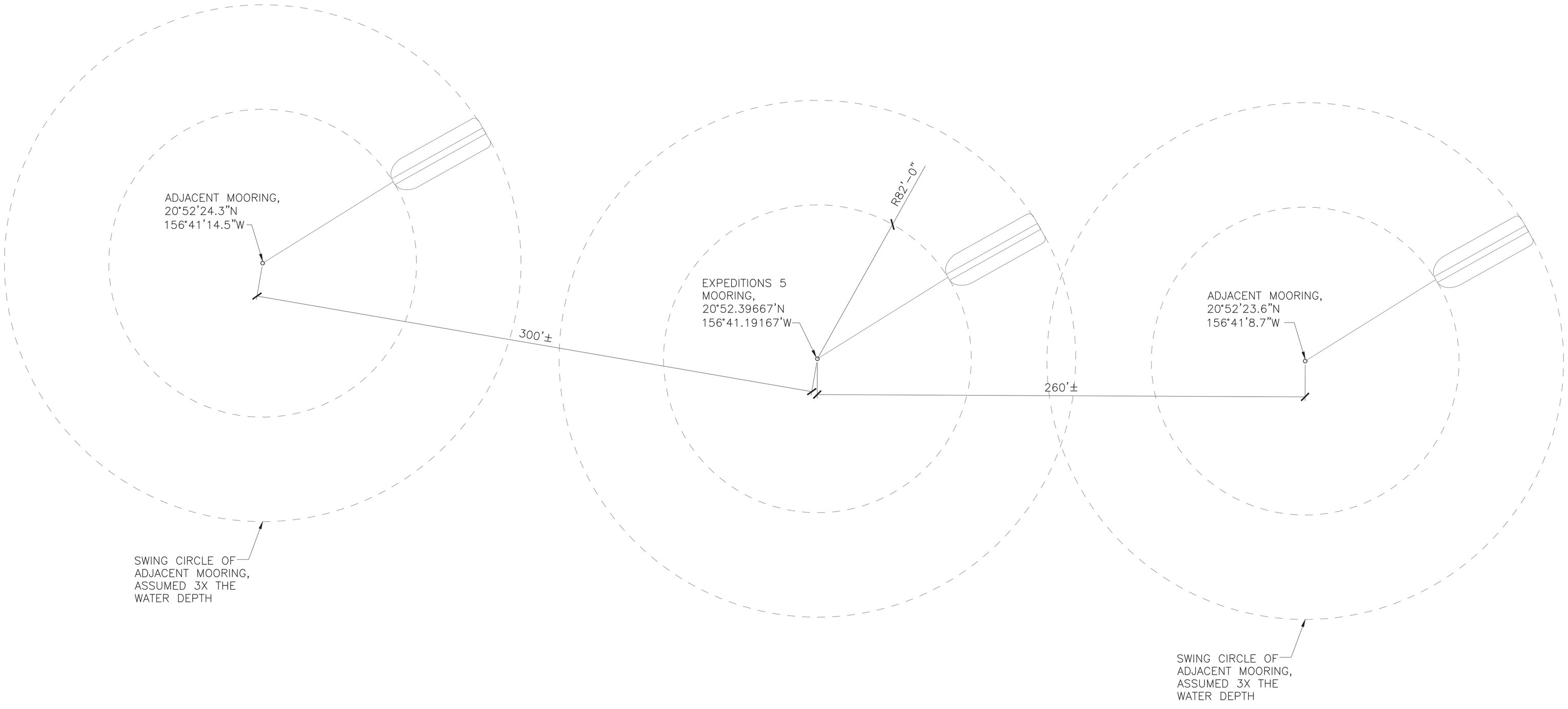
GPS COORDINATES: 20°52.39667'N
156°41.19167'W

SHEET TITLE

MOORING NOTES AND ELEVATION

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
S-1
SHEET 2 OF 3




## MOORING PLAN

SCALE: 1/32" = 1'-0"

PHREE
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SHEET TITLE

MOORING PLAN

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
S-2
SHEET 3 OF 3

# EXHIBIT A

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

November 20, 2017

Regulatory Division
POH-2017-204

Hone Heke Corporation, DBA Expeditions
Attention: Mr. Bill Caldwell
658 Front Street 127
Lahaina, Hawaii 96761

Dear Mr. Caldwell:

This is in response to your December 2, 2016, application for a Department of the Army (DA) permit in order to construct three mooring buoys for commercial vessels. It has been assigned number POH-2017-204, Lahaina Bay, which should be referred to in all future correspondence with this office. The project sites are located in Lahaina Bay near Lahaina, Maui in Hawaii at the following locations:

a. Mooring Buoy one (1), identified as Expedition 4, 20.8696° N, -156.6841° W
b. Mooring Buoy two (2), identified as Expedition 5, 20.8775° N, -156.6886° W
c. Mooring Buoy three (3), identified as Expedition 6, 20.8691° N, -156.6851° W

DA permit authorization is necessary because your project will involve work in and the placement of structures into waters of the U.S. under our regulatory jurisdiction. The project descriptions are as follows:

a. Expedition 4: This project is in references to an already installed (2003) single point mooring buoy for commercial vessels deployed in approximately 56-foot deep water, located approximately 2,243-linear feet from the shoreline in Lahaina Bay near Lahaina, near the Island of Maui at 20.8696 N, -156.6841° W. The existing mooring anchoring system is comprised of two 3800 pound concrete blocks with one MR-SR Manta anchor installed at a minimum of 7-linear feet below the seafloor. The anchor is attached to one of the cement blocks via 3/4-inch galvanized mooring chain which is segmented at the sea floor surface and connected via 3/4-inch galvanized bolt anchor shackles and seizing wires. The dimensions for the concrete blocks are 5-linear feet in length by 18-inches in height by 5-linear feet in width. A 3/4-inch galvanized "Campbell" dock chain 10-linear feet in length is wrapped around and connected at the center of both cement blocks via 3/4-inch galvanized bolt-anchor-shackles and seizing-wire. A 5/8-inch mooring chain 4-linear feet in length connects to a 12-inch float via a 1-inch swivel and 3/4-inch shackle.

The float is connected to a 1 1/2-inch “blue steel” 3 strand rope approximately 54-linear feet in length with thimble eyes on both ends and a second float attached to the rope near the terminus of the rope. The rope, in turn, connects to a 5/8-inch galvanized mooring chain via a 5/8-inch galvanized bolt-anchor-shackle and seizing-wire which is connected to 1-inch forged eye-to-eye swivel to the rope. The mooring chain is 50-linear feet in length and connects to the 1-inch swivel via a 5/8-inch shackle then to a 32-inch mooring buoy. The mooring buoy has a 1-inch Masterlink which attaches via two 7/8-inch shackles with seizing wire to two 30-linear feet in length, 1 1/4-inch 3-strand nylon ropes. The mooring chain threads through the center of the buoy and connects to the Masterlink via a 7/8-inch bolt shackle with seizing wire. The total length of working chain and rope is approximately 145 feet. All of the mentioned hardware has replaced old and is new since 2017.

b. Expedition 5: This project is in references to an already installed (2015) single point mooring buoy for commercial vessels deployed in approximately 53-foot deep water, located approximately 2,000-linear feet from the shoreline in Lahaina Bay near Lahaina, near the Island of Maui at 20.8775° N, 156.6886° W. The existing mooring anchoring system is comprised of two (2) 3800 pound concrete blocks with one MR-SR Manta anchor installed at a minimum of 7-linear feet below the seafloor. The anchor is attached to the cement block via 3/4-inch galvanized mooring chains which are segmented at the surface and connected via 3/4-inch galvanized bolt anchor shackles and seizing wire.

   The dimensions for the concrete block are 5-linear feet in length by 18-inches in height by 5-linear feet in width. A 3/4-inch galvanized “Campbell” dock chain 10-linear feet in length is wrapped around and connected at the center of both blocks via 3/4-inch galvanized bolt anchor shackles and seizing wire. A 5/8-inch mooring chain 15-linear feet in length connects to 12 inch float via a 1-inch swivel with a 3/4-inch shackle. The float is connected to a 1 1/2-inch “blue steel” 3-strand rope approximately 40-linear feet in length with thimble eyes on both ends and a second float attached to the rope. The rope, in turn, connects to a 5/8-inch mooring chain via a 3/4-inch galvanized bolt anchor shackle and seizing wire which is connected to 1-inch forged eye-to-eye swivel to the rope. The mooring chain is 30-linear feet in length and connects to a 32-inch mooring buoy. The mooring buoy has a 1-inch Masterlink which would attach to two 7/8-inch shackles to two 30-linear feet in length, 1 1/4-inch 3-strand nylon ropes with eye splices and hawser thimbles on the shackle ends and eye splices on the other end. The mooring chain threads through the center of the buoy and connects to the Masterlink via a 7/8-inch bolt shackle with seizing wire. The total length of working chain and rope is approximately 115 feet. All of the mentioned hardware has replaced the old and is new since 2017.

c. Expedition 6: This project is in references to an already installed (2006) single point mooring buoy for commercial vessels deployed in approximately 76-foot deep water, located approximately 2,630-linear feet from the shoreline in Lahaina Bay near Lahaina, near the Island of Maui at 20.8691° N, 156.6851 ° W. The existing mooring anchoring system is comprised of two 3800 pound concrete blocks with two MR-SR Manta anchors installed at a minimum of 7-linear feet below the seafloor. The anchors are attached to each of the cement blocks individually via 3/4-inch galvanized mooring chain which is segmented once it extends out of the sea floor and is connected via a 3/4-inch galvanized bolt anchor shackle and seizing wire to another 3/4-inch galvanized mooring chain that in turn is connected to one of the cement blocks via a 3/4-inch shackle.

   The dimensions for the concrete blocks are 5-linear feet in length by 18-inches in height by 5-linear feet in width. A 3/4-inch galvanized "Campbell" dock chain 22-linear feet in length is wrapped around and connected at the center of both cement blocks via 3/4-inch galvanized bolt anchor shackles and seizing wire. A 5/8-inch mooring chain 46-linear feet in length connects to a 5/8-inch galvanized chain via 3/4-shackle which connects to a 12-inch float via a 3/4-inch shackle. The float is connected to a 1 1/2-inch "blue steel" 3-strand rope 75-linear feet in length with thimble eyes on both ends and a second float attached to the rope near the terminus of the rope. The rope connects to a 3/4-inch galvanized mooring chain via a 3/4-inch galvanized bolt anchor shackle and 1-inch swivel. The mooring chain is 50-linear feet in length and connects to a 32-inch mooring buoy. The mooring buoy has a 1-inch Masterlink which would attach to two 30-linear feet in length, 1 1/4-inch 3-strand nylon ropes via 7/8-inch shackles with seizing wire. The mooring chain threads through the center of the buoy and connects to a 1-inch Masterlink via a 7/8-inch bolt shackle with seizing wire. The total length of working chain and rope is approximately 205 feet. All hardware has been replaced in 2017.

Based upon the information and plans you provided, we hereby verify that the work described under item "a" above, which would be performed in accordance with the enclosed plan (sheets 1-3), dated November 14, 2017, is authorized by Nationwide Permit (NWP) No. 09, Structures in Fleeting and Anchorage Areas. The work described under item "b" above, which would be performed in accordance with the enclosed plan (sheets 1-3), dated November 14, 2017, is authorized by NWP No. 09, Structures in Fleeting and Anchorage Areas. The work described under item "c" above, which would be performed in accordance with the enclosed plan (sheets 1-3), dated November 14, 2017, is authorized by NWP No. 09, Structures in Fleeting and Anchorage Areas. NWPs No. 09 and their associated Regional and General Conditions can be accessed at our website at www.poh.usace.army.mil/Missions/Regulatory/Permits. You must comply with all terms and conditions associated with NWPs No. 09.

Further, please note General Condition 30 requires that you submit a signed certification to us once any work and required mitigation are completed. Enclosed is the form for you to complete and return to us.

This verification is valid until the NWPs are modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 19, 2022. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued.

Please contact me via email at Tunis.W.McElwain@usace.army.mil, by mail at the address above or by phone at (808) 835-4303 if you have questions. For more information about the Regulatory Program, please visit our website at www.poh.usace.army.mil/Missions/Regulatory.

Sincerely,

Tunis W. McElwain
Chief, Regulatory Branch
Honolulu District

Enclosures:
1. Certification
2. Expedition 4 Plan Sheets 1-3
3. Expedition 5 Plan Sheets 1-3
4. Expedition 6 Plan Sheets 1-3

**US Army Corps of Engineers**
**Alaska District**

Permit Number: POH-2017-204

Name of Permittee: Hone Heke Corporation DBA Expeditions

Date of Issue: November 20, 2017

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to Mr. Tunis W. McElwain at the following address:

U.S. Army Corps of Engineers
Honolulu District, Regulatory Branch
Fort Shafter, Hawaii 96858-5440

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

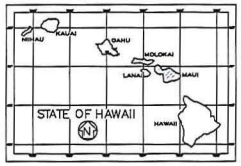
_____ _____

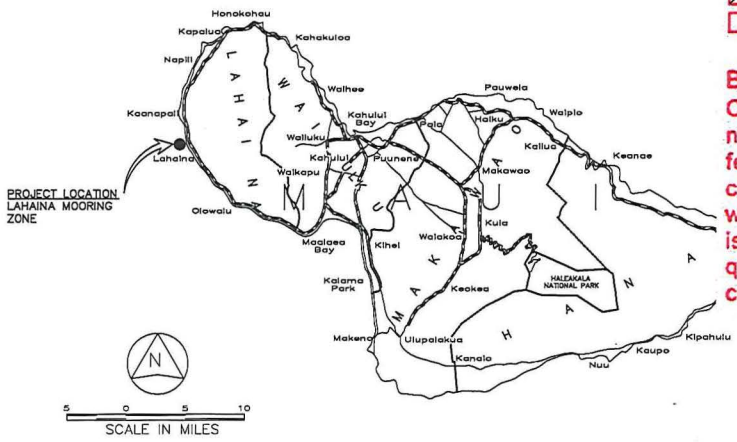
Signature of Permittee Date

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 1-3

# OFFSHORE MOORING - LAHAINA MOORING ZONE
# FOR BILL CALDWELL - EXPEDITIONS 4

GPS COORDINATES OF MOORING : 20°52'10.8"N, 156°41'03.0"W
APPROXIMATE WATER DEPTH : 56'



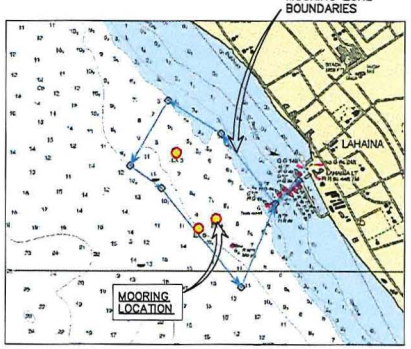

VICINITY MAP

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

☒ Approved ☐ Approved, as noted
☐ Rejected ☐ Revise & Resubmit

By: _____ Date: 12/2/16

**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.**




LOCATION MAP

## INDEX TO DRAWINGS

| SHEET NUMBER | DRAWING NUMBER | DESCRIPTION |
|---|---|---|
| 1 | T-1 | TITLE, INDEX TO DRAWINGS, AND VICINITY MAP |
| 2 | S-1 | MOORING NOTES AND ELEVATION |
| 3 | S-2 | MOORING PLAN |
| | | |
| | | |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PHONE: (808) 661-3756

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156°41'03.0"W

SHEET TITLE
TITLE SHEET

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
T-1
SHEET 1 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 2-3

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DESIGN VESSEL: EXPEDITIONS 4
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   2. BEAM: 23'-6"
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EARTH ANCHORS:

A. SELECTION OF ANCHOR TYPE SHALL BE BASED UPON SURVEY SITE AND SOIL PROBING TO MINIMUM DEPTH OF 10' AT PROPOSED ANCHOR LOCATION. CONTRACTOR SHALL PROVIDE RESULTS OF SURVEY, SOIL PROBING, AND PROPOSED ANCHOR TYPE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

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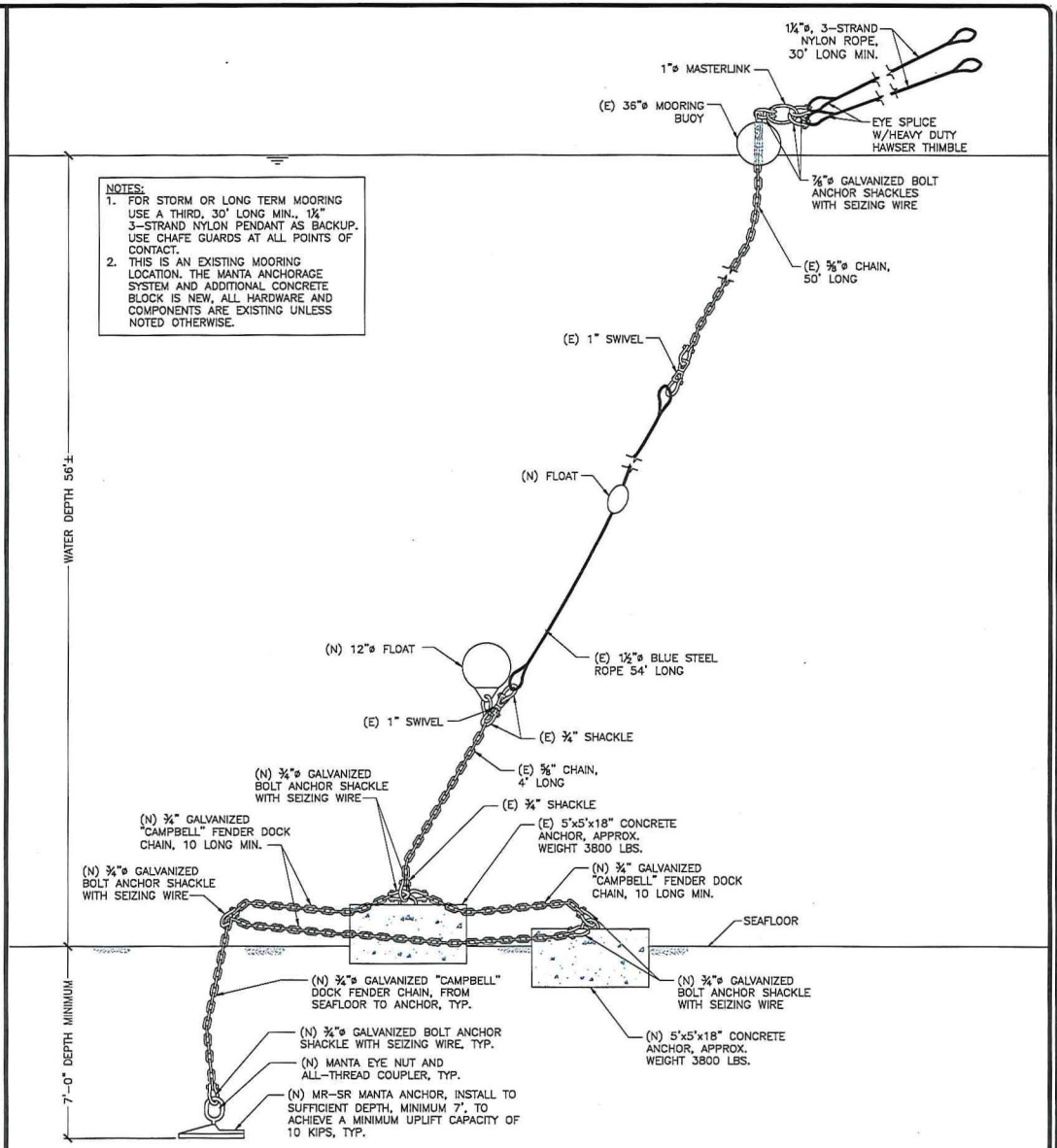


NOTES:
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2. THIS IS AN EXISTING MOORING LOCATION. THE MANTA ANCHORAGE SYSTEM AND ADDITIONAL CONCRETE BLOCK IS NEW, ALL HARDWARE AND COMPONENTS ARE EXISTING UNLESS NOTED OTHERWISE.

MOORING ELEVATION
NOT TO SCALE


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


JOSHUA M MURPHREE
LICENSED PROFESSIONAL ENGINEER
No.13750-S
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2018
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

GENERAL NOTES

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

ALL CONSTRUCTION SHALL CONFORM TO THE 2006 INTERNATIONAL BUILDING CODE AND THE LATEST COUNTY OF MAUI/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
OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 95761
PHONE: (808) 661-3756

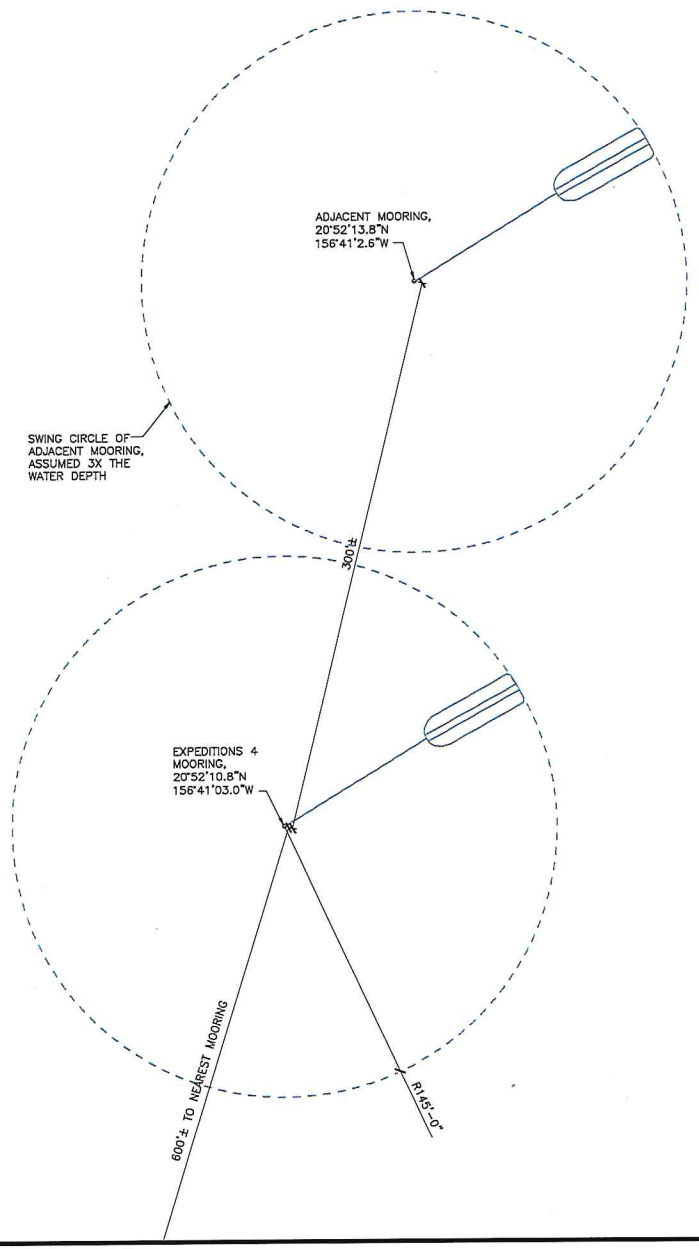
GPS COORDINATES: 20°52'10.8"N
156°41'03.0"W

SHEET TITLE
MOORING NOTES AND ELEVATION

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
S-1
SHEET 2 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 3-3




MOORING PLAN
SCALE: 1/32" = 1'-0"

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

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FOR:

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156°41'03.0"W

SHEET TITLE

MOORING PLAN

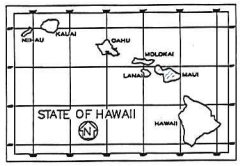
JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

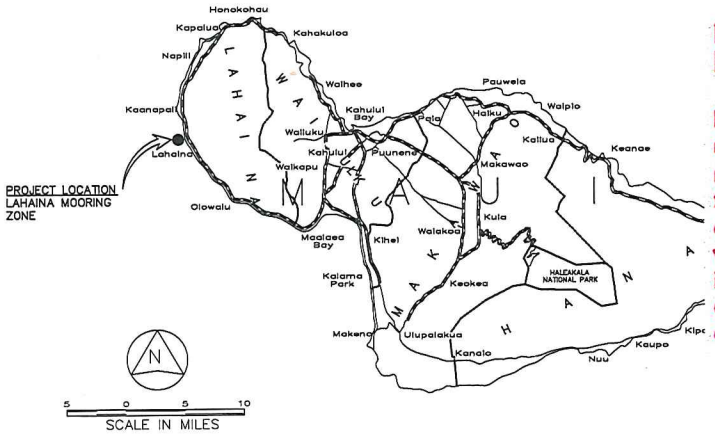
DRAWING NO.
S-2
SHEET 3 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 1-3

# OFFSHORE MOORING - LAHAINA MOORING ZONE
# FOR BILL CALDWELL - EXPEDITIONS 5

GPS COORDINATES OF MOORING : 20°52.39667'N, 156°41.19167'W
APPROXIMATE WATER DEPTH : 53'



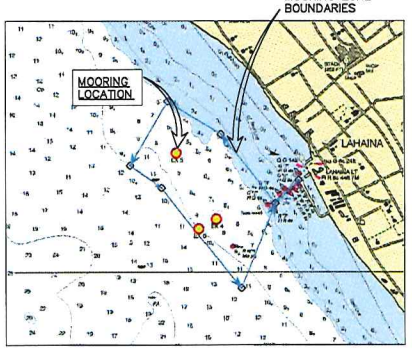

VICINITY MAP

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

☒ Approved ☐ Approved, as noted
☐ Rejected ☐ Revise & Resubmit

By: _____ Date: 12/2/16

**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.**




LOCATION MAP

## INDEX TO DRAWINGS

| SHEET NUMBER | DRAWING NUMBER | DESCRIPTION |
|---|---|---|
| 1 | T-1 | TITLE, INDEX TO DRAWINGS, AND VICINITY MAP |
| 2 | S-1 | MOORING NOTES AND ELEVATION |
| 3 | S-2 | MOORING PLAN |
| | | |
| | | |


PHREE
CREATIONS, LLC.
61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990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HAWAII, U.S.A.

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REVISION MARK • DATE • DESCRIPTION

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OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
PHONE: (808) 661-3756

GPS COORDINATES: 20°52.39667'N
156°41.19167'W

SHEET TITLE
TITLE SHEET

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

DRAWING NO.
T-1
SHEET 1 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 2-3

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 MAUI 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: 2 KNOTS
D. WAVES AND TIDAL VARIATIONS:
   1. PEAK WAVE HEIGHT: 8 FEET

DESIGN VESSEL: EXPEDITIONS 5
   1. LOA: 55'-8"
   2. BEAM: 20'-8"
   3. DRAFT: 5'-0"
   4. WEIGHT: 26 TONS.
   *MOORING IS DESIGNED FOR DESIGN VESSEL ONLY, ANY CHANGE IN MOORED VESSEL REQUIRES RE-ANALYSIS.

EARTH ANCHORS:

A. SELECTION OF ANCHOR TYPE SHALL BE BASED UPON SURVEY SITE AND SOIL PROBING TO MINIMUM DEPTH OF 10' AT PROPOSED ANCHOR LOCATION. CONTRACTOR SHALL PROVIDE RESULTS OF SURVEY, SOIL PROBING, AND PROPOSED ANCHOR TYPE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

B. INSTALL ANCHORS PER MANUFACTURERS INSTRUCTIONS. PROOF TEST TO MINIMUM UPLIFT CAPACITY STATED ON DESIGN DRAWINGS. SUBMIT DOCUMENTATION OF PROOF LOAD TESTING TO ENGINEER FOLLOWING INSTALLATION.

C. MANTA ANCHORS SHALL NOT BE INSTALLED IN LOCATIONS WHERE SHIFTING SAND MAY RESULT IN REDUCED SOIL COVER OVER ANCHOR HEAD.

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.

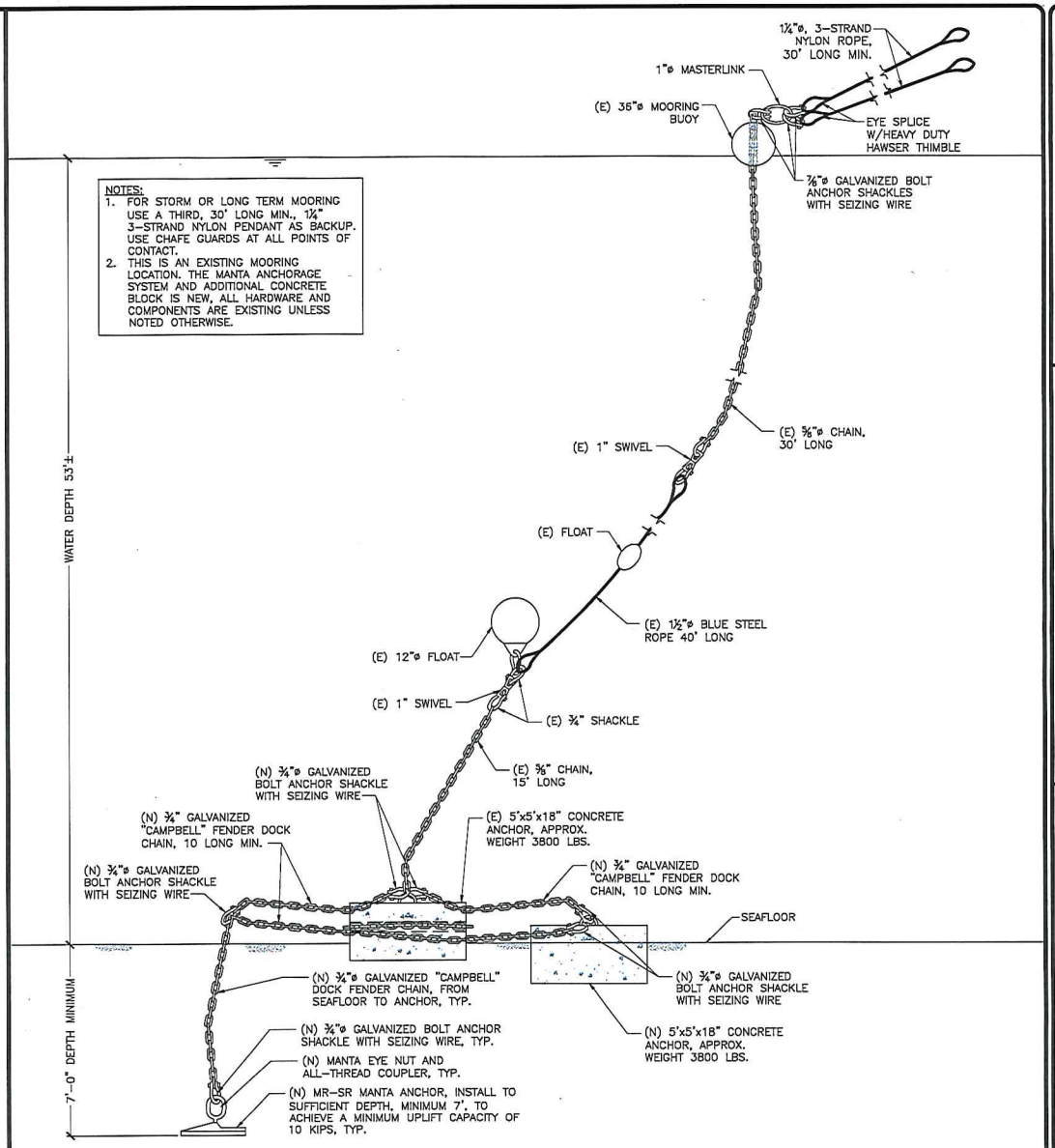
C. SUBMIT PRODUCT DATA OF ALL CHAINS, HARDWARE, ROPE, AND MOORING COMPONENTS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

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.

C. THE VESSEL OWNER IS RESPONSIBLE FOR INSTALLING AND MAINTAINING CHAFING GEAR ON ALL MOORING LINES.




MOORING ELEVATION
NOT TO SCALE

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

JOSHUA M MURPHREE LICENSED PROFESSIONAL ENGINEER No.13730-S HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2018
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REVISION MARK • DATE • DESCRIPTION

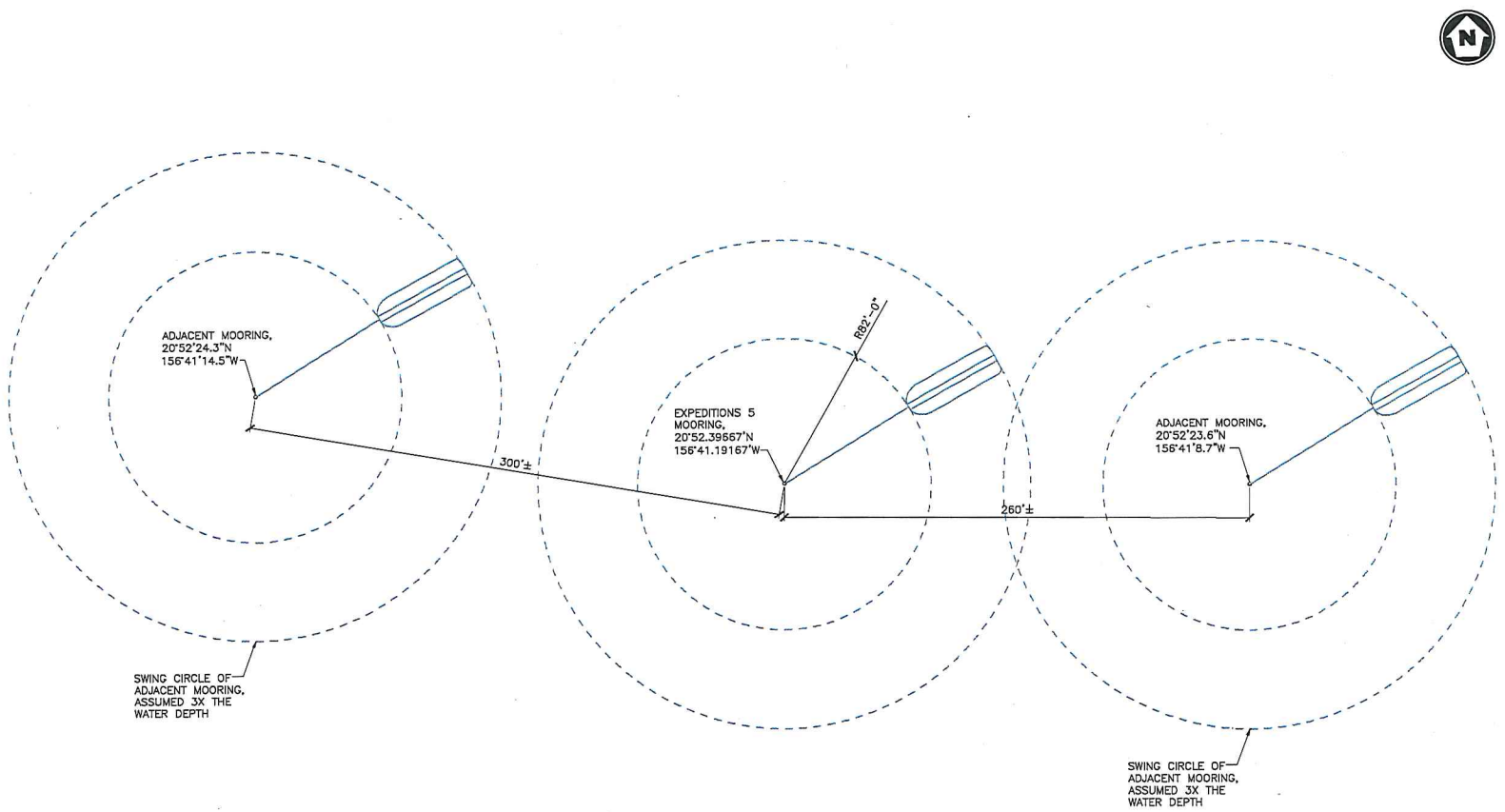
PROJECT
PROPOSED
OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:
BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
PHONE: (808) 661-3756

GPS COORDINATES: 20°52.39667'N 156°41.19167'W

SHEET TITLE
MOORING NOTES AND ELEVATION

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016
DRAWING NO. S-1
SHEET 2 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 3-3




MOORING PLAN
SCALE: 1/32" = 1'-0"

PHREE
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61-655 KAMEHAMEHA HIGHWAY
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PROJECT

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OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL

EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
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SHEET TITLE

MOORING PLAN

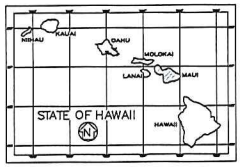
JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

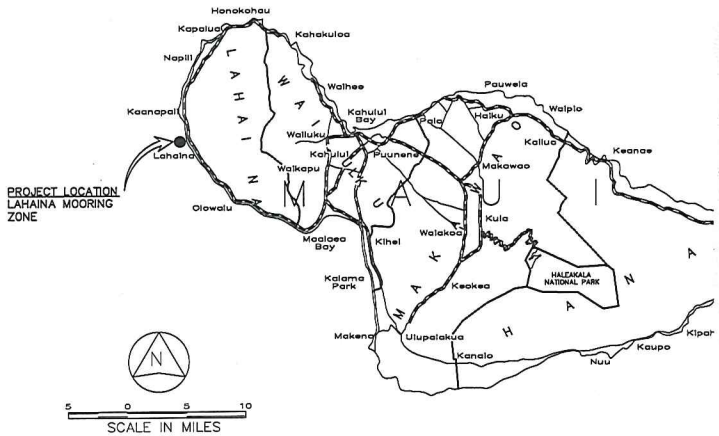
DRAWING NO.
S-2
SHEET 3 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
Project: Mooring Buoy
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 1-3

# OFFSHORE MOORING - LAHAINA MOORING ZONE
# FOR BILL CALDWELL - EXPEDITIONS 6

GPS COORDINATES OF MOORING : 20°52'08.8"N, 156°41'06.7"W
APPROXIMATE WATER DEPTH : 76'




VICINITY MAP

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

☒ Approved ☐ Approved, as noted
☐ Rejected ☐ Revise & Resubmit

By: [signature] Date: 12/2/16

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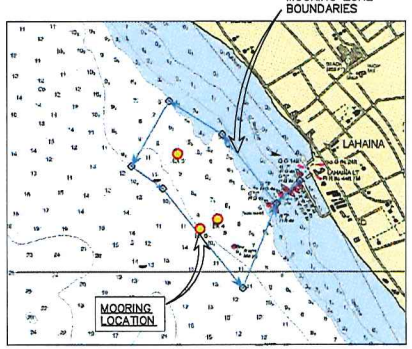


LOCATION MAP

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|---|---|---|
| 1 | T-1 | TITLE, INDEX TO DRAWINGS, AND VICINITY MAP |
| 2 | S-1 | MOORING NOTES AND ELEVATION |
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PHREE
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61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990


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No.13730-S
HAWAII, U.S.A.

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REVISION MARK • DATE • DESCRIPTION

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OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 95761
PHONE: (808) 661-3756

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TITLE SHEET

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T-1
SHEET 1 OF 3

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C. CURRENT:
   1. MAX CURRENT: 2 KNOTS
D. WAVES AND TIDAL VARIATIONS:
   1. PEAK WAVE HEIGHT: 8 FEET

DESIGN VESSEL: EXPEDITIONS 6
   1. LOA: 66'-8"
   2. BEAM: 25'-6"
   3. DRAFT: 5'-4"
   4. WEIGHT: 43 TONS.
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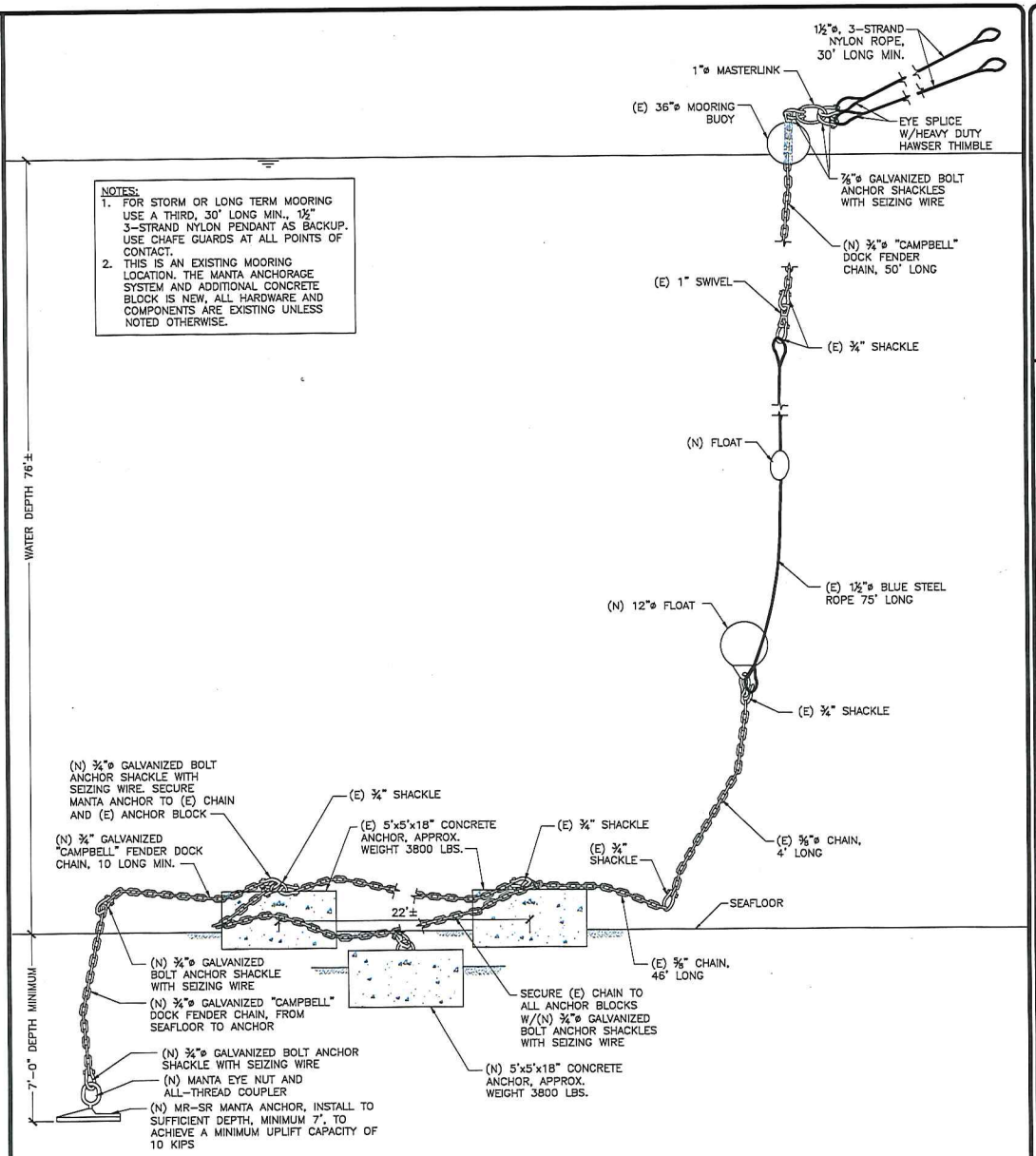


MOORING ELEVATION
NOT TO SCALE

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LAHAINA MOORING ZONE
FOR:

BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
PHONE: (808) 661-3756

GPS COORDINATES: 20°52'08.8"N 156°41'06.7"W

SHEET TITLE
MOORING NOTES AND ELEVATION

JOB NO. 2015-0007.25
DRAWN JMM
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DATE NOV. 3, 2015

DRAWING NO. S-1
SHEET 2 OF 3

Permit: POH-2017-204
Applicant: Hone Heke Corp.
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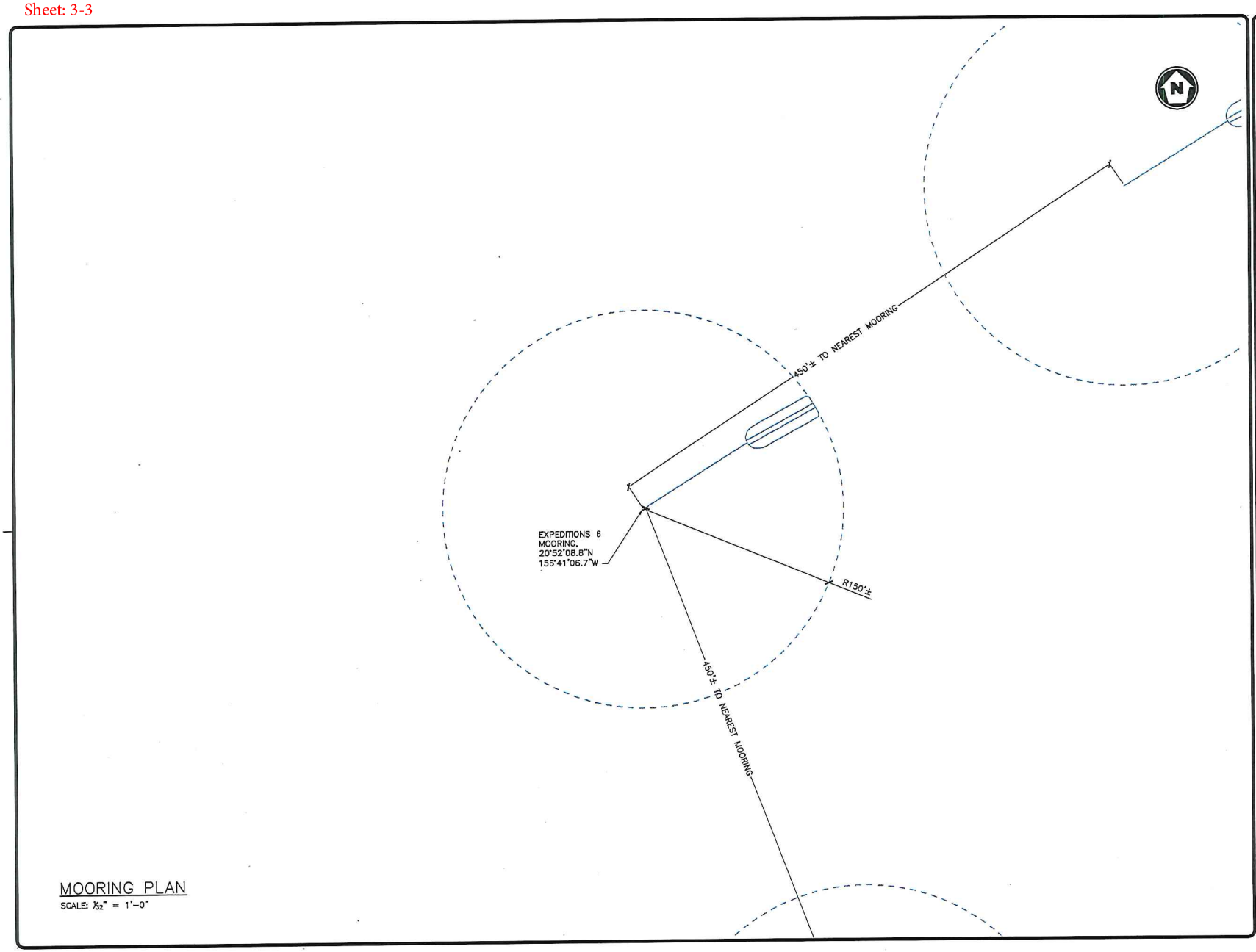
Waterway: Lahaina Bay
Date: 14/NOV/2017
Sheet: 3-3




MOORING PLAN
SCALE: 1/32" = 1'-0"

PHREE
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HALEIWA, HAWAII 96712 • (808) 349-4990

JOSHUA M MURPHREE
LICENSED PROFESSIONAL ENGINEER
No.13730-S
HAWAII, U.S.A.

EXPIRATION DATE OF THIS LICENSE 4/30/2018
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

GENERAL NOTES

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

ALL CONSTRUCTION SHALL CONFORM TO THE 2006 INTERNATIONAL BUILDING CODE AND THE LATEST COUNTY OF MAUI/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
OFFSHORE MOORING
LAHAINA MOORING ZONE
FOR:

BILL CALDWELL
EXPEDITIONS
658 FRONT STREET, SUITE 127
LAHAINA, HI 96761
PHONE: (808) 661-3756

GPS COORDINATES: 20°52'08.8"N
156°41'06.7"W

SHEET TITLE

MOORING PLAN

JOB NO. 2015-0007.25
DRAWN JMM
CHECKED JMM
DATE NOV. 3, 2016

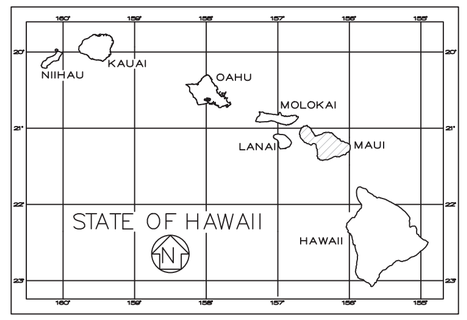
DRAWING NO.
S-2
SHEET 3 OF 3

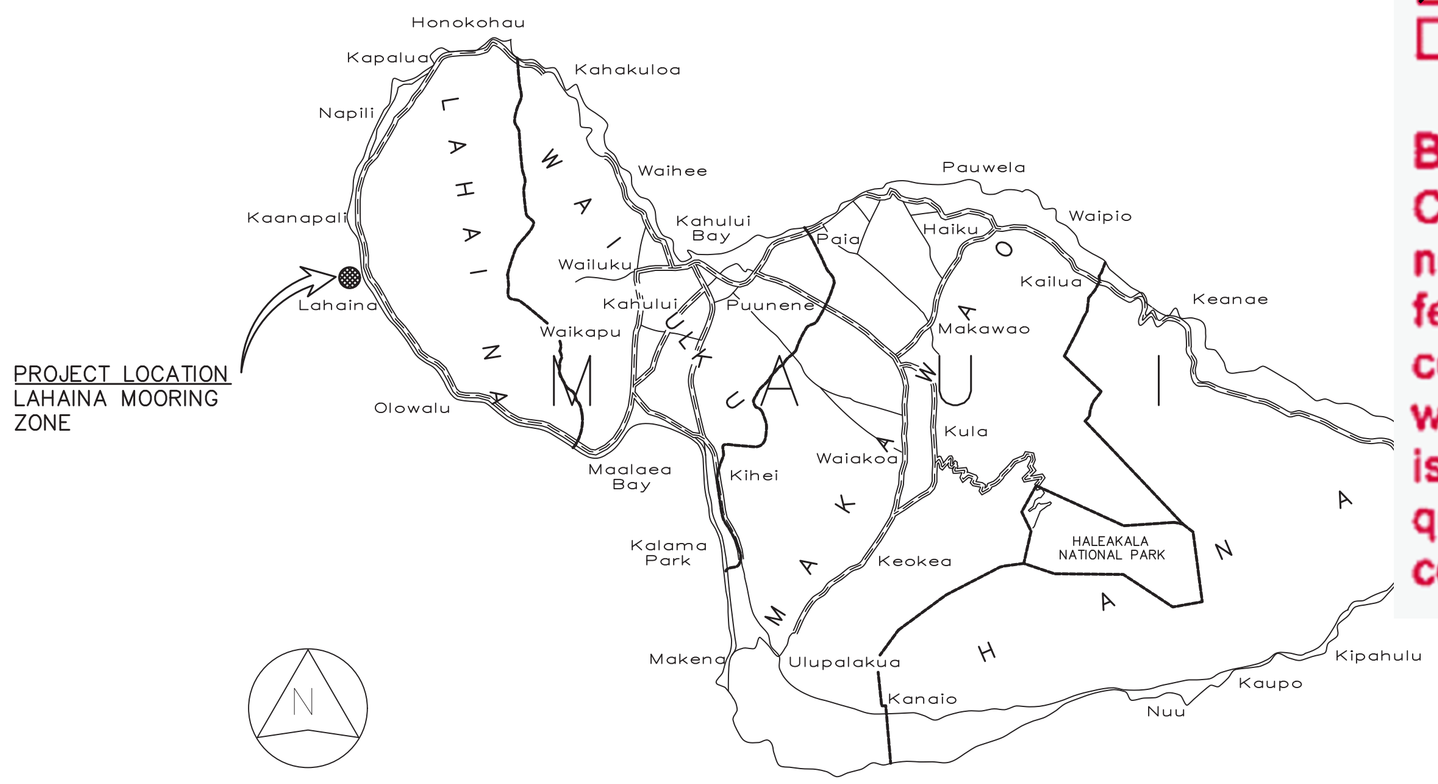
EXHIBIT A

# OFFSHORE MOORING - LAHAINA MOORING ZONE
# FOR BILL CALDWELL - EXPEDITIONS 4

GPS COORDINATES OF MOORING : 20°52'10.8"N, 156°41'03.0"W

APPROXIMATE WATER DEPTH : 56'



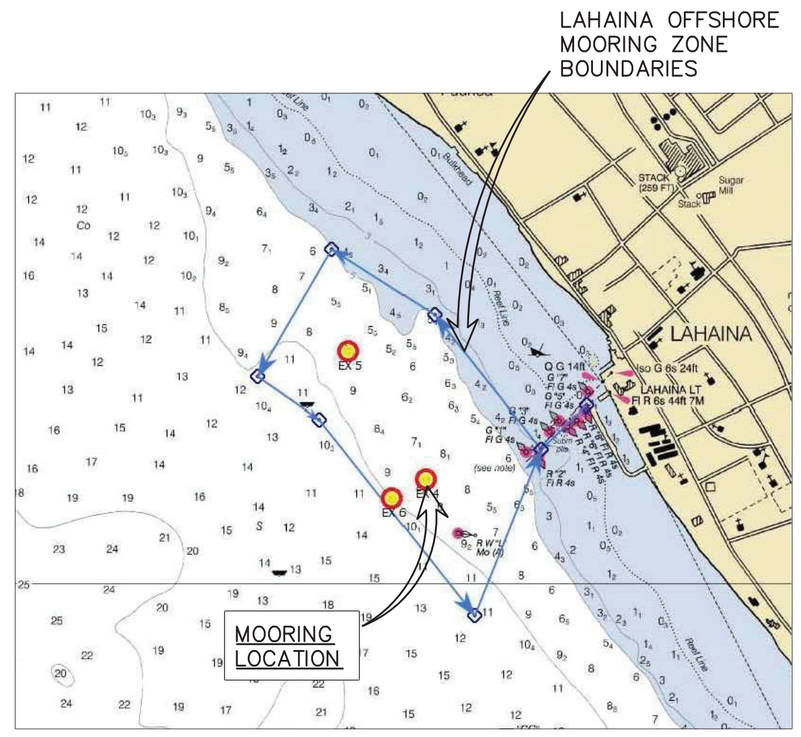

VICINITY MAP

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

☒ Approved ☐ Approved, as noted
☐ Rejected ☐ Revise & Resubmit

By: _____ Date: 12/2/16

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.




LOCATION MAP

## INDEX TO DRAWINGS

| SHEET NUMBER | DRAWING NUMBER | DESCRIPTION |
|---|---|---|
| 1 | T-1 | TITLE, INDEX TO DRAWINGS, AND VICINITY MAP |
| 2 | S-1 | MOORING NOTES AND ELEVATION |
| 3 | S-2 | MOORING PLAN |
| | | |
| | | |


PHREE CREATIONS, LLC.
61-655 KAMEHAMEHA HIGHWAY
HALEIWA, HAWAII 96712 • (808) 349-4990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TITLE SHEET

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T-1
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 MAUI 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: 2 KNOTS
D. WAVES AND TIDAL VARIATIONS:
   1. PEAK WAVE HEIGHT: 8 FEET

DESIGN VESSEL: EXPEDITIONS 4
   1. LOA: 64'-8"
   2. BEAM: 23'-6"
   3. DRAFT: 6'-0"
   4. WEIGHT: 31 TONS.

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

EARTH ANCHORS:

A. SELECTION OF ANCHOR TYPE SHALL BE BASED UPON SURVEY SITE AND SOIL PROBING TO MINIMUM DEPTH OF 10' AT PROPOSED ANCHOR LOCATION. CONTRACTOR SHALL PROVIDE RESULTS OF SURVEY, SOIL PROBING, AND PROPOSED ANCHOR TYPE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

B. INSTALL ANCHORS PER MANUFACTURERS INSTRUCTIONS. PROOF TEST TO MINIMUM UPLIFT CAPACITY STATED ON DESIGN DRAWINGS. SUBMIT DOCUMENTATION OF PROOF LOAD TESTING TO ENGINEER FOLLOWING INSTALLATION.

C. MANTA ANCHORS SHALL NOT BE INSTALLED IN LOCATIONS WHERE SHIFTING SAND MAY RESULT IN REDUCED SOIL COVER OVER ANCHOR HEAD.

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.

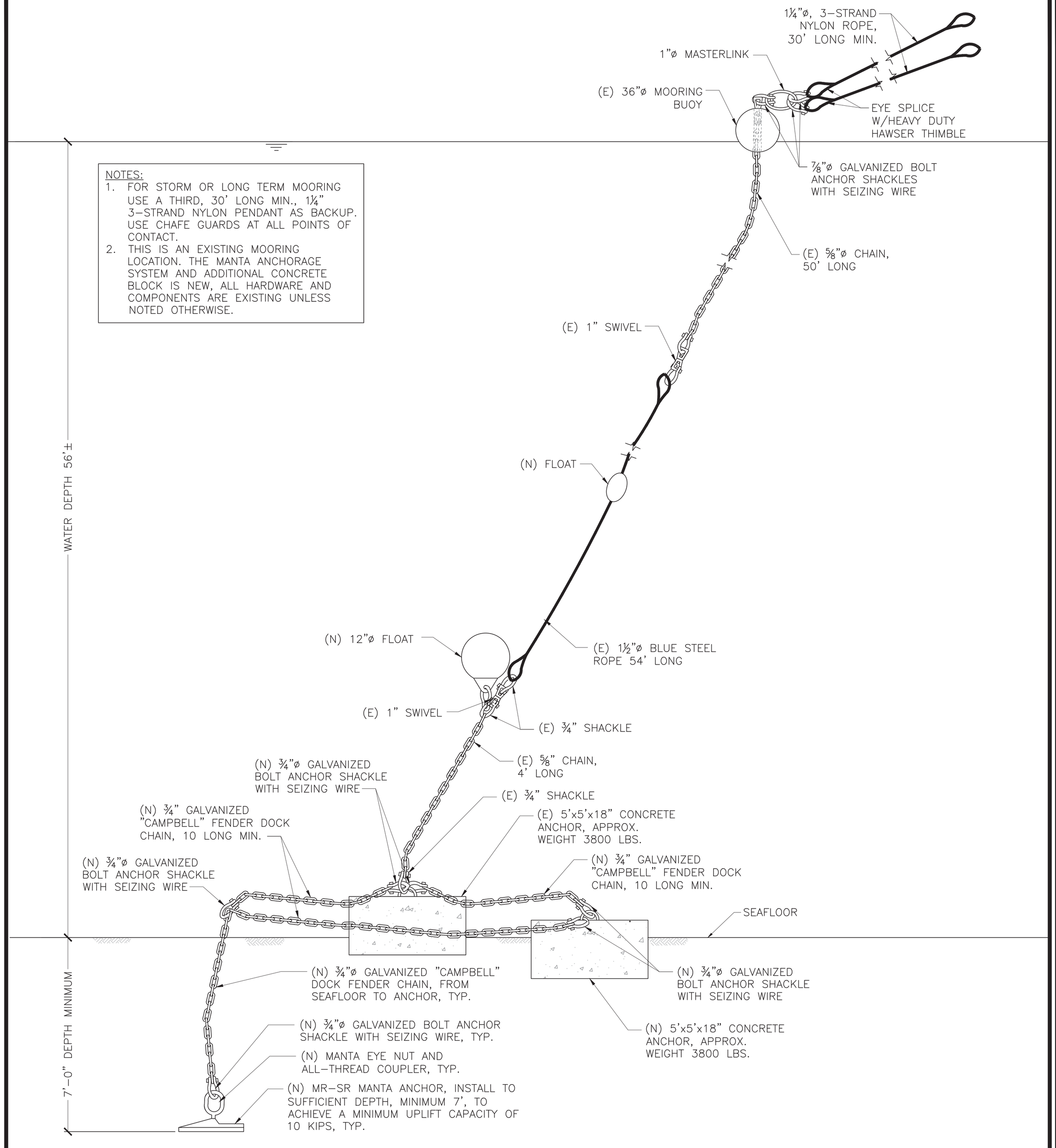
MOORING HARDWARE, MAINTENANCE AND INSPECTION

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.

C. THE VESSEL OWNER IS RESPONSIBLE FOR INSTALLING AND MAINTAINING CHAFING GEAR ON ALL MOORING LINES.

NOTES:
1. FOR STORM OR LONG TERM MOORING USE A THIRD, 30' LONG MIN., 1¼" 3-STRAND NYLON PENDANT AS BACKUP. USE CHAFE GUARDS AT ALL POINTS OF CONTACT.
2. THIS IS AN EXISTING MOORING LOCATION. THE MANTA ANCHORAGE SYSTEM AND ADDITIONAL CONCRETE BLOCK IS NEW, ALL HARDWARE AND COMPONENTS ARE EXISTING UNLESS NOTED OTHERWISE.




MOORING ELEVATION

NOT TO SCALE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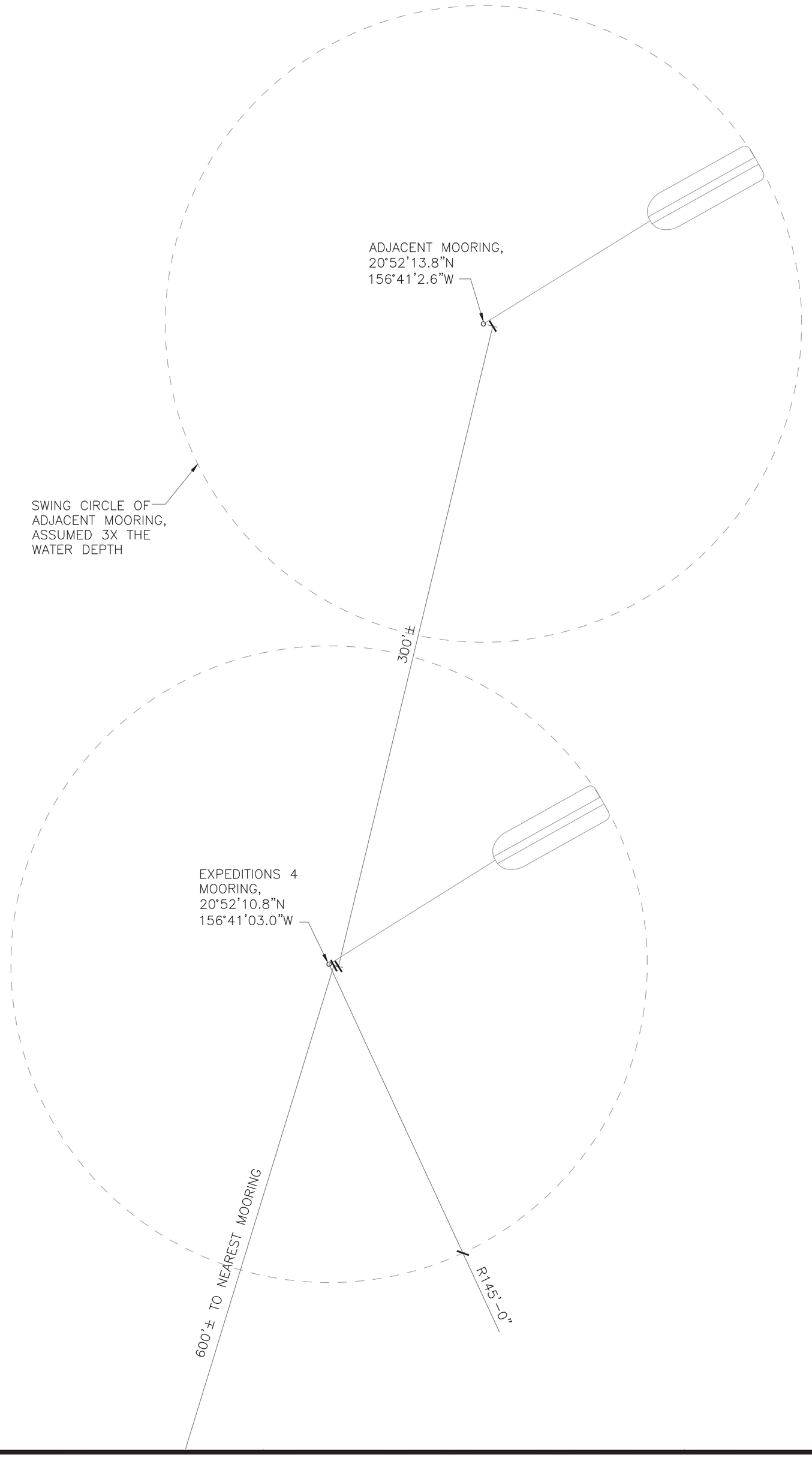


## MOORING PLAN

SCALE: 1/32" = 1'-0"

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