CERTIFICATION OF COMPLIANCE FOR ELECTRICAL INSTALLATIONS & SYSTEMS

In accordance with the LCRA Highland Lakes Marina Ordinance Section 5.4

Form B

By my signature, I certify to the Lower Colorado River Authority that the electrical installations and systems of the Austin Paddle board and Kayak Marina Facility are designed to ensure public safety and comply with the most recent editions of the National Electrical Code (NEC), National Electrical Safety Code (NESC).

Signature: Roger Vaughan

Printed name: Roger Vaughan

Date: 12-28-24

Certification by a professional engineer, affix seal here:

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JAN 03 2025

WATER SURFACE MANAGEMENT

Certification by a master electrician:

Name of master electrician: Roger Vaughan

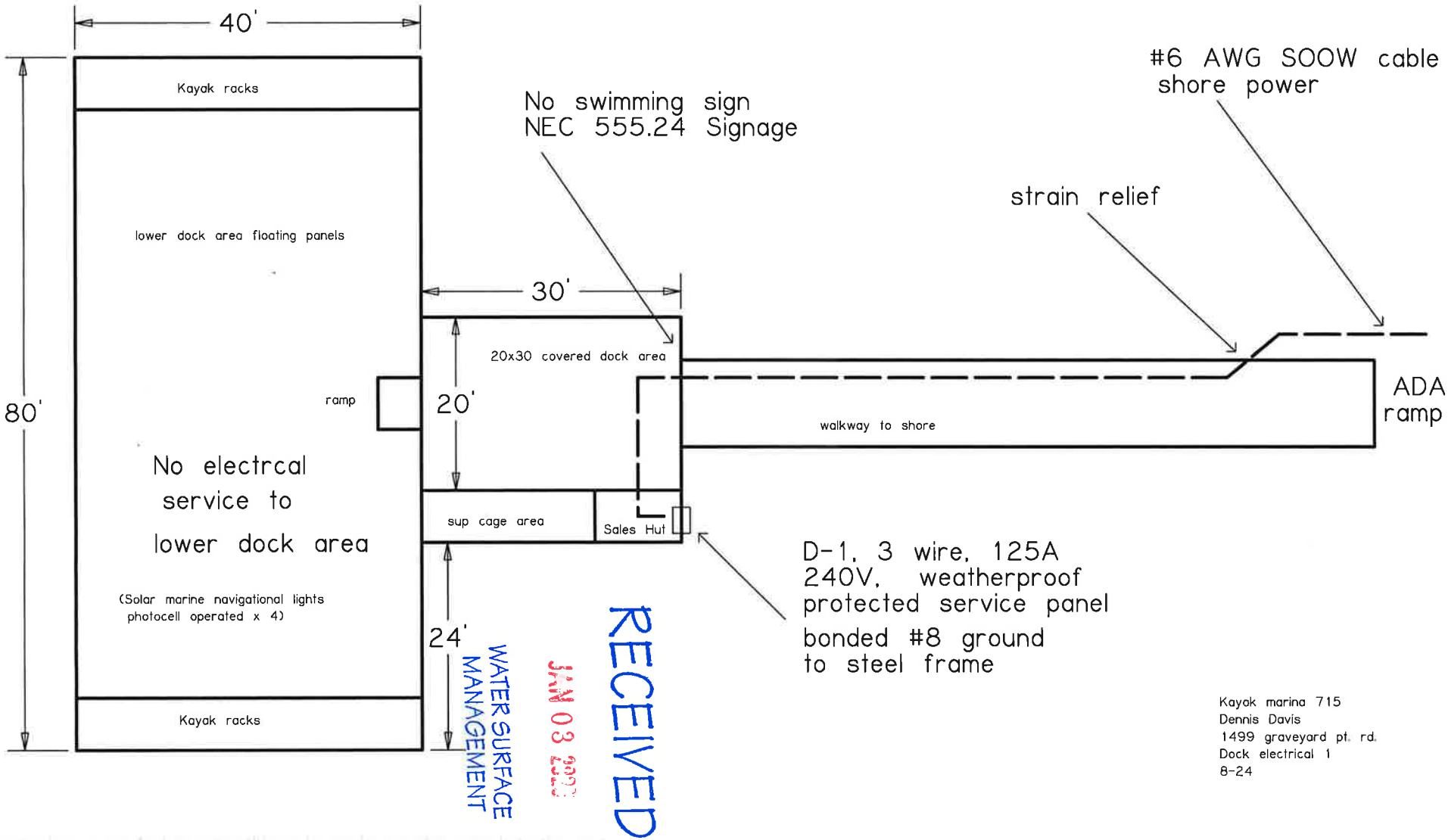
License number: ME 7585

Licensing municipality: Texas

License expiration date: 5/10/25

shall comply with NEC article 555 Marinas and Boatyards

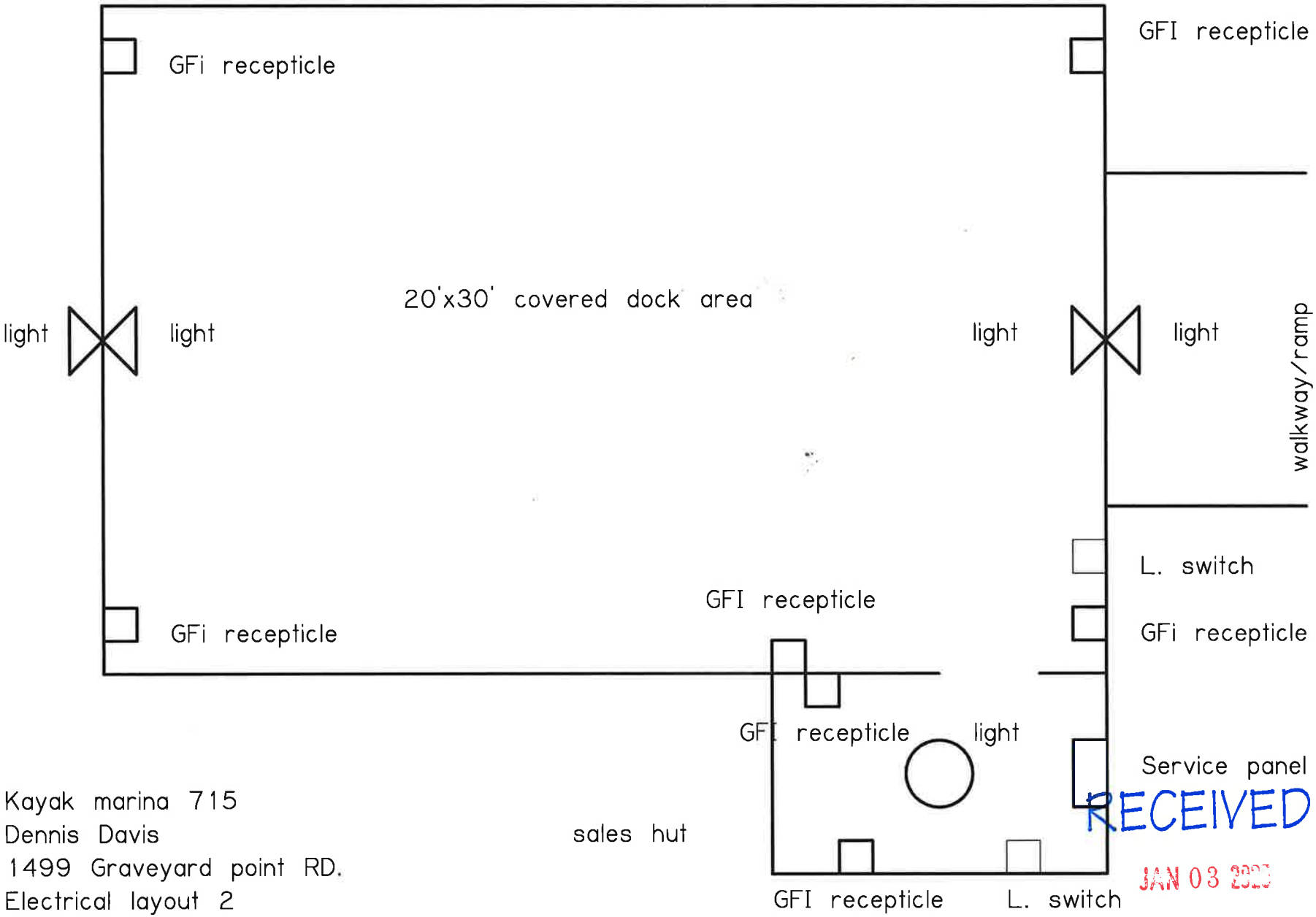
Top/ down view



Dock electrical supply

Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
Dock electrical 1
8-24

Top/ down view dock electrical fixtures
shall comply with 555.12 Load Calculations for Service and Feeder Conductors.



Kayak marina 715
Dennis Davis
1499 Graveyard point RD.
Electrical layout 2
12-2024

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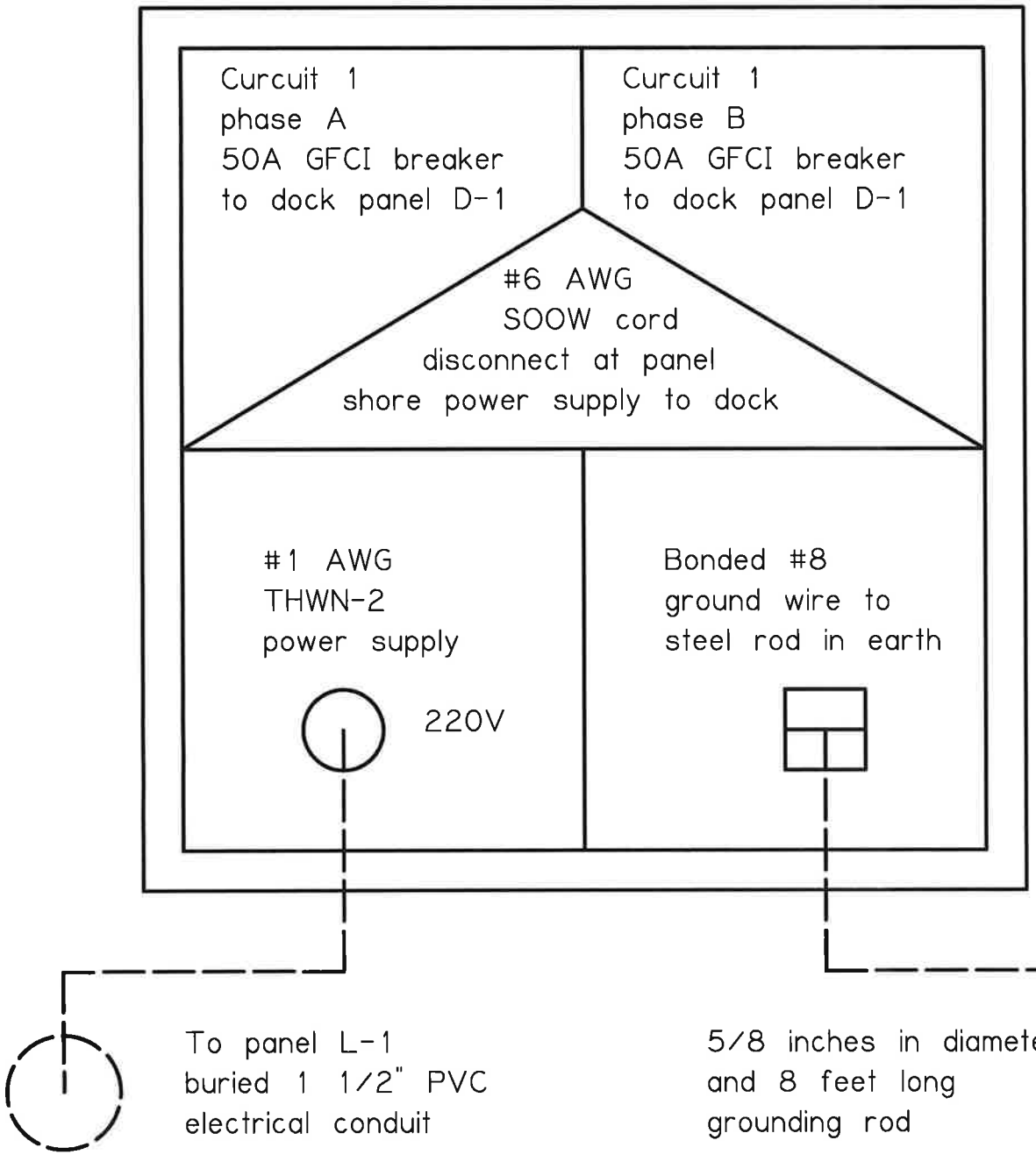
WATER SURFACE MANAGEMENT

L-2 Dock Electrical supply panel @ 685 msl.



Weatherproof NEMA 3R
Dock Panel - 100A 120/240V
1 Phase, 3 Wire Panel board
with 50A, 2 pole, Ground- fault
Circuit Interrupt (GFCI) Breakers

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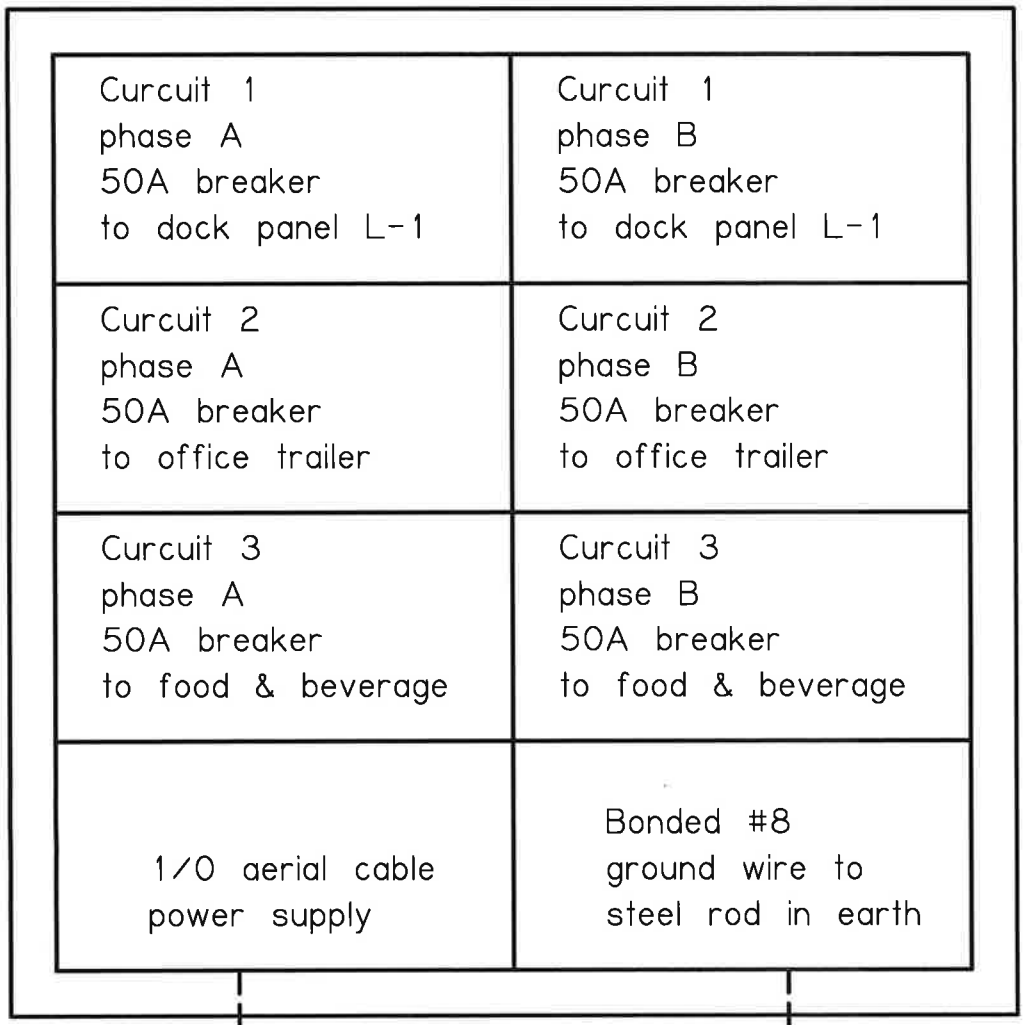
JAN 03 [illegible]

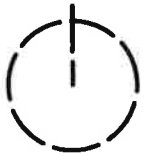
WATER SURFACE
MANAGEMENT

Kayak marina 715
Dennis Davis
1499 Graveyard pt. rd
L-2 electrical panel
12-24

L-1 Marina property main service panel

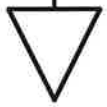


Weatherproof NEMA 3R
Main panel- 200A 120/240V
1 Phase, 3 Wire Panel board
with 50A, 2 pole breakers



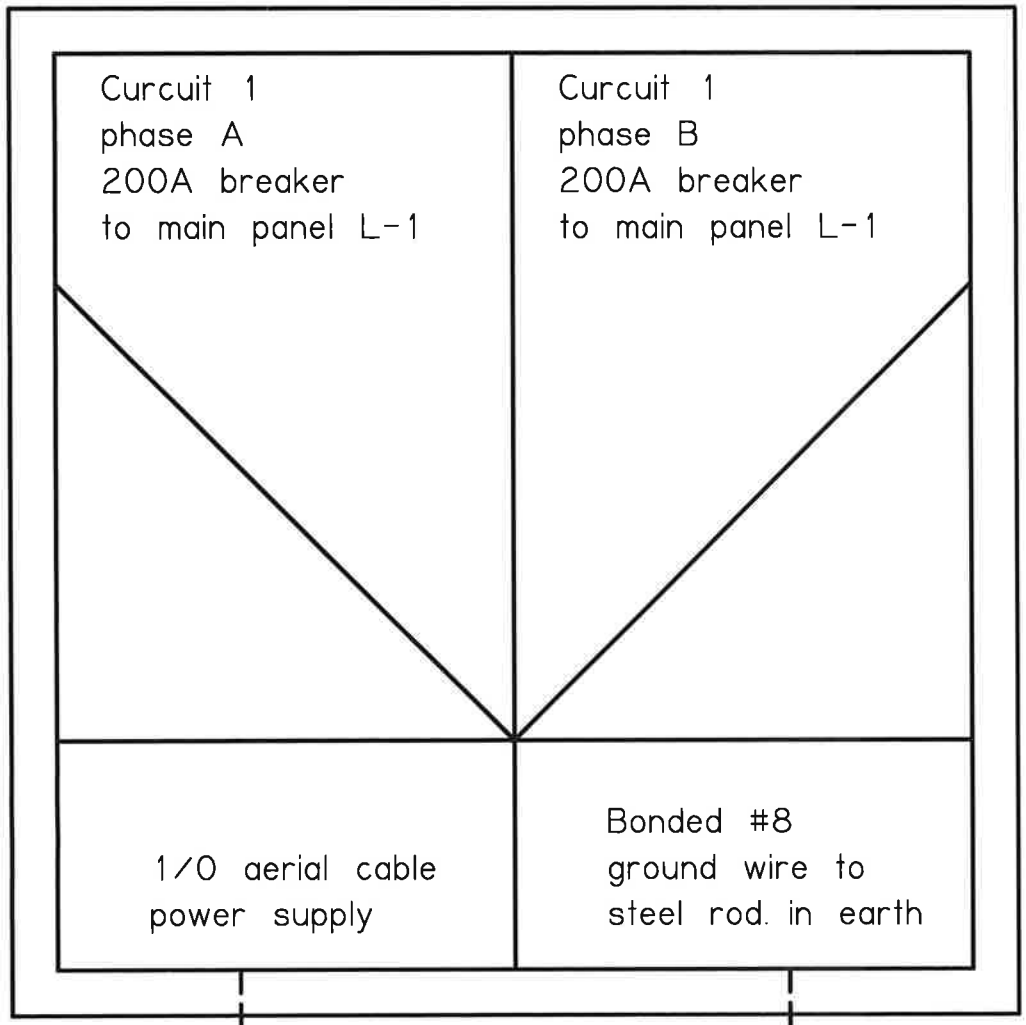
to panel MD-1
Aerial supply cable
located up street

5/8 inches in diameter
and 8 feet long
grounding rod



Kayak marina 715
Dennis Davis
1499 Graveyard pt. rd
L-1 electrical panel
12-24

MD-1 main disconnect @ 722 msl. (off property)



Weatherproof NEMA 3R
Main panel- 200A 120/240V
1 Phase, 3 Wire Panel board
Main disconnect switch

to single phase
PEC controlled
transformer drop

5/8 inches in diameter
and 8 feet long
grounding rod

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WATER SURFACE MANAGEMENT

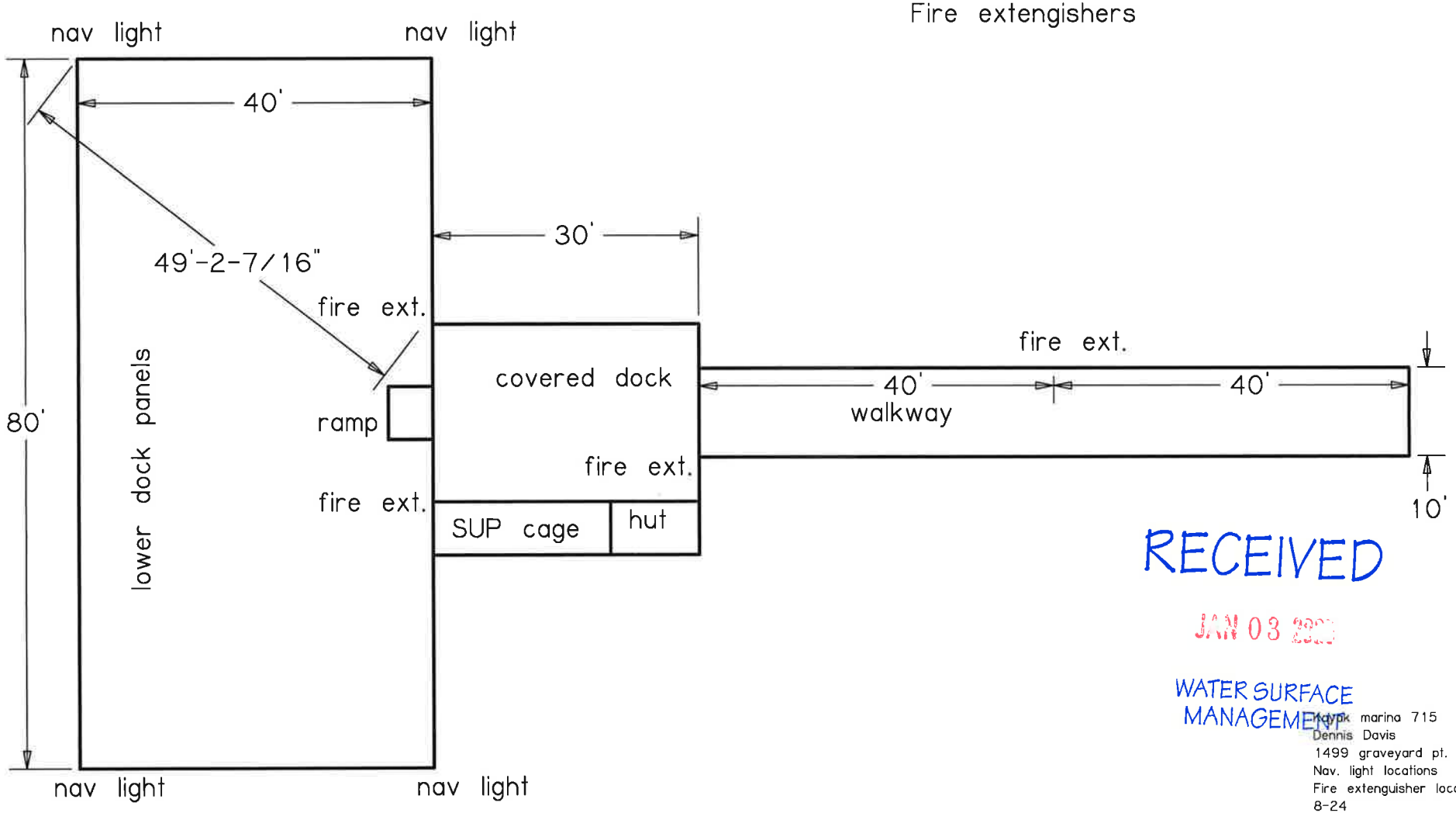
Kayak marina 715
Dennis Davis
1499 Graveyard pt. rd
MD-1 Main discconect
12-24

Top/ down view

Dock configuation

Navigation lights (solar- Marine)

Fire extengishers



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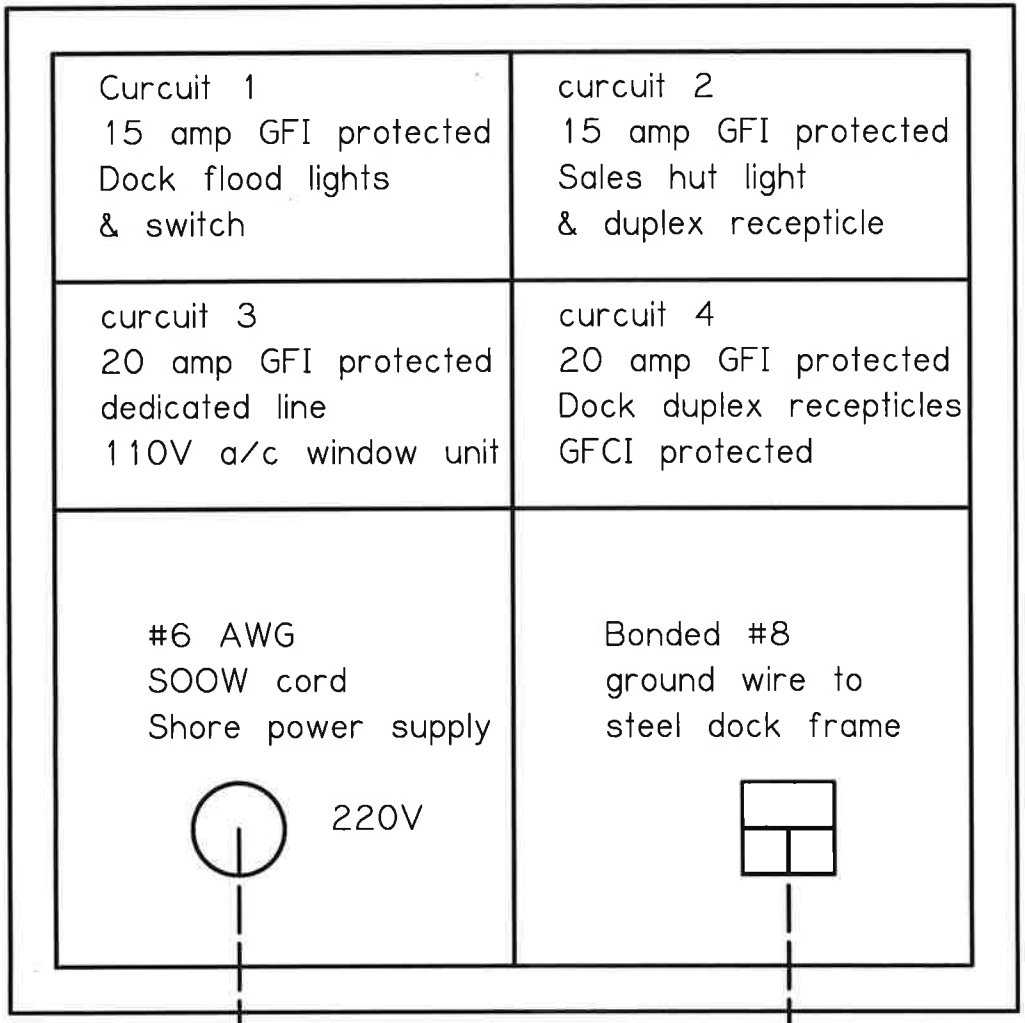
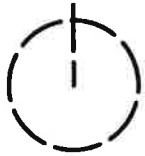
WATER SURFACE MANAGEMENT

Navpk marina 715
Dennis Davis
1499 graveyard pt. rd.
Nav. light locations
Fire extenguisher locations
8-24
NF-1

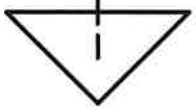
Dock Electrical panel D-1



Weatherproof NEMA 3R
Dock panel - 125A. 120/240V
1 Phase, 3 Wire Panel board
with 20A, 1 Pole, Ground- fault
Circuit Interrupt (GFCI) Breakers
and 15A, 1-pole GFCI breakers.



to 50 amp
GFI protected
L-2 land panel
supply and disconnect



Upper dock
steel frame

Kayak marina 715
Dennis Davis
1499 Graveyard pt. rd
D-1 electrical panel
12-2024

TR1616

PROFESSIONAL ENGINEER'S CERTIFICATION OF A MARINA FACILITY

In accordance with the LCRA Highland Lakes Marina Ordinance Section 5.4

Form C

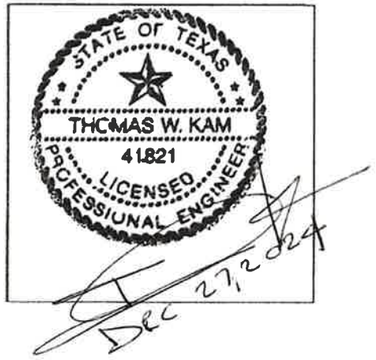
By my signature as a professional engineer licensed in the State of Texas, I certify to the Lower Colorado River Authority that the civil, structural, mechanical and fuel installations and systems of the Sattva Inc. dba Austin Paddleboard & Kayak Marina Facility are designed to ensure public safety.

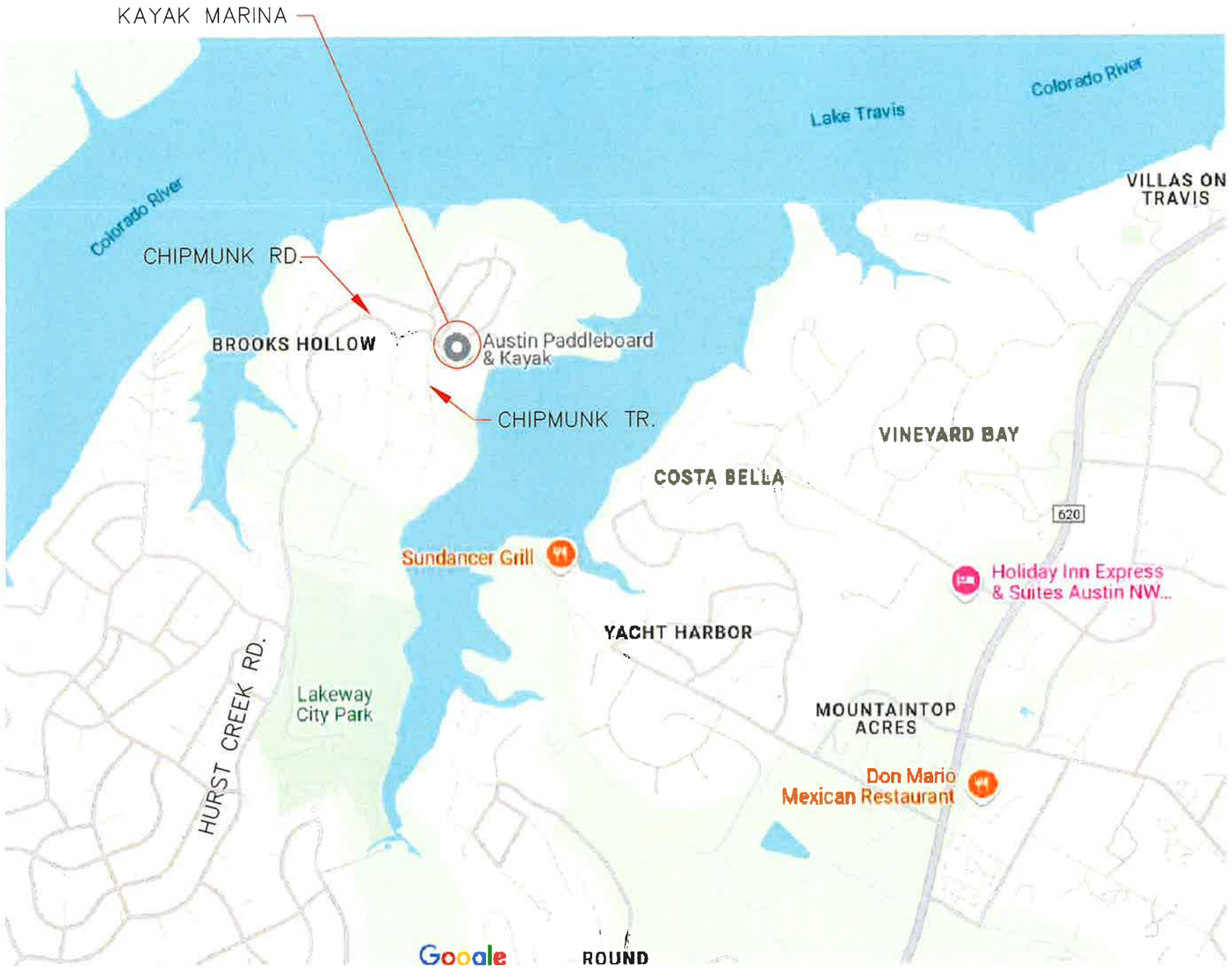
Signature:

Printed name: THOMAS KAM P.E.

Date: DEC. 27, 2024

Professional Engineer's Seal:





COURTESY GOOGLE MAPS

1 PROJECT LOCATION MAP
NOT TO SCALE

RECEIVED
JAN 03 2025
WATER SURFACE MANAGEMENT

THOMAS W. KAM 41821 REGISTERED PROFESSIONAL ENGINEER 12-27-24

TK# 16164

TK CONSULTING ENGINEERS
FIRM #: F-1856
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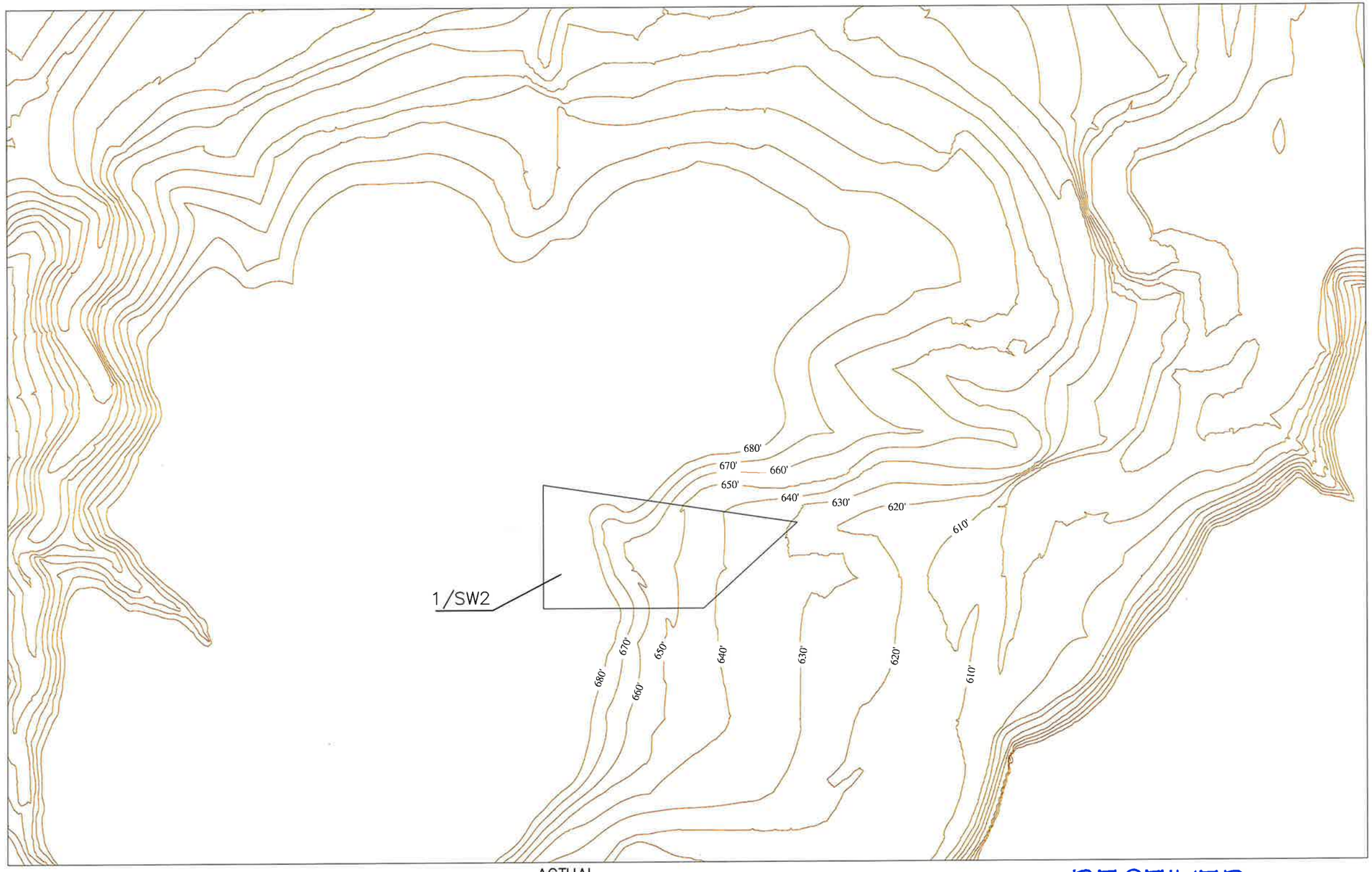
(512) 219-1574
TOM@TKAUSTIN.COM

KAYAK MARINA
1499 GRAVEYARD POINT ROAD
LAKEWAY, TEXAS 78734

DATE: DEC. 27, 2024

SW1

DENNIS DAVIS
(512) 825-3090



ACTUAL NORTH

1 KEY PLAN
1" = 200'-0" @ 24 X 36
1/400" = 1'-0" @ 12 X 18

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WATER SURFACE MANAGEMENT

DENNIS DAVIS
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THOMAS V. KAM
41821
REGISTERED
PROFESSIONAL ENGINEER
12-27-24

TK# 16164

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TOM@TKAUSTIN.COM

KAYAK MARINA
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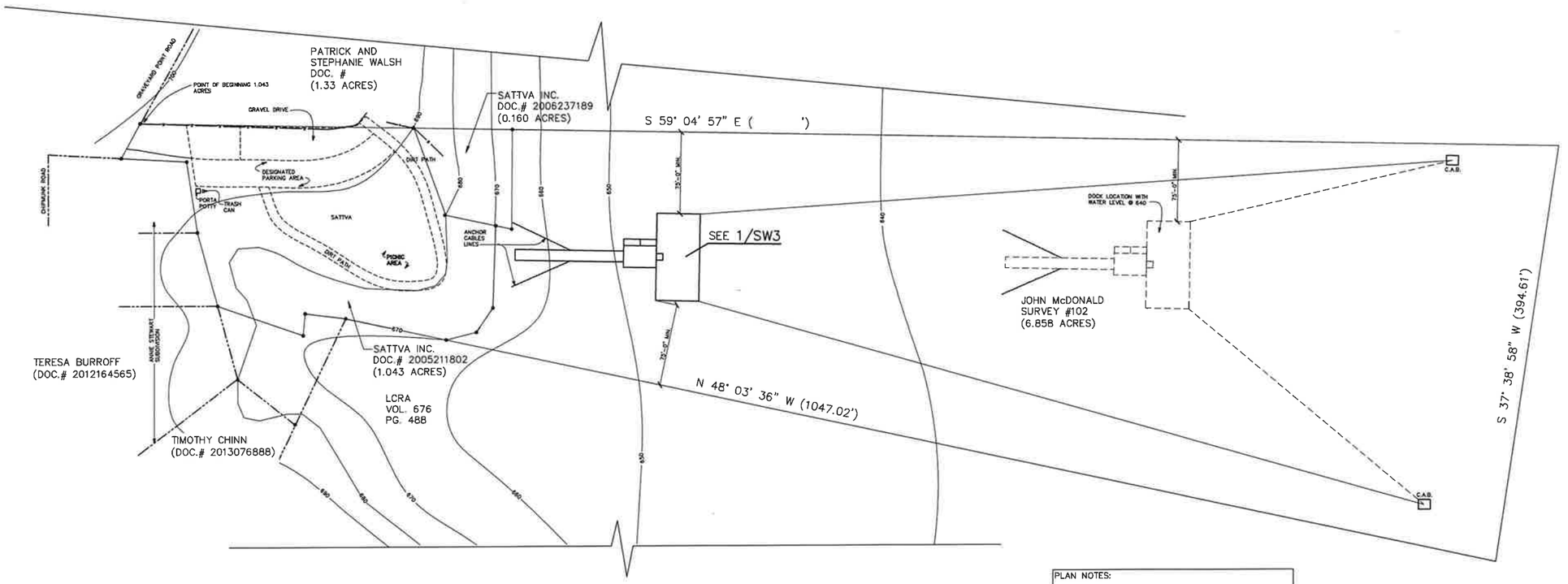
LAKEWAY, TEXAS 78734

DATE: DEC. 27, 2024

SW1



ACTUAL NORTH

1 SITE PLAN
1" = 50'-0" @ 24 X 36
1/2" = 50'-0" @ 12 X 18

PLAN NOTES:

1] SURVEY INFORMATION BASED ON "ALL POINTS SURVEYING" DATED JAN. 26, 2023 JOB #0980

2] TOPOGRAPHICAL INFORMATION: GRAVEYARD POINT TOPOGRAPHIC PLAN (NO DATE)

3] C.A.B. ☐ INDICATES CONCRETE ANCHOR BLOCKS.

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JAN 03 2025
WATER SURFACE MANAGEMENT

DENNIS DAVIS
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THOMAS W. KAM 41821 REGISTERED PROFESSIONAL ENGINEER 12-27-24

TK# 16164

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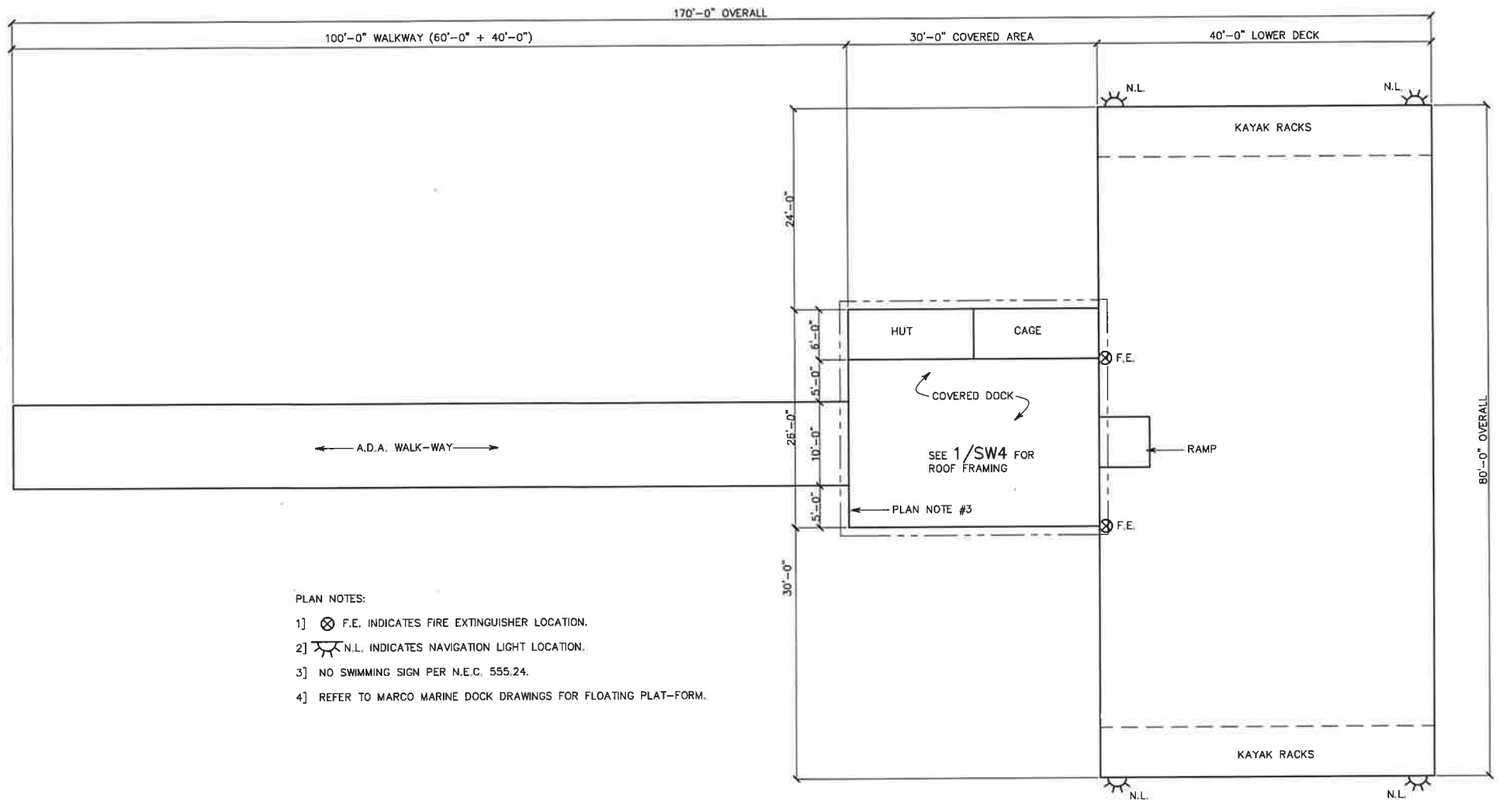
TOM@TKAUSTIN.COM

KAYAK MARINA
1499 GRAVEYARD POINT ROAD
LAKEWAY, TEXAS 78734

DATE: DEC. 27, 2024

SW2



PLAN NOTES:

1] ⊗ F.E. INDICATES FIRE EXTINGUISHER LOCATION.

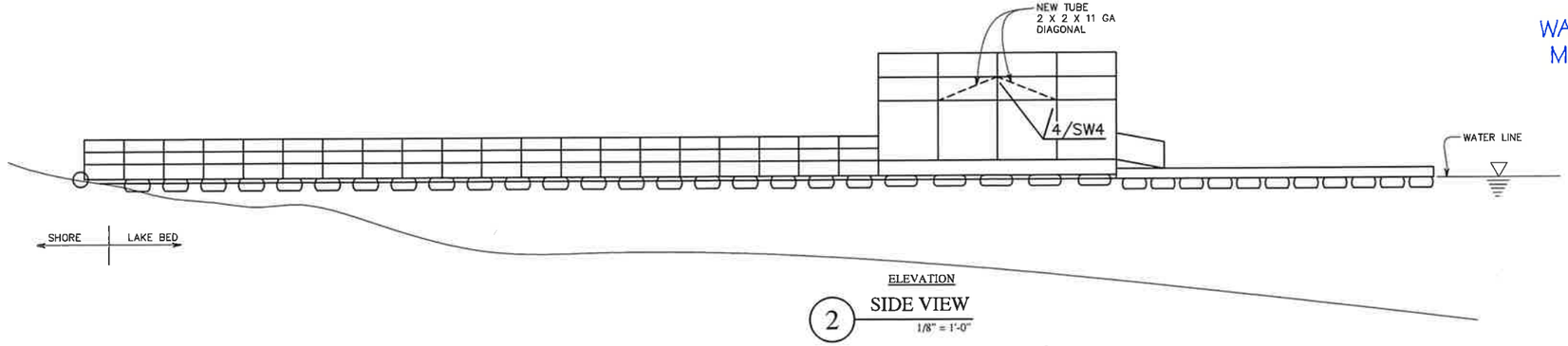
2] N.L. INDICATES NAVIGATION LIGHT LOCATION.

3] NO SWIMMING SIGN PER N.E.C. 555.24.

4] REFER TO MARCO MARINE DOCK DRAWINGS FOR FLOATING PLAT-FORM.

2/SW3
SIDE VIEW

1 FLOOR PLAN VIEW
1/8" = 1'-0"



ELEVATION

2 SIDE VIEW
1/8" = 1'-0"

RECEIVED

JAN 03 2025

WATER SURFACE MANAGEMENT

DENNIS DAVIS
(512) 825-3090

THOMAS V. KAM
41821
REGISTERED
PROFESSIONAL ENGINEER
12-27-24

TK# 16164

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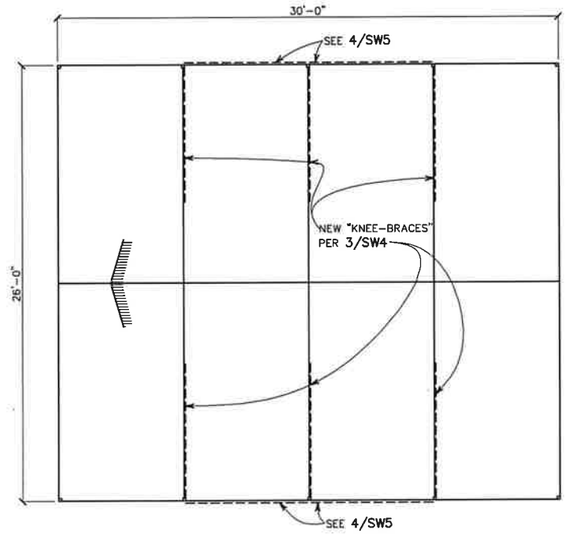
TOM@TKAUSTIN.COM

KAYAK MARINA
1499 GRAVEYARD POINT ROAD
LAKEWAY, TEXAS 78734

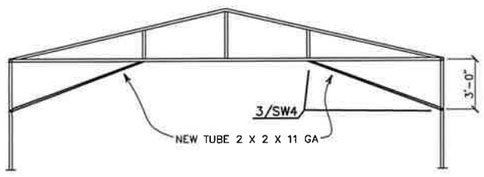
DATE: DEC. 27, 2024

SW3



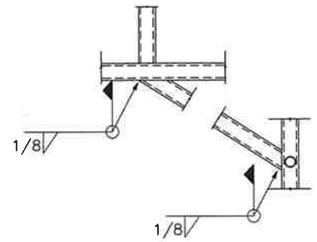
2/SW4

1 ROOF PLAN
1/4" = 1'-0"

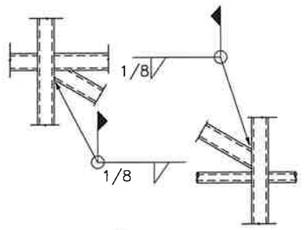


ELEVATION

2 TRUSS FRAMING
1/4" = 1'-0"



3 1 1/2" = 1'-0"



4 1 1/2" = 1'-0"

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JAN 03 2025
WATER SURFACE MANAGEMENT

DENNIS DAVIS
(512) 825-3090

THOMAS V. KAM
41821
REGISTERED PROFESSIONAL ENGINEER
12-27-24

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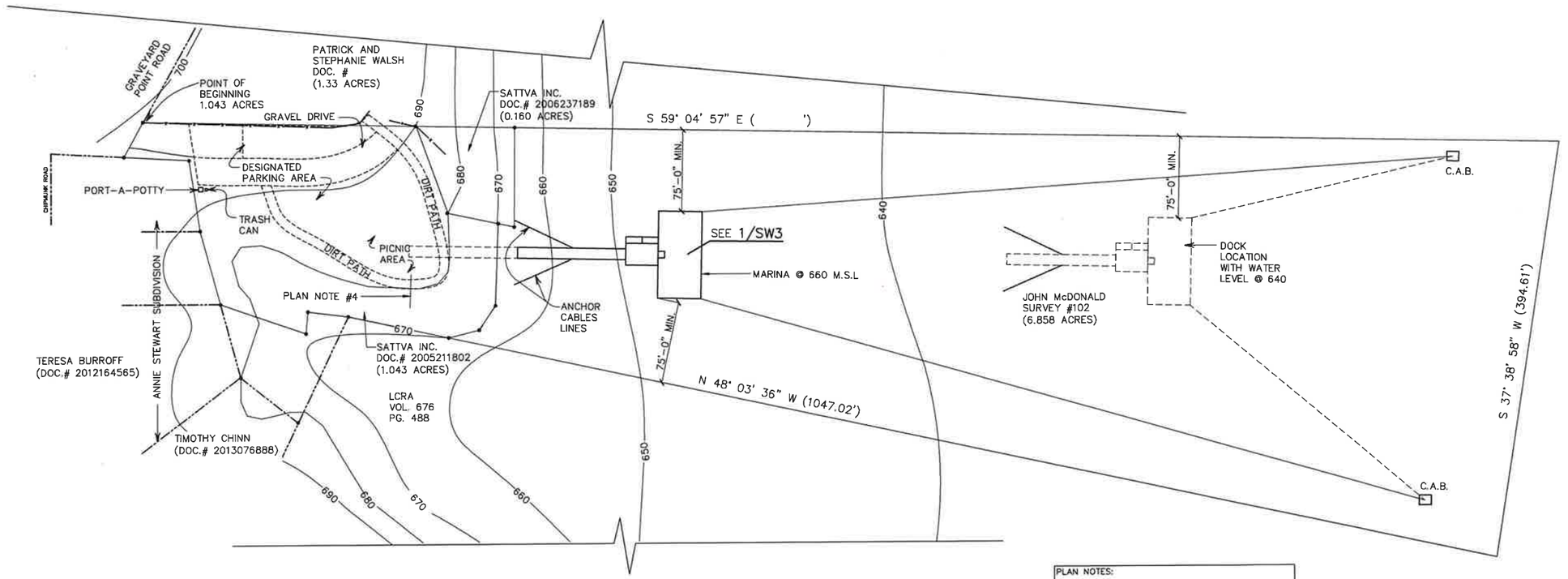
TOM@TKAUSTIN.COM

KAYAK MARINA
1499 GRAVEYARD POINT ROAD
LAKEWAY, TEXAS 78734

DATE: DEC. 27, 2024

SW4



ACTUAL NORTH

1 SITE PLAN
1" = 50'-0" @ 24 X 36
1/2" = 50'-0" @ 12 X 18

PLAN NOTES:

1] SURVEY INFORMATION BASED ON "ALL POINTS SURVEYING" DATED JAN. 25, 2023 JOB #09B0

2] TOPOGRAPHICAL INFORMATION: GRAVEYARD POINT TOPOGRAPHIC PLAN (NO DATE)

3] C.A.B. ☐ INDICATES CONCRETE ANCHOR BLOCKS.

4] EXTEND WALKWAY @ 680 M.S.L.

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FEB 24 2025
WATER SURFACE MANAGEMENT

DENNIS DAVIS
(512) 825-3090

THOMAS V. KAM
41821
REGISTERED PROFESSIONAL ENGINEER
12-27-24

TK# 16164

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(512) 219-1574
TOM@TKAUSTIN.COM

KAYAK MARINA
1499 GRAVEYARD POINT ROAD
LAKEWAY, TEXAS 78734

REV. 02-10-2025

DATE: DEC. 27, 2024

SW2

Dock materials for 2024 updated kayak marina configuration

10' x 60' Walkway. W-1 details

- 10'x60' galvanized steel frame structure. Main side and end beams formed from 6" C channel @8.2# per foot.
- web Intermediates on 4' centers formed from 3" C channel @ 5.0 # per foot.
- 60' Length intermediates on 18" centers formed from 2"x2"x 3/16" angle.
- 60' length hand railing on both sides of walkway formed from 1.25" galvanized schedule 40 pipe.
- dock hinge at walkway formed from 2" galvanized schedule 40 pipe, 1.5" pipe hinge pin 120" long with galvanized 3/8"x 2.5" carriage end bolts to secure pipe in place .
- 14" pneumatic wheel attached to 4" C channel main frame of walkway. 2" schedule 40 pipe axle and wheel hubs. 1/2" x 1.5" galvanized hex bolts, lock washers, nuts to attach wheel set.
- Treated lumber 2"x 4" "sleeper" boards bolted to 2"x 2"x 3/16" angle intermediates with 3/8"x 2.5" galvanized carriage bolts for top deck board to screw into.
- 2"x6" deck boards screwed into "sleeper" 2"x4" boards with 2.5" long deck screws.
- All welded in field areas treated with cold galvanizing compound.
- 3/8" galvanized guy cables , turnbuckles securing walkway lateral swing to preserve walkway hinge. attachments in front of float closest to land and securing to either end of 20' wide main covered dock.
- There are six, 4'x8' rectangular frame sponsons attached to the 4" C channel main frame, The sponsons are formed from 2" x 1/4" galvanized steel angle iron welded to the bottom of the 6" C channel.
- The six 4'x8'x16" encapsulated floats are placed parallel to the 60' length walkway, attached to the 2"x 1/4" angle iron frame sponson by 3/8"x 4" galvanized carriage bolts, washers, nuts.

10' x40' Walkway extension for shallow water use. W-2 details

- 10'x40' galvanized steel frame structure. Main side and end beams formed from 6" C channel @ 8.2 # per foot.
- web Intermediates on 4' centers formed from 3" C channel @ 5.0 # per foot.
- 40' Length intermediates on 18" centers formed from 2"x2"x 3/16" angle.
- 40' length hand railing on both sides of walkway formed from 1.25" galvanized schedule 40 pipe.

- dock hinge at walkway formed from 2" galvanized schedule 40 pipe, 1.5" pipe hinge pin 120" long with galvanized 3/8"x 2.5" carriage end bolts to secure pipe in place .
- 14" pneumatic wheel attached to 4" C channel main frame of walkway. 2" schedule 40 pipe axle and wheel hubs. 1/2" x 1.5" galvanized hex bolts, lock washers, nuts to attach wheel set.
- Treated lumber 2"x 4" "sleeper" boards bolted to 2"x 2"x 3/16" angle intermediates with 3/8"x 2.5" galvanized carriage bolts for top deck board to screw into.
- 2"x6" deck boards screwed into "sleeper" 2"x4" boards with 2.5" long deck screws.
- All welded in field areas treated with cold galvanizing compound.
- 3/8" galvanized guy cables , turnbuckles securing walkway lateral swing to preserve walkway hinge. attachments in front of float closest to land and securing to either end of 20' wide main covered dock.
- There are four, 4'x8' rectangular frame sponsons attached to the 6" C channel main frame, The sponsons are formed from 2"x 1/4" galvanized steel angle iron welded to the bottom of the 6" C channel.
- The four, 4'x8'x16" encapsulated floats are placed parallel to the 40' length walkway, attached to a 1.25" schedule 40 steel pipe frame sponson by 3/8"x 4" galvanized carriage bolts, washers, nuts.

<u>ADA aluminum end ramp on walkway. A-1 details</u>

- 10' wide and 12' long ADA ramp hinged to end of walkway formed from 6061 T-6, 4" channel frame with 6061 T-6 2"x2"x 3/16" intermediates @ 18" on center.
- 3/16" thick Aluminum 6061 diamond tread surface cover to be welded to the 4" channel frame and 2"x2"x 3/16" bottom intermediates.
- ADA ramp hinge at walkway formed from 2" galvanized schedule 40 pipe, 1.5" pipe hinge pin 120" long with galvanized 3/8"x 2.5" carriage end bolts to secure pipe in place . Hinge assembly on ADA ramp side formed from 6061 T-6 aluminum schedule 40 pipe welded to the 4" aluminum channel outer frame.

<u>20'x30' Covered dock area. C-1 details</u>

- 20'x30' hot dipped galvanized frame structure formed in monolithic box truss design from 1.5"x 1.5"x 3/16" angle.
- Walkway hinge on center of 20' wide land side of frame. 3" C channel @ 5.0 #, 2" schedule 40 pipe hinge that mates to same on end of 40' walkway.

- roof column supports formed from 2" galvanized schedule 40 pipe, 10' 6" long, welded on 7' 6" centers to top of perimeter of lower box truss frame.
- 20' wide x 30" tall Roof rafters will be formed from 2"x 2"x1/8" galvanized square tube steel. Standard roof truss design.
- Roofing material is 26 gauge galvalume R panel, screwed on 12" centers to 2"x2" square tube roof rafters.
- Roof is a 12/2 pitch, gable style design 13'6" high off deck at apex and 10'6" at drip line.
- Treated lumber 2"x4" "sleeper" boards bolted to top of steel box truss frame on 16" centers to facilitate 2"x6" decking boards to be screwed to.
- 2"x6" Deck boards screwed into sleeper boards with 2.5" long deck screws.
- The six, 4"x8"x12" and four, 4"x8"x16" encapsulated floats are bolted to the lower galvanized steel box truss frame with 3/8"x4" galvanized carriage bolts, washers, nuts.
- All welded in field areas will be coated with cold galvanizing compound.

<u>10'x6' Staff hut. S-1 details</u>

- 10'x6' hot dipped galvanized frame structure formed in monolithic box truss design from 1.5"x 1.5" x 3/16" angle.
- 2"x4" treated lumber wall framing @ 16" on center, sheathed in zip system and Hardie panel exterior siding bolted to lower truss frame.
- Standard shed roof design to cover Staff hut with 2"x6" treated lumber roof rafters @ 16" on center, sheathed in zip system decking.
- Roofing material is 26 gauge galvalume R panel, screwed on 12" centers to roof rafters.
- Roof is a 12/2 pitch, shed style design starting under the side of main gable roof and ending at 8' height on drip line.
- Treated lumber 2"x4" "sleeper" boards bolted to top of steel box truss frame on 16" centers to facilitate 2"x6" decking boards to be screwed to.
- 2"x6" Deck boards screwed into sleeper boards with 2.5" long deck screws.
- The two, 4"x6'x16" encapsulated floats are bolted to the lower galvanized steel box truss frame with 3/8"x4" galvanized carriage bolts, washers, nuts.
- All welded in field areas will be coated with cold galvanizing compound.

<u>80'x40' low level uncovered dock area. L-1 details</u>

- Sixteen, 10'x20' Merco Marine Engineered dock panel sections (Heavy duty style), formed from treated 2"x8" lumber, hot dipped galvanized framing connections and

braces, galvanized steel float attachment fixtures. Two rows of 10'x20' sections that are attached with hot dipped galvanized D ring hinges. Constructed to a low water design to provide for rowing/ paddling craft.

- The sixteen hinge connected lower dock panel structure is connected to the upper covered dock structure with four hot dipped galvanized articulating schedule 40 pipe hinges.
- One, 6'x20' Merco Marine Engineered dock panel section (heavy duty style) formed from treated 2"x8" lumber, hot dipped galvanized framing connections and braces, galvanized steel float attachment fixtures. This section is attached to the upper covered dock lower steel frame with articulating galvanized schedule 40 steel pipe hinges and connected to the side of the lower sixteen, 10'x20' Merco Marine lower floating dock sections with hot dipped galvanized D ring hinges. This section will accommodate a stand up paddleboard storage cage next to the Staff hut off the side of the covered dock area.
- The combination of these hinges will provide for movement when dock structure is subjected to high winds and waves to move independently to prevent breaking structural components.
- Main beams constructed from 2"x8" treated lumber formed in a box grid with hot dipped galvanized connections sandwiched to either side of each beam, all hot dipped galvanized steel connections and fixtures are through bolted the wood beams with 1/2" galvanized carriage bolts, lock washers, nuts.
- 2"x8" wood beams are on 24" centers.
- 2"x1/4" flat aluminum bolted to top of 2"x8" wood beams.
- Encapsulated floatation Installed between 2"x8" wood beams, secured and bolted to 2"x 1/4" aluminum with 3/8"x4" hot dipped galvanized carriage bolts.
- Top decking formed from plastic composite deck 2x6 boards. Decking screwed into 2"x8" treated wood beams with stainless steel 2.5" long screws.

<u>5'x6' Deck Ramp. R-1 details</u>

- 5'x6' deck ramp with handrail to facilitate moving from upper covered deck to lower uncovered deck.
- Main frame formed from galvanized 3" C channel @ 5.0# and 2"x2"x 3/16" angle.
- hinge end of ramp that attaches to upper dock frame will be formed from 3"C.
- Lower end of ramp that tapers to lower dock frame will be formed from 3" C.
- sides and intermediates of 16" centers will be formed from 2"x2"x 3/16" galvanized angle.

- There are five, 2x4 treated lumber "sleeper" boards attached with 3/8"x 2.5" galvanized carriage bolts, washers, nuts, to the sides and inner 2"x2" angle.
- The top decking is plastic composite, attached to the "sleeper" 2x4's with stainless steel 2.5" long deck screws.
- Four 4" tall rubber wheels are attached to the bottom of the 2"x2" angle and facilitate movement of the ramp when hinged dock section will move in high wave conditions.
- 1.25" hot dipped galvanized schedule 40 pipe handrail to one side welded to 3" C on lower ramp frame.
- The ramp hinge is formed from four, 3/4"x 4"long hinge pins.
- All welded in field areas are treated with cold galvanizing compound.

Dock Anchoring. DA-1 details

- Dock structure is secured with a four corner winch system.
- One drum winch to each corner of dock.
- Two winches, down guide pulleys mounted to lower frame with 1/2" Stainless steel IWRC 6x19 cables attaching to steel shore mount locations drilled into rock at the 681 elevation.
- Two winches, down guide underwater pipes and pulleys with 1/2" Stainless steel IWRC 6x19 cables attaching to four, 3000# concrete rectangular blocks located underwater in front of property.
- The stainless underwater anchor lines are from the winches have 5" ID galvanized pipe down guides with pulleys at bottom of pipe to keep the cables well under the water from swimmers or boats.
- There are two 5" ID galvanized schedule 40 pipe "spud" anchor poles mounted with galvanized pipe sleeves and winches which raise and lower when dock is moved. These pipes augment the four corner winch system and act as a secondary anchor system if there was a cable breakage.

Flood and low water dock status.

- When Lake Travis would be in the flood pool above 681 msl. the dock has ample mooring cable on winches to rise straight up above the 681 location on property to 721 msl. Dock maintenance would be to loosen both shore winches and underwater line winches to achieve placement straight up, not

continuing back into the property where trees are located. Walkway completely floats, does not need land for support.

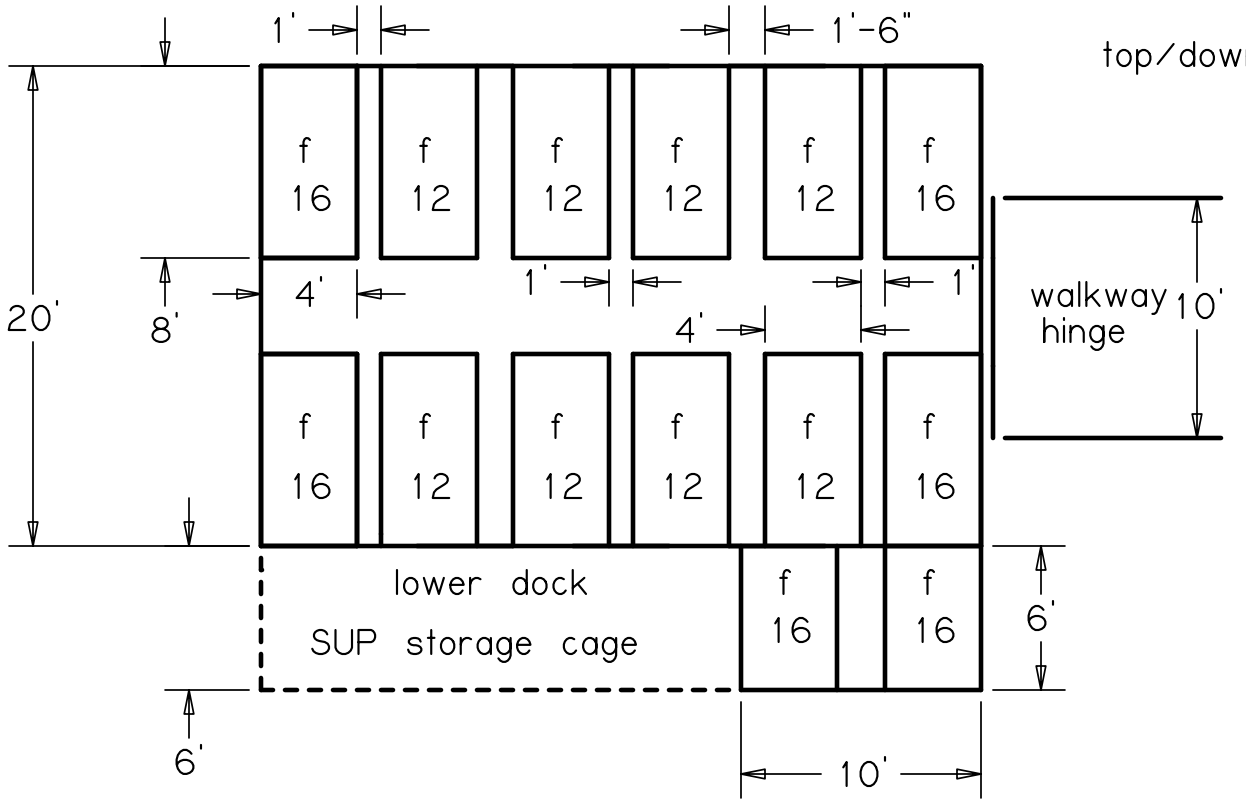
- Dock is designed to go aground if needed when lake would go below 620 msl. underwater pipe down guides for water side winches can be unbolted and removed. dock structure has no large underwater braces that would be damaged by going aground. All power boats or vessels tied to the dock that would impede going aground would be removed.
- The topography is very flat, sandy, and level when water is low.

Navigation lights and electrical. NF-1 details

- 220V Shore power to covered dock area and Staff hut.
- Navigational lights are solar and will light when power is disrupted, four lights total on corners of the lower panel dock area.

Fire Extinguishers. NF-1 details

- There will be four fire extinguishers, one on each of the 20' side of the covered dock area where the ramp access is to the lower launching deck area. One attached to the Staff hut, and one attached to the hand railing on center of walkway.

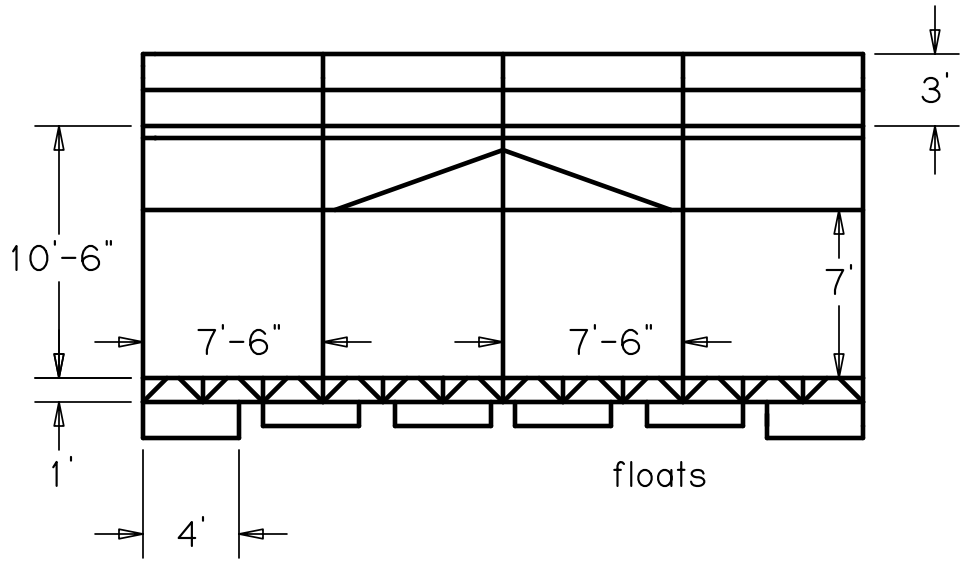


20'x30'

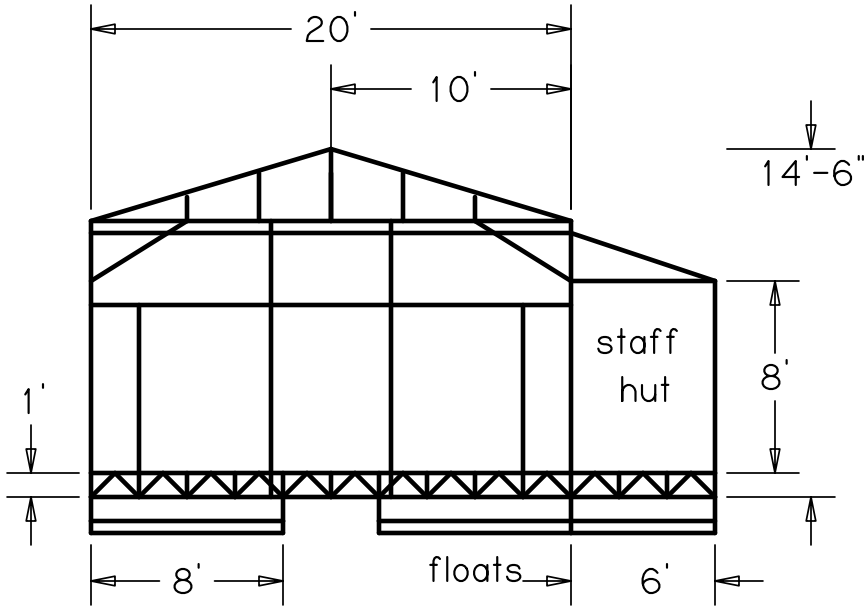
Upper covered dock

6'x10' Staff hut

float layout



side view



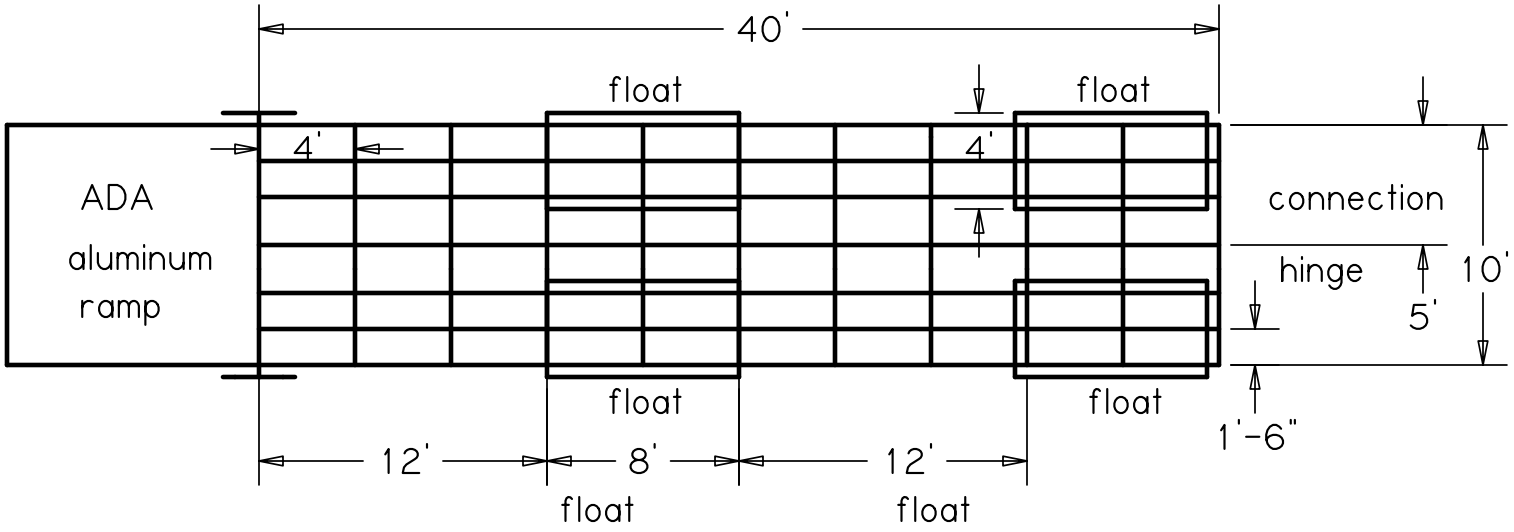
front view

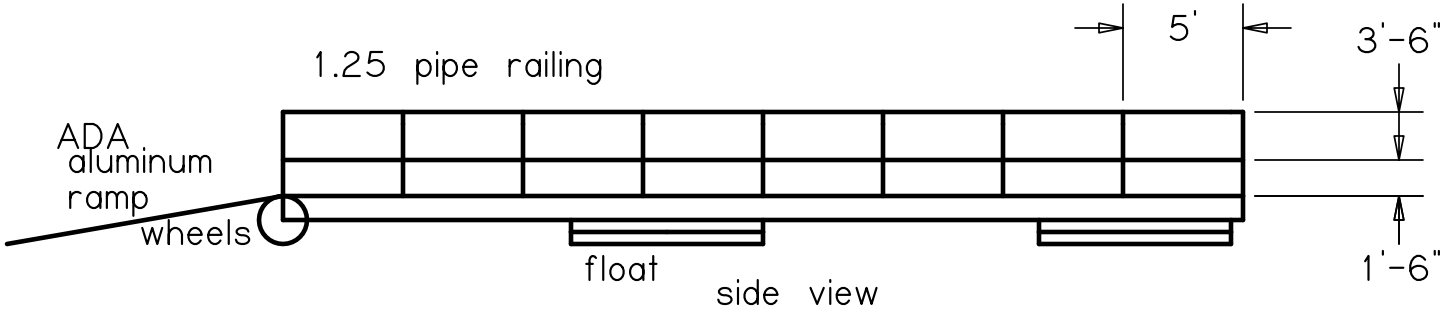
Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
Covered dock float layout
8-24

C-1 / S-1

40' walkway extension

top/ down view



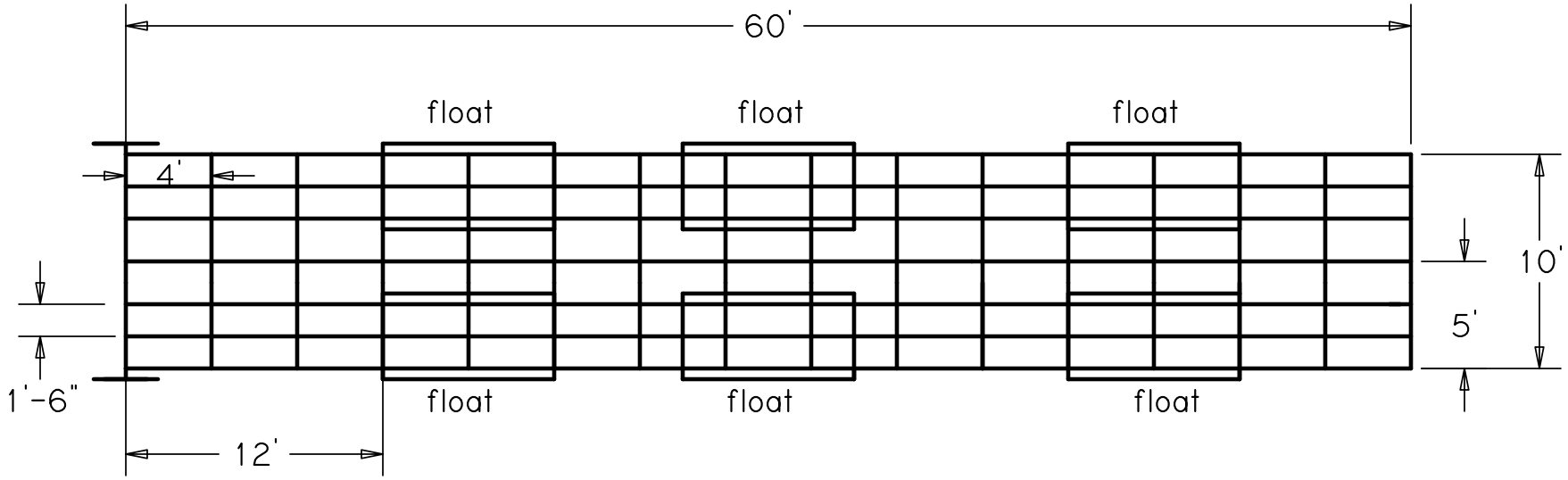


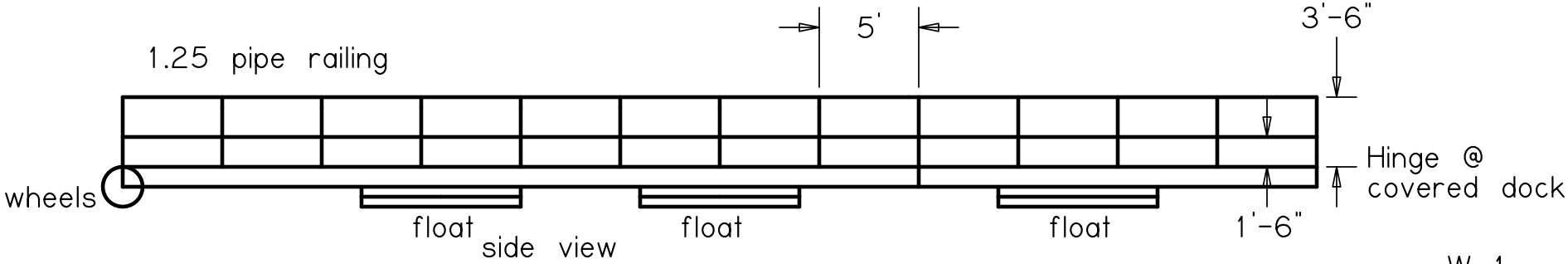
side view

Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
walkway extension
8-24
W-2

60' walkway

top/ down view



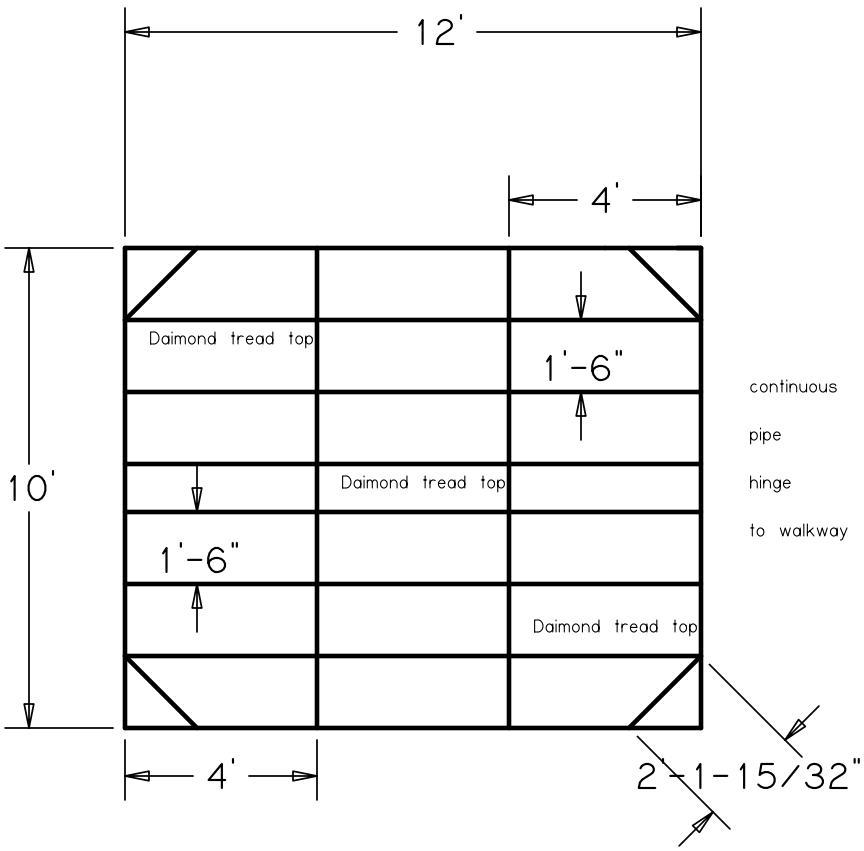


side view

W-1

Top/ down view

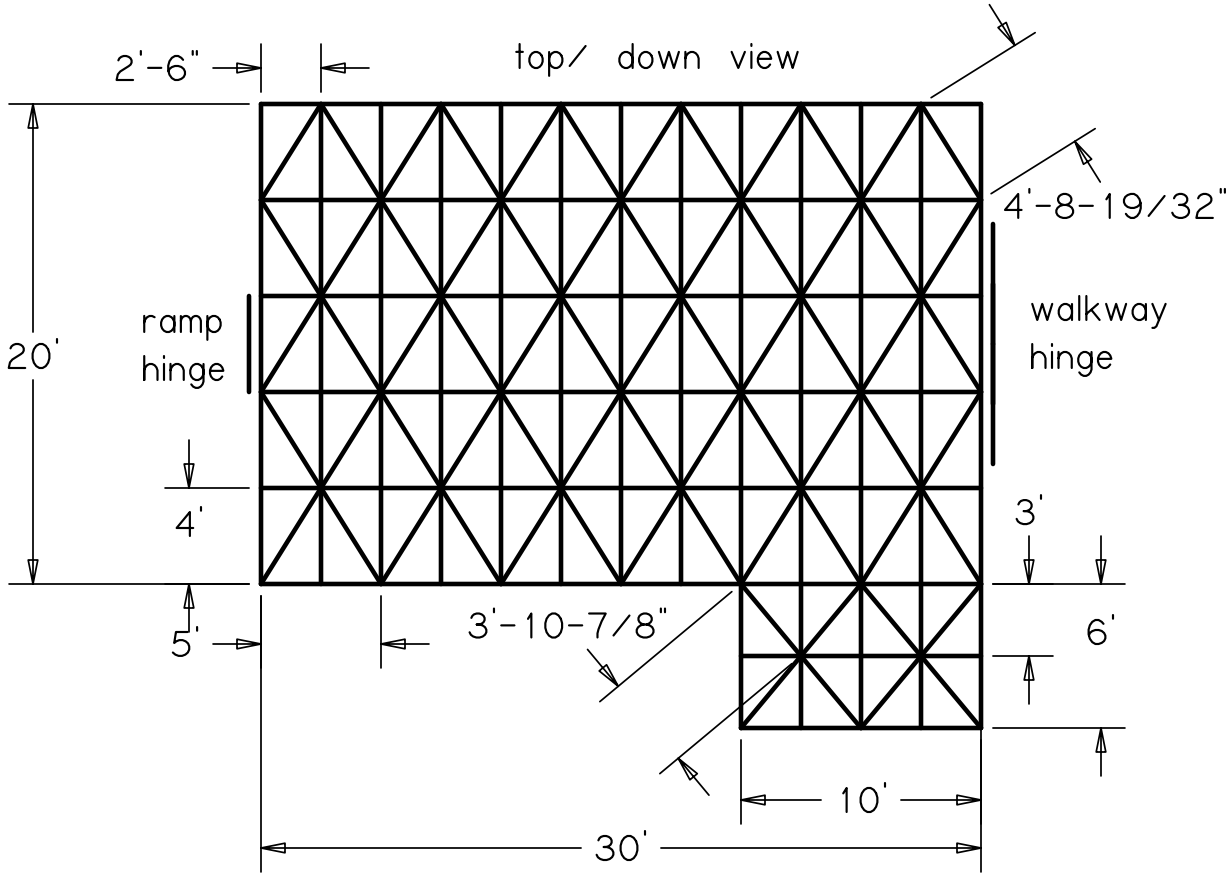
Aluminum ADA ramp frame

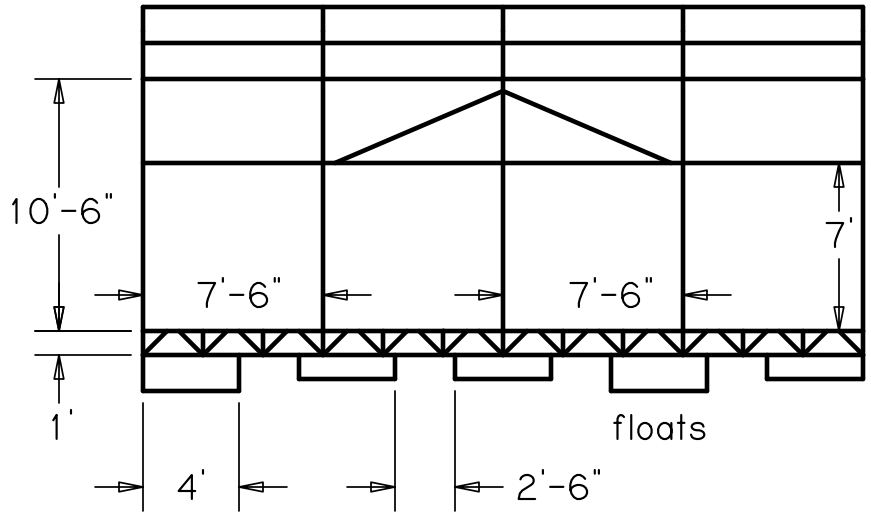


Marina 715
Dennis Davis
1499 graveyard pt. rd.
ADA ramp
8-24

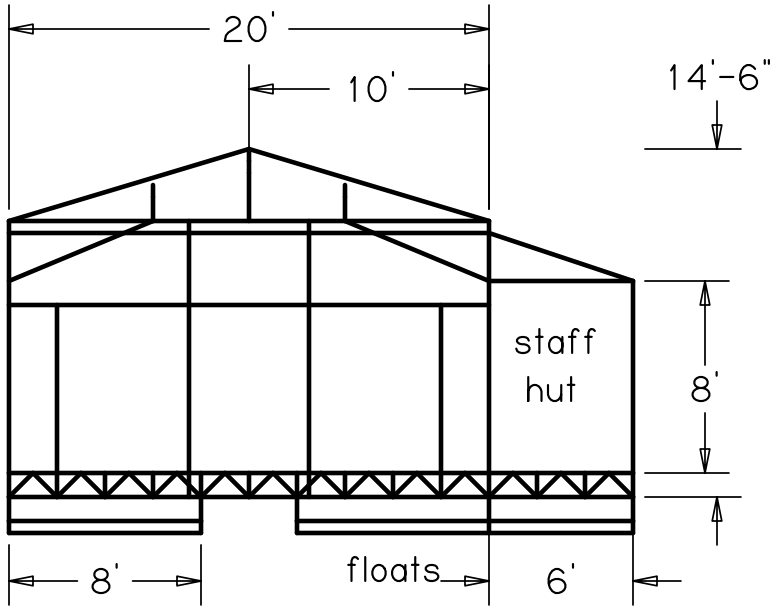
A-1

20'x30' upper covered dock
6'x10' Staff hut
steel foundation layout





side view



front view

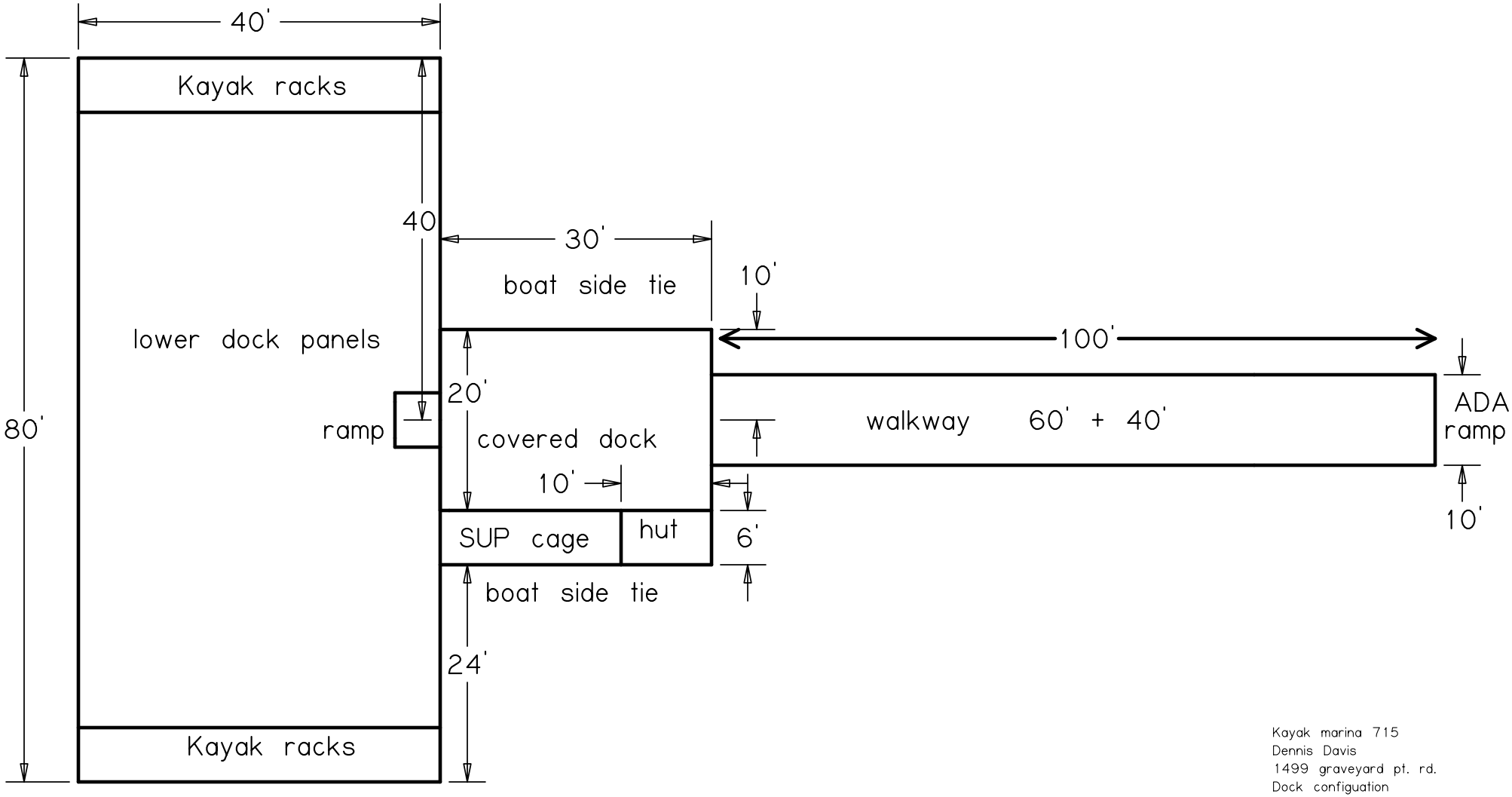
Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
Covered dock section
8-24
C-1 / S-1

Top/ down view

Dock configuation

3980 sq' of dock area

1000 sq' of walkway area



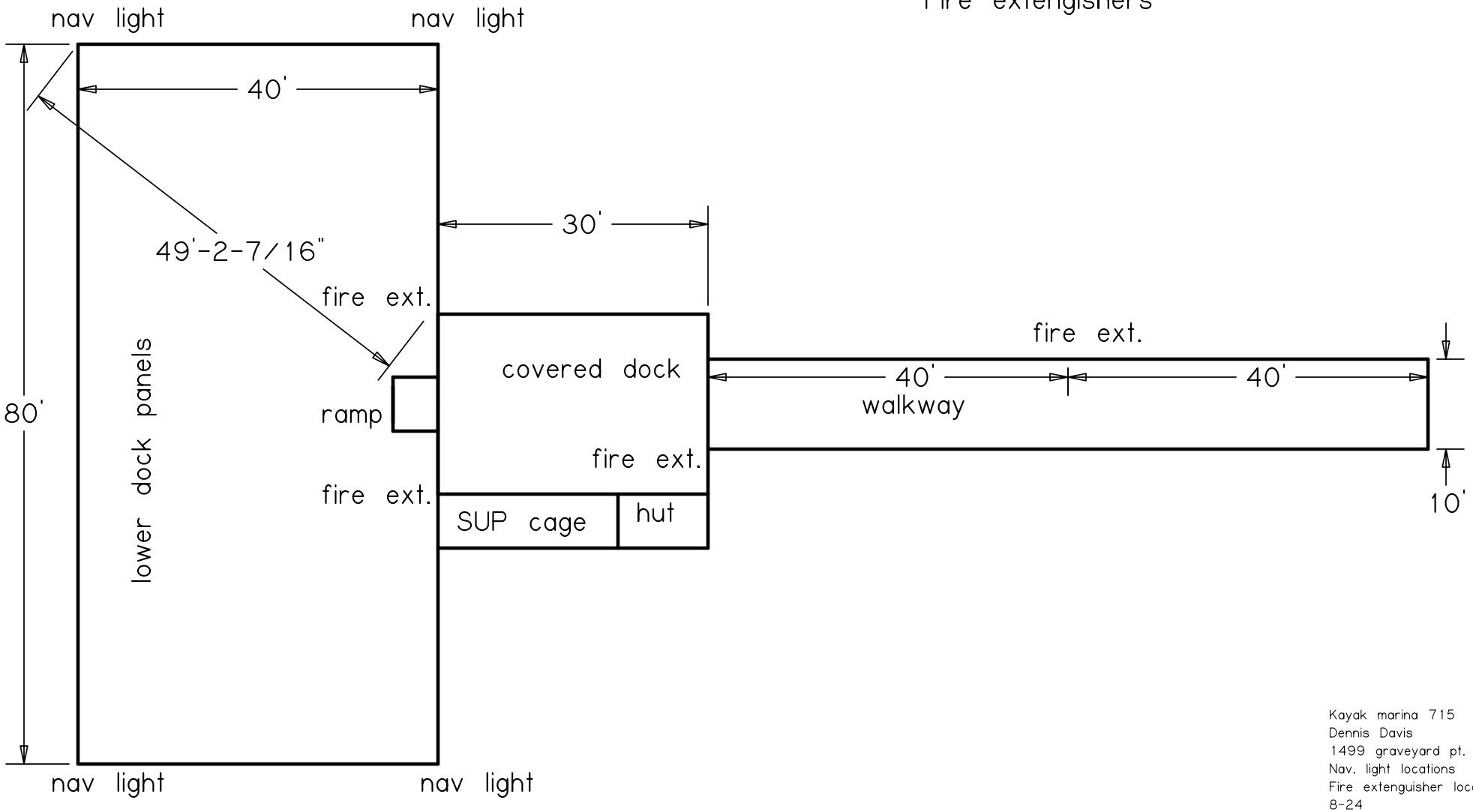
Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
Dock configuation
8-24

Top/ down view

Dock configuation

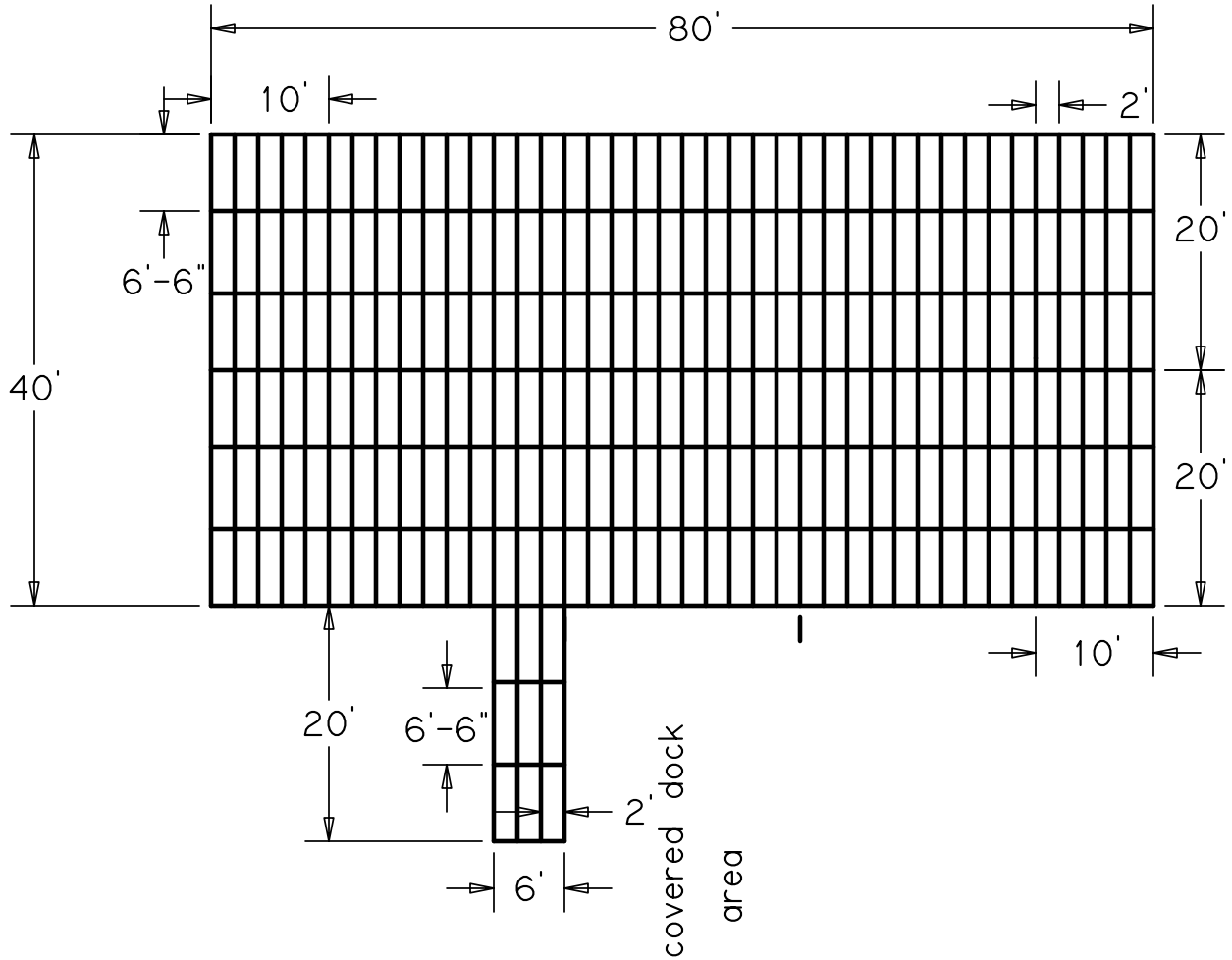
Navigation lights (solar- Marine)

Fire extengishers



Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
Nav. light locations
Fire extenguisher locations
8-24

NF-1



Top/ down view

Lower dock panels
Framing layout

16- 10'x20'

1- 6'x20'

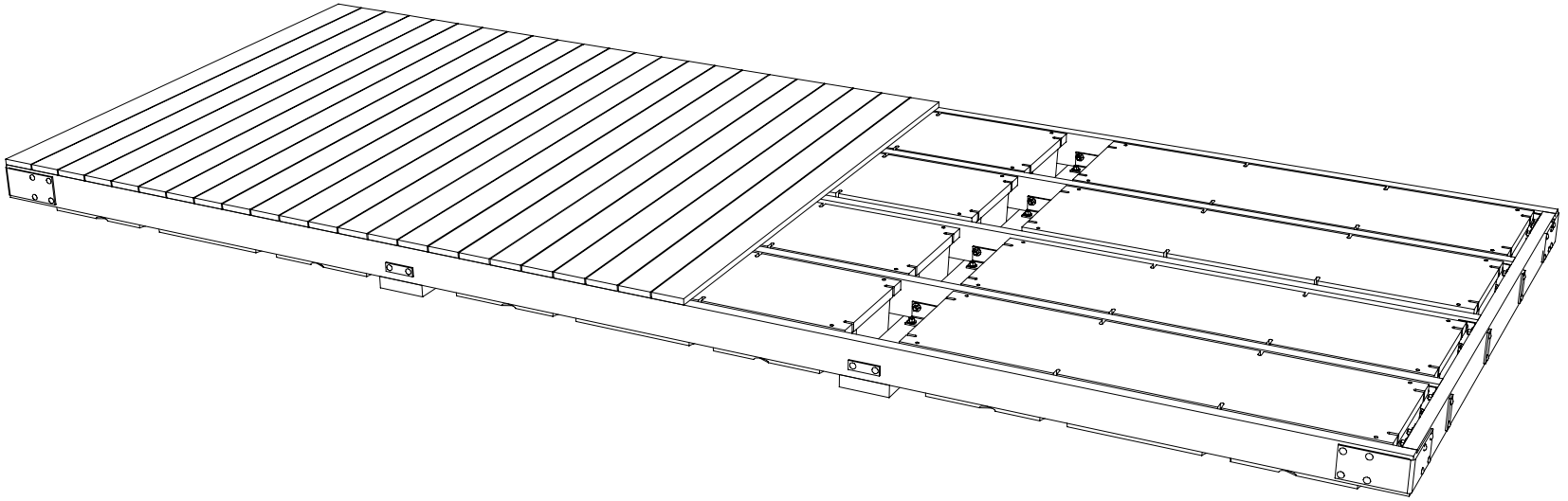
15 floats per 10'x20' section

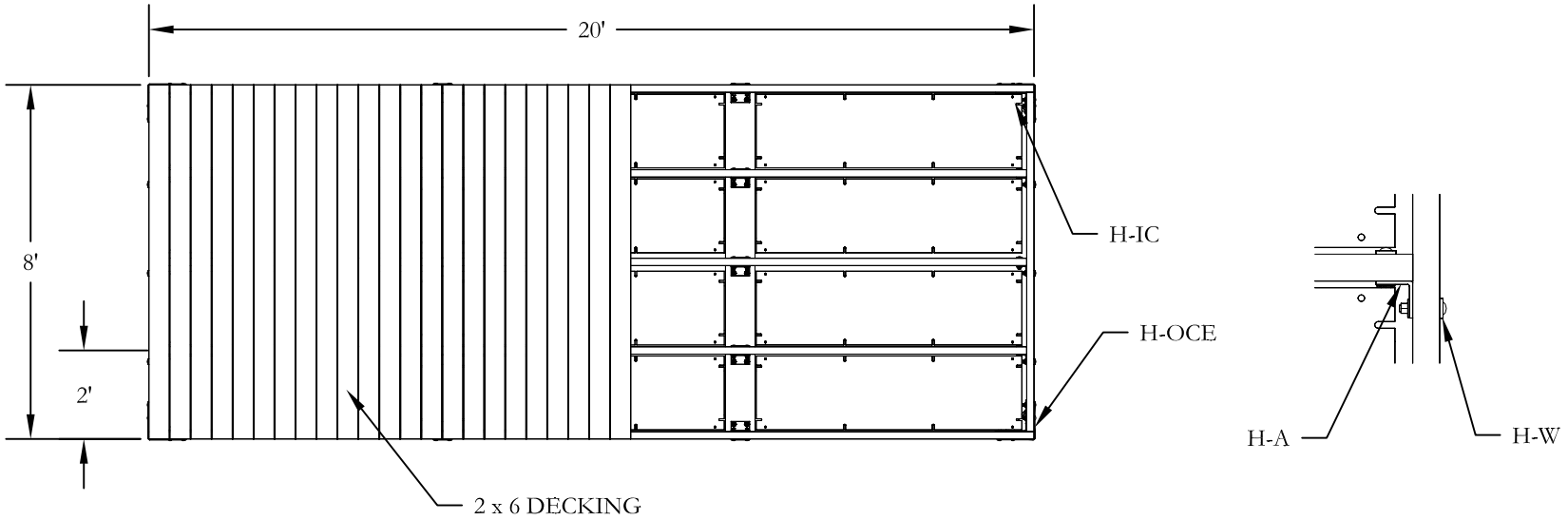
9 floats on 6'x20' section

87,150 # total float buoyancy for 17 panels

Kayak marina 715
Dennis Davis
1499 graveyard pt. rd.
Lower floating panel
Framing and flaot layout
8-24

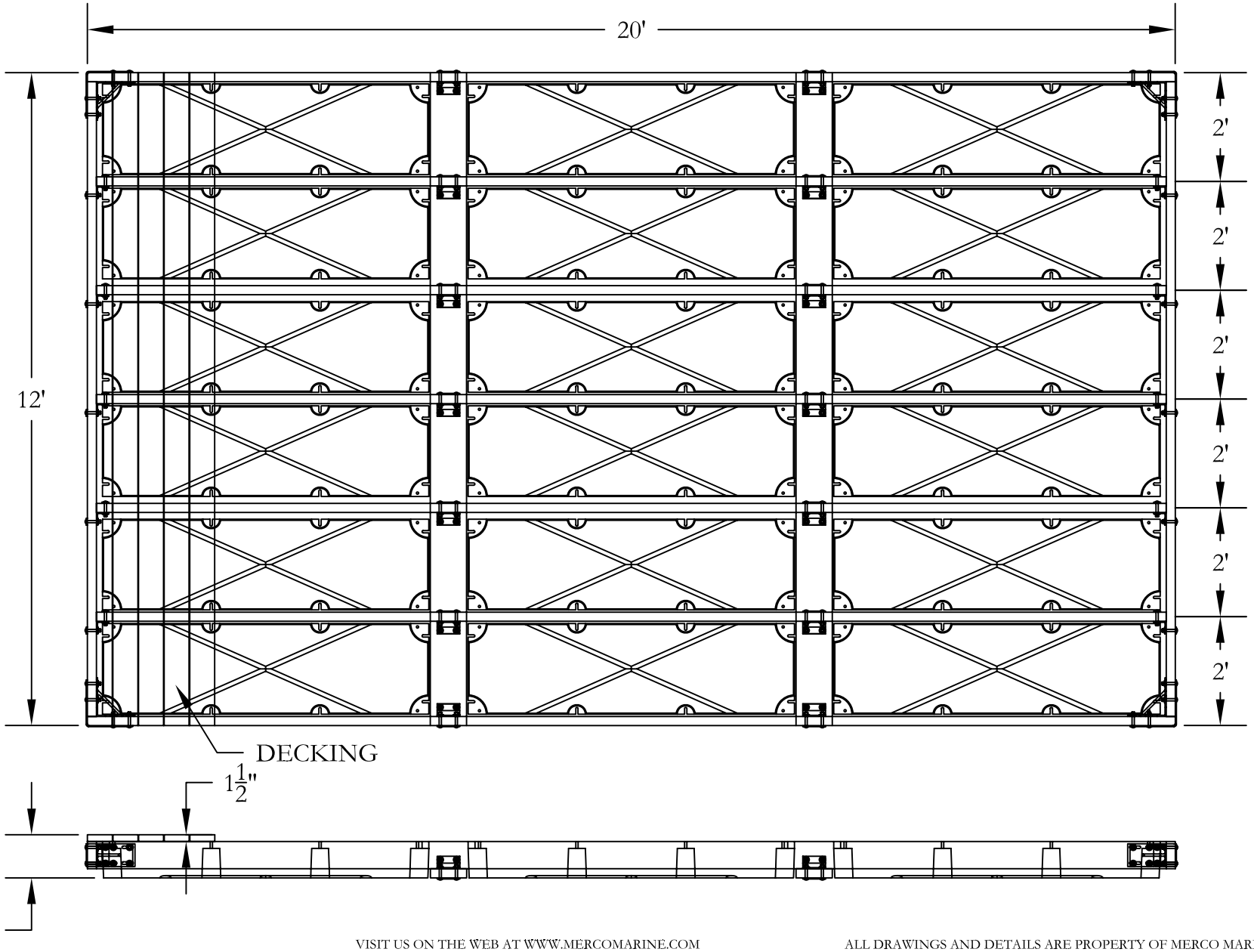
L-1





MERCO MARINE
60 MERCO ROAD
WELLSBURG, WV 26070
PHONE: (800)396-3726
FAX: (304)737-3008

TITLE:	SCALE:
8' x 20' ROWING DOCK	N.T.S.
	DRAWN BY: DAN OTTO
DATE: 1/17/2011 1:03 PM	APRVD BY: J. MERIWETHER



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TITLE:	ROWING DOCK
SCALE:	3/8" = 1'-0"
DRAWN BY:	D. OTTO
DATE:	10/21/2010 4:40 PM
APRVD BY:	J. MERIWETHER