

# WATER EMERGENCY TRANSPORTATION AUTHORITY



## WETA

# ALAMEDA HARBOR BAY TERMINAL ALAMEDA, CA

**OWNER**  
WATER EMERGENCY TRANSIT AUTHORITY  
PIER 9 SUITE 111  
THE EMBARCADERO  
SAN FRANCISCO, CA 94111

**CONTRACTOR**  
MANSON CONSTRUCTION COMPANY  
200 CUTTING BLVD.  
RICHMOND, CA 94804  
P: (510) 232-6319

**STRUCTURAL ENGINEER - MARINE**  
LIFTECH CONSULTANTS INC.  
344 - 20TH STREET, SUITE 360  
OAKLAND, CA 94612-3593  
P: (510) 832-5606  
EMAIL: LIFTECH@LIFTECH.NET

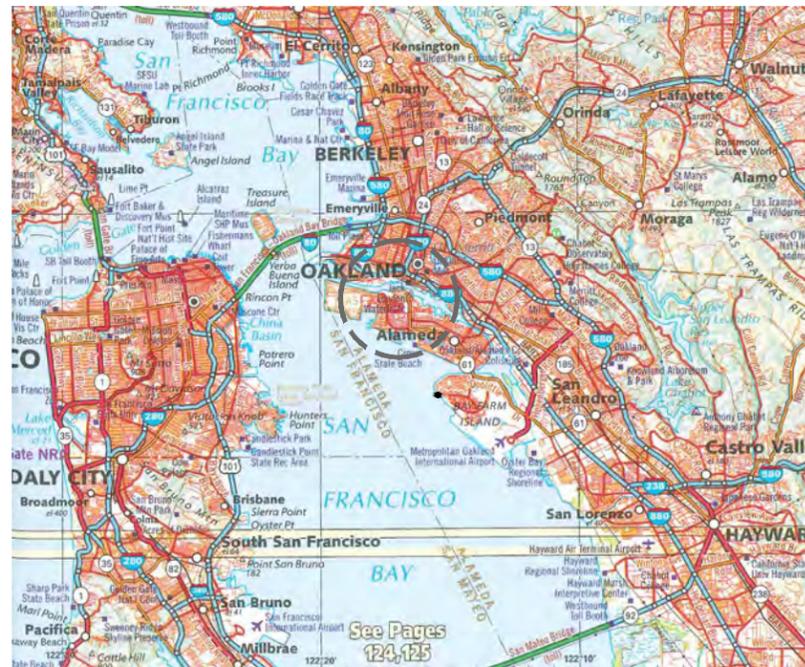
**STRUCTURAL ENGINEER - RAMPS**  
KPFF CONSULTING ENGINEER  
111 S.W. FIFTH AVENUE, SUITE 2500  
PORTLAND, OR 97204  
P: (503) 227-3251

**MECHANICAL, ELECTRICAL, AND PLUMBING**  
EDESIGNC, INC  
582 MARKET STREET, #400  
SAN FRANCISCO, CA 94104  
P: (415) 963-4303

**ARCHITECTURE AND ADA OVERSIGHT**  
FMG ARCHITECTS  
330 15TH STREET  
OAKLAND, CA 94612  
P: (510) 465-8700

**GEOTECHNICAL ENGINEER**  
LANGAN TREADWELL ROLLO  
501 14TH STREET, 3RD FLOOR  
OAKLAND, CA 94612  
P: (510) 874-7000

**CORROSION ENGINEER**  
V&A CONSULTING ENGINEERS, INC  
155 GRAND AVENUE, SUITE 700  
OAKLAND, CA 94612  
P: (510) 903-6600



VICINITY MAP



PROJECT LOCATION

### DRAWING INDEX

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|----------------------|---------------------------------------------------|
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|                                     |                                 |
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| A   | 06/09/14 | 90% SUBMITTAL                 | AH | LMO  | CAM  |
| B   | 07/18/14 | 90% RESUBMITTAL               | AH | LMO  | CAM  |
| C   | 08/01/14 | 100% SUBMITTAL/<br>PERMIT SET | AH | LMO  | CAM  |



| DESIGNED BY: | PROJECT                                    | DATE     |
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| CAM          | ALAMEDA HARBOR BAY<br>TERMINAL ALAMEDA, CA | ----     |
| DRAWN BY:    | SHEET                                      | SHEET OF |
| AH           | TITLE SHEET AND DRAWING INDEX              | G0.1 #   |
| CHECKED BY:  | DRAWING NO.                                | JOB NO.  |
| LMO          | G0.1                                       | 2045     |

**DESIGN CRITERIA – HARBOR BAY FERRY TERMINAL**

**SPECIFICATIONS**

These drawings and the project specifications, and the following:

|      |                                                                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AA   | Aluminum Association, <i>Aluminum Design Manual</i> , 2010                                                                                                                                        |
| ABS  | American Bureau of Shipping and Affiliated Companies, <i>Rules for Building and Classing Steel Vessels</i> , 2011.                                                                                |
| ABSW | American Bureau of Shipping and Affiliated Companies, <i>Guide for NonDestructive Inspection of Hull Welds 2002</i> , Updated 2010.                                                               |
| ACI  | American Concrete Institute, Building Code Requirements for Structural Concrete (ACI 318-11) and Commentary (ACI 318R-11)                                                                         |
| ADA  | American Disability Act, 2010 Standard and Specifications                                                                                                                                         |
| ASCE | American Society of Civil Engineers, ASCE/SEI Standard 7-10, <i>Minimum Design Loads for Buildings and Other Structures</i> . Reston, VA: American Society of Civil Engineers, 2010.              |
| AWS  | American Welding Society, AWS D1.1/D1.1M:2010, Structural Welding Code – Steel, 22nd Edition. Miami, FL: American Welding Society, 2010.                                                          |
| AISC | American Institute of Steel Construction, Inc., <i>Specification for Structural Steel Buildings</i> . Chicago, IL: American Institute of Steel Construction, Inc., 2005.                          |
| CBC  | International Code Council and the California Building Standards Commission, <i>2013 California Building Code, California Code of Regulations</i> , Title 24, Part 2, Volume 1 and 2. CBRC, 2013. |

**PROJECT REFERENCES**

- San Francisco Bay Area Water Emergency Transportation Authority Alameda Harbor Bay Ferry Terminal Refurbishment, Volume 3, Technical Specifications, November 15, 2013.

**REFERENCES (INFORMATION ONLY – NOT CRITERIA)**

|       |                                                                                                                                                                           |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PIANC | Working Group 33 of the Maritime Navigation Commission, Guidelines for the Design of Fender Systems: 2002. Brussels, Belgium: International Navigation Association, 2002. |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**VESSEL DATA**

| Parameter                          | Design Vessel Characteristics | Vessel 1                        | Vessel 2                       | Vessel 3                       |
|------------------------------------|-------------------------------|---------------------------------|--------------------------------|--------------------------------|
| Vessel                             |                               | WETA & Bay Link                 | Peralta & Encinal              | Bay Breeze                     |
| Length Overall, L                  | 80-140'                       | 118'                            | 115'-3"                        | 97'-11"                        |
| Beam                               | *                             | 28'-8"                          | 32'-9"                         | 29'-3"                         |
| Maximum Displacement               | 406 kips                      | 260 kips                        | *                              | *                              |
| Draft                              | *                             | Hull 4'-6"<br>Prop 5'-0"        | *                              | *                              |
| Fender Strike Location Above Water | 10"-108"                      | Loaded 7'-4"<br>Unloaded 7'-10" | Loaded 3'-7"<br>Unloaded 4'-7" | Loaded 6'-9"<br>Unloaded 7'-6" |
| Maximum Hull Pressure              | *                             | 5.5 psi (800 psf)               | *                              | *                              |

Notes:  
\*Information not provided

**DESIGN LIFE**

25 Years

**BASIC LOADS AND DESIGN REQUIREMENTS**

**Load Definitions – See Individual Components for Details**

- D Dead Load – Weight of Fixed Structure and Components
- L Live Loads
  - LU Uniform Loads From People– 100 psf on ramps within guardrails
  - Uniform Lateral Load of 50 PLF horizontally on guardrails along with 100 plf applied vertically downward
  - LC Concentrated Loads – 400 lbs within guardrails
  - Concentrated Load of 200 lbs on any point/direction on guardrails
  - Concentrated loads not combined with uniform loads.
  - LB Vessel Berthing
  - LM Mooring Loads
- E Environment Loads Excluding Wind
  - Note: Environmental loads are for Pier 9 in San Francisco, and are conservative for Habor Bay Terminal in Alameda. Less severe loads were not investigated because the impact to the structure would be small.
  - EW Waves
  - EC Current - Negligible
- W Wind Loads per ASCE
  - $q_z G_f = 0.00256 K_z K_{zt} K_d V^2 I G_f$  (psf)
  - Basic wind speed, V 85 mph, 3-s gust, at 33 ft
  - Importance factor, I 1.15
  - Topographic factor,  $K_{zt}$  1.0
  - Exposure category D
  - Velocity pressure coef.,  $K_z$   $K_z = 2.01 (z/700)^{0.17}$
  - Structure height, z in feet
  - Gust effect factor,  $G_f$  1.0
  - Directionality factor,  $K_d$  0.85
- S Earthquake Loads

**Fenders**

Typical and Corner  
Minimum energy of 8.7 k-ft  
Reaction of 40.5 kips  
Maritime MDD 350 or approved equal

**D Dead Loads**

LB Vessel Berthing Design Condition  
Speed: 1.5 fps  
Incidence angle: 10 degrees  
Mass: Include added mass of water

**Ramp**

E Approximate accelerations at ramp deck:  
0.3 g Transverse to float  
0.25 g Longitudinal to float  
0.4 g Vertical

**S Does not control**

**W 20 psf on profile**

Maximum deflection shall not exceed  $L_{span}/360$

**LOAD COMBINATIONS – ALLOWABLE STRESS DESIGN**

The design is in accordance with the AISC Allowable Stress Design (ASD) design provisions which results in a design consistent with a design made in accordance with the AISC Load Resistance and Factored Design (LRFD) provisions. Refer to the AISC specification.

| Combination Name | D+L | D+L+W | D+L+S | D+L+E+W |
|------------------|-----|-------|-------|---------|
| D Dead           | 1.0 | 1.0   | 1.0   | 1.0     |
| L Live           | 1.0 | 1.0   | 1.0   | 1.0     |
| E Environmental  |     |       |       | 1.0     |
| W Wind           |     | 1.0   |       | 1.0     |
| S Earthquake     |     |       | 0.7   |         |

**SAFETY DESIGN REQUIREMENTS**

Safety equipment is shown on the drawings in accordance with the Owner's bid drawings. The Owner shall verify the adequacy of the safety design including, but not limited to, safety ladders, life rings, warning stripes, fire extinguishers, spill response and safety equipment, and navigation lights.

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| C   | 08/01/14 | 100% SUBMITTAL/<br>PERMIT SET | AH | LMO  | CAM  |



DESIGNED BY:  
CAM

DRAWN BY:  
LMO

CHECKED BY:  
LMO

PROJECT  
ALAMEDA HARBOR BAY  
TERMINAL ALAMEDA, CA

SHEET  
GENERAL NOTES - 1

DATE  
----

SHEET OF  
G1.1 #

DRAWING NO.  
G1.1

JOB NO.  
2045

**PROJECT NOTES**

Contractor: Manson Construction Company  
 Engineer: Liftech Consultants Inc.  
 Owner: Water Emergency Transportation Authority

**GENERAL NOTES**

**GENERAL**

The Project Specifications, which are a separate document, are an integral part of the construction documents. The Project Specifications take precedence over the General Notes. See structural drawings for other requirements. Structural drawings take precedence over all.

All work shall conform to all applicable codes and ordinances including OSHA.

Contractor shall visit the site and verify that all existing conditions, elevations, dimensions, and construction are consistent with these drawings and notify the Engineer and Owner of any discrepancies before proceeding with the work.

All codes and specifications are latest edition unless otherwise noted.

**SPECIAL INSPECTION**

Special inspection shall be provided in accordance with the requirements in IBC, Chapter 17, and shall include:

- Anchor grouting in concrete
- Field welding

The Owner will retain the Special Inspector for the above inspections. Inspection reports shall be submitted to the Engineer and Owner.

**STRUCTURAL OBSERVATION**

Contractor shall notify the Owner and Engineer at least one week prior to the following construction stages so that the Engineer may perform a visual observation of the structural system for general conformance to the approved construction documents:

- Installation of new components

**MEANS, METHODS, AND JOBSITE SAFETY**

At all times, the Contractor shall be solely and completely responsible for means, methods, sequences, and procedures of work, and conditions of the jobsite including safety of persons and property, and for all necessary independent engineering review of these conditions. The Engineer's jobsite review is not intended to include review of the adequacy of the Contractor's safety measures.

**TIMBER**

All members shall be Douglas Fir Larch, No. 1, Grading WCLIB, per NDS 2005.

**STRUCTURAL STEEL**

**Workmanship**

Work shall conform to the requirements of the ANSI/AISC 360 "Specification for Structural Steel Buildings", March 9, 2005, including current supplements and ANSI/AWS D1.1, "Structural Welding Code" including provisions applicable to cyclically loaded structures

**Material**

Structural steel shall conform to the following unless otherwise noted:

|                   |                                 |
|-------------------|---------------------------------|
| Plate and Bar     | ASTM A572 Grade 50              |
| Shapes            | ASTM A572 Grade 50 or ASTM A992 |
| Pipes             | ASTM A53                        |
| Rectangular HSS   | ASTM A500 Grade B               |
| Angles & Channels | ASTM A572 Grade 50              |

|               |                                                                                               |
|---------------|-----------------------------------------------------------------------------------------------|
| Bolts         | ASTM A325 Type 3                                                                              |
| Nuts          | Heavy hex style grade DH3 or C3. Use ASTM F 436 flat head washer for bolts and threaded rods. |
| Anchor Bolts  | ASTM F1554 Grade 36                                                                           |
| Safety Chains | See Topper drawings                                                                           |

**Edges**

Steel plate edges shall be rounded to 1/4 inch, unless otherwise noted. Break all sharp edges.

**Galvanizing & Coatings**

See Coatings specification section 09810.

**Non-skid Coating**

Non-Skid steel coating shall be as noted in the Coatings specification section 09810.

**WELDING**

Welders and welding operators shall have current AWS certificates for the materials and processes being used. The Contractor shall maintain current files of these certificates and shall provide them to the Owner upon request.

Weld procedures shall be qualified in accordance with AWS D1.1 or be acceptable in accordance with ABS. The Contractor shall maintain current files of weld procedure specifications and test results. The Contractor shall review planned weld procedures, weld test results, or both, and verify they are acceptable prior to welding.

Electrodes shall be in accordance with Table 3.1 of AWS D1.1 except E60xx rods shall not be used.

Unless otherwise noted on the drawings, fillet welds that occur on opposite sides of a common plane shall be interrupted at the corner common to both welds. See Figure 1.

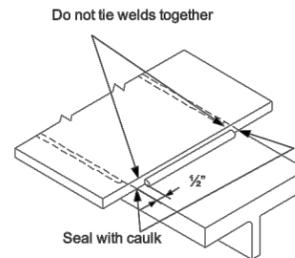


Figure 1 Fillet Welds on Opposite Sides of a Common Plane

All welded joints exposed to weather shall be seal welded except fillet welds occurring on opposite sides of a common plane as shown in Figure 1. Those joints shall be sealed with caulking unless otherwise noted.

Weld preheat and interpass temperatures shall comply with Table 4.4 of AWS D1.1.

The removal of weld or base metal shall be done in accordance with AWS D1.1, Section 5.

**Weld Inspection**

All welds shall be visually inspected (VT). Additional nondestructive testing (NDT) shall be performed as indicated on the drawings. The Owner may perform NDT other than visual even though this inspection is not indicated on the drawings. It shall be the Contractor's responsibility to ensure that all welds meet the acceptance requirements of AWS D1.1, Section 6, "Inspection" or ABS.

Weld inspectors performing non-visual NDT shall be certified in accordance with the current edition of the American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A. Inspectors shall be an NDT Level II inspector, or an NDT Level I inspector working under the supervision of an NDT Level II inspector.

The Contractor shall allow unrestricted access for inspection by the Owner or his representative.

**Bolts**

All bolted steel to steel connections shall have high strength bolting conforming to ASTM A325 SC unless otherwise noted and shall be tightened by using "turn-of-the-nut" method.

**Drain Holes**

Drain holes, 0.75" diameter or larger, shall be provided at all water traps.

**Bent Plates**

Bent plates shall have bend lines perpendicular to the direction of rolling. The plate temperature shall be at least 70° F at the time of bending. No sharp indentations, dents, or cracks will be allowed. The plate may be inspected by UT Methods.

**REINFORCED CONCRETE**

**Workmanship**

Concrete work shall conform to "Standard Specifications for Structural Concrete for Buildings," ACI 301-05 and "Building Code Requirements for Structural Concrete (ACI 318-08) and Commentary."

**Material**

Reinforced concrete shall conform to the following unless otherwise noted:

|                             |                                |
|-----------------------------|--------------------------------|
| Reinforcing steel           | ASTM A615 or A706, Grade 60    |
| Wire for Spiral Reinforcing | ASTM A82                       |
| Concrete                    | Minimum F'c = 4 ksi at 28 days |

Concrete cover exposed to earth = 3 inch.

Construction joints other than those shown on the drawings may be provided by the contractor subject to written approval by the Engineer.

Exposed corners shall be chamfered 3/4 inch unless noted otherwise.

**Grout**

Grouts shall be as follow or approved equals:

|                       |             |
|-----------------------|-------------|
| Embedded anchor bolts | Hilti RE500 |
|-----------------------|-------------|

Installation shall be in accordance with the manufacturer's recommendations.

**OSHA Requirements**

All work under this contract shall conform to OSHA requirements.

**STRUCTURAL ALUMINUM**

See Topper drawings.

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SEAL/SIGNATURE  
 DESIGNED BY: CAM  
 DRAWN BY: AH  
 CHECKED BY: LMO

PROJECT  
 SHEET

ALAMEDA HARBOR BAY  
 TERMINAL ALAMEDA, CA  
 GENERAL NOTES - 2

|             |        |
|-------------|--------|
| DATE        | ----   |
| SHEET OF    | G1.2 # |
| DRAWING NO. | G1.2   |
| JOB NO.     | 2045   |

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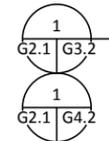
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SAN FRANCISCO BAY

APPROXIMATE SHORE LINE  
(E) RIP-RAP

PIER EXISTING CONDITION AND DEMOLITION PLANS

PIER MODIFICATION PLAN AND ELEVATIONS



80'-6" ± GANGWAY

(E) 5'-8" WIDE GANGWAY

1  
G2.1 | G3.3  
FLOAT EXISTING CONDITION AND DEMOLITION PLANS  
1  
G2.1 | G4.3  
FLOAT MODIFICATION PLANS AND ELEVATIONS

1  
G2.1 | G3.1  
LANDSIDE EXISTING CONDITION AND DEMOLITION PLANS  
1  
G2.1 | G4.1  
LANDSIDE MODIFICATION PLANS

2'-6" TRANSITION PLATE

100'-0" ±

30'-0" ±

(E) PARKING

**SITE PLAN**  
1/16" = 1'-0"

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**MANSON**  
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200 Cutting Blvd., Richmond, CA 94804, (510)232-6319

CONSULTANT  
**Liftech**  
LIFTECH CONSULTANTS INC.  
344-20th Street, Suite 360,  
Oakland, CA 94610 (510)832-5606 PH 2045

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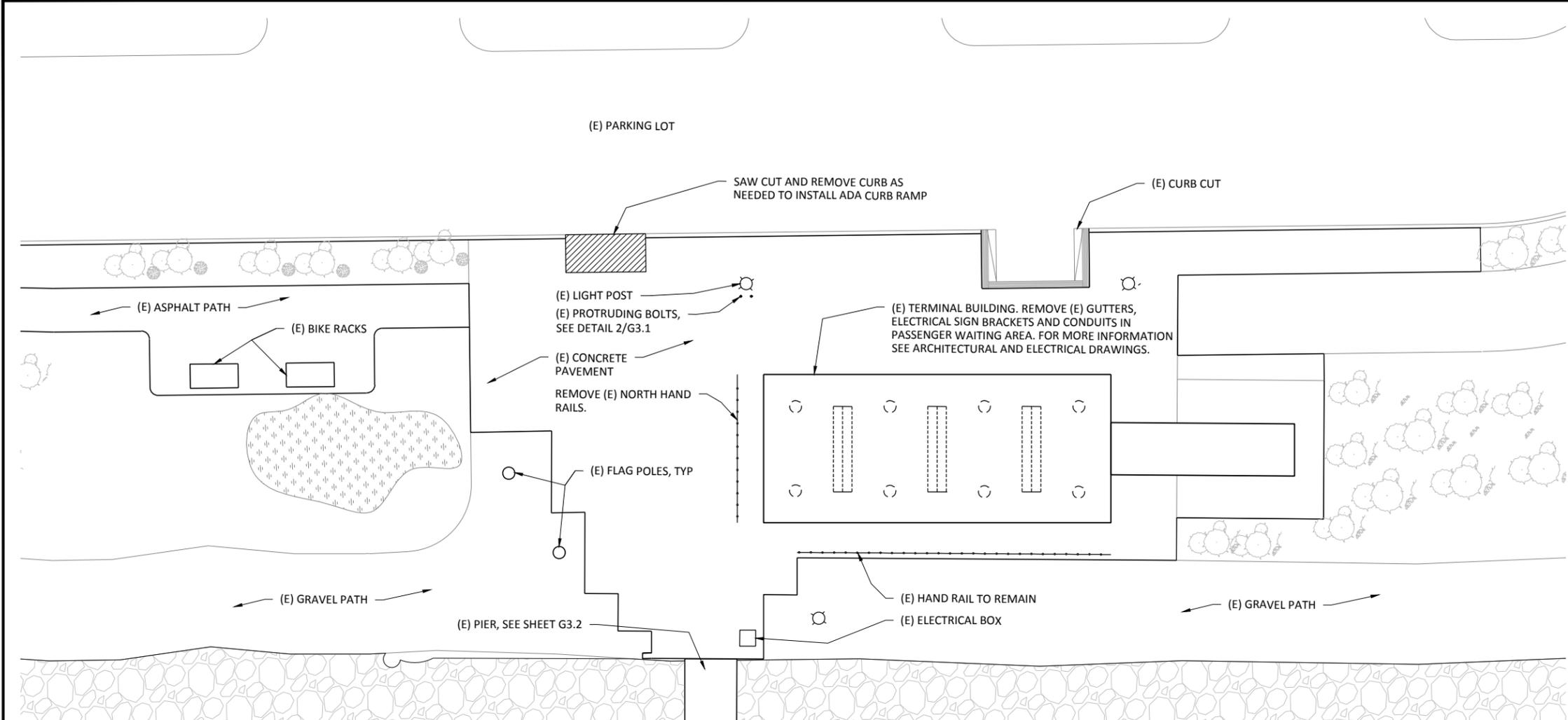
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PROJECT  
ALAMEDA HARBOR BAY  
TERMINAL ALAMEDA, CA  
SHEET  
SITE PLAN

DATE  
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SHEET OF  
G2.1 #  
DRAWING NO.  
G2.1  
JOB NO.  
2045

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\\moa2045\2045\Drawings\Current\Harbor Bay\G2.1 SITE PLAN.dwg 8/4/2014 12:05 PM ALVIN HOFFPAUR



NOTE:  
FOR MODIFICATIONS SEE SHEET G4.1.

**LANDSIDE EXISTING CONDITION AND DEMOLITION PLAN**

1/8" = 1'-0"



(E) PROTRUDING BOLTS.  
CUT FLUSH WITH CONCRETE.

**DETAIL AT PROTRUDING BOLTS**

NOT TO SCALE



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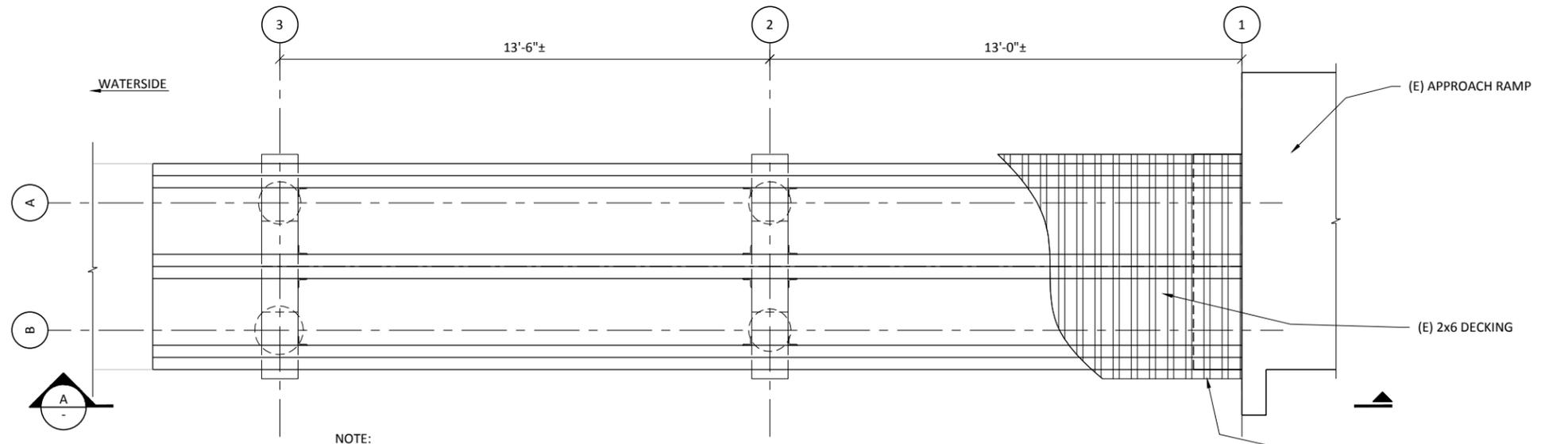
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|---------|--------------------------------------------------|
| PROJECT | ALAMEDA HARBOR BAY<br>TERMINAL ALAMEDA, CA       |
| SHEET   | LANDSIDE EXISTING CONDITION AND DEMOLITION PLANS |

|             |           |
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| DATE        | ----      |
| SHEET       | G3.1 OF # |
| DRAWING NO. | G3.1      |
| JOB NO.     | 2045      |

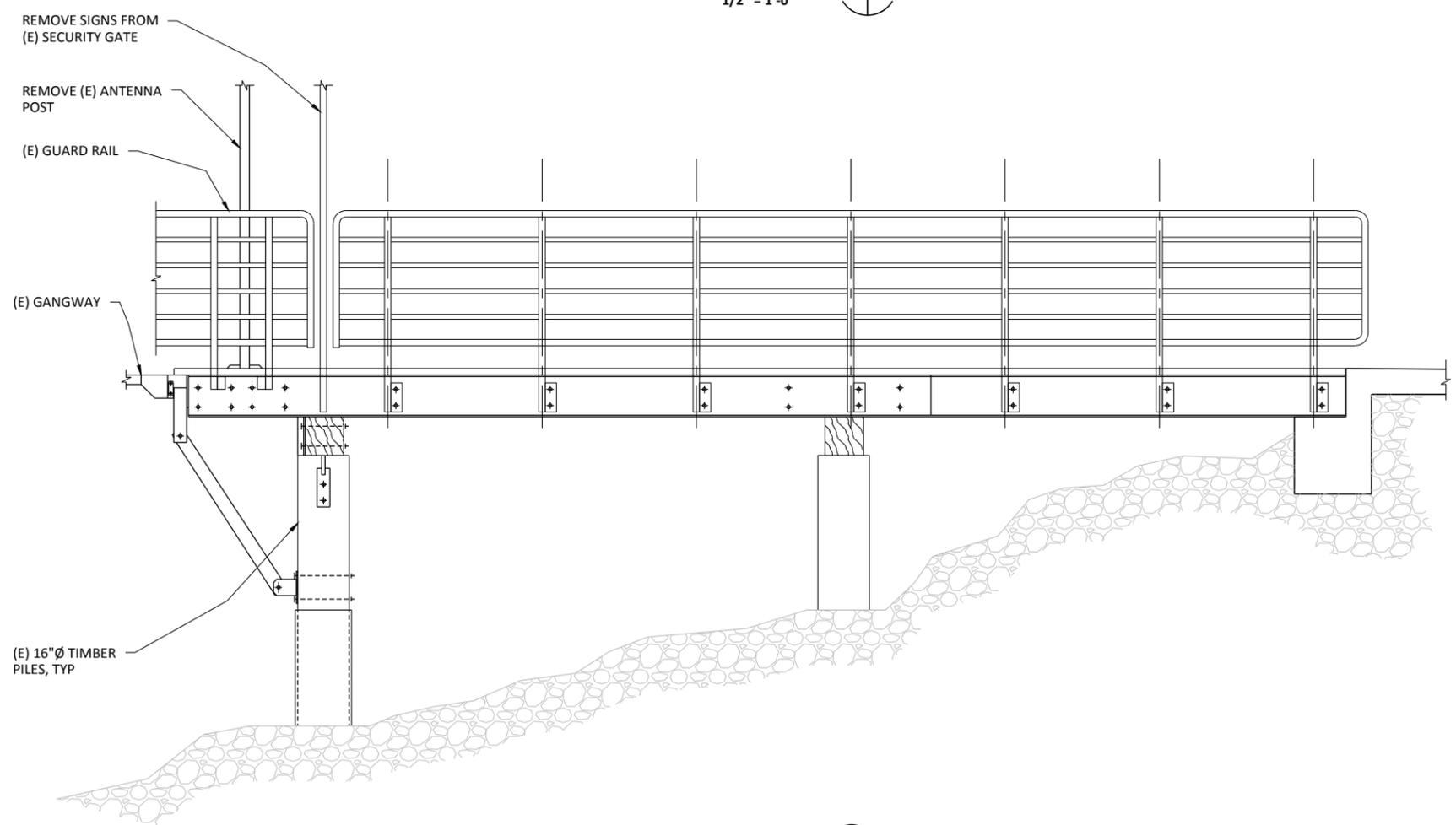
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NOTE:  
GUARD RAILS NOTE SHOWN FOR CLARITY.

**PIER PLAN**  
1/2" = 1'-0" 1  
G2.1 G3.2



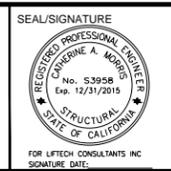
**SECTION**  
1/2" = 1'-0" A

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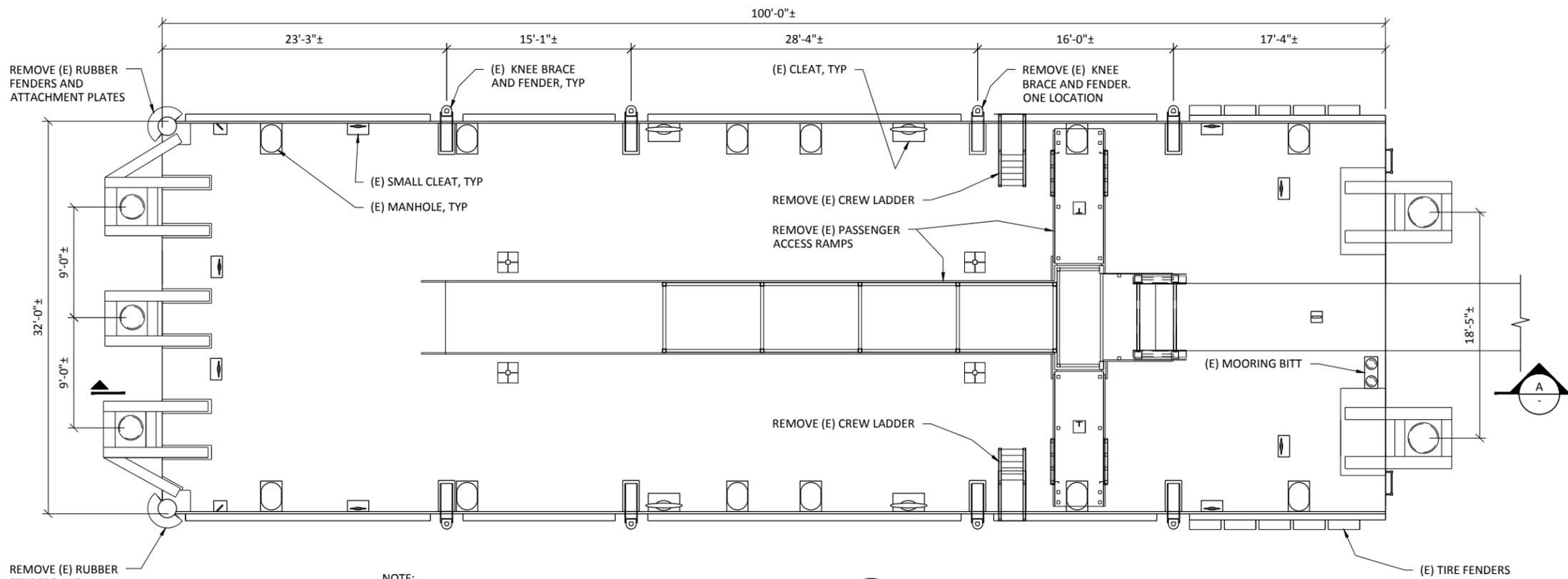


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|---------|----------------------------------------------|
| PROJECT | ALAMEDA HARBOR BAY<br>TERMINAL ALAMEDA, CA   |
| SHEET   | PIER EXISTING CONDITION AND DEMOLITION PLANS |

|             |           |
|-------------|-----------|
| DATE        | ----      |
| SHEET       | G3.2 OF # |
| DRAWING NO. | G3.2      |
| JOB NO.     | 2045      |

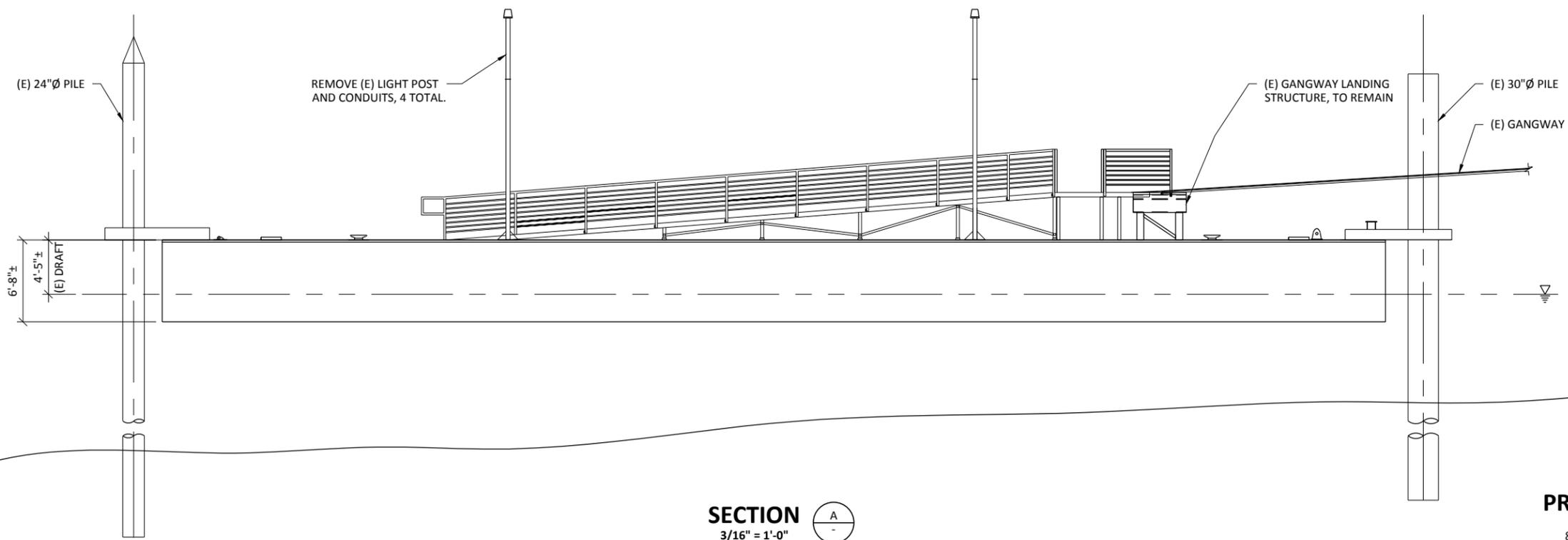
\\moa2045\2045\dwg\Current\Harbor Bay\G3.2 PIER EXISTING CONDITION AND DEMOLITION PLANS.dwg 8/4/2014 12:05 PM ALVIN HOFFPAUR



REMOVE (E) RUBBER FENDERS AND ATTACHMENT PLATES

NOTE:  
 1. FOR MODIFICATIONS SEE SHEET G4.3.  
 2. DIMENSIONS SHOWN FOR REFERENCE, FIELD VERIFY DIMENSIONS CRITICAL FOR CONSTRUCTION.

**FLOAT PLAN** 1  
 3/16" = 1'-0" G2.1 | G3.3



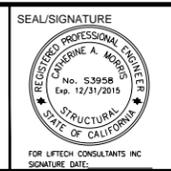
**SECTION** A  
 3/16" = 1'-0"

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| NO.       | DATE     | DESCRIPTION                   | BY | CHKD | APPR |
| A         | 06/09/14 | 90% SUBMITTAL                 | AH | LMO  | CAM  |
| B         | 07/18/14 | 90% RESUBMITTAL               | AH | LMO  | CAM  |
| C         | 08/01/14 | 100% SUBMITTAL/<br>PERMIT SET | AH | LMO  | CAM  |



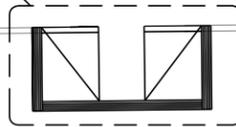
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| DESIGNED BY: | CAM |
| DRAWN BY:    | AH  |
| CHECKED BY:  | LMO |

|         |                                               |
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| PROJECT | ALAMEDA HARBOR BAY<br>TERMINAL ALAMEDA, CA    |
| SHEET   | FLOAT EXISTING CONDITION AND DEMOLITION PLANS |

|             |           |
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| DATE        | ----      |
| SHEET       | G3.3 OF # |
| DRAWING NO. | G3.3      |
| JOB NO.     | 2045      |

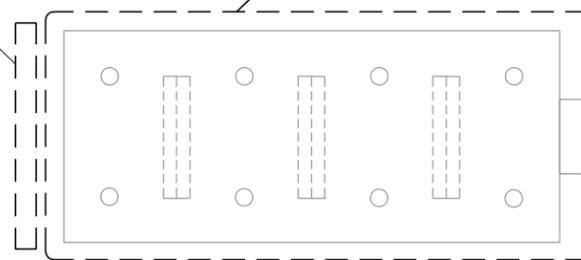
\\moa2045\2045\dwg\Current\Harbor Bay\G3.3 FLOAT EXISTING CONDITION AND DEMOLITION PLANS.dwg 8/4/2014 12:06 PM ALVIN HOFFPAUIR

MODIFICATION FOR ADA CURB 2  
G4.1 | S1.4



1  
G4.1 | A1.1 FOR TERMINAL BUILDING MODIFICATIONS. FOR ELECTRICAL MODIFICATION SEE ELECTRICAL DRAWINGS

FILL REMOVED HANDRAIL SOCKETS W/ CONCRETE FLUSH WITH (E) CONCRETE.



REPAINT (E) ELECTRICAL BOX

1  
G4.1 | S1.4

**LANDSIDE MODIFICATION PLAN**

1/8" = 1'-0"

1  
G2.1 | G4.1



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AH

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PROJECT

ALAMEDA HARBOR BAY  
TERMINAL ALAMEDA, CA

SHEET

LANDSIDE MODIFICATION PLANS

DATE

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SHEET

OF

G4.1 #

DRAWING NO.

G4.1

JOB NO.

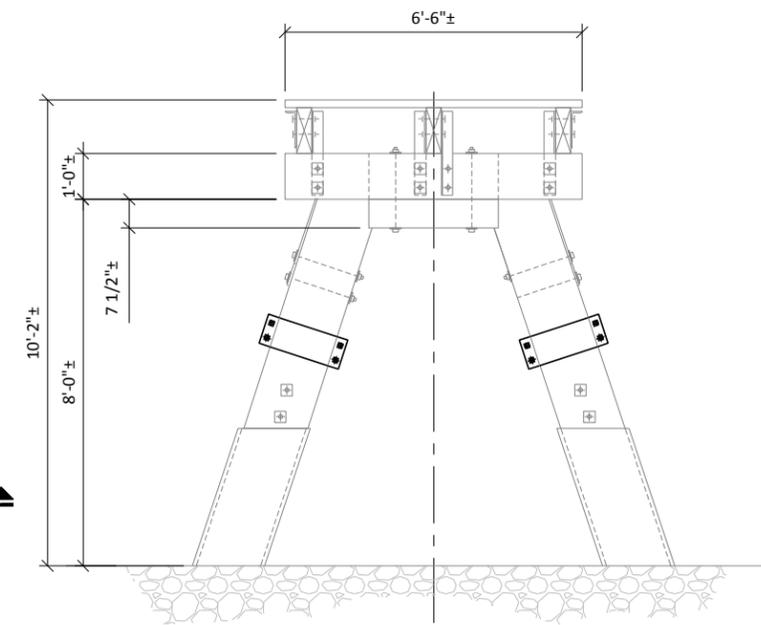
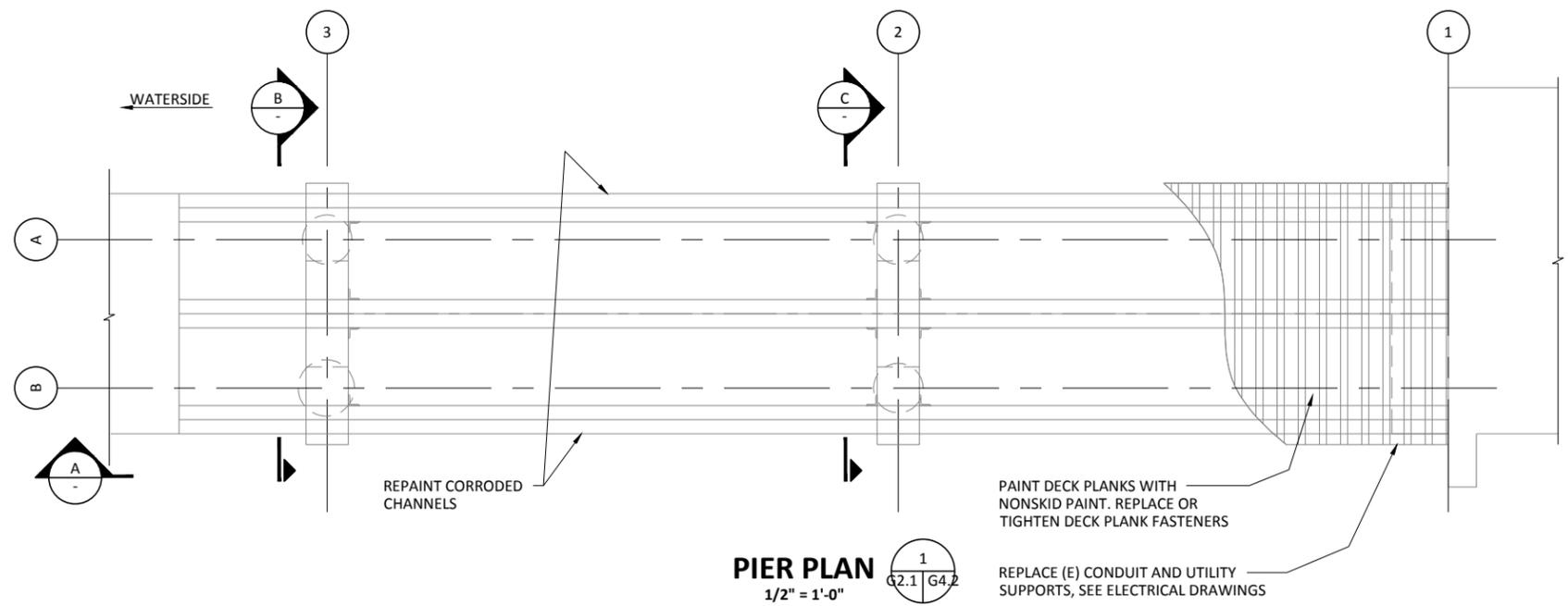
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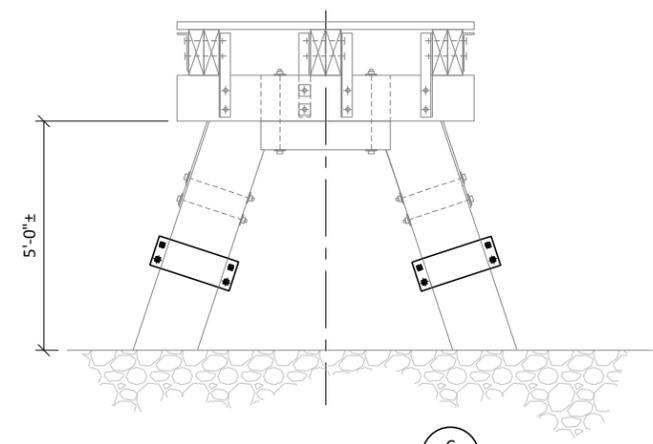
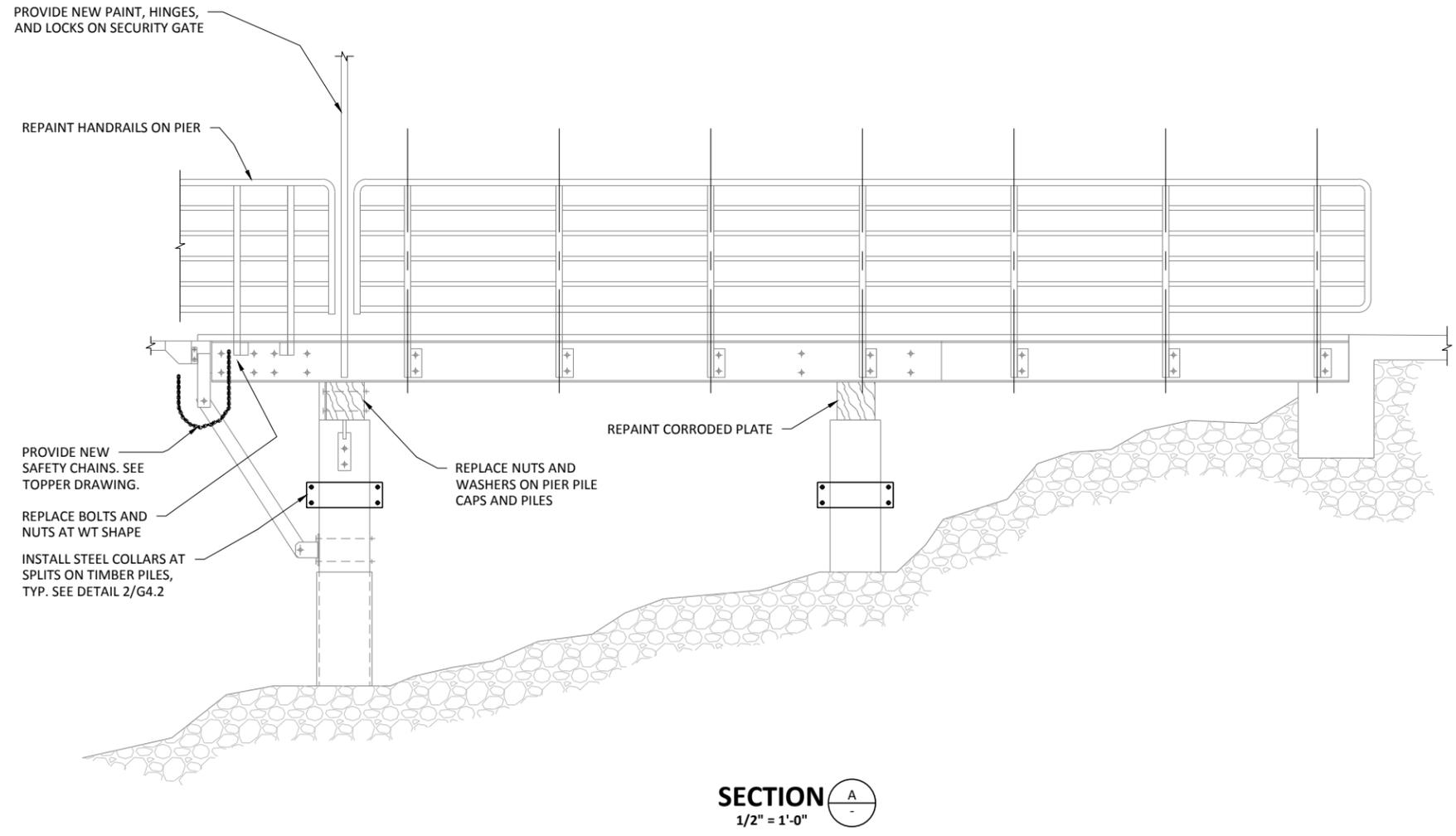
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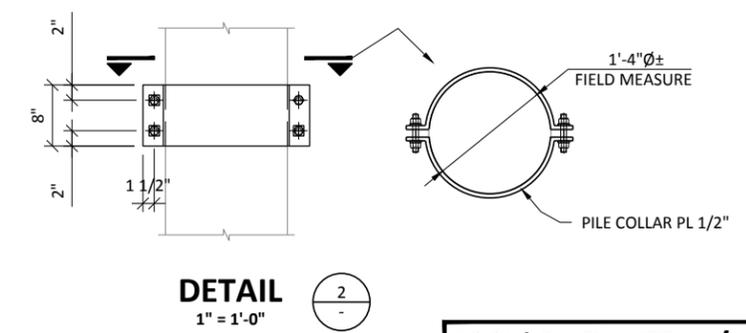
\\moa2045\2045\dwg\Current\Harbor Bay\G4.1.LANDSIDE MODIFICATION PLANS.dwg 8/4/2014 12:06 PM ALVIN HOFFPAUIR



NOTE:  
IF CRACK OR SPLIT EXTENDS MORE THAN 6' DOWN FROM CAP, ADD SECOND COLLAR.



NOTE:  
FOR INFORMATION NOT SHOWN SEE SECTION B/G4.2

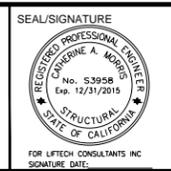


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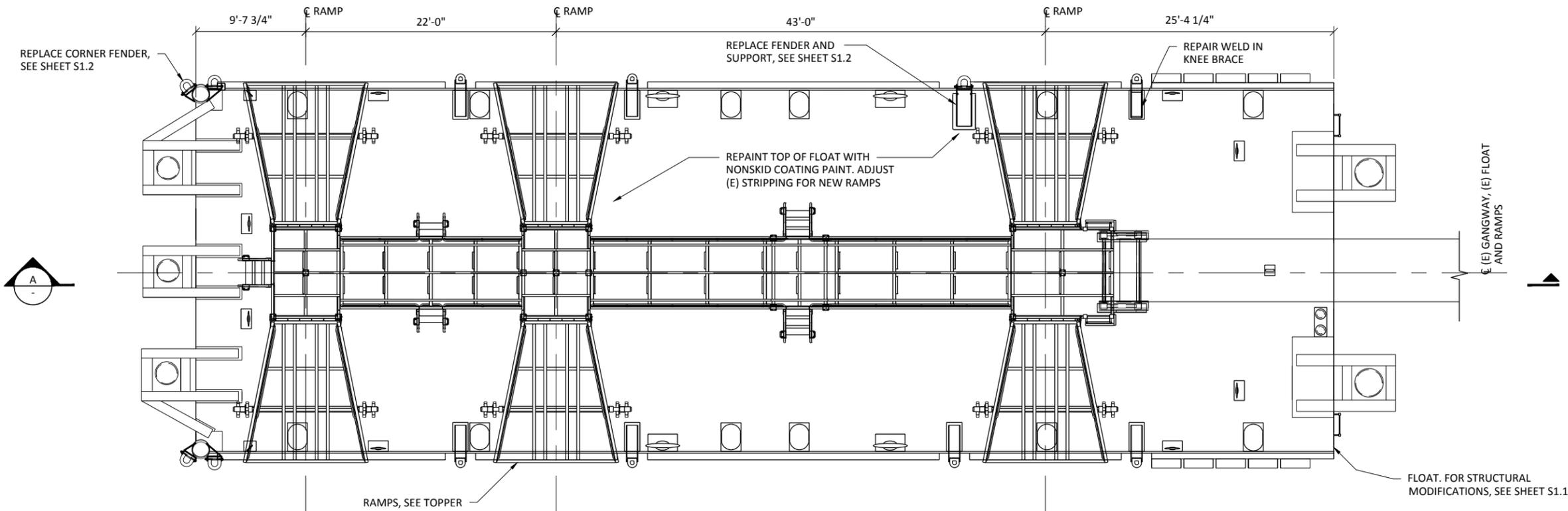


DESIGNED BY: CAM  
DRAWN BY: AH  
CHECKED BY: LMO

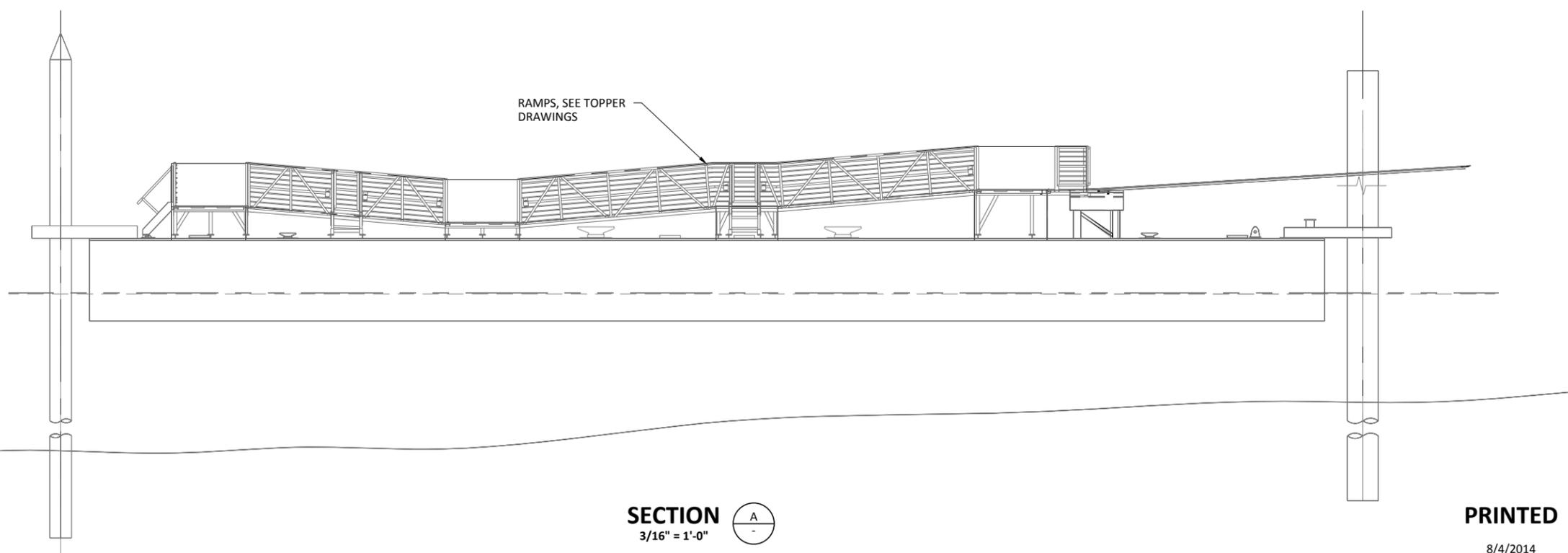
PROJECT: ALAMEDA HARBOR BAY TERMINAL ALAMEDA, CA  
SHEET: PIER MODIFICATION PLAN AND ELEVATIONS

DATE: ----  
SHEET: G4.2 OF #  
DRAWING NO.: G4.2  
JOB NO.: 2045

\\moa2045\2045\Drawings\Current\Harbor Bay\G4.2 PIER MODIFICATION PLAN AND ELEVATIONS.dwg 8/4/2014 12:06 PM ALVIN HOFFPAUR



**FLOAT PLAN** 1  
3/16" = 1'-0" G2.1 G4.3



**SECTION** A  
3/16" = 1'-0"

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CORPORATE A. MADROS  
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STATE OF CALIFORNIA  
FOR LIFTECH CONSULTANTS INC  
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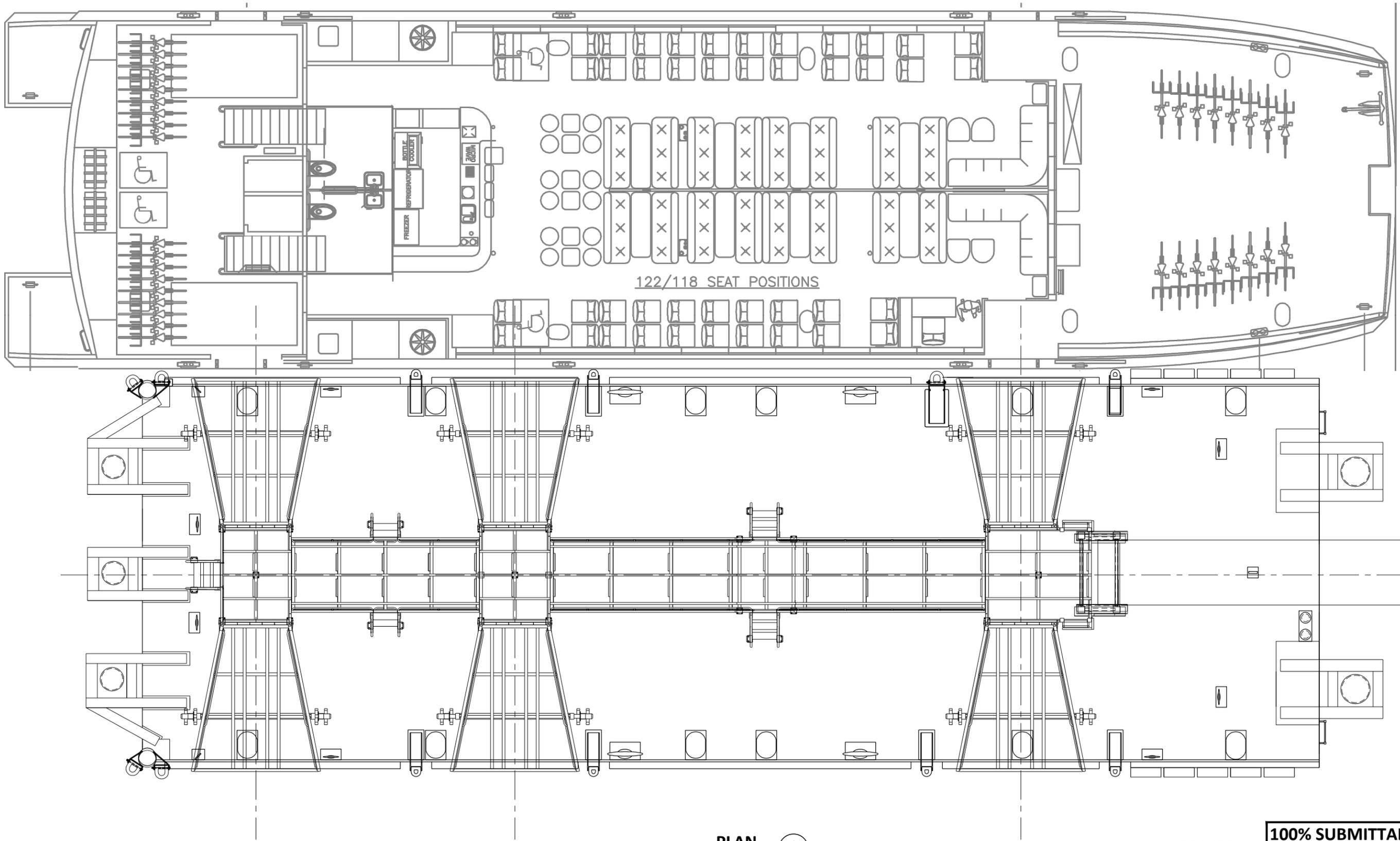
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DESIGNED BY: CAM  
DRAWN BY: AH  
CHECKED BY: LMO

PROJECT  
**ALAMEDA HARBOR BAY  
TERMINAL ALAMEDA, CA**  
SHEET  
**FLOAT MODIFICATION PLANS AND ELEVATIONS**

|             |           |
|-------------|-----------|
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| SHEET       | G4.3 OF # |
| DRAWING NO. | G4.3      |
| JOB NO.     | 2045      |

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PLAN  
1/4" = 1'-0"



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| C   | 08/01/14 | 100% SUBMITTAL/<br>PERMIT SET | AH | LMO  | CAM  |



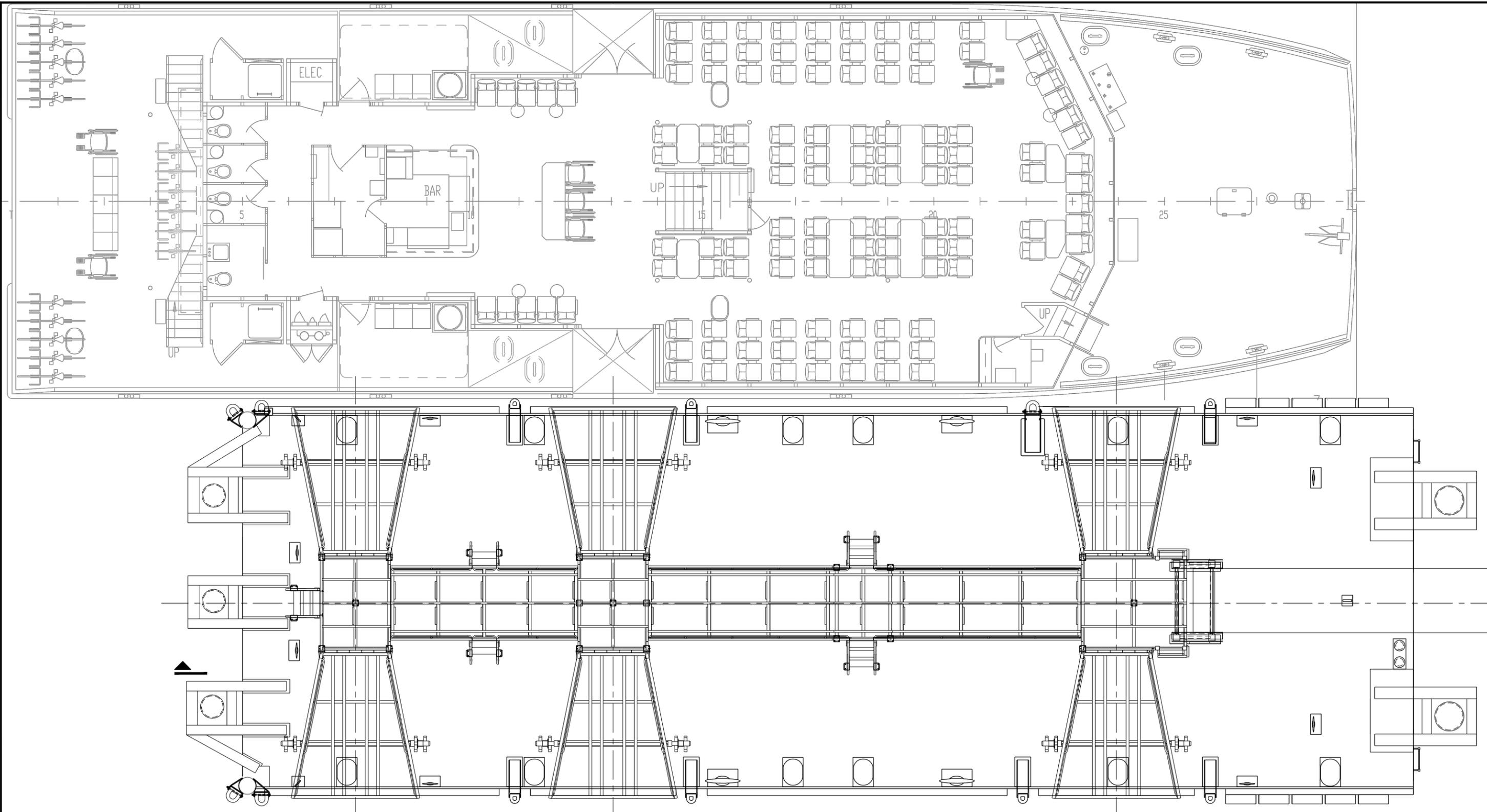
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CAM  
DRAWN BY:  
AH  
CHECKED BY:  
LMO

PROJECT  
**ALAMEDA HARBOR BAY  
TERMINAL ALAMEDA, CA**  
SHEET  
**FLOAT-VESSEL ARRANGEMENT WETA AND BAY LINK**

DATE  
----  
SHEET 5.1 OF #  
DRAWING NO.  
**G5.1**  
JOB NO.  
2045

\\mo2045\2045.Dwg;Current\Harbor Bay\G5.1 FLOAT-VESSEL ARRANGEMENT WETA AND BAY LINK.dwg 8/4/2014 12:07 PM ALVIN HOFFPAUIR



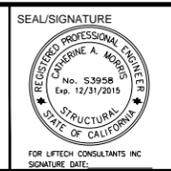
**PLAN**  
1/4" = 1'-0"



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| DESIGNED BY: | CAM |
| DRAWN BY:    | AH  |
| CHECKED BY:  | LMO |

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| SHEET   | FLOAT-VESSEL ARRANGEMENT PERALTA           |

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|             | G5.2 # |
| DRAWING NO. | G5.2   |
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