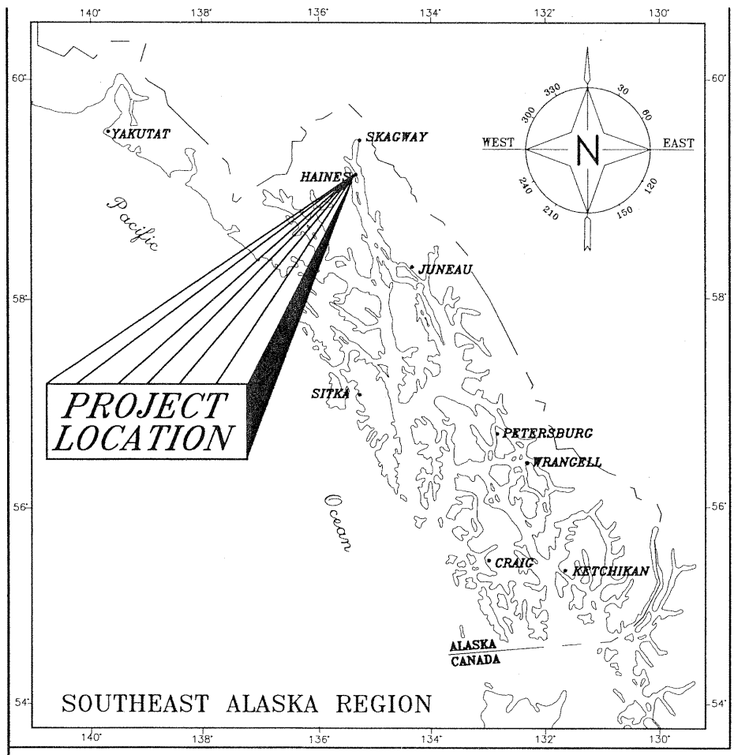


STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
SOUTHEAST REGION

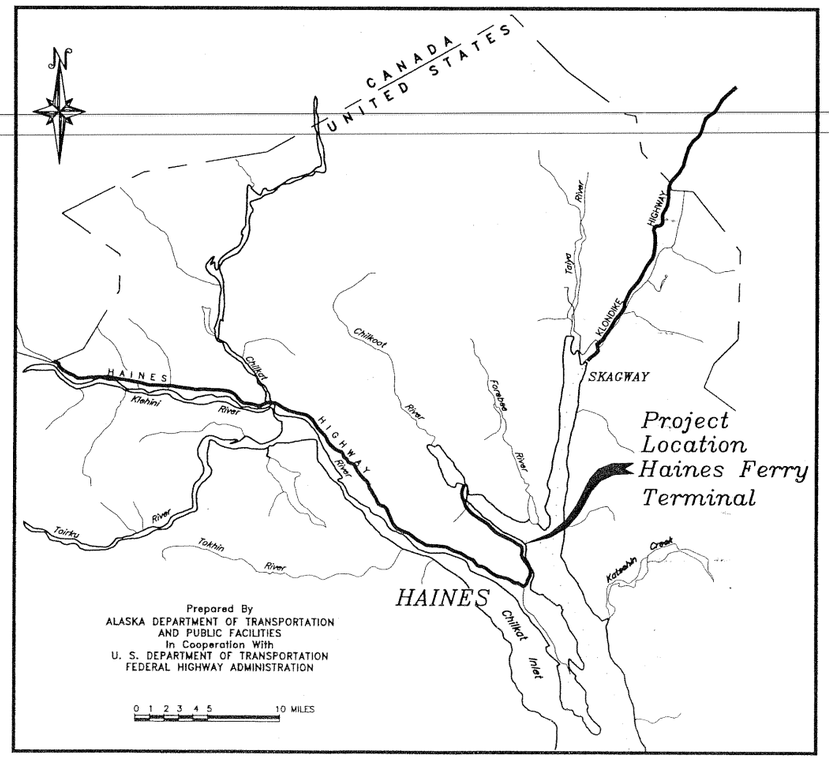
A PROJECT AT

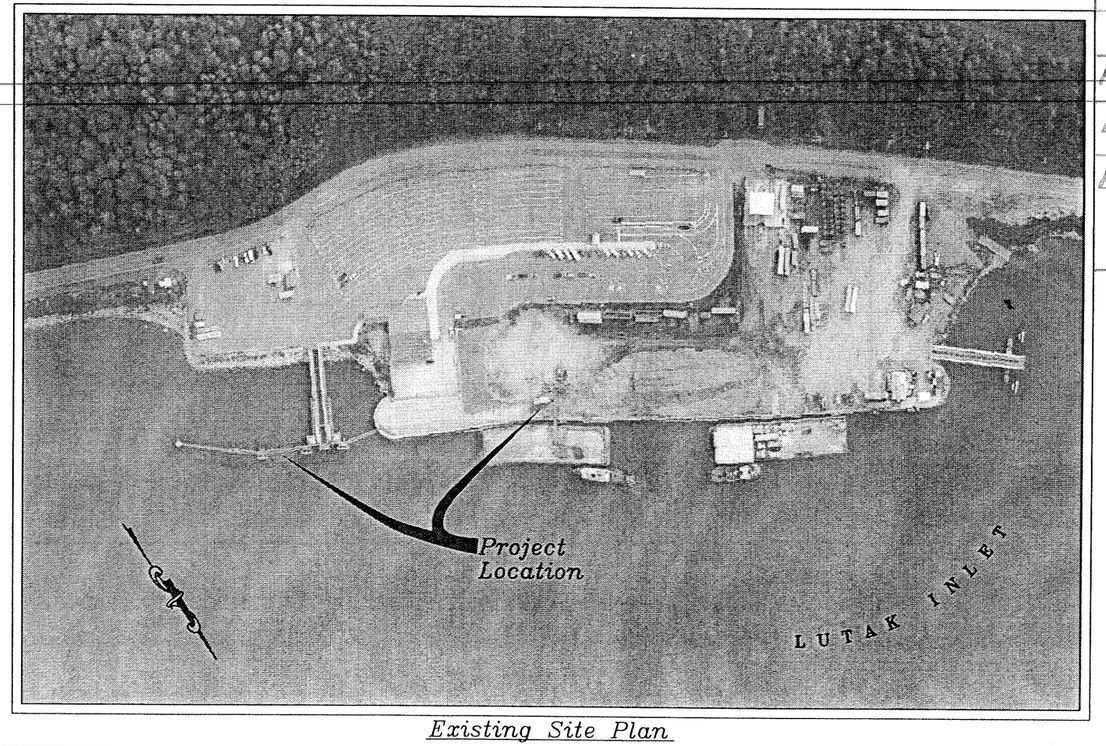
HAINES, ALASKA

HAINES MOORING IMPROVEMENTS

NH-095-5(6)
PROJECT NO. 75249

INDEX OF SHEETS





Existing Site Plan

As-Built Drawings
Contractor - Western Dock & Bridge
Project Engineer - Cliff Douglas
Date Began - May 25, 2008
Date Completed - June 5, 2009

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
SOUTHEAST REGION

APPROVED Jack D. Beedle Date 8/6/07
Regional Preconstruction Engineer
Jack D. Beedle, P.E.

APPROVED Malcolm A. Menzies Date 8/8/07
Director, S.E. Region
Malcolm A. Menzies, P.E., L.S.

CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

Date
Construction Project Manager

PROJECT NUMBER:
75249/NH-095-5(6)

DATE:
AUGUST, 2007

SHEET 1 OF 28

STATE OF ALASKA
49th
Timothy H. Doggett
CE-9027
REGISTERED PROFESSIONAL ENGINEER
8-7-07

D:\HWY\75249\Phase-R\Sht01-Proj-Title-Index.dwg SCALE : 1 = 1

GENERAL NOTES

Construction:

Per contract documents for project No. NH-095-5(6) / 75249

Design Basis:

Marine facilities design standards.
AISC Manual of Steel Construction LRFD, 3rd Ed

Design Loads:

Catwalk & Gangway loads:
LL – 65 psf uniform or
10 psf uniform + 500 lb concentrated moving load

Fender and mooring loads:
Vessel Berthing (side berth) – 80 kips
Vessel Mooring (side berth) – 50 kips horizontal

Materials:

ALL STEEL AND IRON PRODUCTS INCORPORATED INTO THIS WORK SHALL BE MANUFACTURED IN THE U.S., SEE SECTION 106-1.01 OF SPECIFICATIONS.

Steel Shapes & Plates:
Plates & misc shapes -- A36 or A572 Gr50, as noted
W-sections -- A992
Tube Sections -- A500 Gr. B
Pipe -- A53, Gr. B, type E or S
Stainless -- A276 Type 302, 304 or 316
Charpy Zone 2 impact requirements shall apply where noted on Plans.

Piling:
30" Dia.x1/2 Pipe Pile -- API 5L X42 PSL1
30" Dia.x3/4 Pipe Pile -- API 2B ASTM572/Gr50
All Other Pipe Pile -- ASTM A252 Gr 2
All piling straight seam
Open-end Cutting Shoe -- APF 0-14001 inside flange or approved equal. Shoes req'd on all piling

Pipe:
Mooring structure pipe – ASTM A252 Gr 2, ASTM A53 Gr B, type E or S

Grating:
Welded steel grating, bearing bar size & spacing per Plans

Fasteners:
Steel connections-
< 1 1/2"ø use A325 bolts or A449 studs
≥ 1 1/2"ø use A354 Gr BC bolts
Timber connections-
use A307
Stainless steel bolts, hex cap screws, and studs
ASTM F593, Alloy Group 2 (316, 316L), CW

Portland Cement Concrete:
Concrete Class A (see Specifications)

Reinforcement
A706 for welded rebar, A615 elsewhere

UHMW-PE Plastic:
Ultra high molecular wt polyethelyne -- ASTM D4020 blend of virgin resin & ground chips, see Specifications

Marine Fenders:
Refer to Specifications

Chain:
Welded stud chain, Grade 2

Sacrificial Anodes:
Aluminum alloy with flat bar core. Potential = -1100mV (ref Cu/CuSO4), actual electrochemical efficiency = 1100 amp-hr/lb

Protective Coatings:

Structural Steel of Dolphins, Fenders, Catwalks & Gangways:
Structures and weldments shall be hot-dip galvanized after fabrication.

Structural Steel of Dock Cap Shoring:
Members and weldments shall be bare steel.

Pipe piles:
30" dia. hot-dip galvanized after fabrication
24" dia. & 16" dia. bare steel

Chain, fasteners & hardware:
Hot-dip galvanized after fabrication

Priority Of Ferry Traffic

1. Once the Contractor begins improvements the following will remain in force until the project is completed.
   - A. The Contractor shall conduct his operations so as not to interfere with normal scheduled ferry access or vehicular traffic to and from the existing ferry facilities.
   - B. Ferry traffic shall have priority over construction activities. It shall be the Contractor's responsibility to coordinate his activities with ferry arrivals and departures.
   - C. Terminal personnel will stage traffic, and operate the transfer equipment.
   - D. Contractor shall provide safe access and lighting for terminal personnel to tie up points as required throughout the contract.
2. The Contractor shall not stockpile any materials in the existing staging area without approval of the State's Engineer.
3. The Contractor shall not occupy, tie-up to or in any way obstruct the use of the Lutak Dock in tracts A or C without written permission of the Haines Borough and a waiver of all claims against the State for any damage which may result. Furnish a copy of such permission & waiver of claims to the Engineer before entering these areas.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Chuck Douglas Date 5/26/09

ESTIMATE OF QUANTITIES

Item No.	Item	Unit	Qty
202(1a)	Removal of Structures and Obstructions (Mooring Structures)	Lump Sum	All Req'd
202(1b)	Removal of Structures and Obstructions (Catwalks)	Lump Sum	All Req'd
202(1c)	Removal of Structures and Obstructions (Dock Fender Module)	Lump Sum	All Req'd
504(1)	4-Pile Mooring Structure (W2, E3, & E4) Cap & Fender System	Each	3
504(2)	44-Ft Catwalk (W1 to W2)	Each	1
504(3)	32-Ft Catwalk (W2 to Dock)	Each	1
504(4)	Dock Cap Shoring (Cell 4)	Lump Sum	All Req'd
504(5)	Refastening Fender Timbers (W1, E1, & E2)	Lump Sum	All Req'd
505(10)	Dynamic Load Test	Each	1
505(12)	30" Dia. x 0.500" wall Pipe Piles, Furnished	Linear Foot	~~1,256~~ 1149
505(13)	30" Dia. Pipe Piles, Driven	Each	12
505(14)	24" Dia. x 0.500" wall Pipe Piles, Furnished	Linear Foot	~~320~~ 245
505(15)	24" Dia. Pipe Piles, Driven	Each	4
505(16)	16" Dia. x 0.500" wall Pipe Pile, Furnished	Linear Foot	~~166~~ 104
505(17)	16" Dia. Pipe Piles, Driven	Each	2
518(1)	Tension Pile Anchors (W2)	Each	4
		Lump Sum	All Req'd
640(1)	Mobilization & Demobilization	Lump Sum	All Req'd
640(4)	Worker Meals and Lodging, or Per Diem	Lump Sum	All Req'd
641(1)	Erosion and Pollution Control Administration	Lump Sum	All Req'd
641(2)	Temporary Erosion and Pollution Control	Cont. Sum	All Req'd
642(1)	Construction Surveying	Lump Sum	All Req'd
644(1)	Field Office	Lump Sum	All Req'd
644(6)	Vehicles	Lump Sum	All Req'd
662(1)	Electrical Lighting System	Lump Sum	All Req'd

PILE DRIVING DATA

Location	No. Es.	Designation (ø x wall)	Ultimate Resistance Uplift (kips)	Ultimate Resistance Bearing (kips)	Elevations Mudline	Elevations Cutoff	Tip Elevations Min.	Tip Elevations Est.	Max Driving Resistance (kips)	Total Est. Length 16ø	Total Est. Length 24ø	Total Est. Length 30ø
Structure W2: Note 4)			Note 2)	Note 2)	-12			-81	Note 1)			168
Grid A / Vertical	2	PP30x0.500	315	535	~~-10~~	+3.00	-79	~~-95~~	645			~~196~~
Grid B / Vertical	2	PP30x0.500	385	430	~~-10~~	+3.00	-79	~~-95~~	645			~~196~~
					-7			-79				164
Structure E3:					-22			-100				206
Grid A / Vertical	2	PP30x0.500	490	535	~~-25~~	+3.00	-88	~~-105~~	620			~~216~~
Grid B / Vertical	2	PP30x0.500	600	430	~~-25~~	+3.00	-91	~~-105~~	670			~~216~~
					-15			-95				196
Structure E4: Note 3)								-99				205
Grid A / Vertical	2	PP30x0.500	490	535	-25 ✓	+3.00	-88	~~-105~~	620			~~216~~
Grid B / Vertical	2	PP30x0.500	600	430	~~-25~~	+3.00	-91	~~-105~~	670			~~216~~
					-21			-102				210
Structure S1 & S2:					-26						133	
Grid A / Vertical	2	PP24x0.500	0	490	~~-20~~	+14.80	-65	~~-65~~ -52			~~160~~	
Grid B / Vertical	2	PP24x0.500	75	270	+12 ✓	+14.80	-50	~~-65~~ -41			112 ~~160~~	
Grid B / Batter 3:1	2	PP16x0.500	180	180	+12 ✓	+19.00	-55	~~-60~~ -16	104	~~166~~		
								Est. Total (LF)		~~166~~	~~320~~	~~1,256~~

104 245 1149

Pile Driving Notes:

1) Maximum driving resistance is the ultimate bearing capacity plus overdriving to reach minimum tip elevation. Use maximum driving resistance in driveability analysis of proposed pile driving system.

2) Basin seafloor will be dredged to Elev -30 in the future. Uplift and bearing resistances shown in the table are the required capacities after dredging.

3) The first pile installed in Structure E4 shall be designated as a Dynamic Load Test pile. (See Section 505 Piling for dynamic load testing requirements)

4) Drive all (4) piles of Structure W2 to bedrock and install tension pile anchors.

LEGEND

Alphabetic reference for section
Location & direction where section is taken
Section X-X
Location of section view
SECTION ON SAME SHEET

Alphabetic reference for Section
Sheet no. reference section is located
Location & direction where section is taken
Section X
Location of section view
Alphabetic reference for Section
Sheet no. reference section is taken from
SECTION CROSS REFERENCE FROM/ON DIFFERENT SHEET

Numeric reference for detail
Sheet no. reference detail is located
Detail X
Location of detail view
Numeric reference for detail
Sheet no. reference detail is first located
DETAIL CROSS REFERENCE ON/FROM DIFFERENT SHEET

Numeric reference for detail
Detail X
Location of detail view
Numeric reference to detail
DETAIL ON SAME SHEET

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Quantities, General Notes & Pile Table

PATH: Q:\Hns\75249\MF\Phase-B\Planset\02-Gen Notes.dwg
PLOT: PSPACE 1=1 TAB: Cap-V02 Thu, 09/Aug/07 06:16PM

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
75249	2007	2	28

LUTAK INLET

Partially failed sheetpile cell and resulting sinkhole

MV COLUMBIA

Marine structures

Lutak Dock

S2 S1 W2 W1 E1 E2 E3 E4

TRACT D

A.T.S. 1512
STATE OF AK.

A.T.S. 1464
TRACT E
STATE OF ALASKA

TRACT C
HAINES BOROUGH

Sheet pile cells (below)

Existing transfer bridge

A.T.S. 1464
TRACT A
HAINES BOROUGH

Existing chain link fence

Existing rip-rap slope

EXISTING TERMINAL BUILDING

Existing curb & gutter

TRACT B
STATE OF ALASKA

Purser's shelter

A.T.S. 229
HERTZ/SCHAFER

Totem Oil Lease Tract

Existing striping

Ferry Terminal Staging Area

Exist. generator bldg.

Exist. storage bldg.

Exist. check in station

Existing striping

Existing curb, gutter & sidewalk

GLO MEANDER LINE

HAINES

DOT/PF EASEMENT

GOV'T. LOT 7
STATE OF ALASKA

GOV'T. LOT 8
STATE OF ALASKA

STATE OF ALASKA

Existing guardrail

Existing signs, typ.

LUTAK ROAD

GOV'T. LOT 9
HERTZ/SCHAFER

HERTZ/SCHAFER

GOV'T. LOT 6
HAINES BOROUGH

GOV'T. LOT 8
STATE OF ALASKA

SEC. 10 T. 30 S., R. 59 E. C.R.M.
SE 1/4, SW 1/4, SW 1/4

Tidal Data	
EHW	22.5'
MHW	15.8'
MLLW	0.0'
ELW	-6.0'

Plan

GRAPHIC SCALE
40 0 40 80 160

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr _____ Date 5/26/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA
49th
Timothy H. Doggett
CE-9027
REGISTERED PROFESSIONAL ENGINEER
8/8/07

CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

PATH: Q:\Hns\75249\MF\Phase-B\Planset\03-Site Plan.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:18AM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Haines Ferry Terminal
General Layout

REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION				
			75249	2007	3	28

LUTAK INLET

Remove & dispose of timber fender module, this location only (1/21)

Remove & dispose of (1 each) failed H-pile (located behind timber fender module) (3/21)

Existing timber fender

TRACT D

Salvage existing 61' catwalk, see Existing Structures Sheet 25 (see note 2).

W1

E1

E2

XE3

XE4

Existing dolphins

Existing catwalk

Remove and dispose of existing catwalk bearing. See Sheet 24.

Remove and dispose of existing catwalk bearing. See Sheet 24.

Existing concrete retaining wall/dock cap

B/21

Existing floodlight

Cell 4

Cell 3

Cell 2

Cell 1

Existing bridge lift tower

Salvage 39' catwalk, see Existing Structures Sheet 25 (see note 1).

Remove & dispose of existing timber breasting dolphin Salvage windsock. See Existing Structures Sheet 23.

Remove & dispose of existing timber catwalk & supports. See Existing Structures Sheet 22 (see note 1).

Remove & dispose of existing timber & concrete mooring dolphin. See Existing Structures Sheet 22.

Remove & dispose of existing catwalk tower bearing. Cut A.B. flush w/ pavement. See Existing Structures Sheet 25.

Approximate limits of sinkhole

Partially failed sheetpile cell

Sheet pile cells (below)

TRACT C
CITY OF HAINES

Existing transfer bridge

A.T.S.
1464
TRACT E

Treatment plant

Existing rip-rap slope

Existing chain link fence

EXISTING TERMINAL BUILDING

Existing curb & gutter

Existing purser's shelter

Existing guardrail

STATE OF ALASKA

NOTES:

1) Catwalk not essential for terminal operations & may be removed without providing alternate access.

2) Coordinate removal of catwalk with terminal personnel. Dock floodlights energized by wiring mounted to catwalk, provide alternate power to floodlights after catwalk is removed.

Existing curb, gutter & sidewalk

Existing storage building

Existing generator building

Ferry terminal staging area

The image on this view is on uncontrolled aerial photograph. It contains distortion that has not been corrected

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

GOV'T. LOT 8
STATE OF ALASKA

STATE OF AK.

LUTAK ROAD

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr C.J. Boughton Date 5/26/09

DESIGNED BY: T. Doggett

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER

8/8/07

CHECKED BY: B. Savikko

DRAWN BY: W. Hickok

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Haines Ferry Terminal Existing Facilities & Demolition Plan

PATH: O:\Hns\75249\MF\Phase-B\Planset\04-Demolition Plan.dwg
PLOT: PSPACE 1=1 TAB: Demo Plan Wed, 01/Aug/07 09:19AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	4	28

LUTAK INLET

New 4 pile mooring structure, see Sheets 6–14

W2 ℄ dolphin — 55.0' — W1 ℄ dolphin — 31.2' — ℄ bridge — 31.6' — E1 ℄ dolphin — 78.7' — E2 ℄ dolphin — 50.8' — E3 ℄ dolphin — 73.0' — E4 ℄ dolphin

1/17 New 32' access gangway

1/16 New 44' catwalk,

See Project Control notes

Existing mooring structures, refasten fender timbers 2/21

New 4-pile mooring structures see Sheets 6–14

S2 S1

Existing concrete retaining wall

Existing timber fenders

New gangway landing 1/18

Fender line

Fender line

B/18 B/16

Existing bollard

3/18 Modify catwalk assembly bearing located on dolphin Similar

Existing catwalk

3/18 Modify catwalk assembly bearing located on dolphin

4/18 Salvaged 61' catwalk, modify skid plates

4/18 Salvaged 39' catwalk, modify skid plates

CELL 4 CELL 3 CELL 2 CELL 1

Existing sheet pile cells (below) typ.

10'

Existing bridge lift towers

Partially failed sheetpile cell

Construct (2) pile bents to shore existing concrete retaining wall located at the face of the wharf 1/19

Contractor Lay–Down & Piling Storage Area 100 ft x 50 ft

Existing transfer bridge

Existing rip–rap slope

Existing chain link fence

EXISTING TERMINAL BUILDING

Existing guardrail

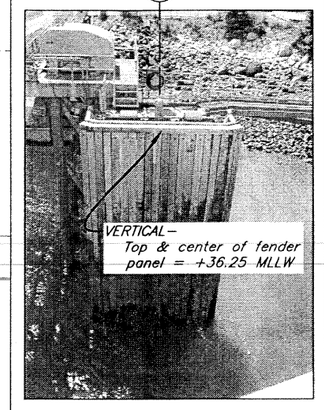
Ferry terminal staging area

Existing storage building

Existing generator building

PROJECT CONTROL:

W1



HORIZONTAL–
Face of new fenders = face of existing dolphins & wharf fenders

Marine Site Plan

GRAPHIC SCALE
20 0 20 40 80

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 5/26/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER 8/8/07

CHECKED BY: B. Savikko

DRAWN BY: W. Hickok

PATH: O:\Hns\75249\MF\Phase-B\Planset\05- Marine Layout.dwg

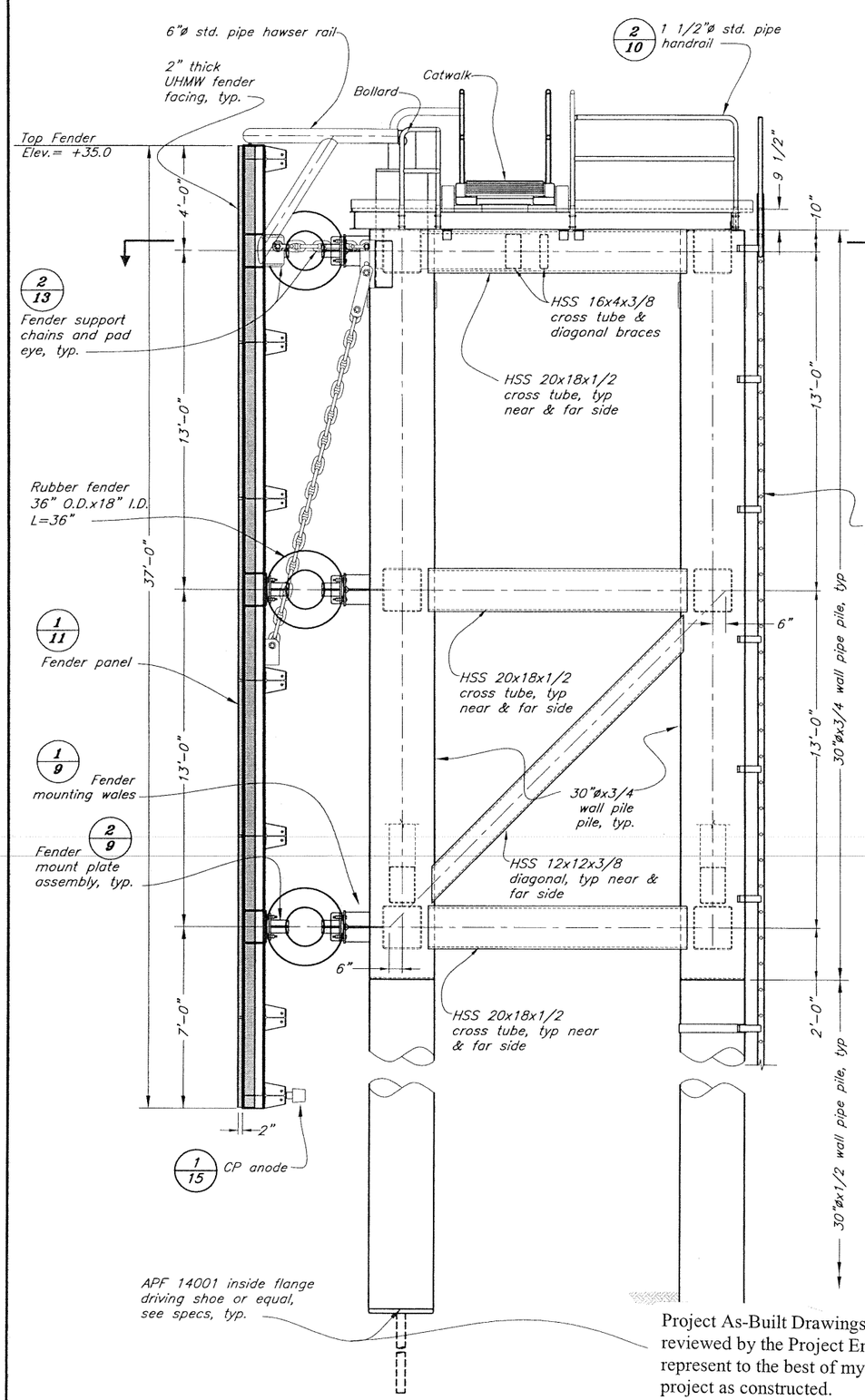
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:19AM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

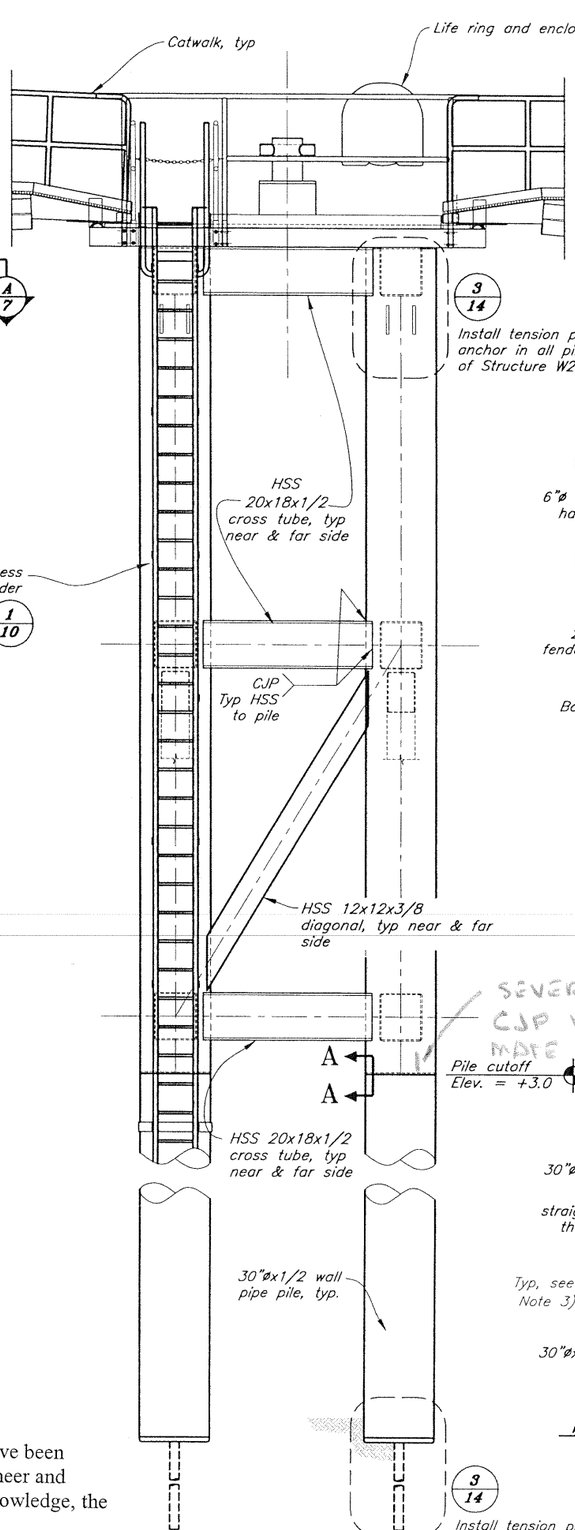
Haines Mooring Improvements
Project 75249

Proposed Marine Site Plan

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	5	28



Side Elevation

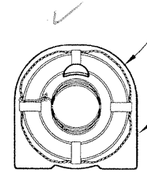


Back Elevation

Notes:
1) Fender panel not shown.

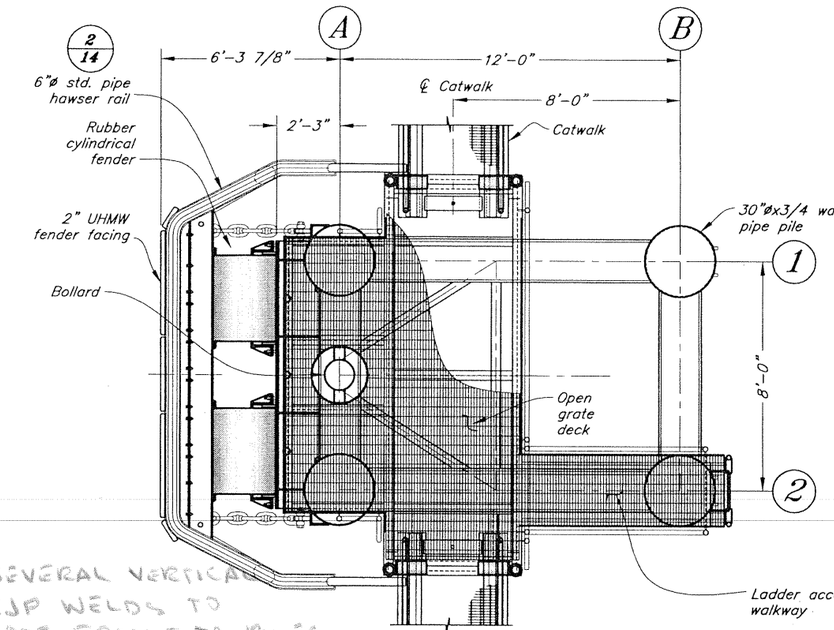
2) E3 shown, W2 & E4 similar except for catwalks, see layout Sheet 5

3) State furnished QA weld inspection may be required, see Section 504-3.02.9 Field Welding.



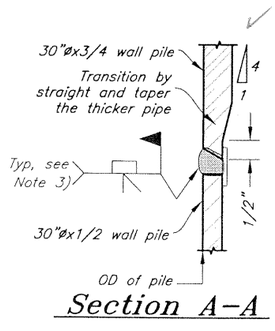
Life Ring Detail 1

(1 life ring per dolphin)



Plan View

NOTE:
Mooring structures W2 & E3 as shown, E4 is similar. See 1/14 for additional guardrail & marker light details of E4.



Section A-A

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Dougherty Date 5/26/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

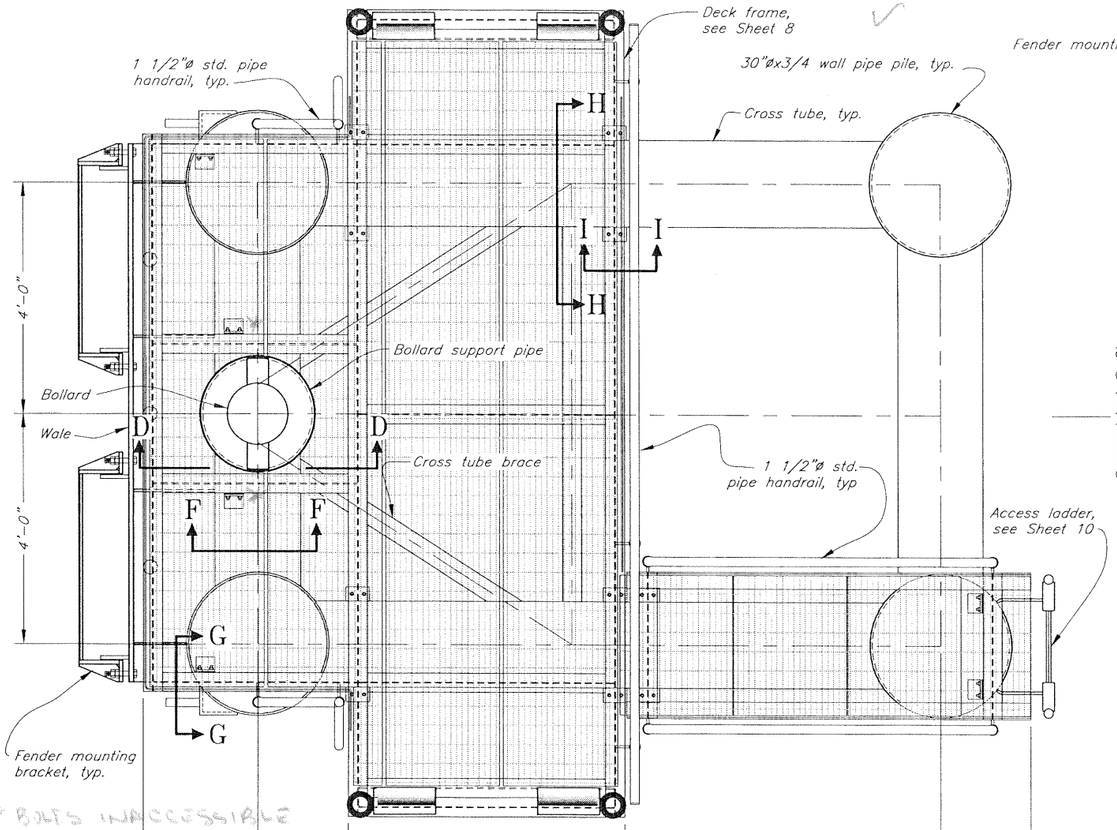
Mooring Structures W2, E3, & E4

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER 2.13.07

CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

PATH: O:\Hns\75249\MF\Phase-B\Planset\06-Vert Dolphin Plan & Elev V2.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Mon, 13/Aug/07 08:49AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	6	28

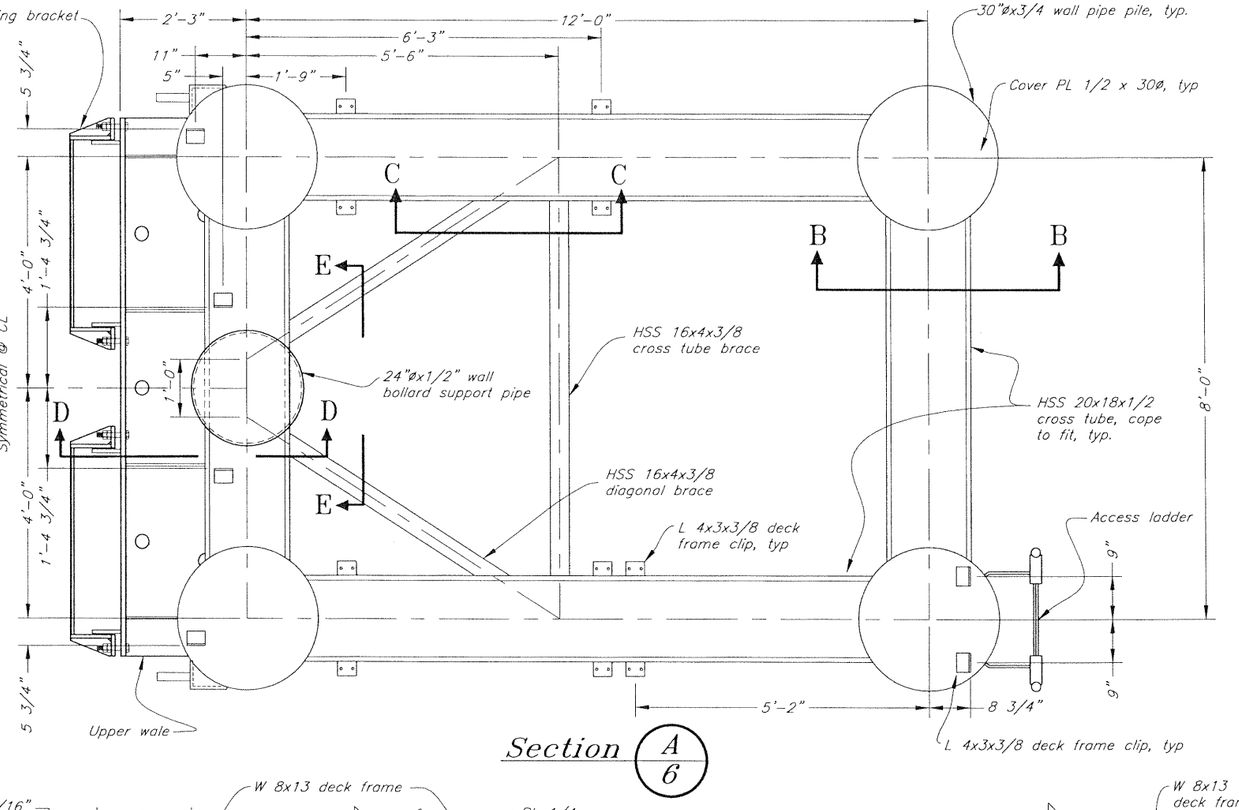


Dolphin Cap Plan

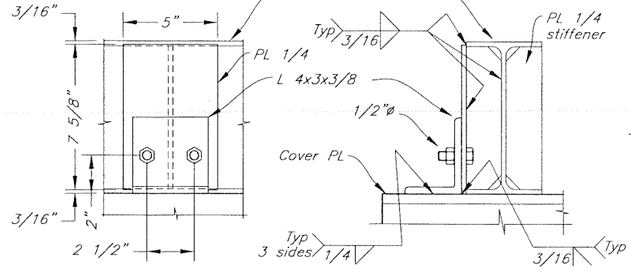
* BOLTS INACCESSIBLE & OMITTED

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr _____ Date 5/26/09

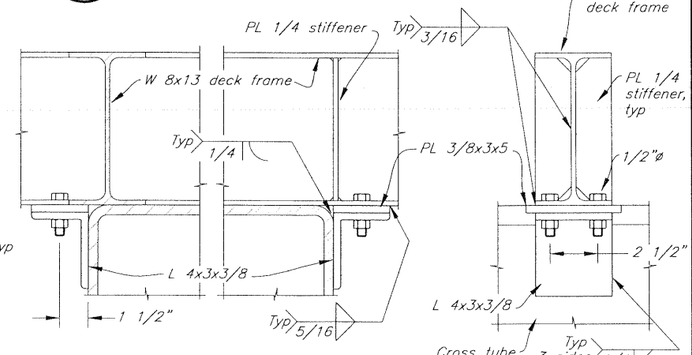


Section A / 6



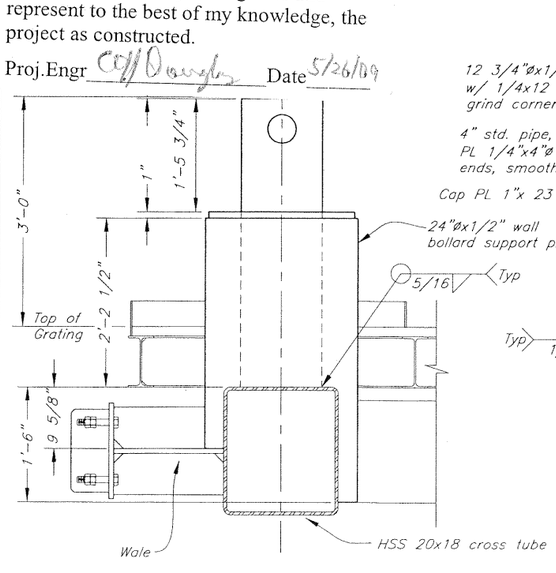
Section F-F

Section G-G

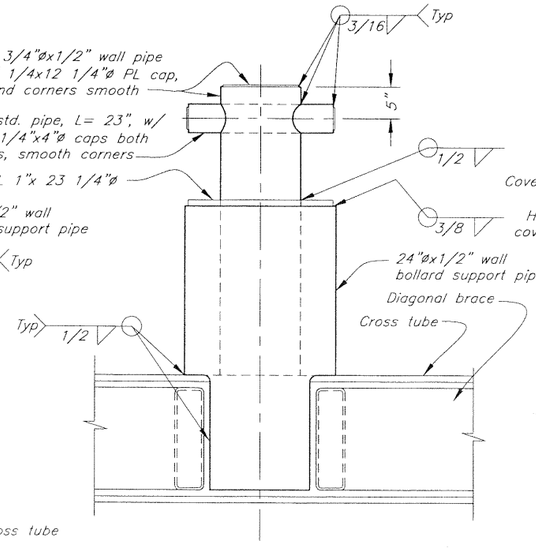


Section H-H

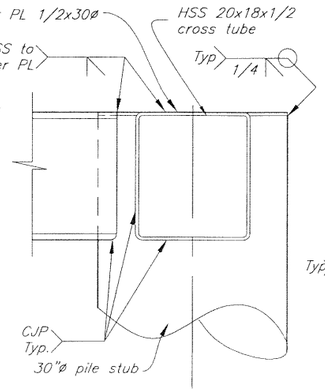
Section I-I



Section D-D



Section E-E



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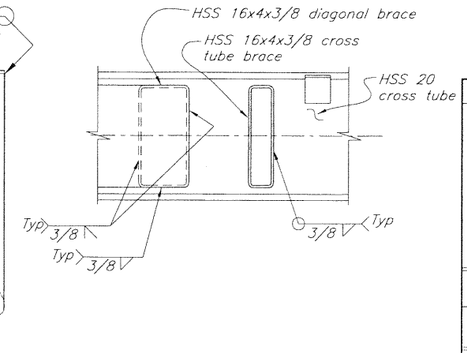

Section C-C

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA 49th — Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER — 8/8/07

CHECKED BY: B. Sovikko

DRAWN BY: W. Hickok

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Mooring Structures W2, E3, & E4 Cap Details

PATH: O:\Hns\75249\MF\Phase-B\Planset\07- Cap Details v1.dwg
PLOT: PSPACE 1=1 TAB: Cap-V02 Thu, 09/Aug/07 06:28PM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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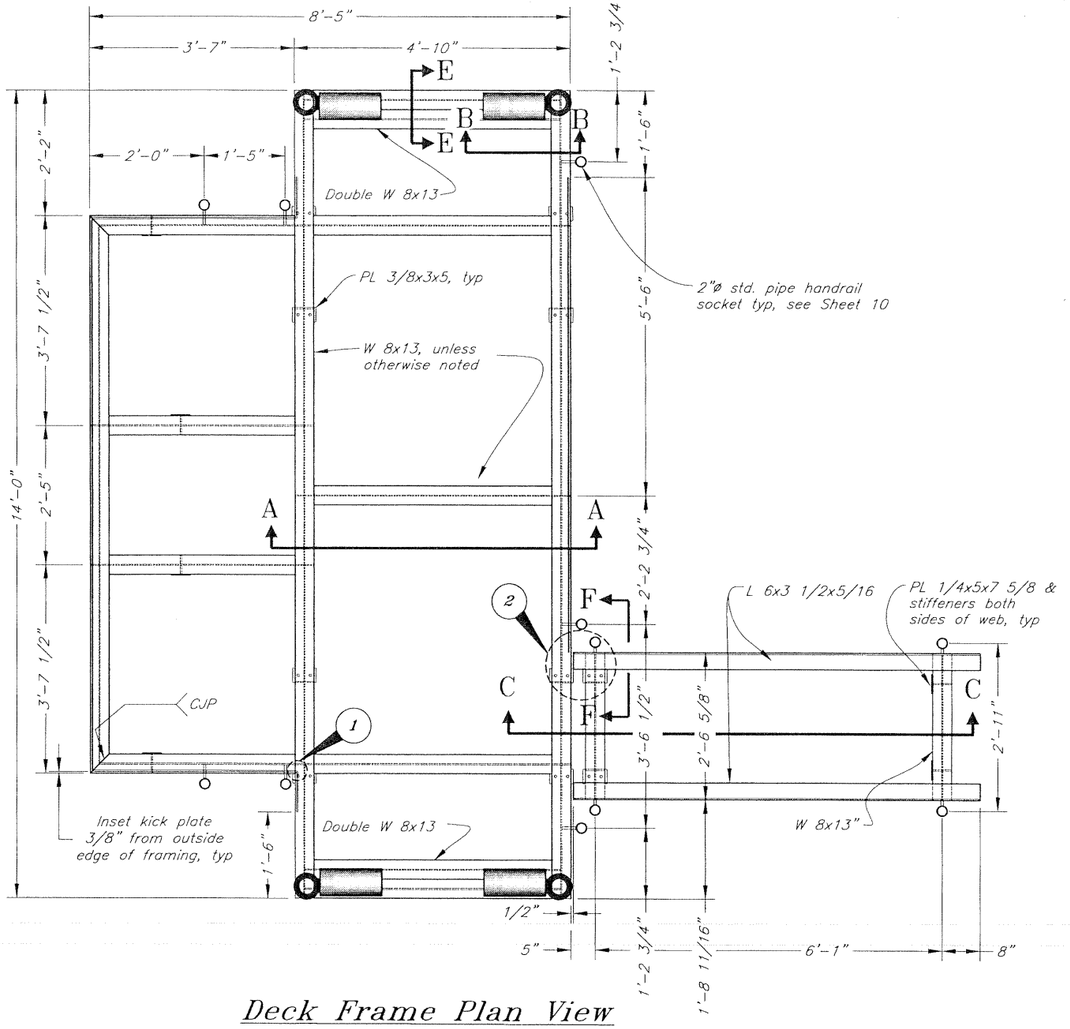
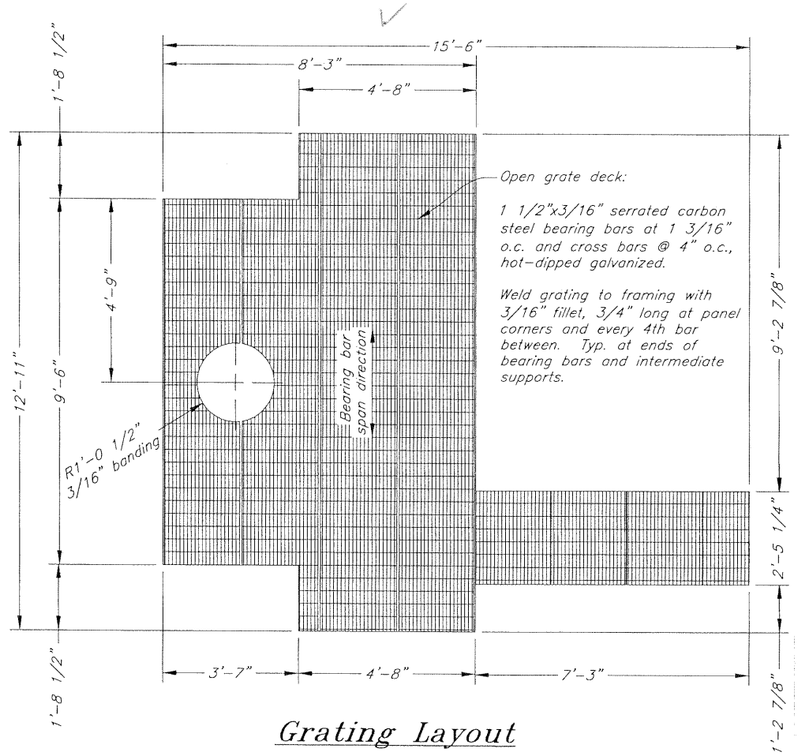
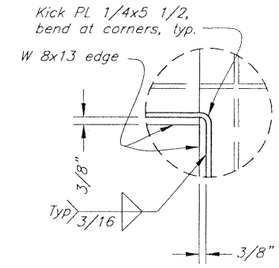


Deck Frame Plan View



Grating Layout

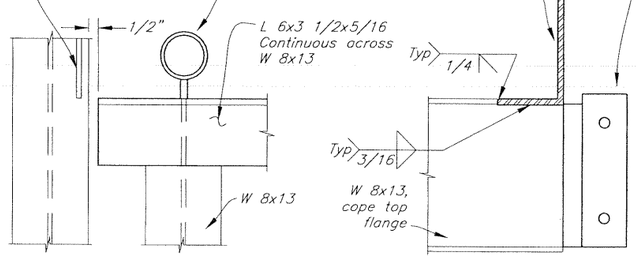


Note: Typ. at kick PL corners

Detail 1

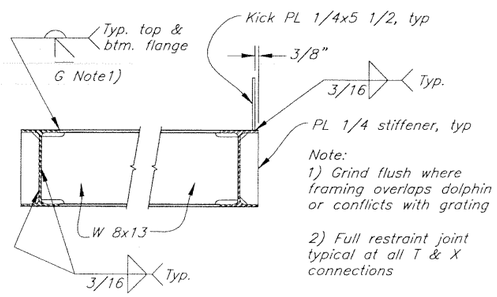
Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Jeff Doggett Date 5/26/09

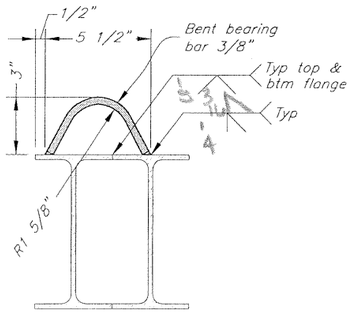


Detail 2

Section F-F



Section A-A



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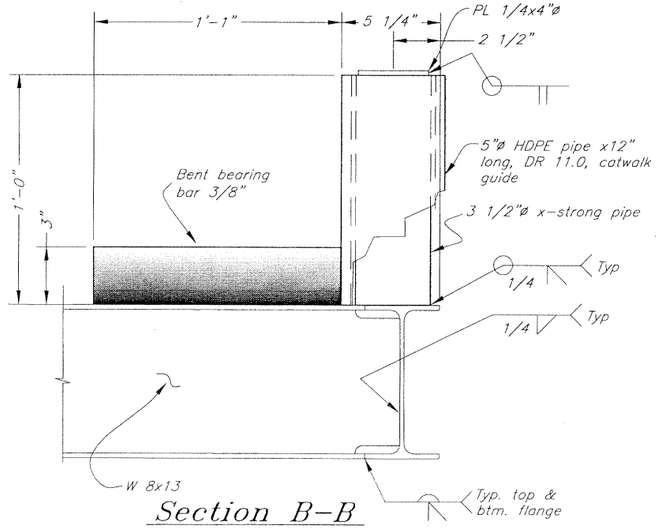
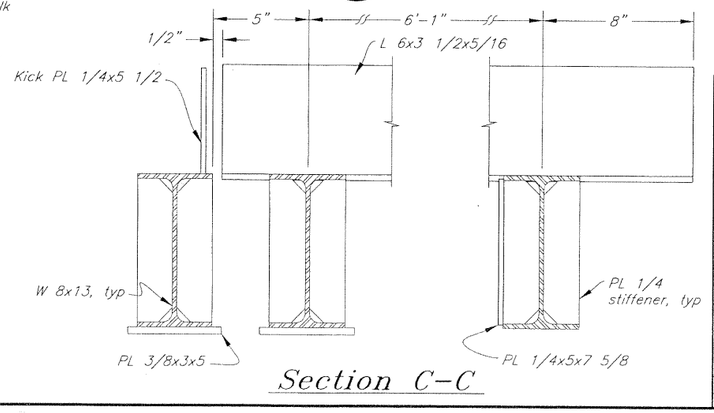


Section B-B



Section C-C

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Mooring Structures
W2, E3, & E4
Cap Deck Framing

CHECKED BY: B. Sovikko
DRAWN BY: W. Hickok

PATH: O:\Hns\75249\MF\Phase-B\Planset\08-Deck v1.dwg
PLOT: PSPACE 1=1 TAB: Deck-V03 Wed, 01/Aug/07 09:21AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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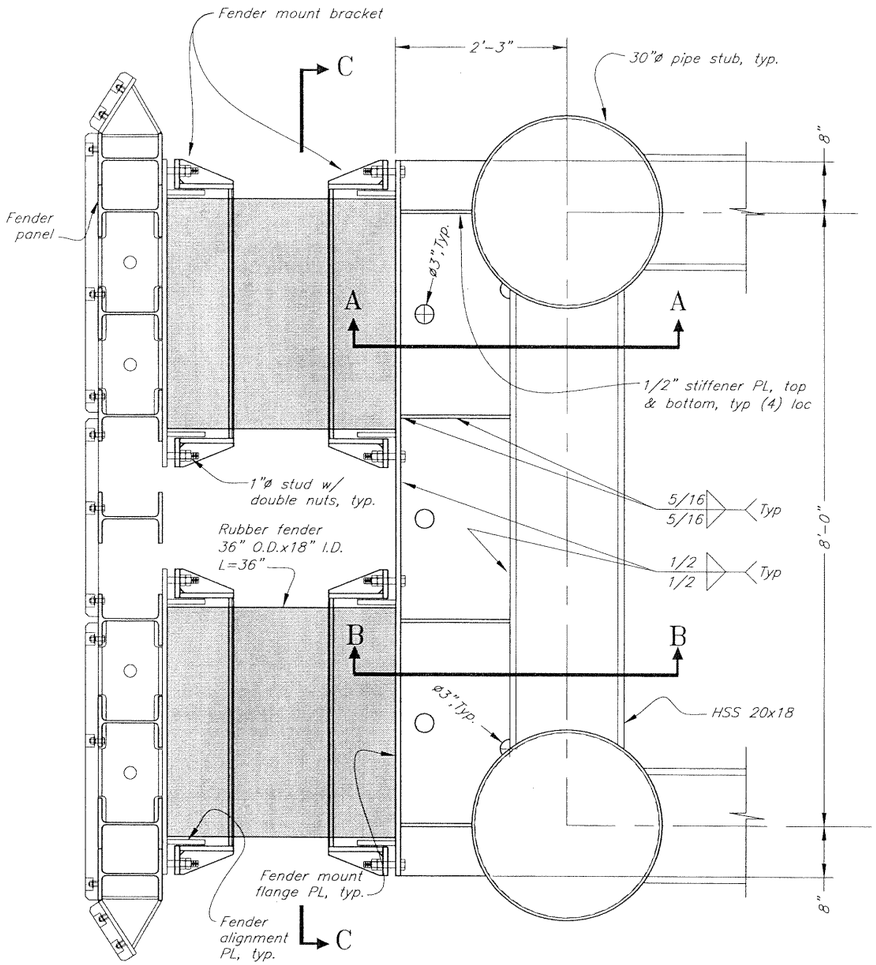
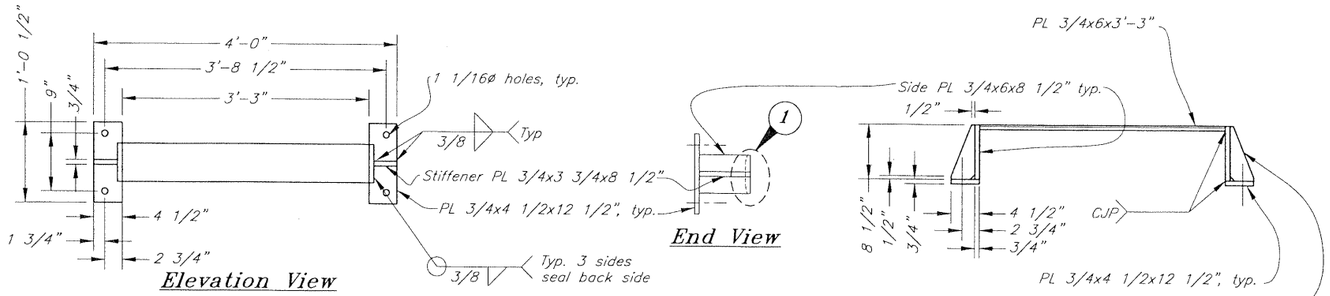
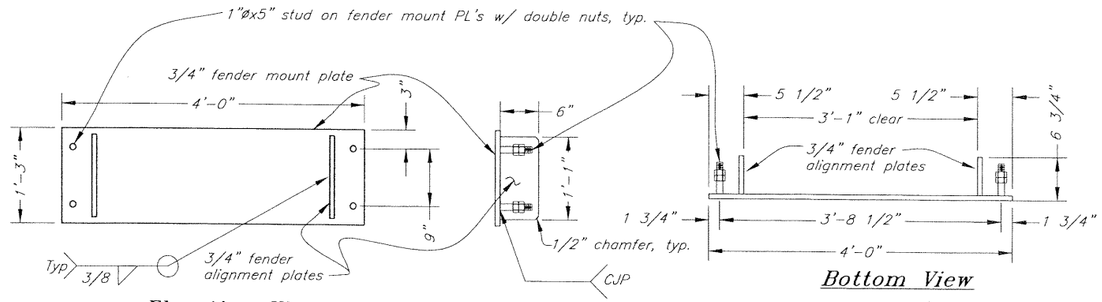


Fender Mounting Wales Plan (1/6)

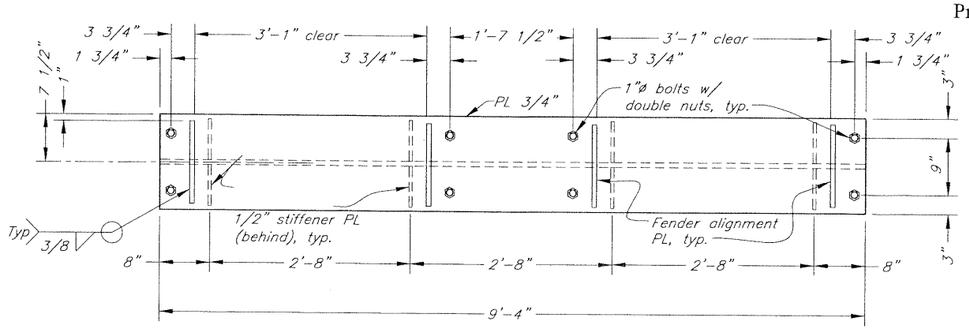
Intermediate wale shown, lower wale similar



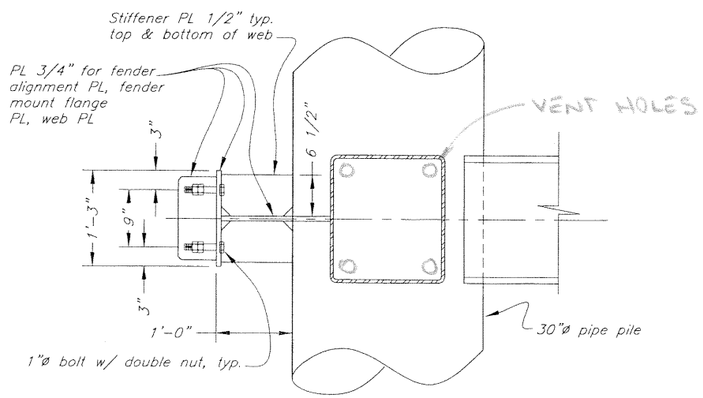
Fender Mount Bracket



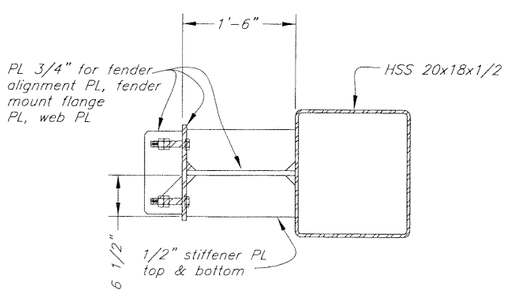
Fender Mounting Plate on Fender Panel (2/6)



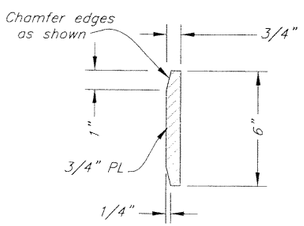
Section C-C



Section A-A



Section B-B



Detail (1)

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 5/16/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER

5/2/07

CHECKED BY: B. Savikko

DRAWN BY: W. Hickok

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Mooring Structures W2, E3, & E4
Fender Mounting Wales

PATH: O:\Hns\75249\MF\Phase-B\Plonset\09-Wales.dwg
PLOT: PSPACE 1=1 TAB: Wales-V05 Wed, 01/Aug/07 09:22AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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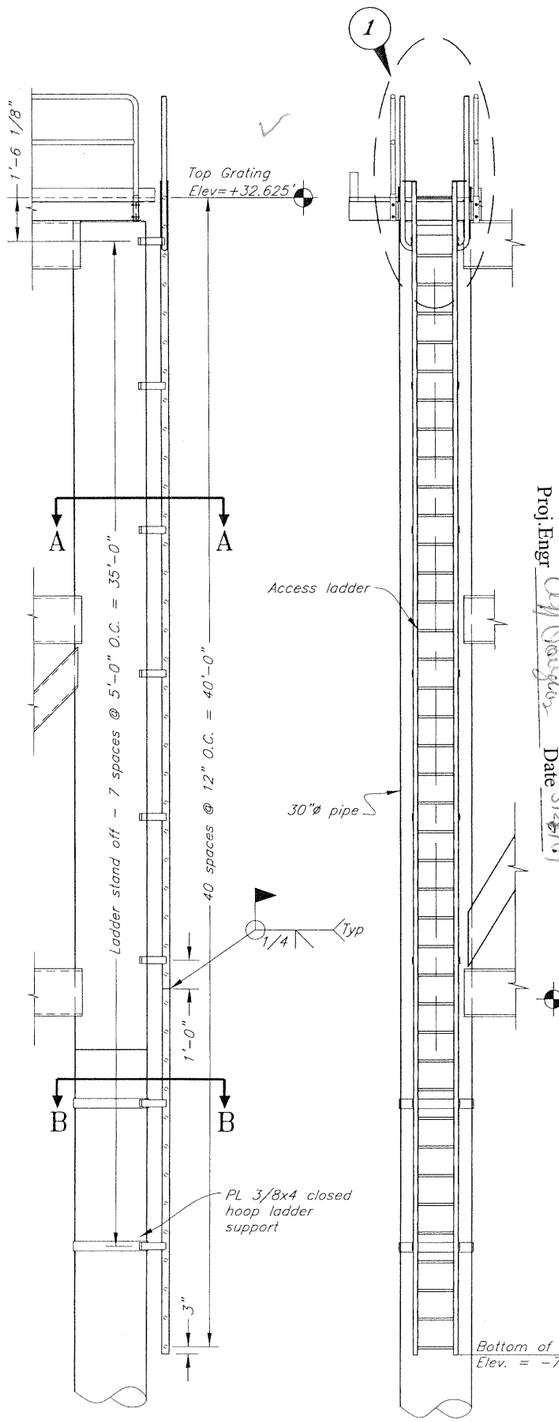
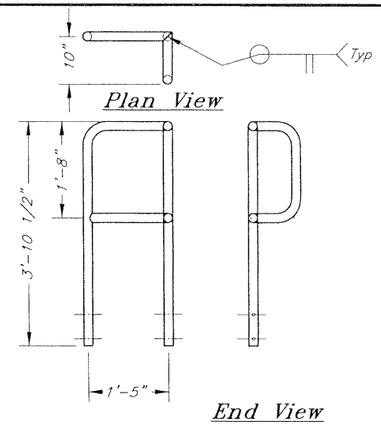


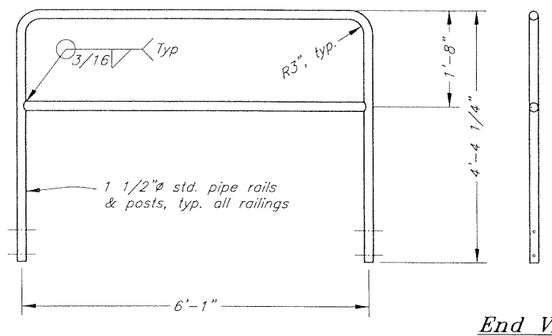
Side View

Elevation View

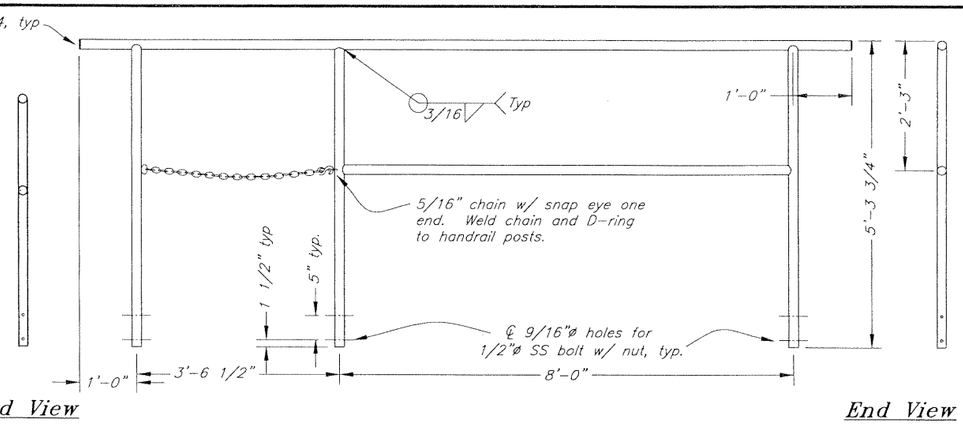
Access Ladder 1/6



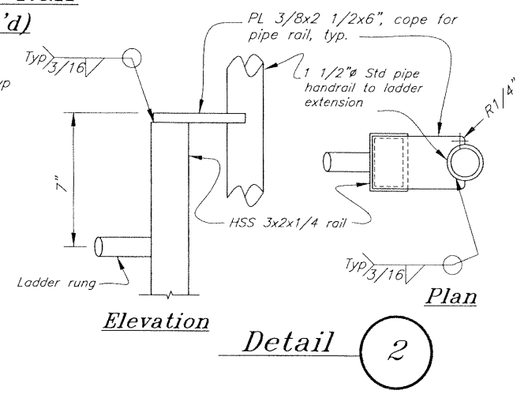
Side Rail
(2 req'd)



Ladder Access
Walkway Rail
(2 req'd)

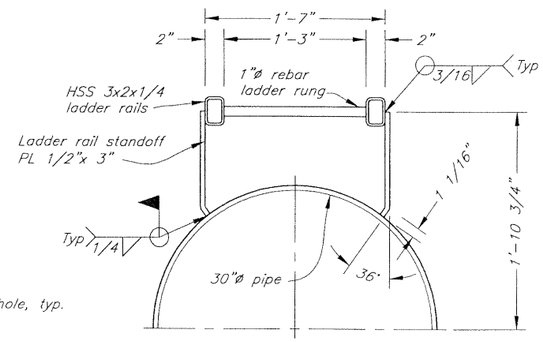


Back Rail

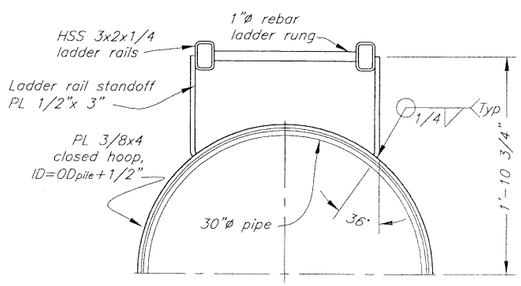


Elevation Plan

Detail 2

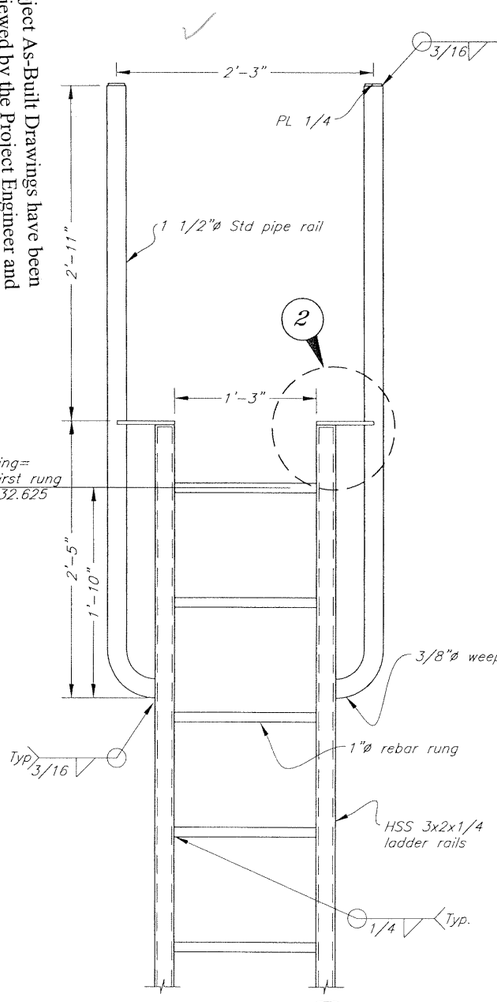


Section A-A

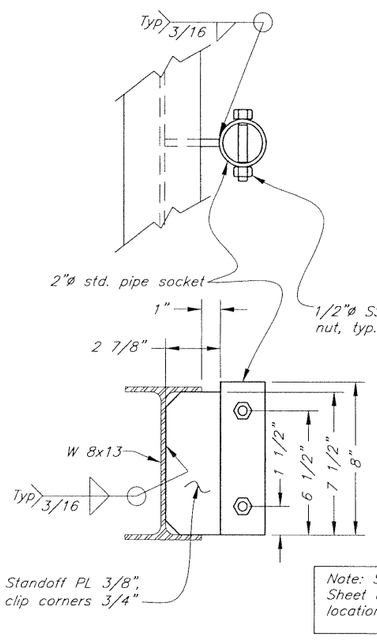


Section B-B

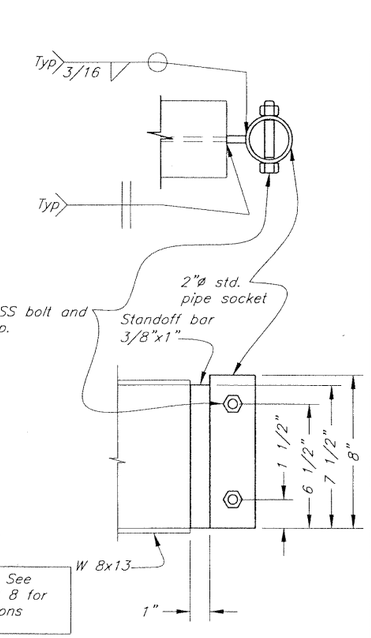
Details not shown, same as Section A-A



Detail 1



Between Flanges



At End of Web

Handrails & Sockets 2/6

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
Proj.Engr Cyl Douglas Date 5/25/07

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
DRAWN BY: W. Hickok
CHECKED BY: B. Savikko

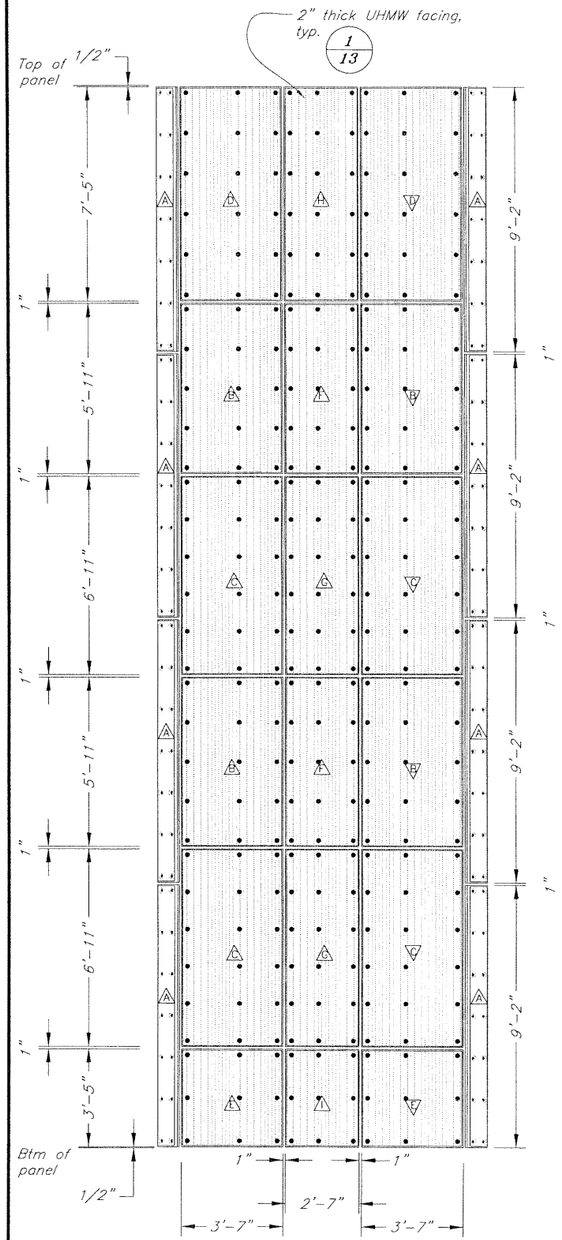
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Mooring Structures
W2, E3, & E4
Railing & Ladder

PATH: O:\Hns\75249\MF\Phase-B\Planset\10-Rails & Ladders.dwg
PLOT: PSPACE 1=1 TAB: Rails & Ladder-V04 Wed, 01/Aug/07 09:22AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	10	28

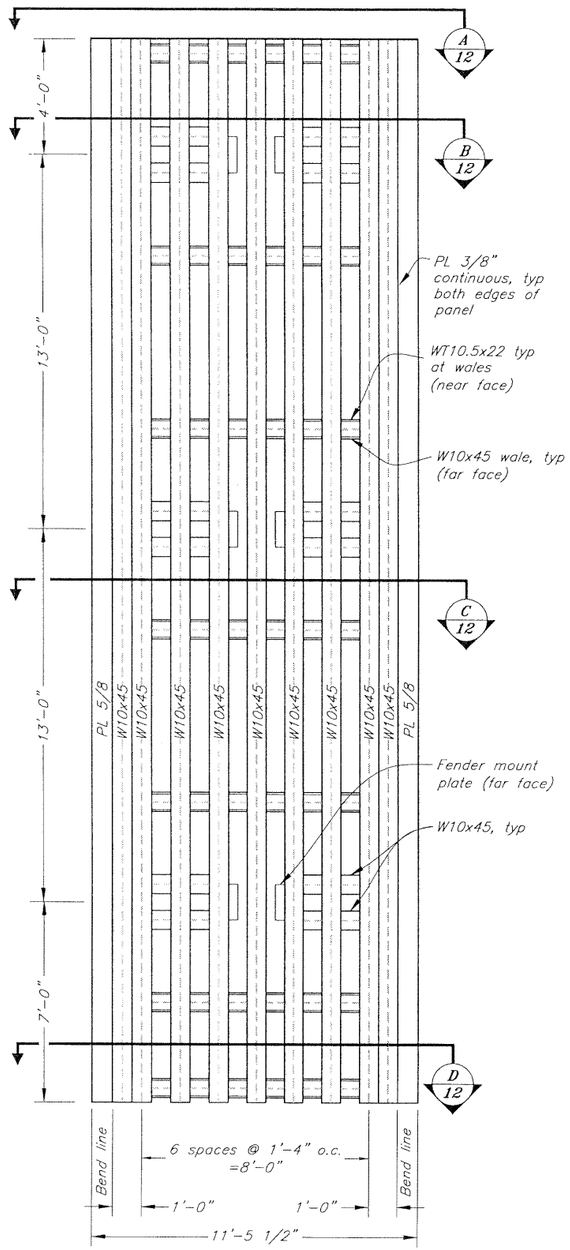


Front Elevation
UHMW Fender Panel Facing

Notes:

1) A denotes the UHMW panel is installed 180° from the orientation shown on the left side.

2) Shaded UHMW panels are the color black, others are the color yellow.

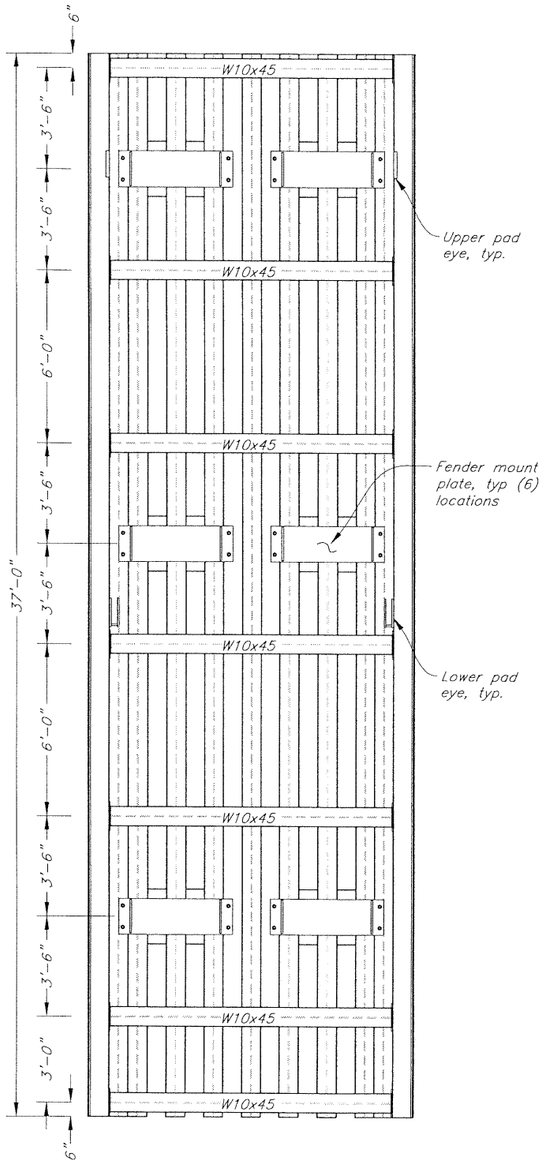


Front Elevation
Fender Panel Frame

Note:

1) Bolt holes not shown, see fender panel details for locations.

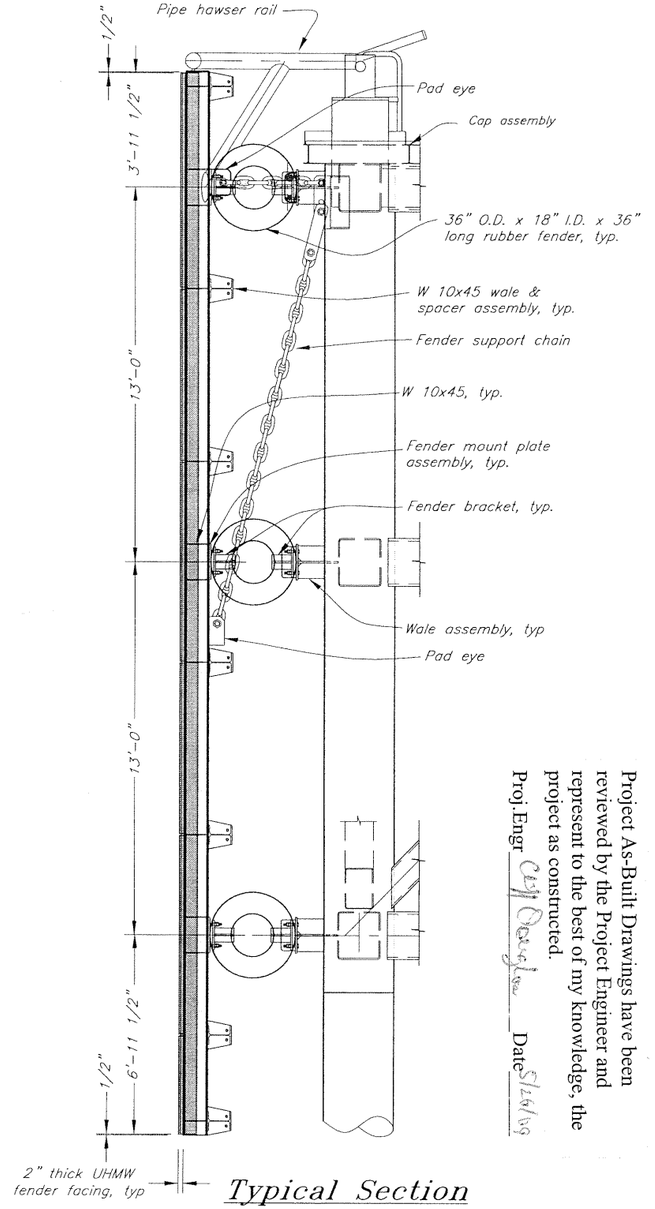
Fender Panel 1/6



Rear Elevation
Fender Panel Frame

The fender panel frame consists of W-sections joined with fully restrained moment connections. Residual stresses generated during fabrication and galvanizing may induce cracking in the welds and base metal. The Contractor shall employ techniques that prevent cracking. Here are several recommendations:

1) *Divide fender panel into subassemblies that fit completely in the galvanizing kettle and then joined in the shop. Do not alternately galvanize one portion and then the other of a single subassembly.*
2) *Apply fender mounting plates and wales after galvanizing of fender subassemblies.*
3) *Assemble components in an order that minimizes residual stresses and distortion.*
4) *Use weld tabs at end of joints to ensure sound weld terminations. Remove weld tabs and make ends of the weld smooth and flush with abutting parts.*
5) *NDT welded joints and repair indications if found, prior to galvanizing.*



Typical Section

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr CEJ Doggett Date 5/26/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA — 49th — Timothy H. Doggett — CE-9027 — PROFESSIONAL ENGINEER

5-29-09

CHECKED BY: B. Savikko

DRAWN BY: W. Hickok

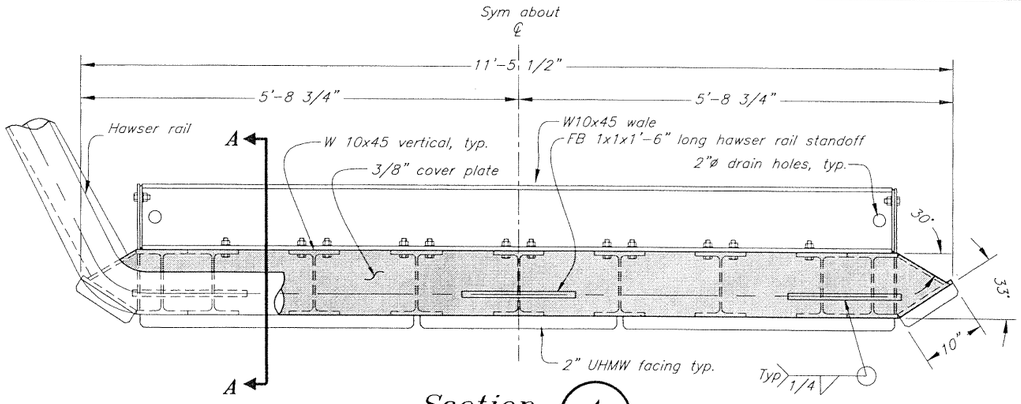
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

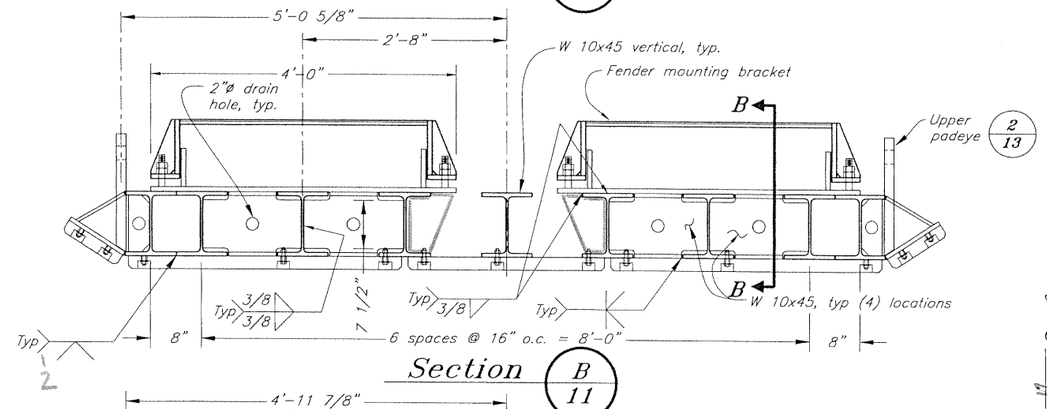
Fender Panel Details

PATH: G:\Hns\75249\MF\Phase-B\Plonset\11- Fender Panel Elev v1.dwg
PLOT: PSPACE 1=1 TAB: 11 Wed, 01/Aug/07 08:46AM

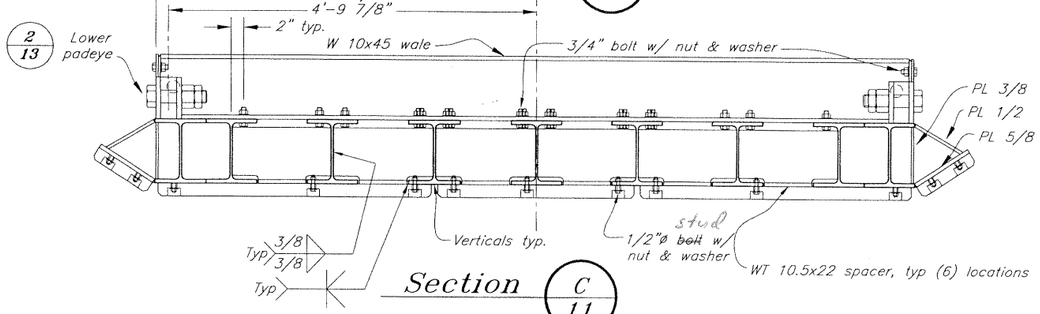
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	11	28



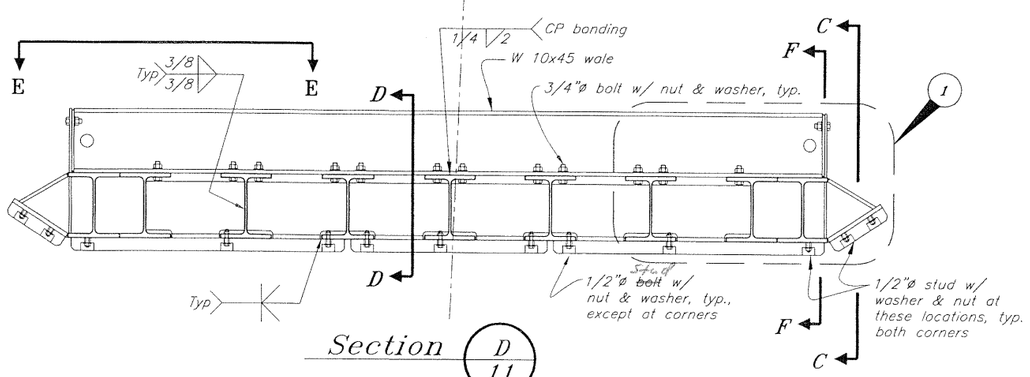
Section A/11



Section B/11



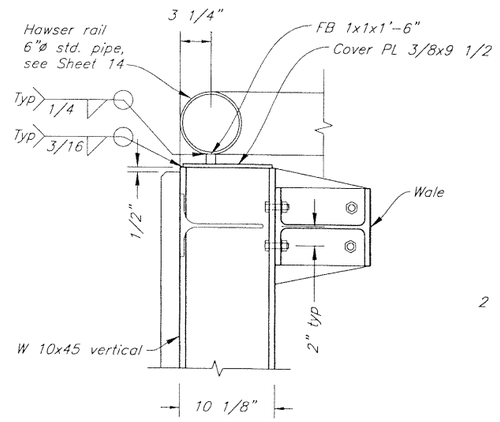
Section C/11



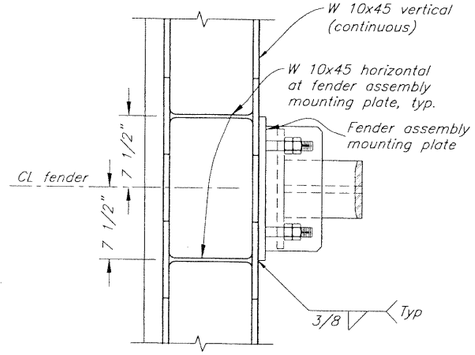
Section D/11

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

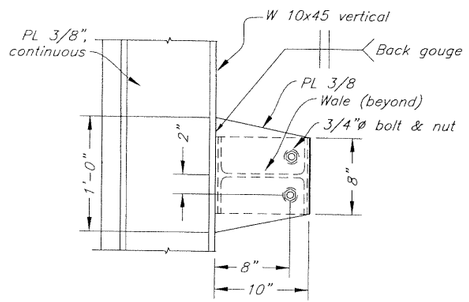
Proj.Engr _____ Date 5/26/09



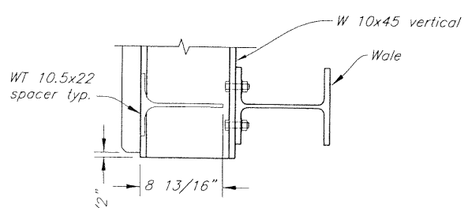
Section A-A



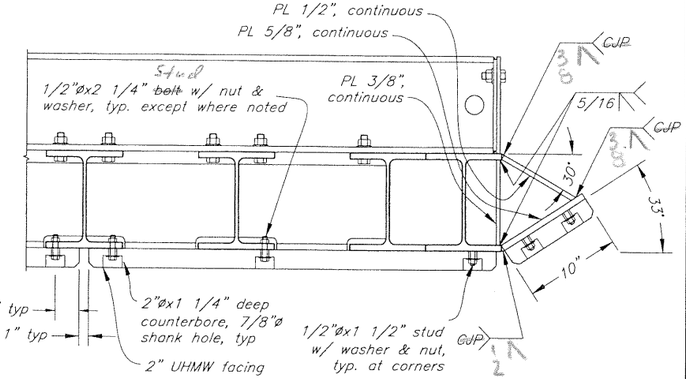
Section B-B



Section C-C

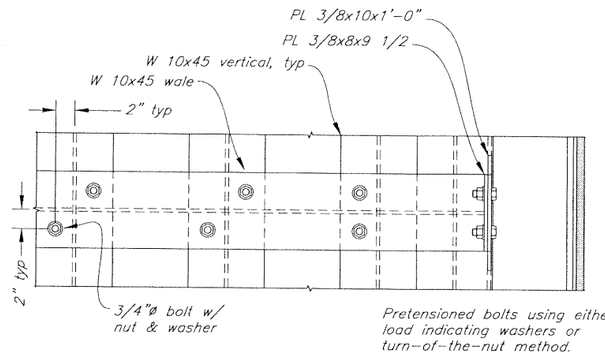


Section D-D



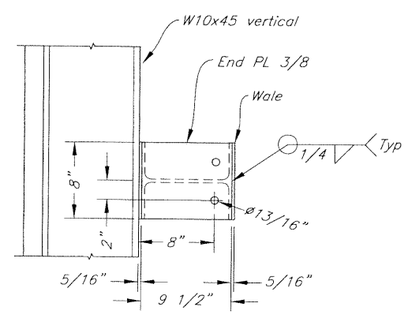
Detail 1

NOTE:
Tighten UMHW facing bolts & studs only snug tight



Pretensioned bolts using either load indicating washers or turn-of-the-nut method.

Section E-E



Section F-F

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA
49th
Timothy H. Doggett
CE-9027
REGISTERED PROFESSIONAL ENGINEER
5/18/07

CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

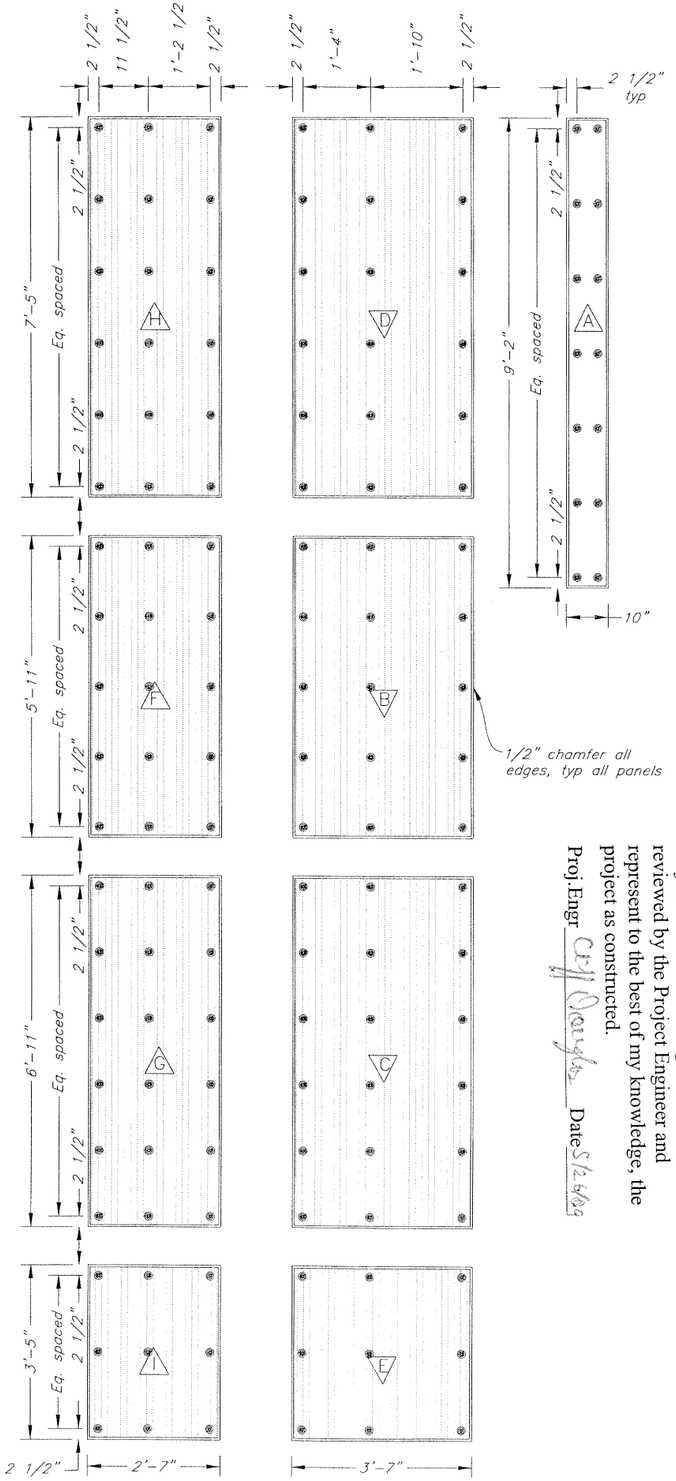
PATH: O:\Hhs\75249\MF\Phase-B\Planset\12- Fender Panel Frome Details v1.dwg
PLOT: PSPACE 1=1 TAB: 10
Wed, 01/Aug/07 09:22AM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249
Mooring Structures W2, E3 & E4 Fender Panel Details

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
75249	2007	12	28

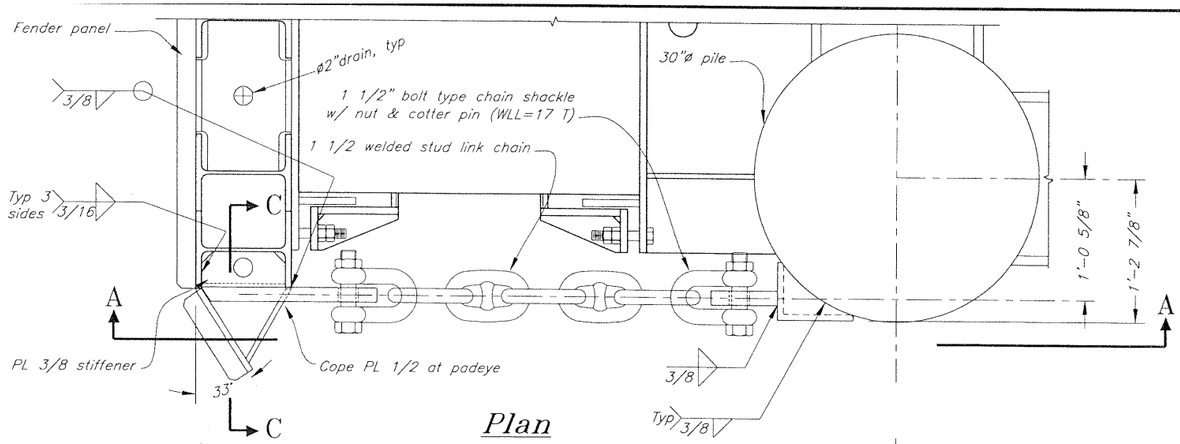


Details - UHMW Facing 1/11

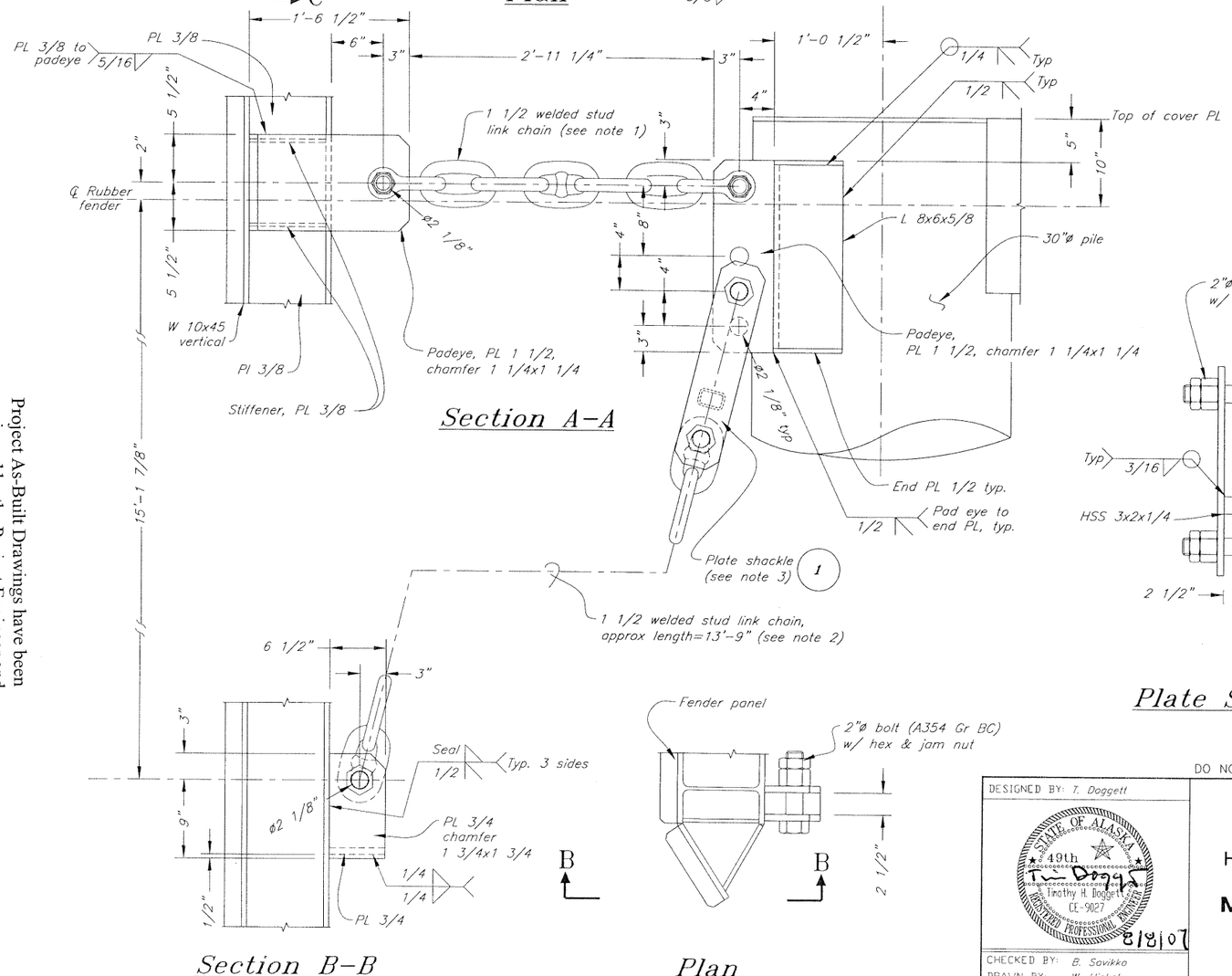
Shaded UHMW panels are the color BLACK, others are YELLOW.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr _____ Date 8/2/07



Plan



Section A-A

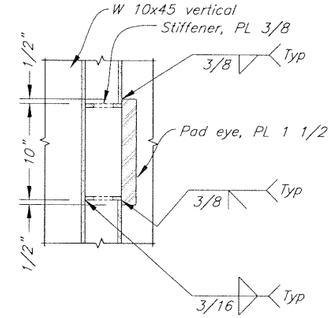
Section B-B

Plan

Fender Support Chains Detail 2/6

NOTES:

1) Stud may be removed in end links of horizontal chain to pass shackle. Do not remove studs in vertical chain.
2) Install chain free of twists. Do not twist chain to adjust length.
3) Field adjust PL shackle and chain so that fender panel is at, or just above, design elevation.



Section C-C

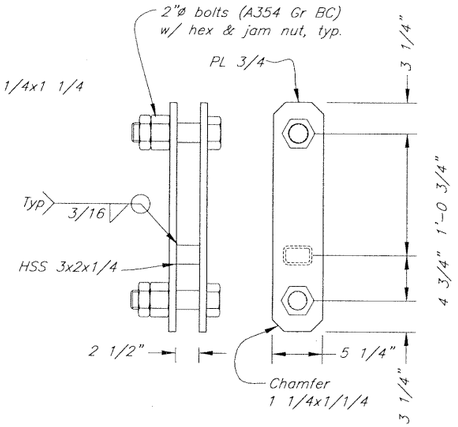


Plate Shackle Detail 1

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
CHECKED BY: B. Sovikko
DRAWN BY: W. Hickok

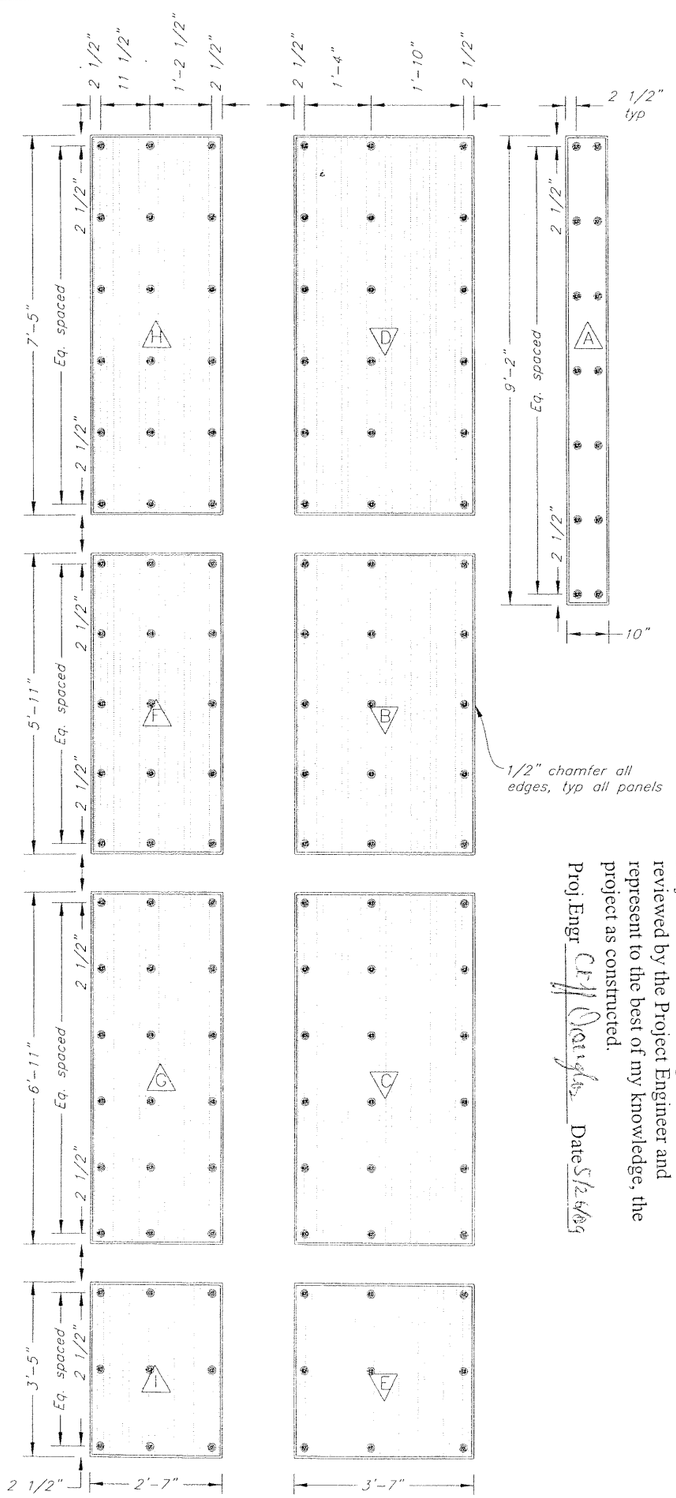
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Mooring Structures W2, E3 & E4
Fender Panel UHMW & Pad Eye Details

PATH: Q:\Hns\75249\MF\Phase-B\Planset\13-UHMW & Pad Eyes v1.dwg
PLOT: PSPACE 1=1 TAB: Hawser Rail & Padeye Wed, 01/Aug/07 09:23AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	13	28



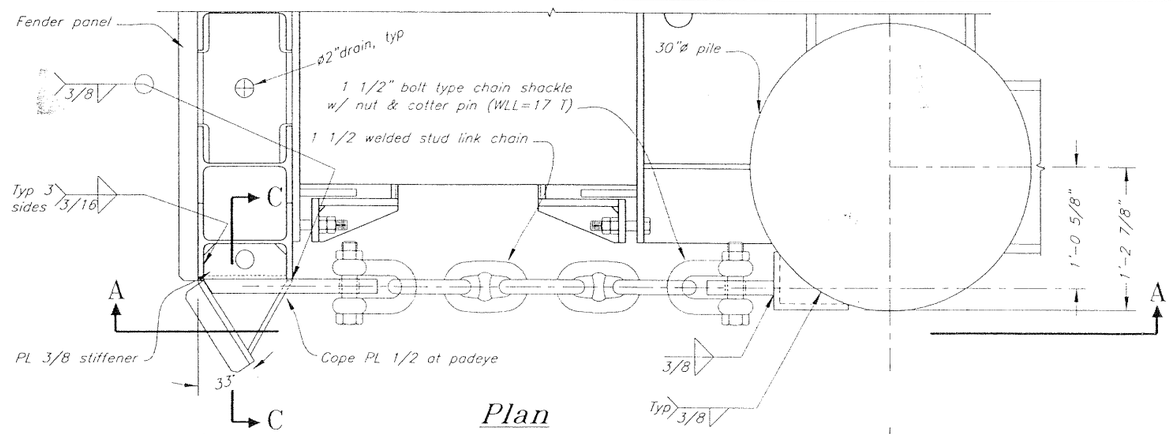
Details – UHMW Facing

1 / 11

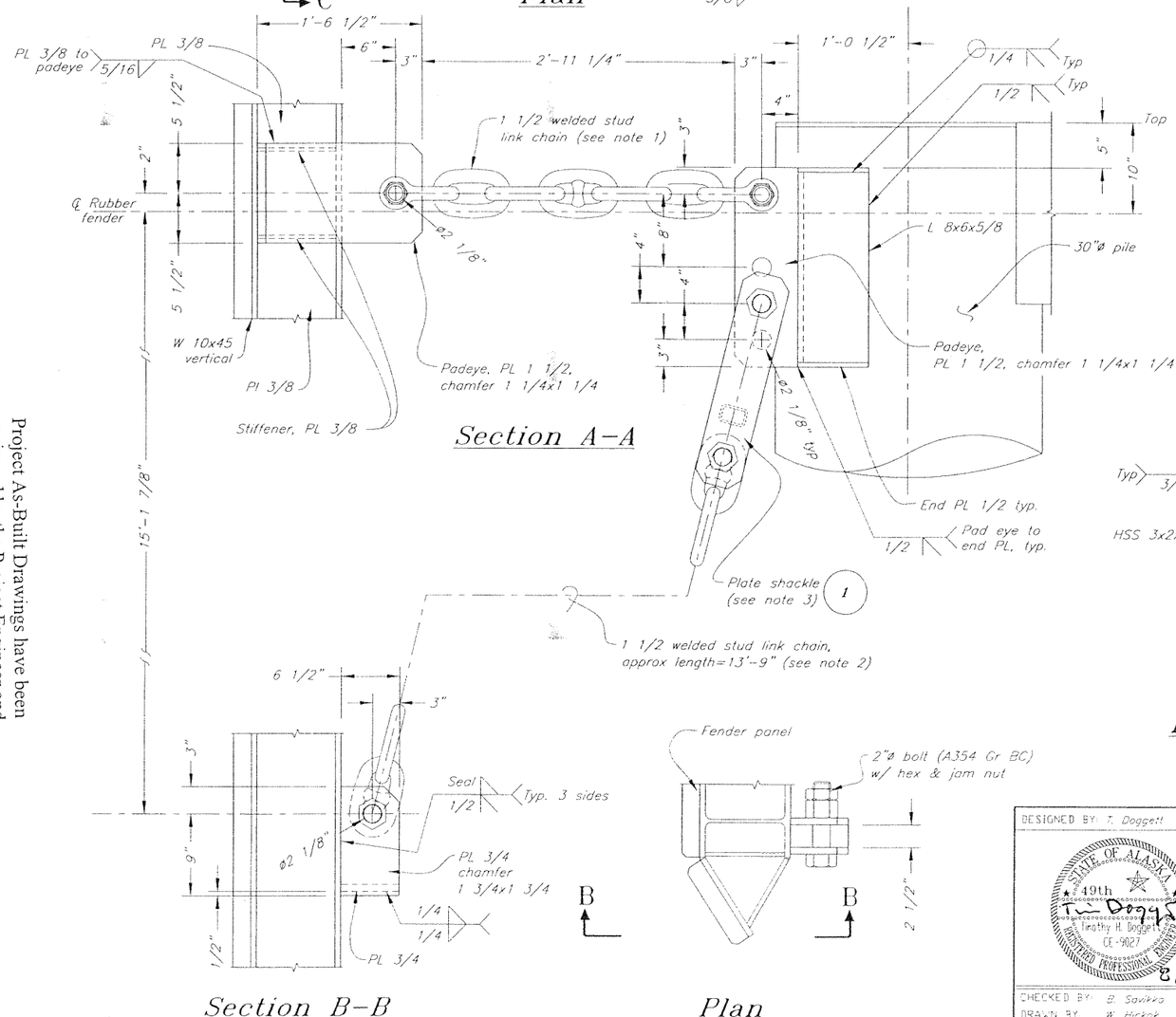
Shaded UHMW panels are the color BLACK, others are YELLOW.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr _____ Date 5/24/07



Plan



Section A–A

Section B–B

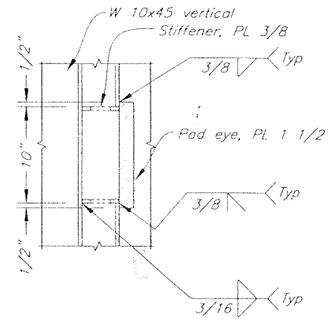
Plan

Fender Support Chains Detail

2 / 6

NOTES:

1) Stud may be removed in end links of horizontal chain to pass shackle. Do not remove studs in vertical chain.
2) Install chain free of twists. Do not twist chain to adjust length.
3) Field adjust PL shackle and chain so that fender panel is at, or just above, design elevation.



Section C–C

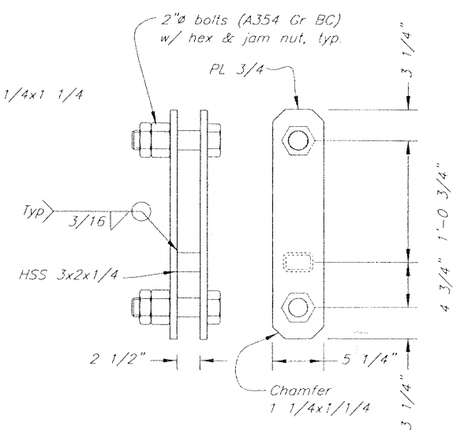


Plate Shackle Detail

1

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Mooring Structures W2, E3 & E4
Fender Panel UHMW & Pad Eye Details

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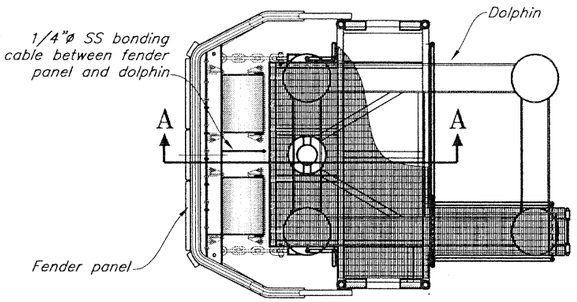
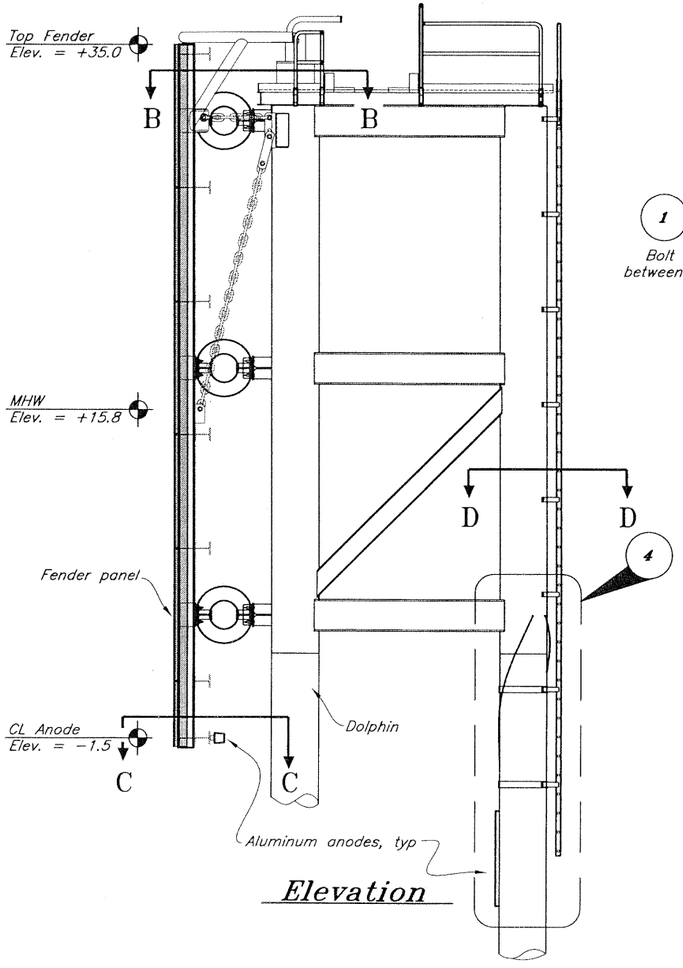
PLOT: PSPACE 1=1 TAB: Hawser Rail & Padeye WED, 01/Aug/07 09:23AM

REVISIONS NO	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO	TOTAL SHEETS
			75249	2007	13	28

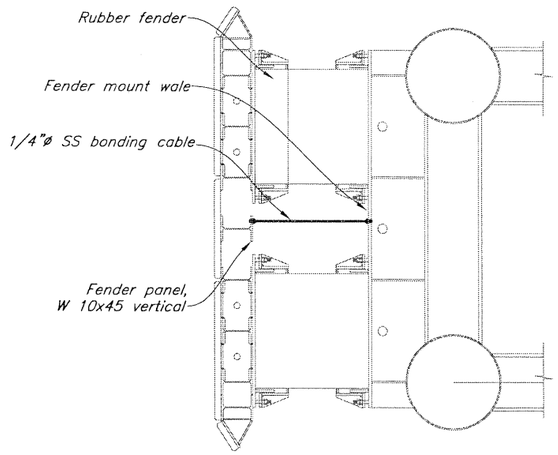


Plan

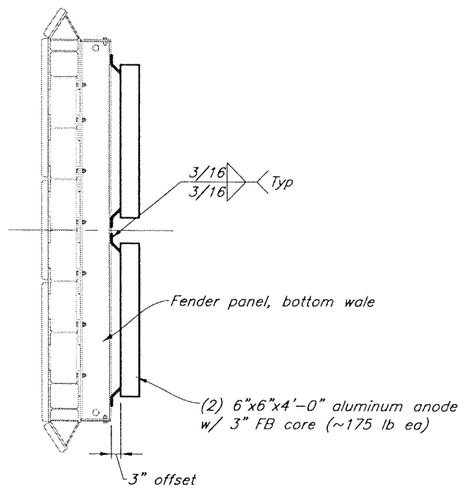


Elevation

Cathodic Protection System 1/6

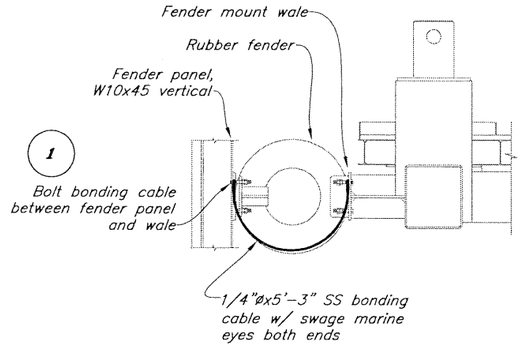


Section B–B



Section C–C

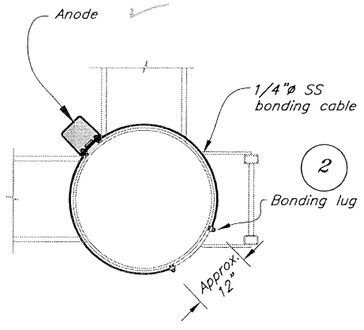
Two anodes required per fender panel



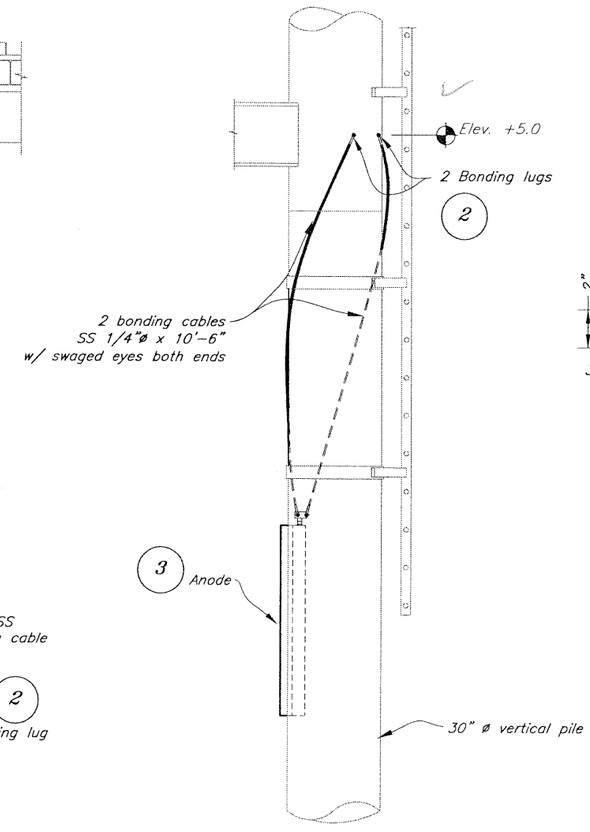
Section A–A

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 8/26/07

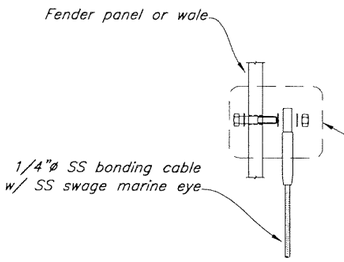


Section D–D

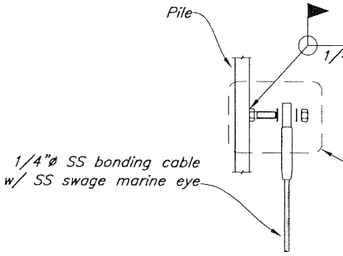


Dolphin Anode Installation Typical Elevation 4

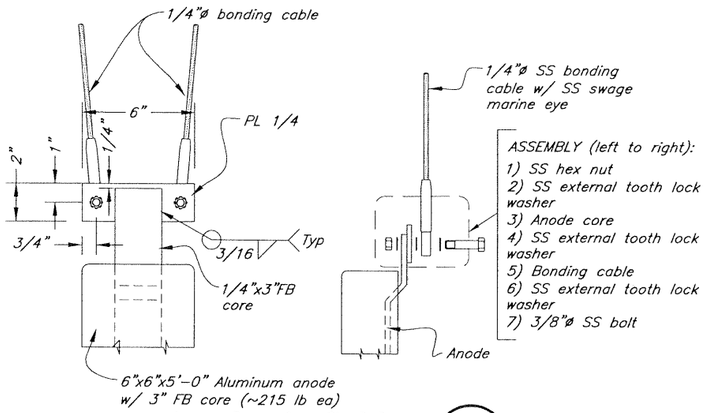
One anode required per dolphin



Bonding Cable Connection Detail 1



Bonding Cable Connection Detail 2



Anode & Cable Connection Detail 3

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER 8/8/07

CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

Haines Mooring Improvements Project 75249

Cathodic Protection System

PATH: Q:\Hns\75249\MF\Phase-B\Planset\15-CP System.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:24AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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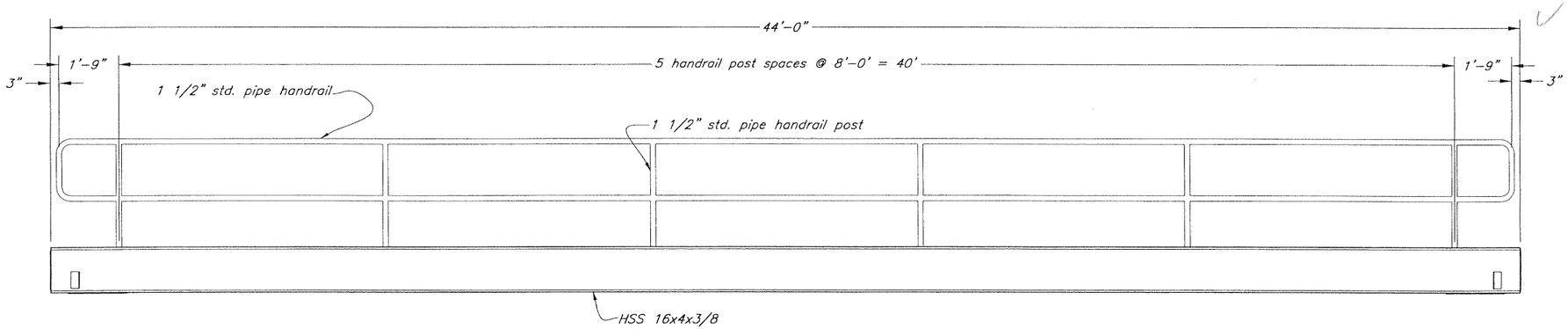
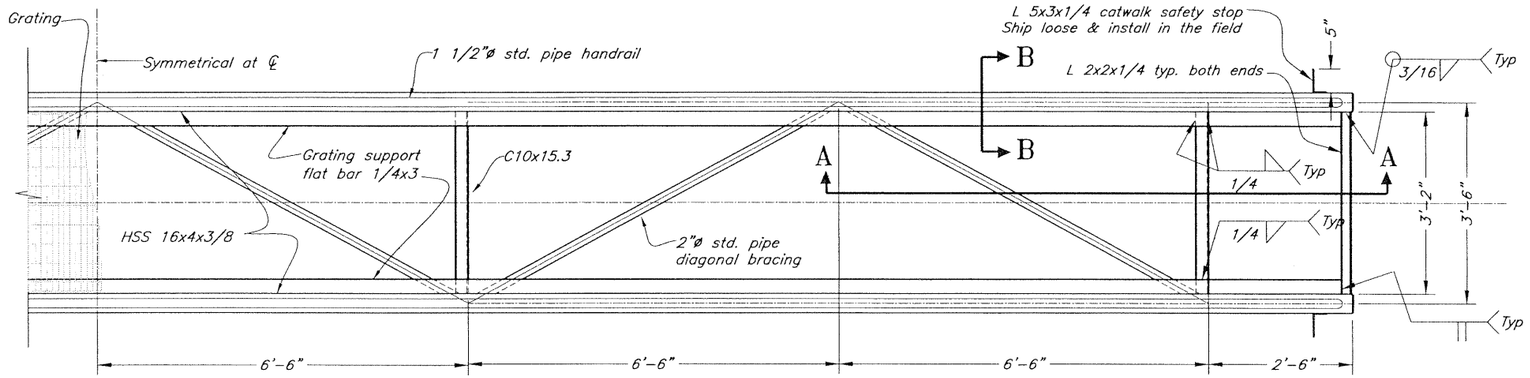
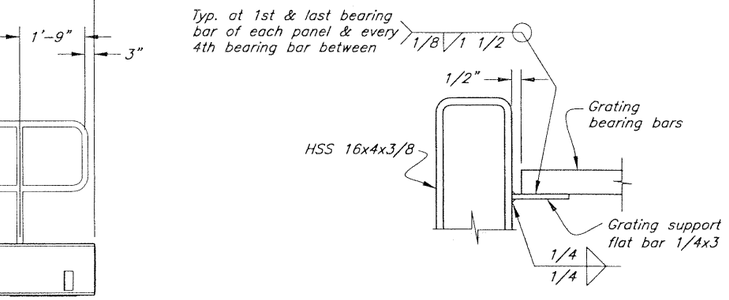


Elevation

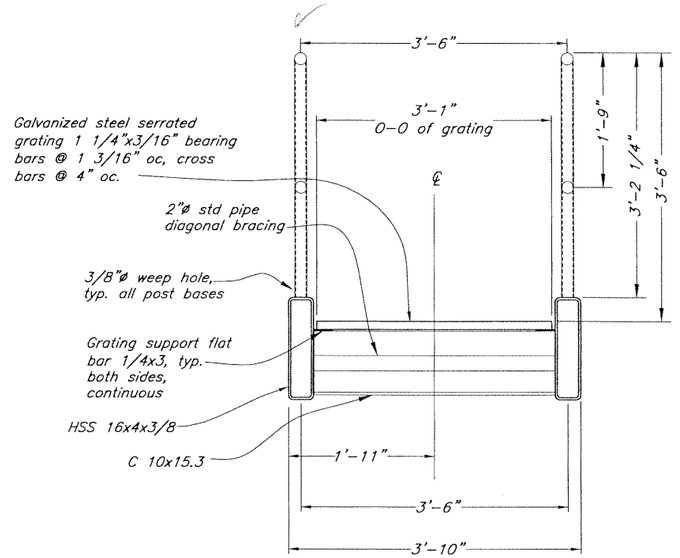


Plan

44' Catwalk (1/5)



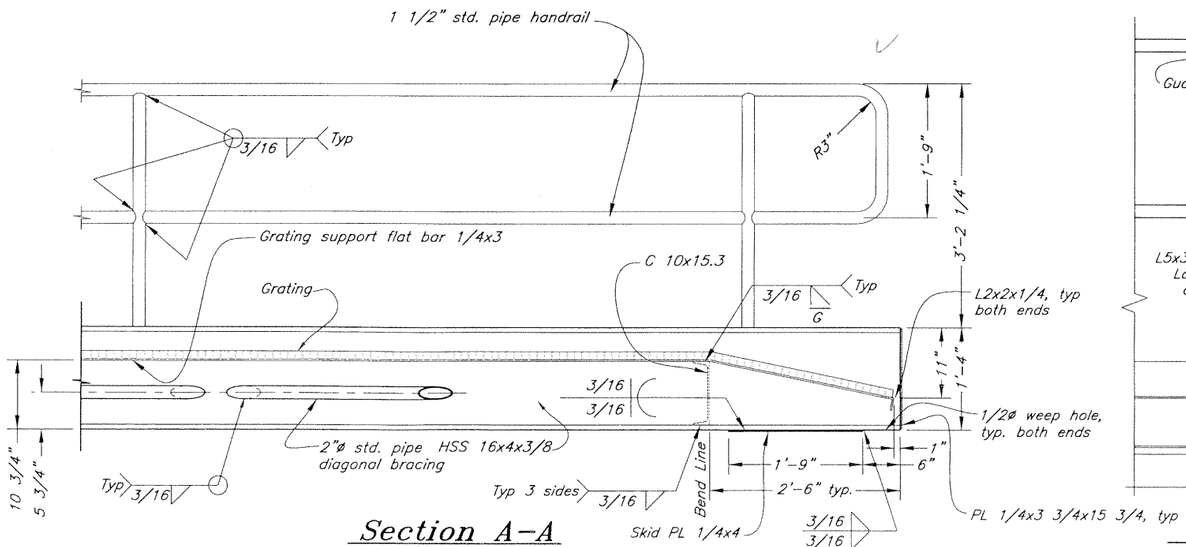
Section B-B



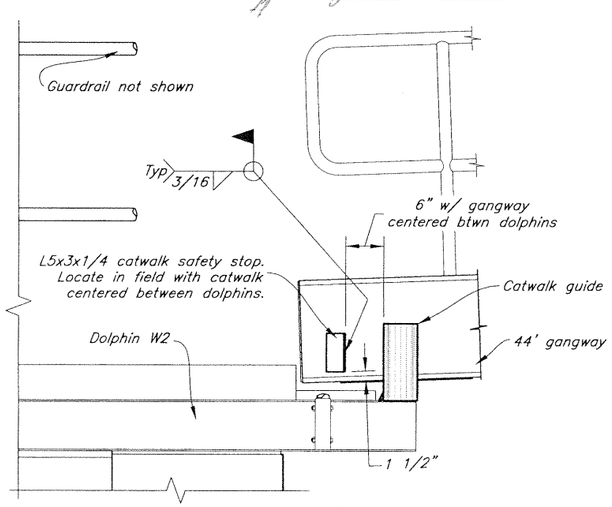
Typical Section

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 5/26/09



Section A-A



Section (Dolphin W2 shown, Dolphin W1 Similar) (B/5)

Notes:
1) Approximate weight of 44'-0" catwalk = 6,550 pounds.

2) Provide camber to compensate for dead load deflection (approximately 1" at center of 44'-0" catwalk).

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
DRAWN BY: W. Hickok
CHECKED BY: B. Savikko

STATE OF ALASKA
49th
Timothy H. Doggett
CE-9027
REGISTERED PROFESSIONAL ENGINEER
8/8/07

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

44' Catwalk at W1 to W2

PATH: Q:\Hns\75249\MF\Phase-B\Planset\16-44' catwalk.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:25AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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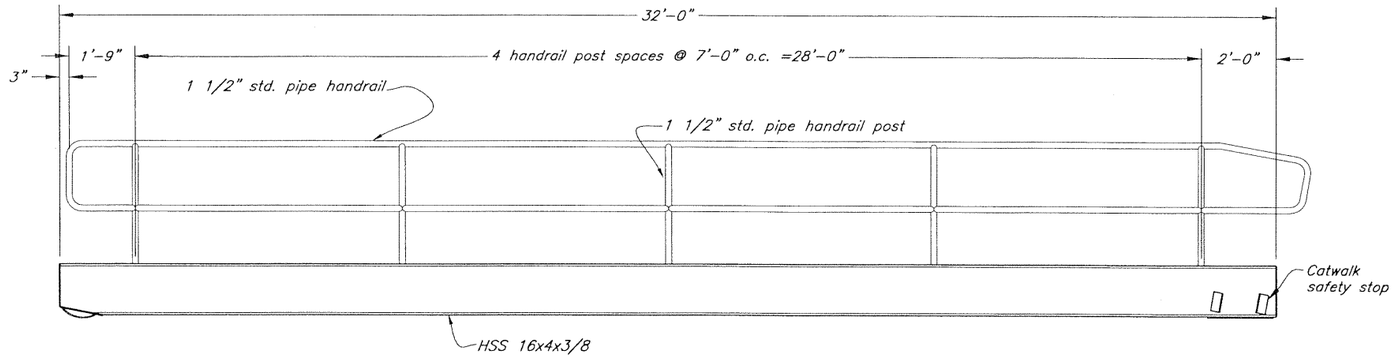
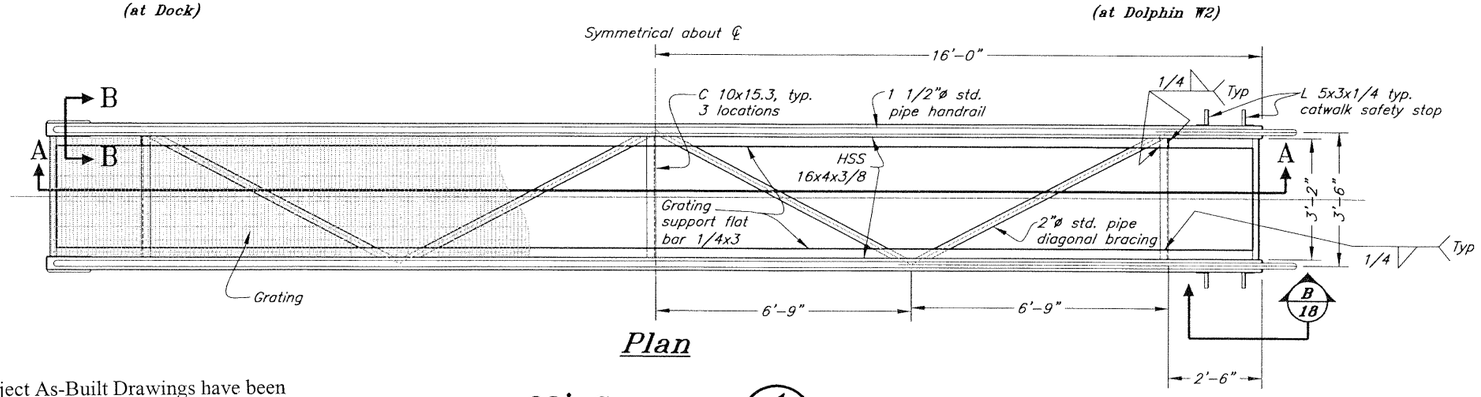


Lower End
(at Dock)

Elevation

Upper End
(at Dolphin W2)

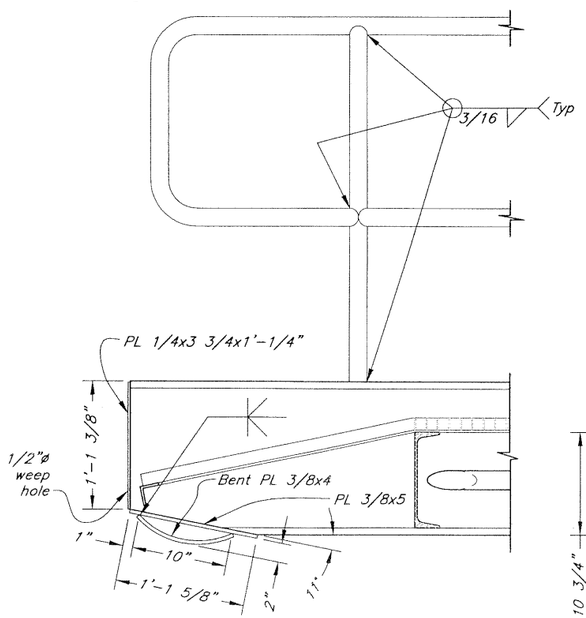


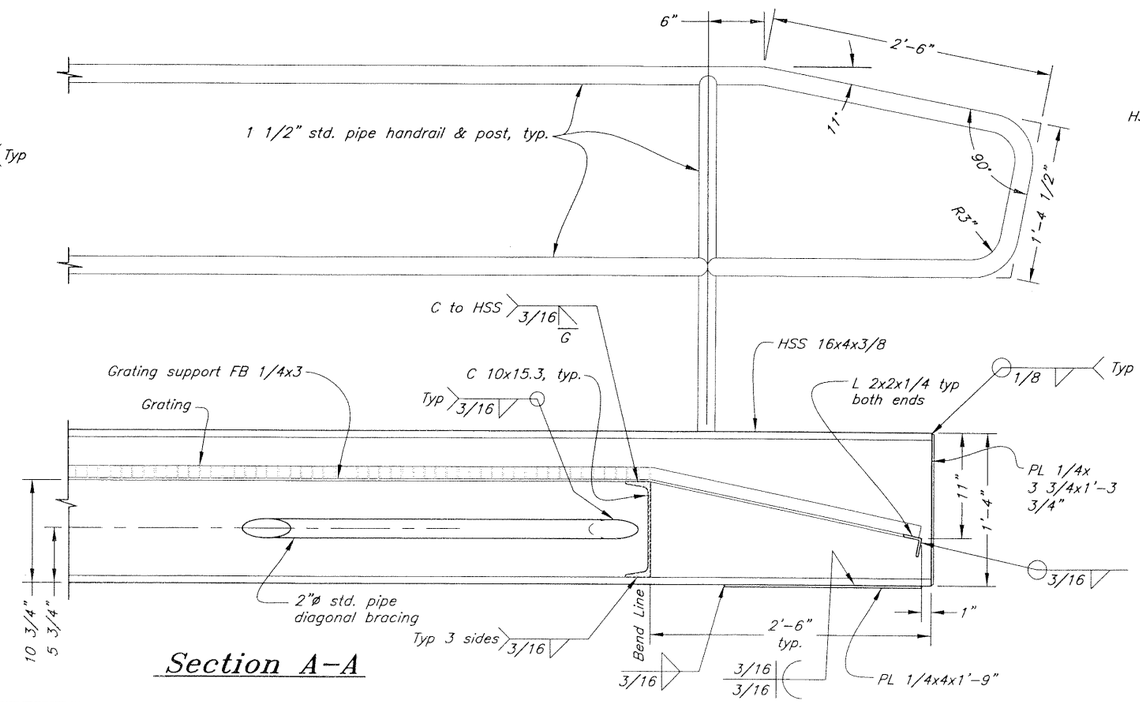
Plan

32' Gangway 1/5

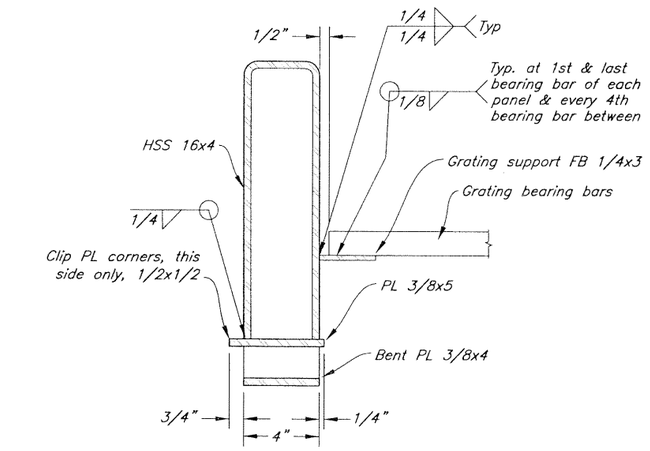
Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Geoff Doucette Date 7/26/07

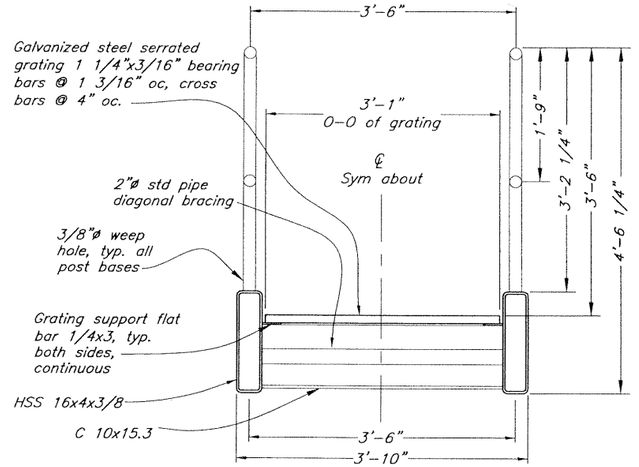




Section A-A



Section B-B



Typical Section

Notes:
1) Approximate weight of 32'-0" catwalk = 4,800 pounds

2) Provide camber to compensate for dead load deflection (approximately 1" at center of 32'-0" catwalk).

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
CHECKED BY: B. Sovikko
DRAWN BY: W. Hickok

STATE OF ALASKA
Timothy H. Doggett
CE-9027
REGISTERED PROFESSIONAL ENGINEER
49th
8/8/07

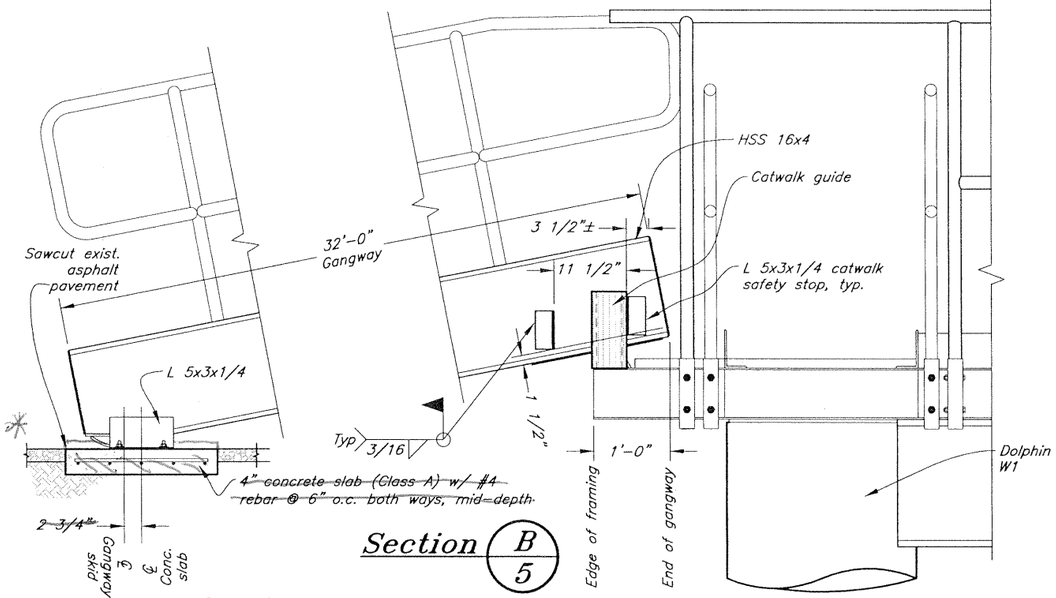
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

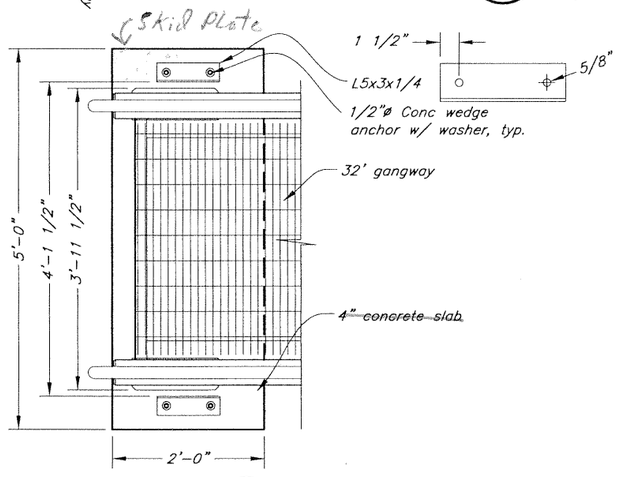
32' Gangway at W2 to Dock

PATH: Q:\Hns\75249\MF\Phase-B\Planset\17-32' gangway.dwg
PLOT: PSPACE 1=1 TAB: 17 Wed, 01/Aug/07 09:53AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	17	28

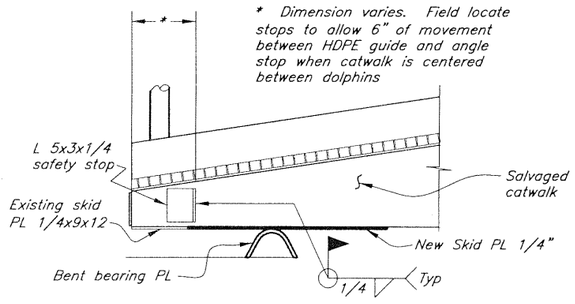


Section B / 5

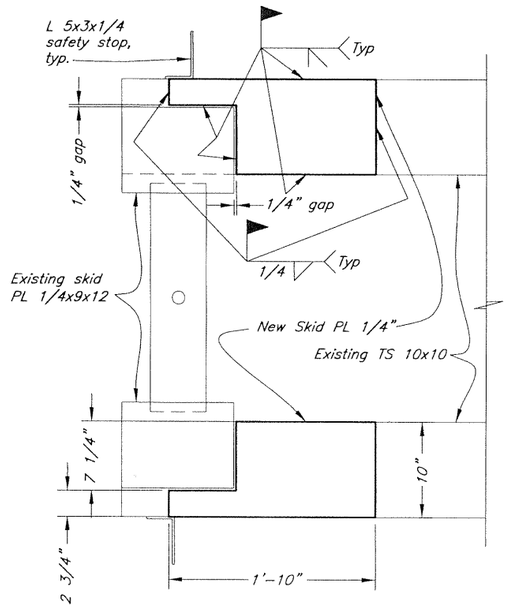


Plan 1 / 5

* Skid Plate attached to Existing pavement



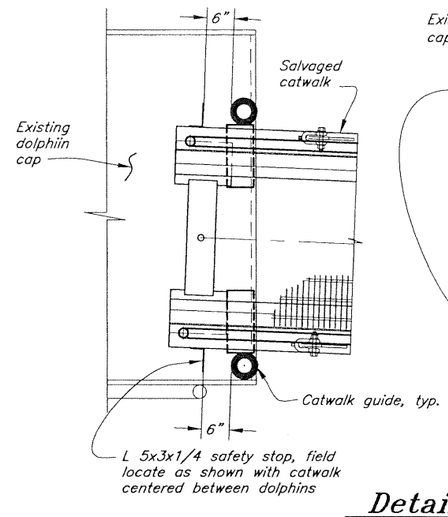
Salvaged Catwalk End Elevation

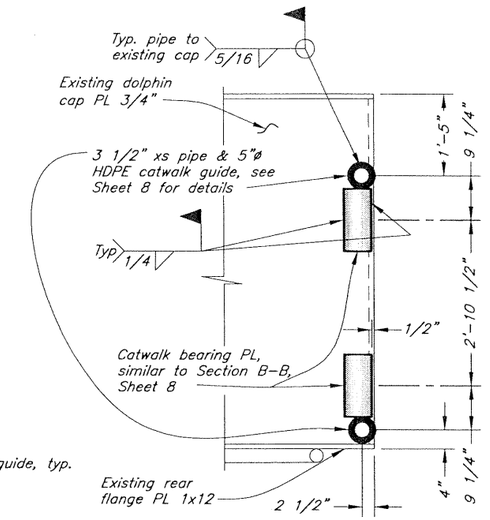


Salvaged Catwalk Bottom View

(Typical both ends of 39' and 61' catwalks)

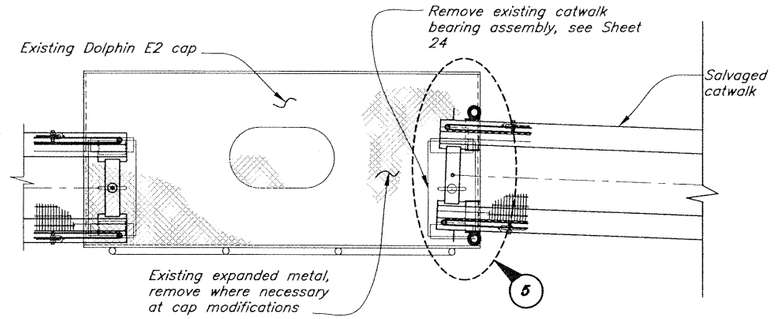
Catwalk Skid PL Modification 4 / 5





Catwalk removed for clarity

Detail 5 / 5



Modification Plan-Dolphin E2 & W1 & Salvaged Catwalk 3 / 5

Dolphin E2 shown, dolphin W1 similar but opposite hand

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 5/26/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett
CHECKED BY: B. Sovikko
DRAWN BY: W. Hickok

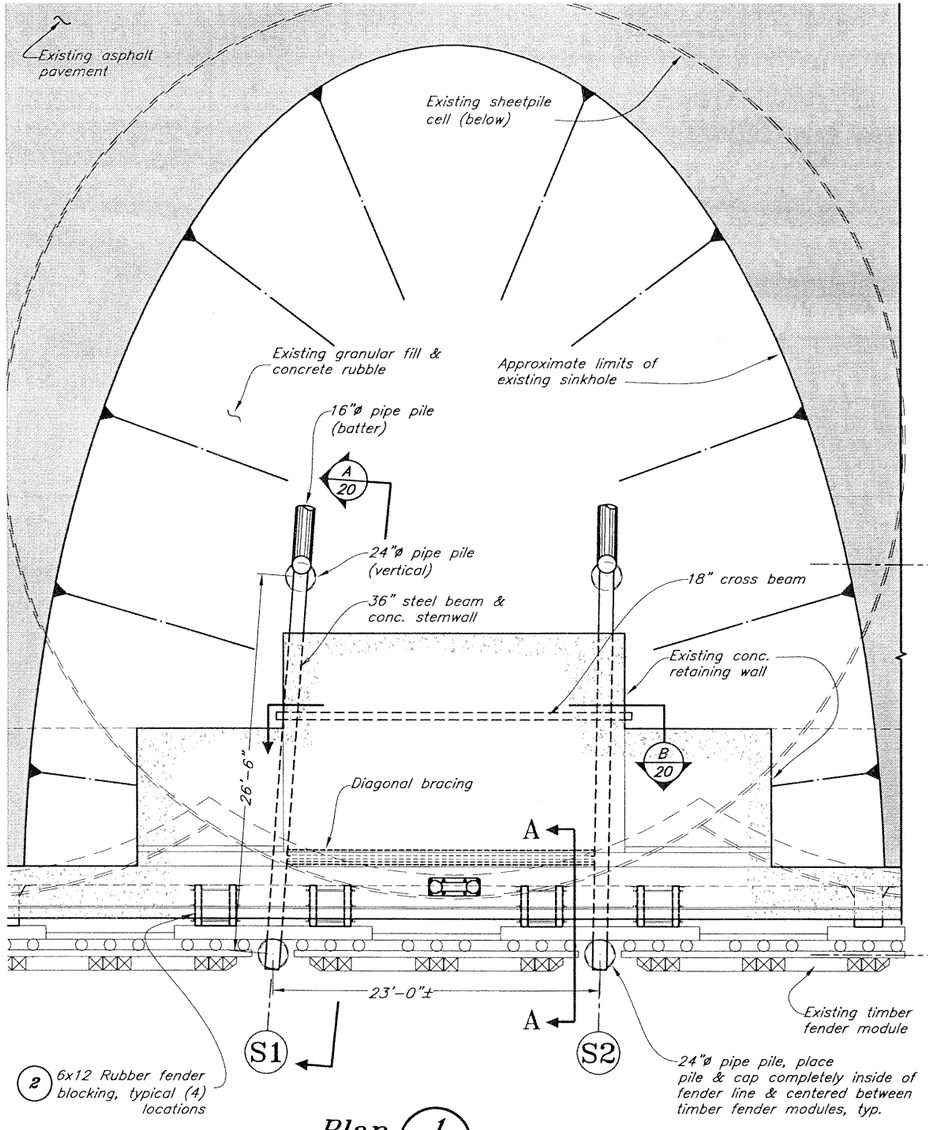
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

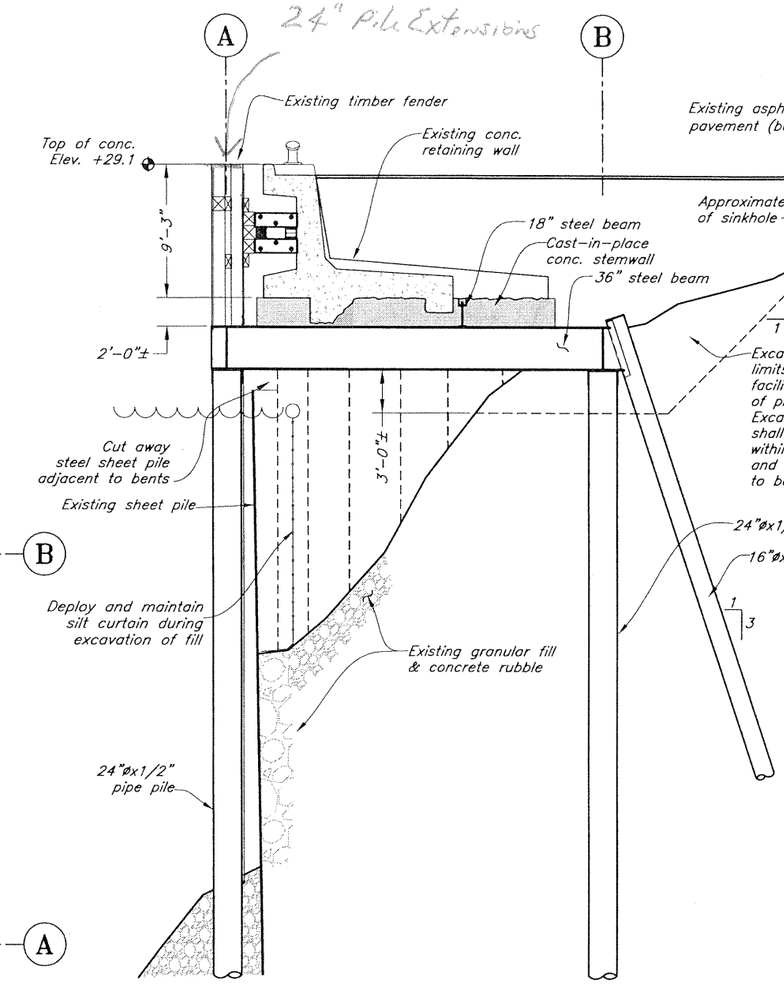
Existing Dolphins & Catwalks Modifications

PATH: Q:\Hns\75249\MF\Phase-B\Planset\18-Existing Dolphin & Catwalk mods.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:26AM

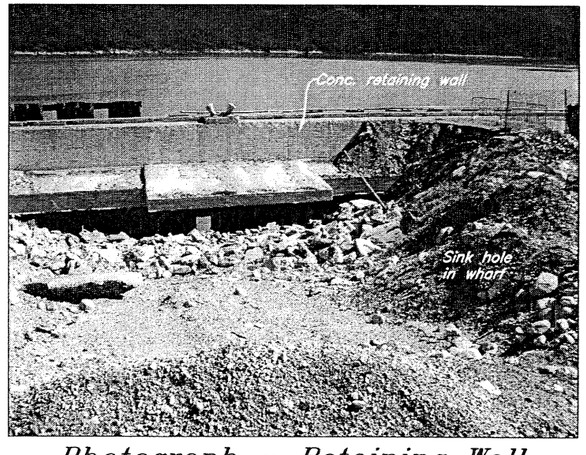
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	18	28



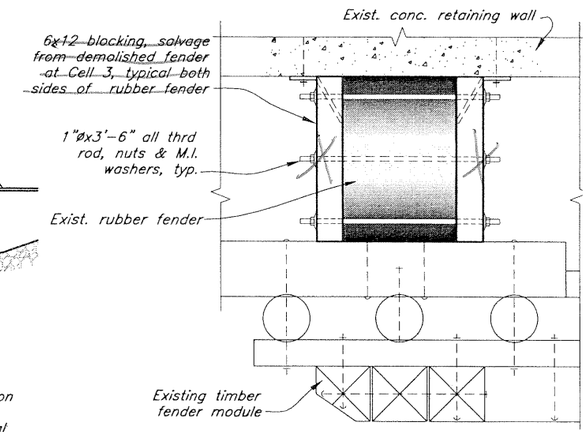
Plan 1/5



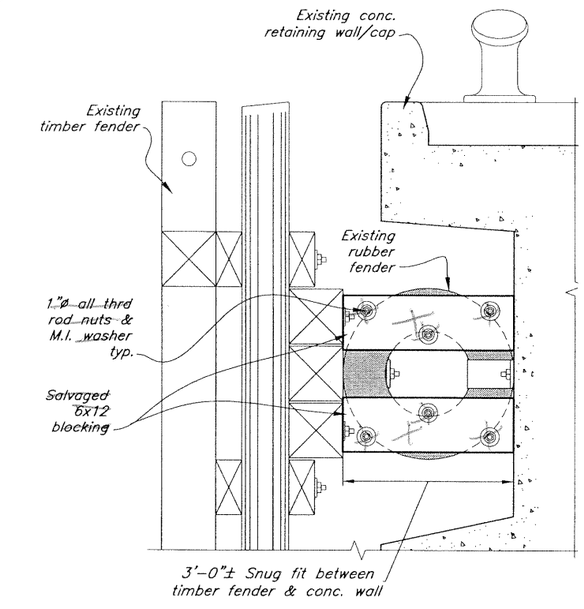
Elevation



Photograph – Retaining Wall
(looking seaward)



Detail 2



Section A-A

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 5/26/09

General Notes:

In October 2004, sheet piles at the face of Cell 4 separated, permitting erosion of the retained fill. A continuous concrete retaining wall and cap structure at the face of the dock was undermined. The concrete retaining wall was designed to bear directly on grade and not intended to span unsupported. An analysis using current codes indicates the retaining wall can not safely support its self weight. The purpose of this work is to stabilize the wall by installing two steel bents and cross beam, as shown on the Plans.

To ensure personnel safety, the Contractor shall provide falsework to support the retaining wall during installation of the bents. Falsework consisting of posts, beams, jacks or other mechanical devices, may be supported by the shoring piling and steel beam if loads do not cause overstressing of the steel. Falsework that is permanently attached to and incorporated into the shoring system may remain in place, unless otherwise directed by the Engineer.

DESIGNED BY: T. Daggett

STATE OF ALASKA 49th Timothy H. Daggett CE-9027 REGISTERED PROFESSIONAL ENGINEER 8/8/07

CHECKED BY: B. Savikko

DRAWN BY: W. Hickok

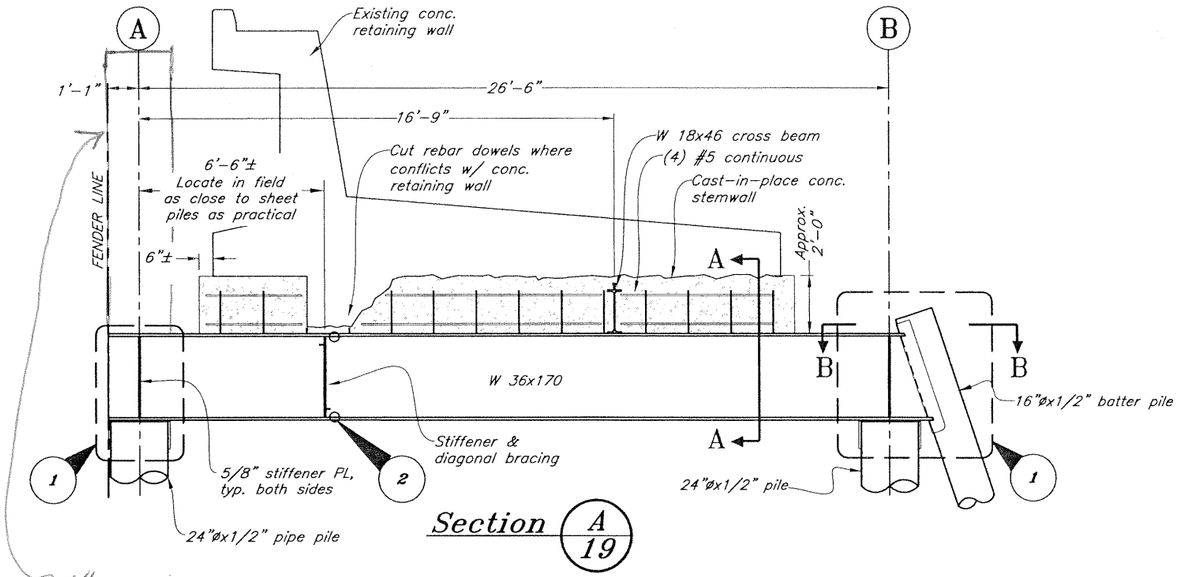
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Dock Cap Shoring

PATH: O:\Hns\75249\MF\Phase-B\Planset\19 Dock Cap Shoring.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:26AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	19	28

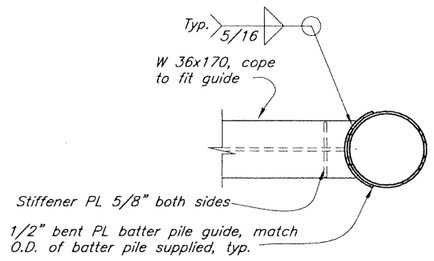


Section A 19

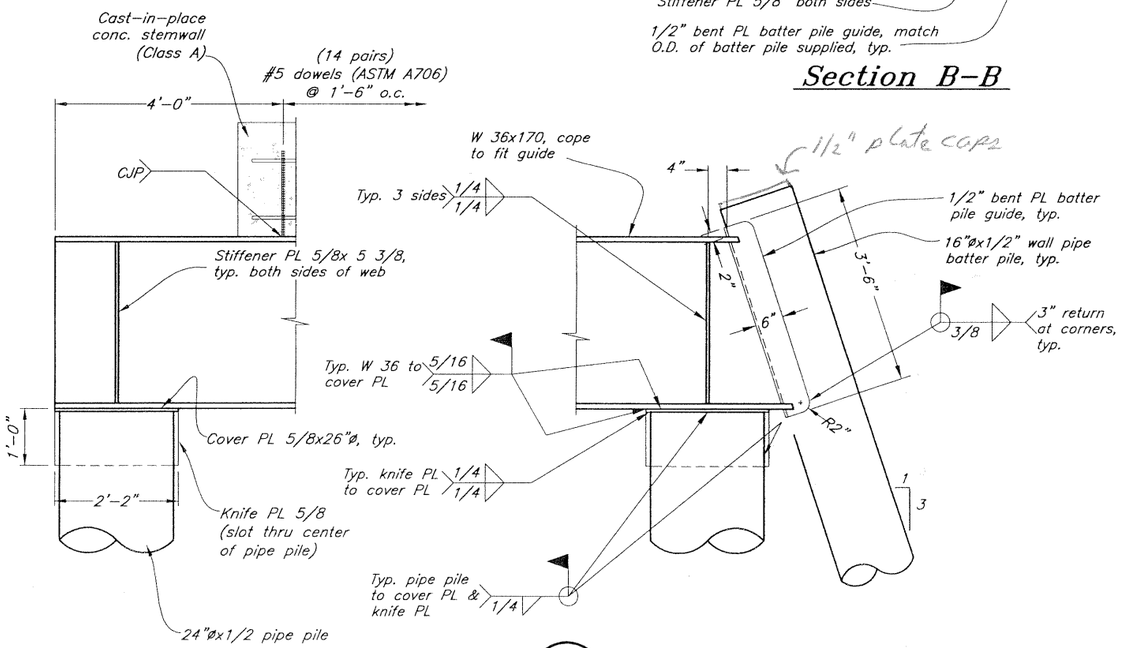
24"ø x 1/2" pipe pile extensions

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

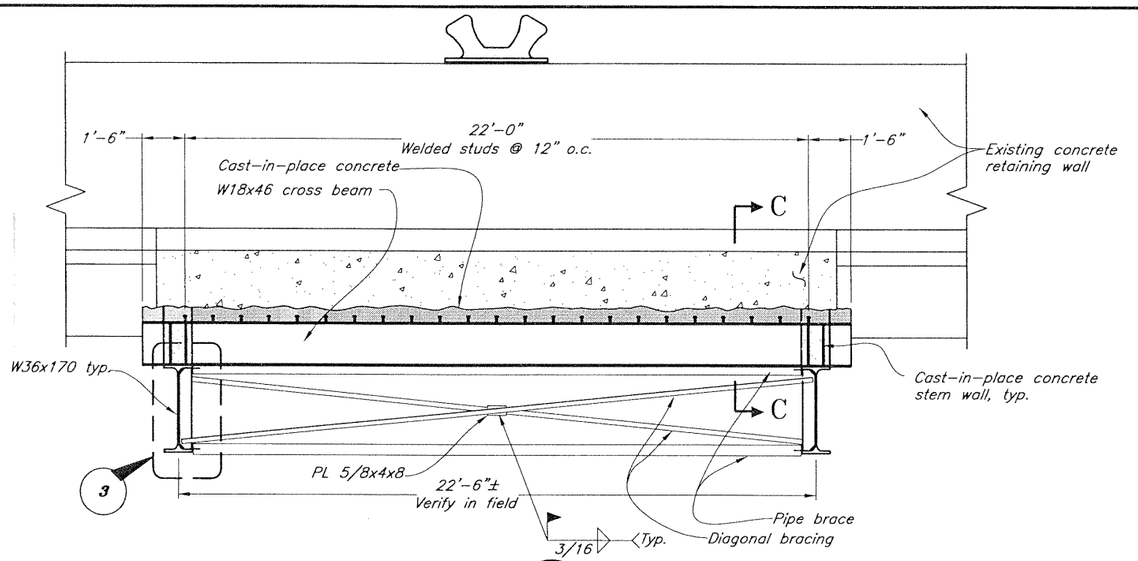
Proj.Engr Cliff Daugs Date 5/28/09



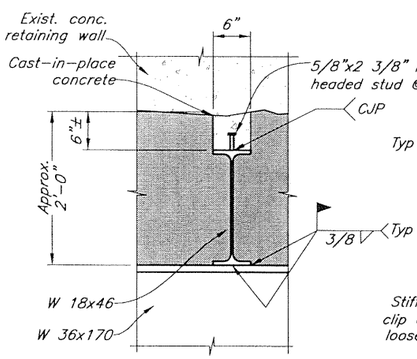
Section B-B



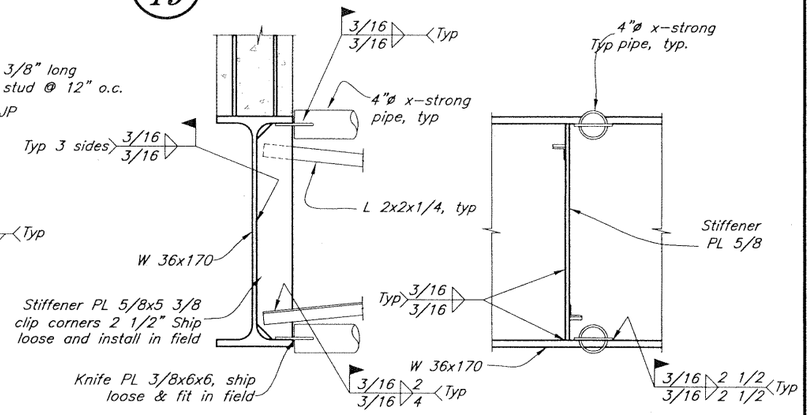
Detail 1



Section B 19

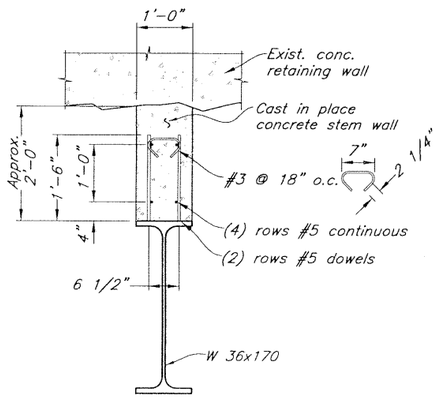


Section C-C



Detail 3

Detail 2



Section A-A

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Dock Cap Shoring Details

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER 8/8/07

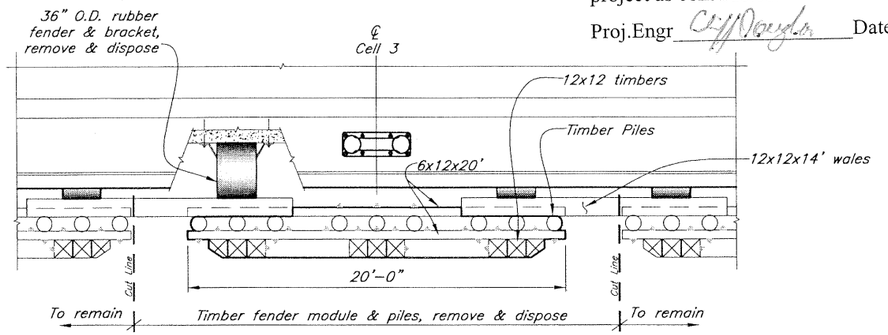
CHECKED BY: B. Savikko
DRAWN BY: W. Hickok

PATH: O:\Hns\75249\MF\Phase-B\Planset\20-Shoring Details v1.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:27AM

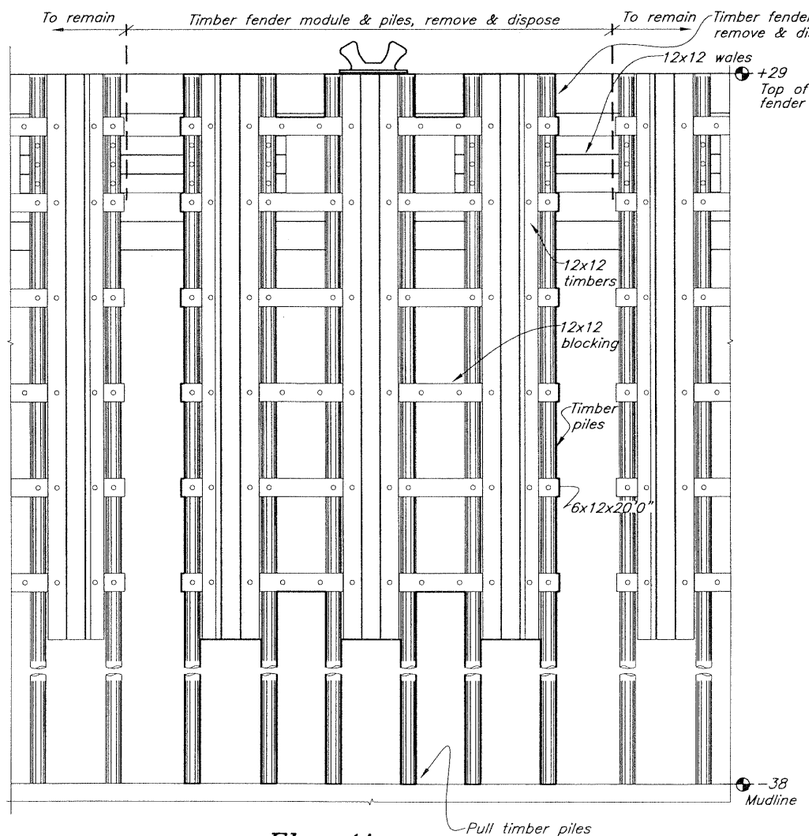
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	20	28

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

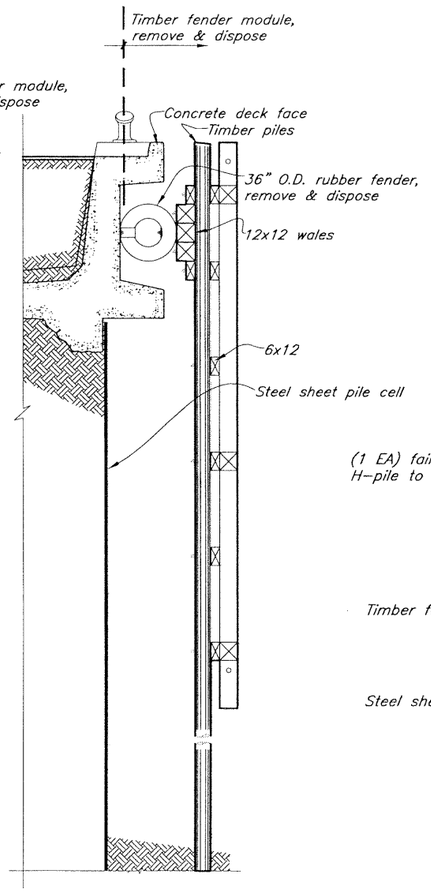
Proj.Engr _____ Date 5/26/09



Plan



Elevation

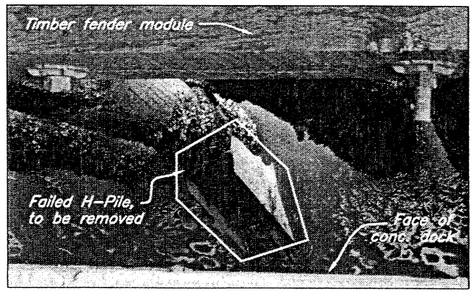


Section

NOTE:
All piles & timbers are creosote pressure treated.

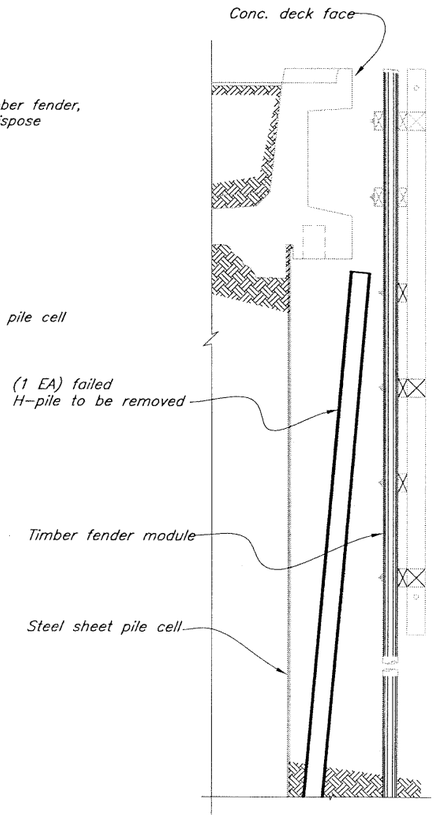
Refer to Sheet 26 for As-Built information.

Timber Fender Module Demolition 1/4



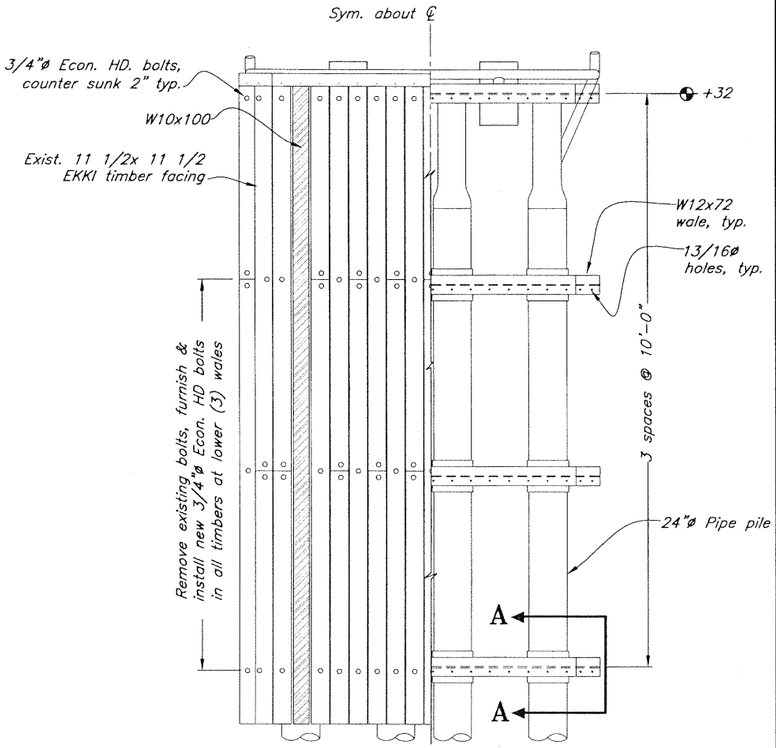
Photograph - H-Pile 3/4

(Looking down from face of dock)

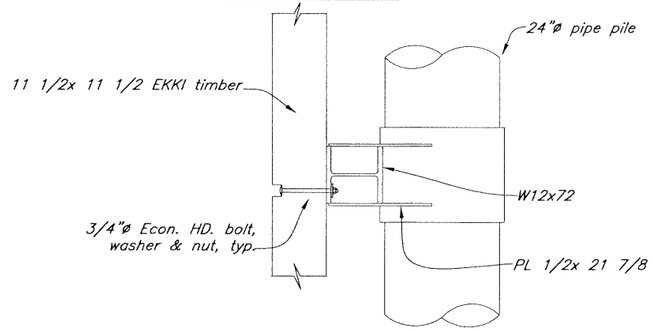


Section

H-Pile Demolition B/4



Elevation



Section A-A

Refastening Fender Timbers Detail 2/5

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: T. Doggett

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Existing Fender Repairs

STATE OF ALASKA 49th Timothy H. Doggett CE-9027 REGISTERED PROFESSIONAL ENGINEER

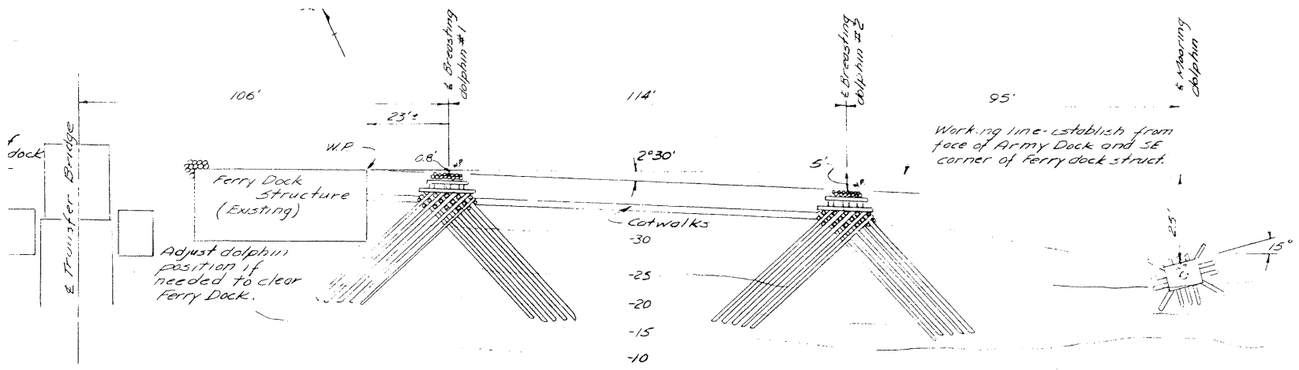
T. Doggett 8/8/07

CHECKED BY: B. Sovikko
DRAWN BY: W. Hickok

PATH: Q:\Hns\75249\MF\Phase-B\Planset\21-Exist Fender Repairs.dwg
PLOT: PSPACE 1=1 TAB: Layout1 Wed, 01/Aug/07 09:27AM

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	21	28

Remove Dolphin Piles

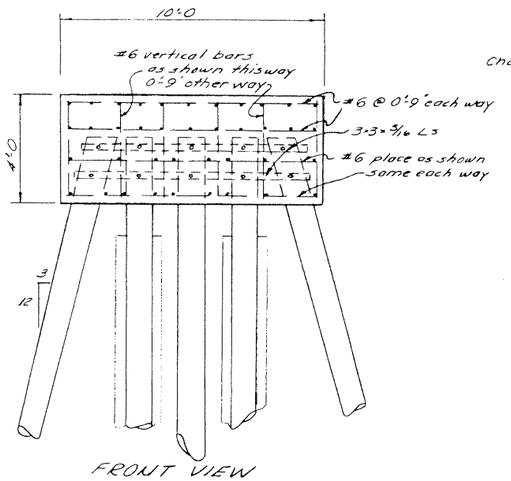


LAYOUT OF DOLPHIN ADDITION
Scale 1"=20'

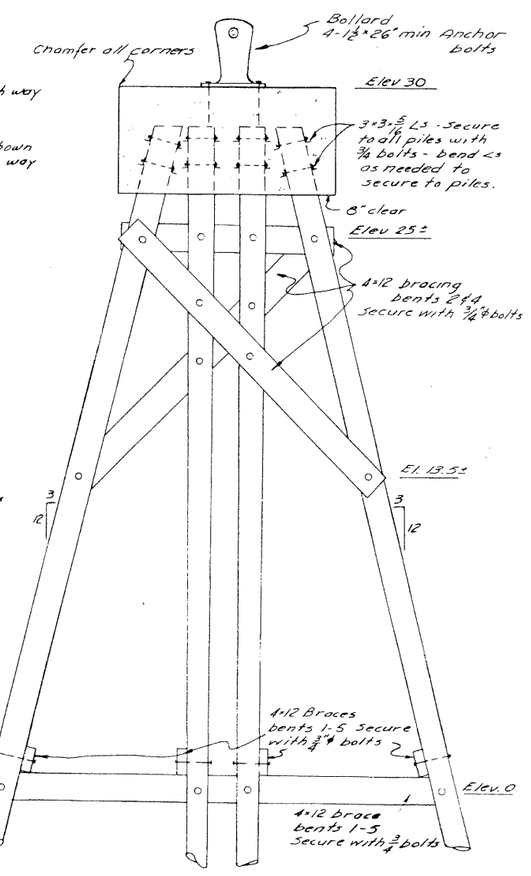
Note: Site contours from "Site Plan" by TONER & NEREAU'G dated Feb. 1962. Verify in field if needed.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

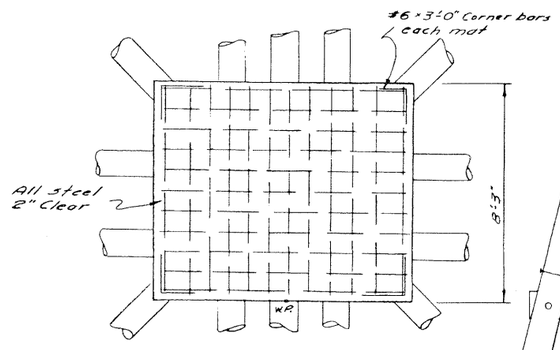
Proj.Engr Cliff Douglas Date 5/26/09



FRONT VIEW



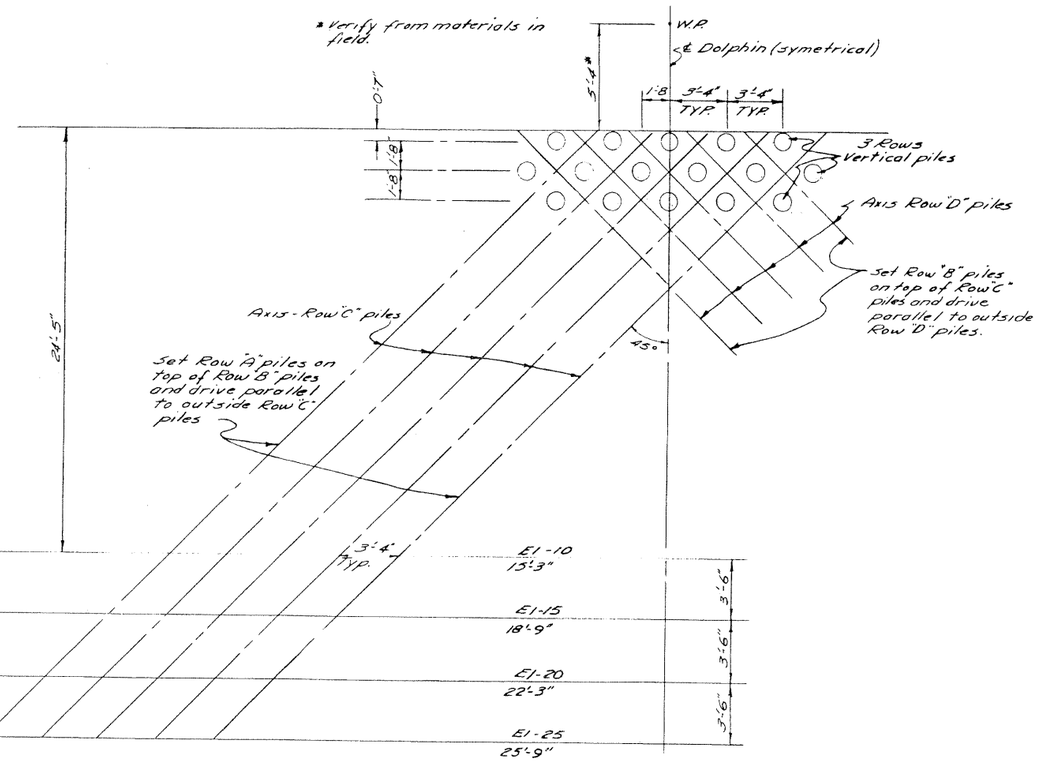
ELEVATION



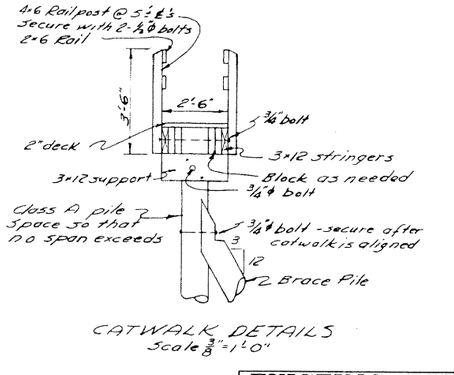
PLAN

Dolphin Notes

1. Mooring dolphin piles shall be Class A driven to a minimum penetration of 15' and a bearing value of 25 tons minimum. At least 18 tons of bearing must be developed 5' above final tip elevation during driving.



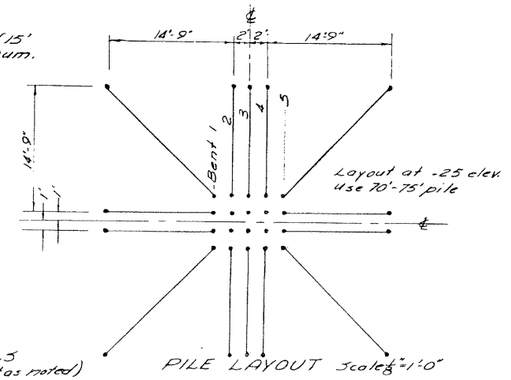
BREASTING DOLPHIN PILE LAYOUTS Scale ¼"=1'-0"



CATWALK DETAILS
Scale ⅜"=1'-0"

NO AS BUILT AVAILABLE

MOORING DOLPHIN DETAILS
Scale ⅜"=1'-0" (except as noted)



PILE LAYOUT Scale ⅛"=1'-0"

Note: Mooring loads and vessel details not available. Mooring dolphin designed for a 60,000 lbs transverse mooring load and a 25,000 lbs longitudinal springing load. Loads applied simultaneously.
By CAMPBELL & Assoc.

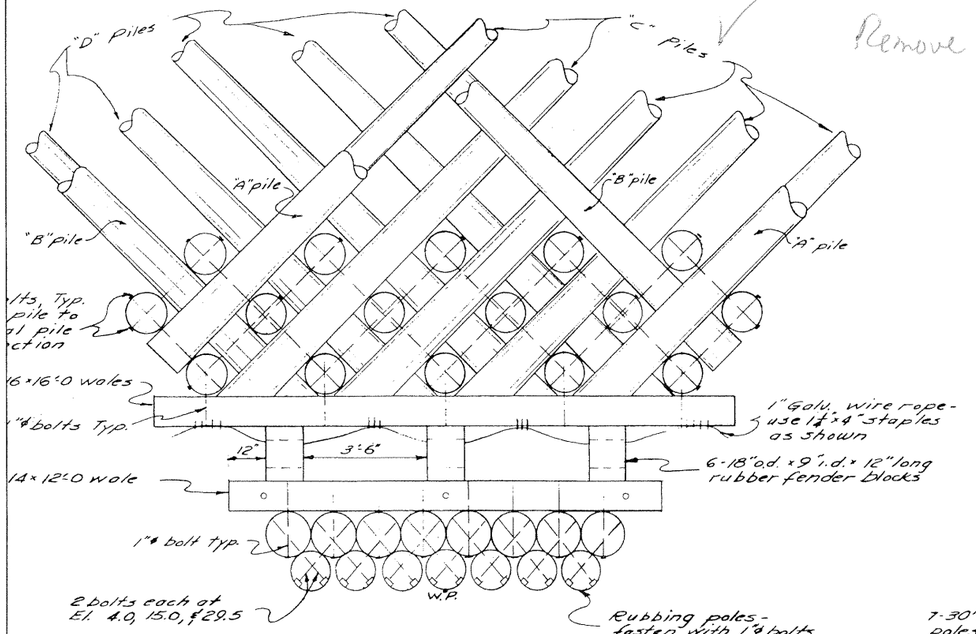
38 PILE DOLPHIN
HAINES - FERRY TERMINAL

PROJECT No. MT 95

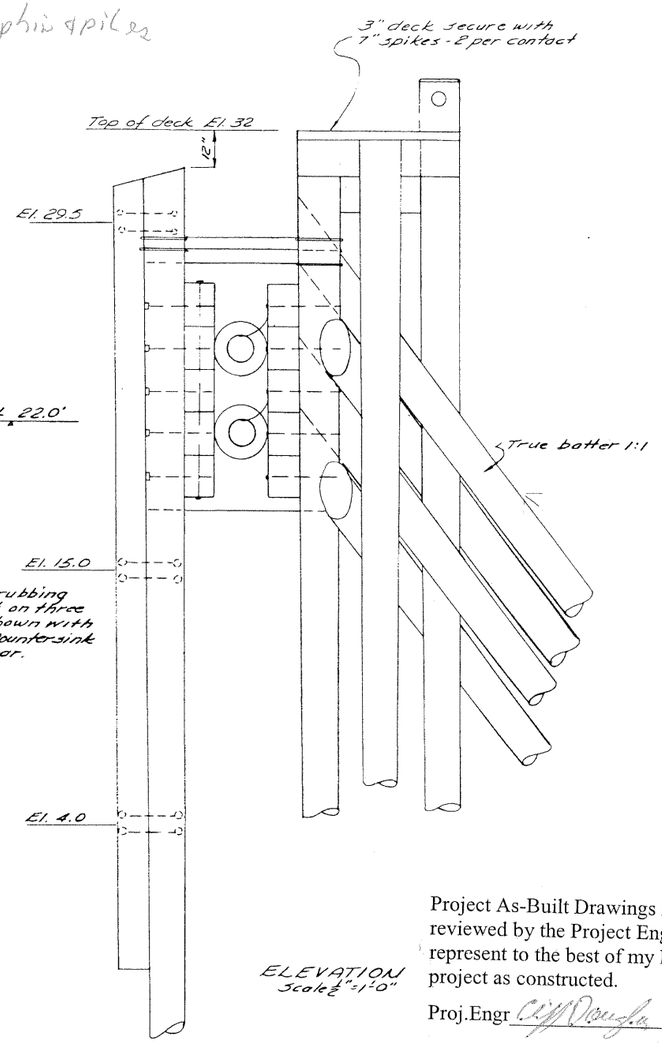
Scale: As Shown | Nov. 7, 1968 | 1/2

EXISTING STRUCTURES
Sheet 22 of 28

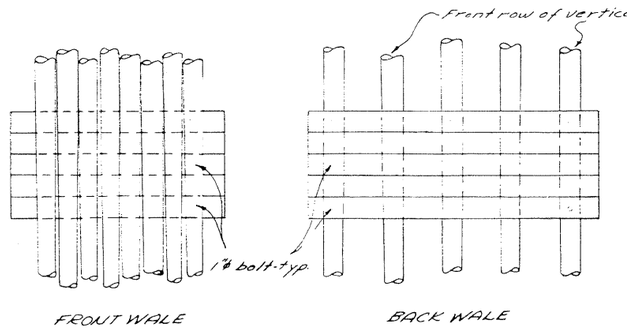
Remove Dolphin & piles



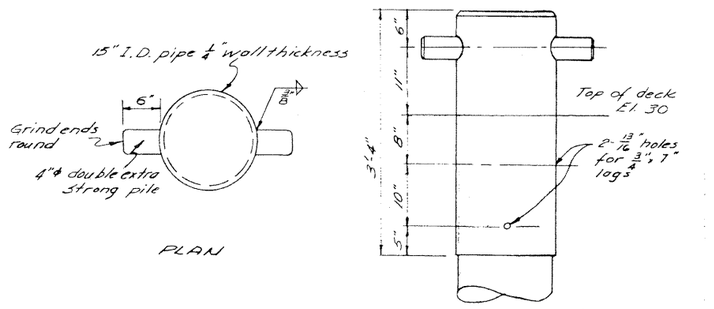
PLAN OF DOLPHIN
Scale ½"=1'-0"



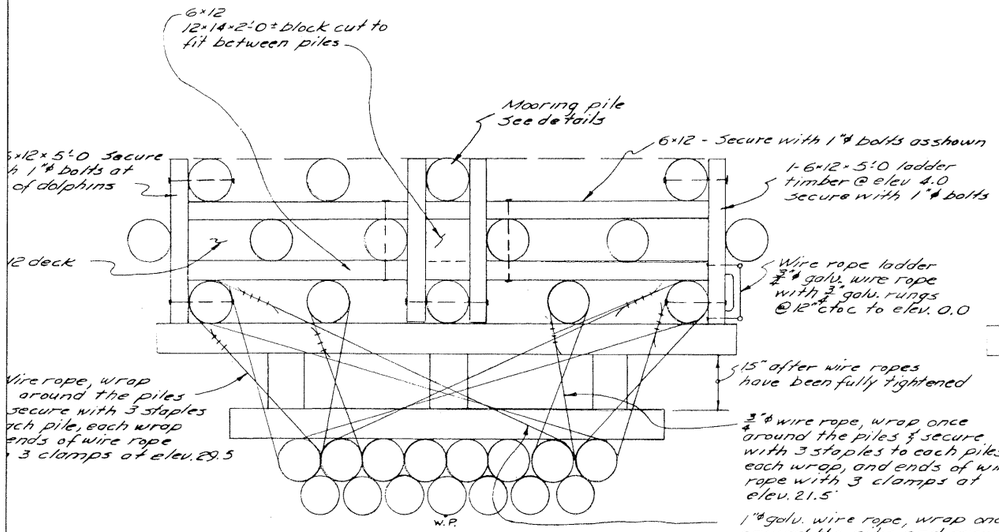
ELEVATION
Scale ½"=1'-0"



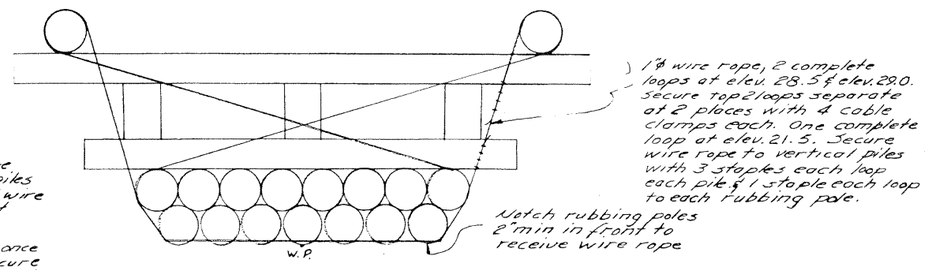
WALE BOLTING DETAILS
Scale ¼"=1'-0"



MOORING PILE DETAILS
Scale 1"=1'-0



DOLPHIN PLAN - WIRE ROPE AND TIMBERS
Scale ½"=1'-0"



WIRE ROPE ALTERNATIVE
Scale ½"=1'-0"

NOTES :
1. Whenever a brace pile passes between two vertical piles, the three piles shall be connected with a 1"ϕ bolt. (2 connections per brace pile.)
2. The fender holding cables shall be tightened fully and the rubber fender blocks compressed so the distance between wales will measure no more than 16".
3. Use ℞ washers for all dolphin bolts in the following sizes:
   ¾×5×5 - for 1½"ϕ bolts
   ½×4×4 - for 1"ϕ bolts

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Cliff Douglas Date 5/26/69

NO AS BUILT AVAILABLE

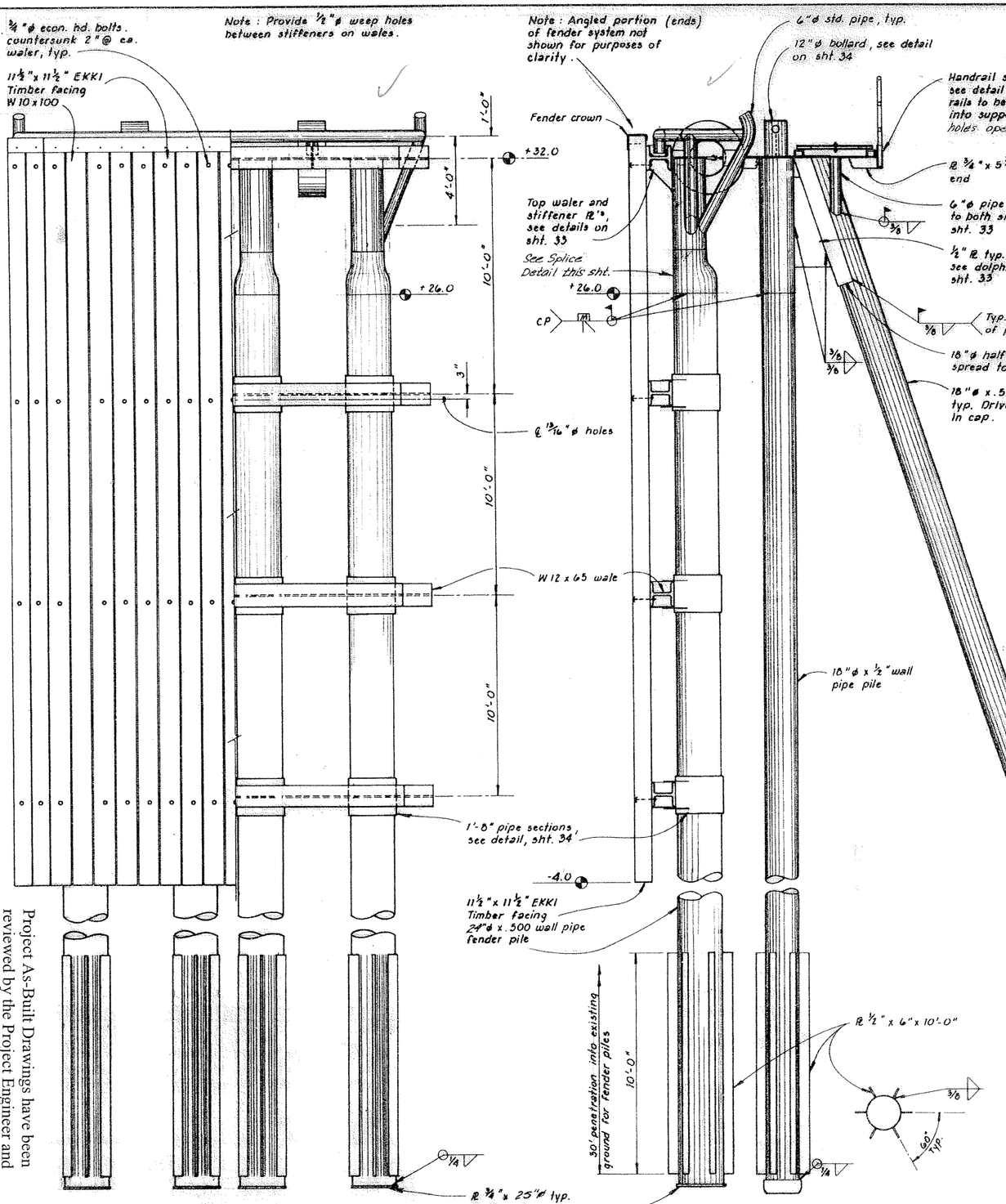
Design by Swan-Wooster Engineering Vancouver, B.C.
Design for Alaska Barite Co. Barite Island Development
Elevations revised for use at Haines.

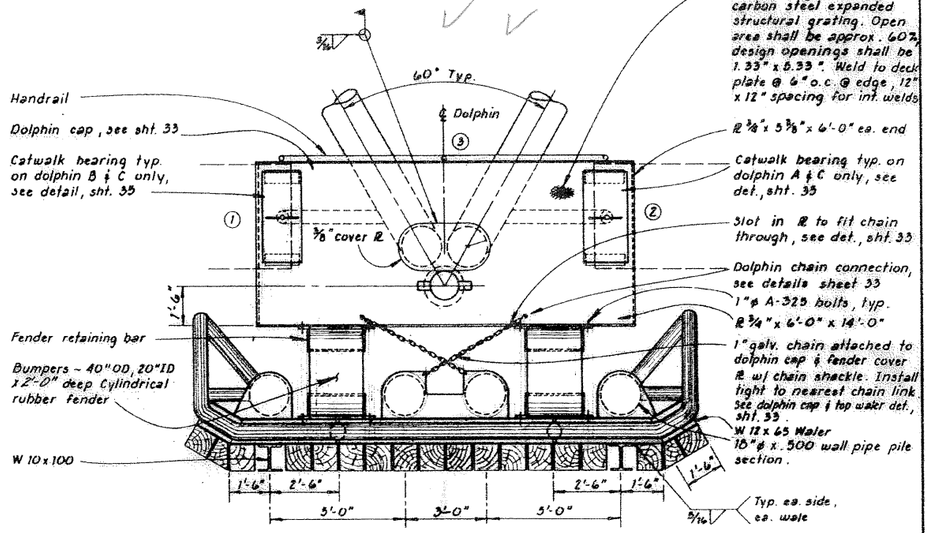
38 PILE DOLPHIN
HAINES FERRY TERMINAL

PROJECT No. MT 95

EXISTING STRUCTURES
Sheet 23 of 28

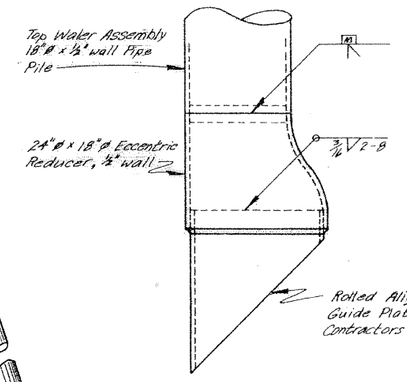
By CAMPBELL & ASSOC. Scale - As Shown Nov. 7, 1968 2 / 2



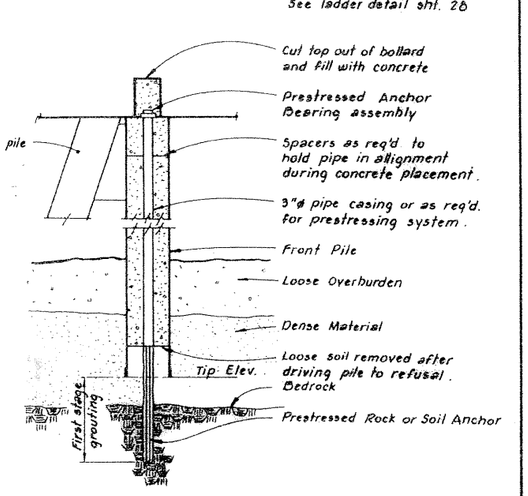


DOLPHIN PLAN
⅜" = 1'-0"

Note: Location of safety ladder for
① Dolphin A
② Dolphin B
③ Dolphin C
See ladder detail sht. 28



FENDER PILE SPLICE DETAIL
1" = 1'-0"



PRESTRESSED PILE ANCHOR
¾" = 1'-0"
Note: Prestressed Anchor shall be used only when directed by the engineer. 3 may be req'd. in accordance with section 301 & 308

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
Proj. Engr _____ Date 5/26/09

STAMP

STATE OF ALASKA 4918 Jack Daniel Bonds CE-8580 REGISTERED PROFESSIONAL ENGINEER 9/26/08

DO NOT SCALE THIS DRAWING – USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
HARBOR DESIGN AND CONSTRUCTION

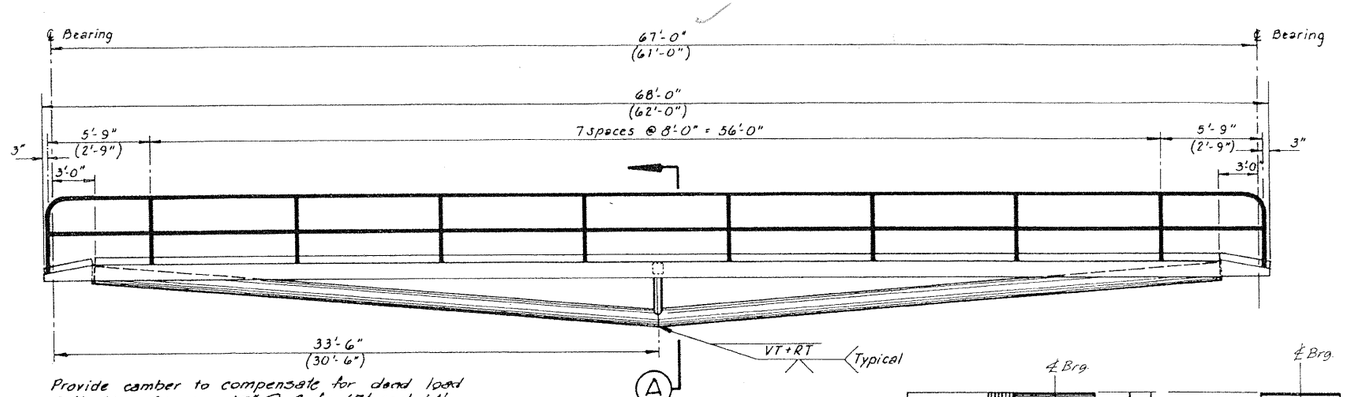
Haines Alaska

DOLPHIN PLAN & ELEVATIONS

SCALE As Noted	SURVEYED		APPROVED
DESIGNED HRM	DRAWN TS		
CHECKED JB/JDB	DATE 6-03		
PROJECT NUMBER A38512 & F-095-5(5)	SHEET 32 OF 37		

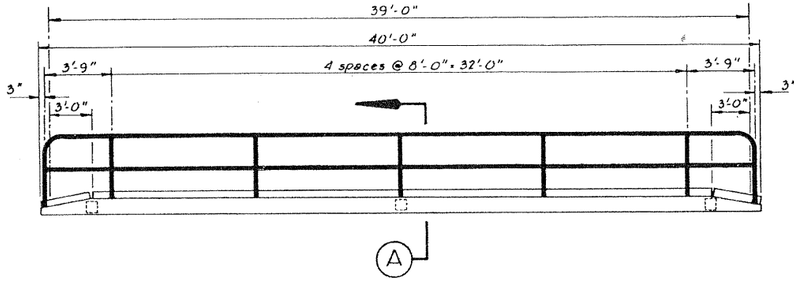
EXISTING STRUCTURES
Sheet 24 of 28

Note: Dimensions in parenthesis ( ) apply to 61'-0" Catwalk only.



Provide camber to compensate for dead load deflection (approx. 1.6" @ ℄ for 67' and 61' catwalks, and 0.6" @ ℄ for 39' catwalk).

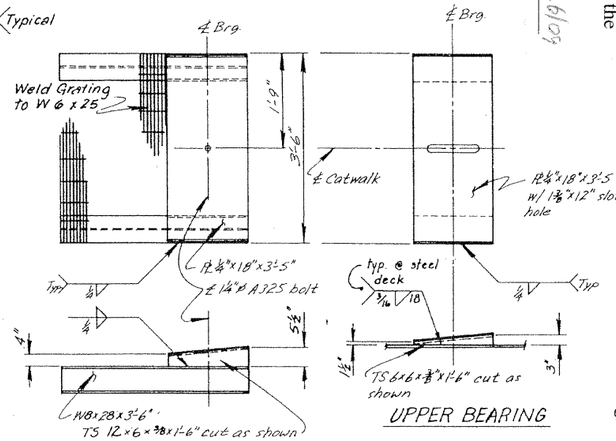
61 ℄ 67' CATWALK ELEVATION
1/4" = 1'-0"



39' CATWALK ELEVATION
1/4" = 1'-0"

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

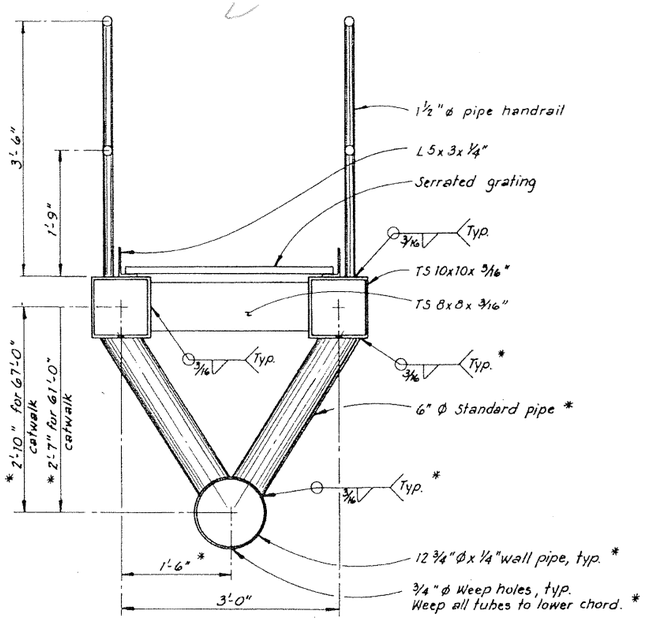
Proj. Engr. Carl Quarg Date 5/26/09



UPPER BEARING

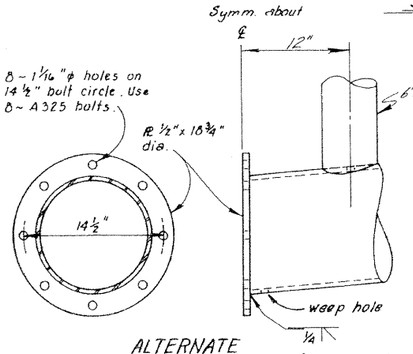
LOWER BEARING * *

61' CATWALK BEARING
3/4" = 1'-0"

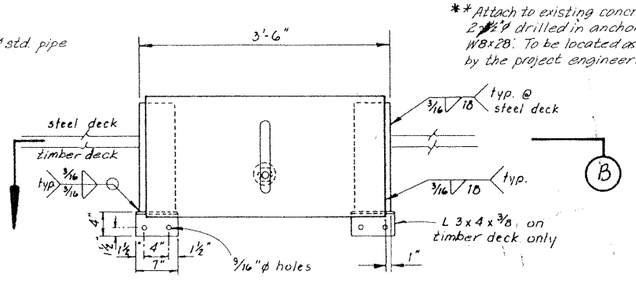


SECTION (A)
1" = 1'-0"

* Applicable to 67' ℄ 61' catwalks only.

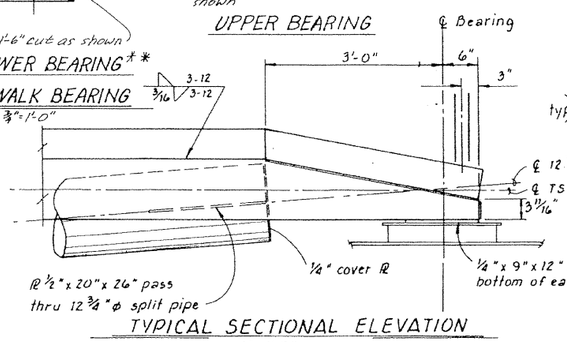


ALTERNATE ℄ SPLICE DETAILS
1 1/2" = 1'-0"

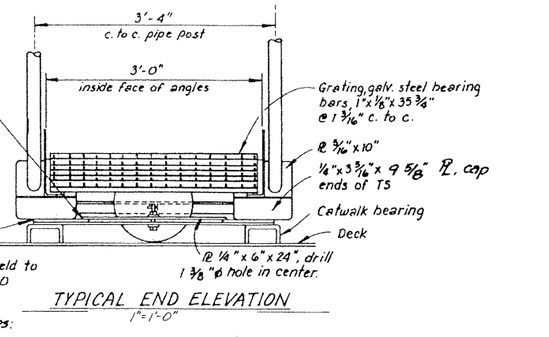


PLAN

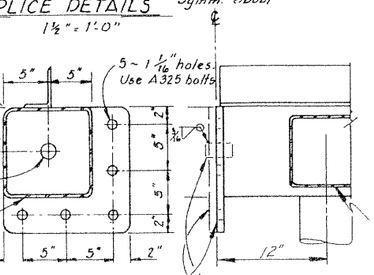
** Attach to existing concrete slab w/ 2 #4 drilled in anchor bolts each W8x28. To be located as directed by the project engineer.



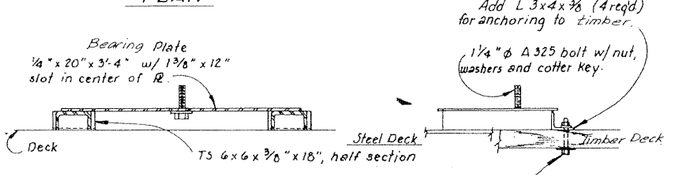
TYPICAL SECTIONAL ELEVATION
1" = 1'-0"



TYPICAL END ELEVATION
1" = 1'-0"

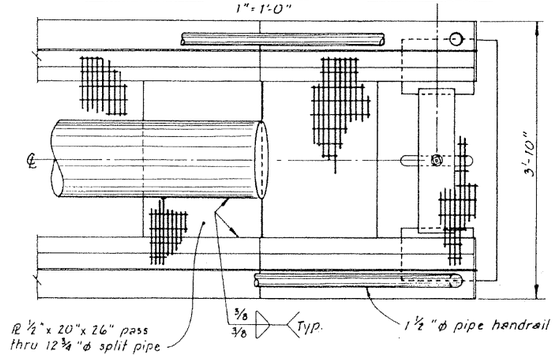


SECTION B



ELEVATION

67' ℄ 39' CATWALK BEARING DETAILS
1" = 1'-0"



TYPICAL SECTIONAL PLAN
1" = 1'-0"

Notes:

Catwalks to be painted per Section 303.

Approx. weight of catwalks: 39' = 5100#, 61' = 9900#, 67' = 10,900#

Grating shall be galvanized steel serrated edge. 1" x 1/8" bearing bars, 1 3/16" o.c., and cross bars, 4" o.c. Weld grating to angle.

All splices in tension or compression components of structure to be double bevel full penetration.

The fully erected catwalk structure shall only be supported or lifted @ end bearing points.

STAMP

STATE OF ALASKA
Jack Daniel Beedle
CE-5309
REGISTERED PROFESSIONAL ENGINEER

DO NOT SCALE THIS DRAWING – USE DIMENSIONS

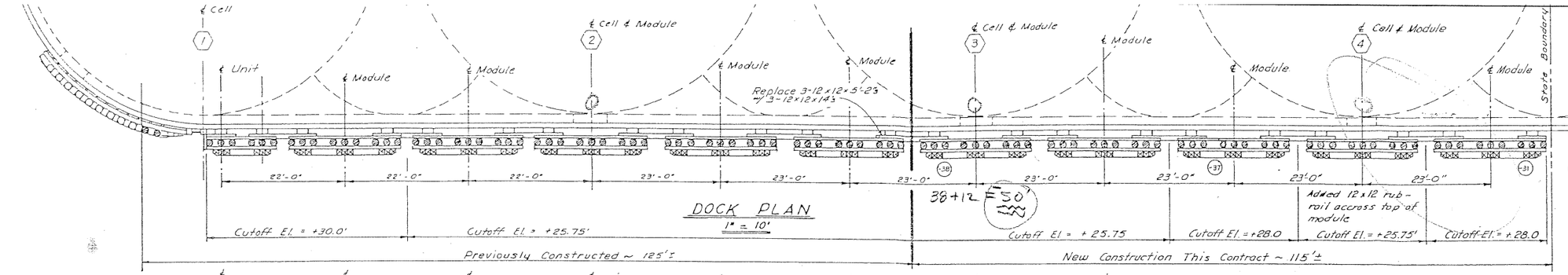
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
HARBOR DESIGN AND CONSTRUCTION

Haines Alaska

CATWALK DETAILS

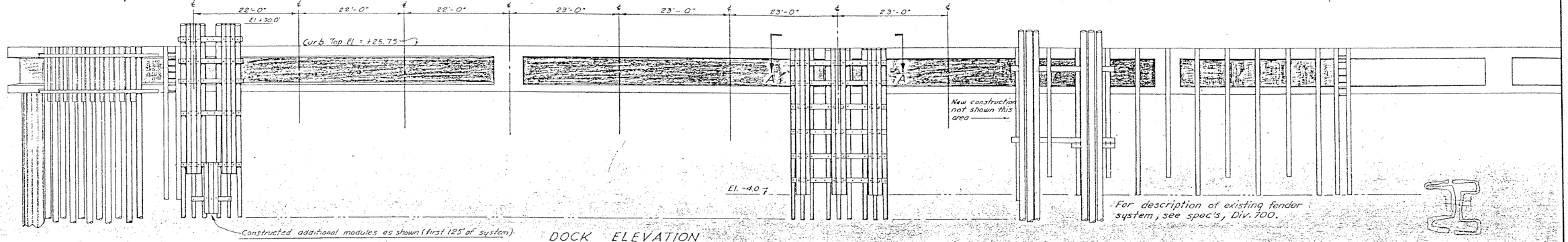
SCALE		SURVEYED	APPROVED
DESIGNED BS		DRAWN TS	
CHECKED JDB		DATE 6-83	
PROJECT NUMBER	F-095-5(5) & A38512	SHEET 35	OF 37

EXISTING STRUCTURES
Sheet 25 of 28



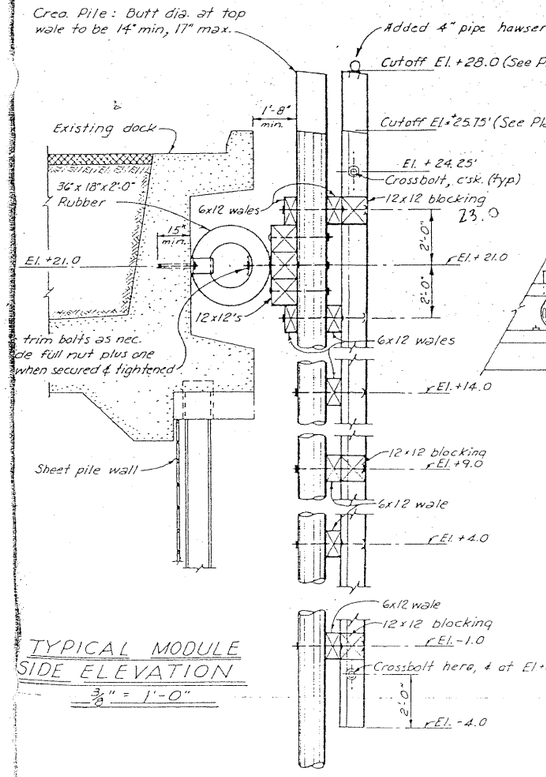
DOCK PLAN
1" = 10'

⓪ = Approx bottom elev., verify before ordering piles.

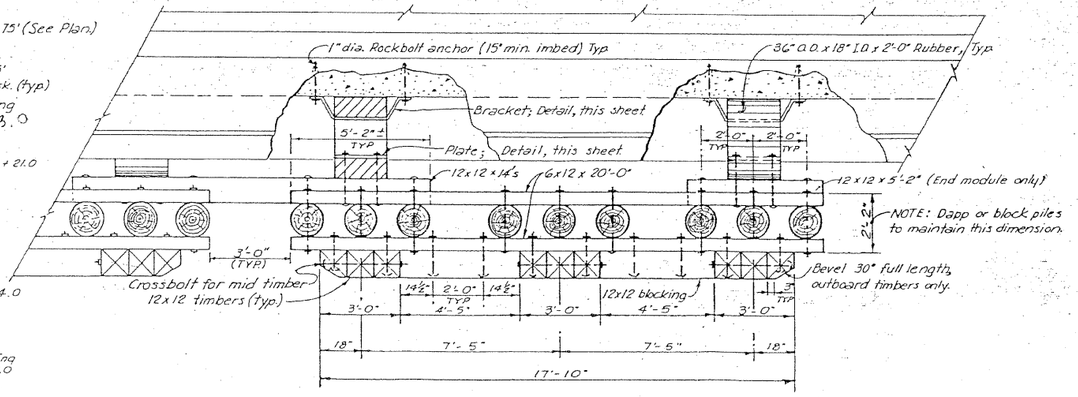


DOCK ELEVATION
1" = 10'

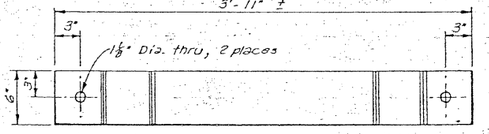
For description of existing fender system, see spec's, Div. 700.

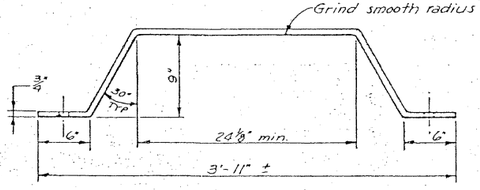


TYPICAL MODULE SIDE ELEVATION
3/8" = 1'-0"



VIEW A-A
3/8" = 1'-0"





BRACKET DETAIL
1½" = 1'-0"

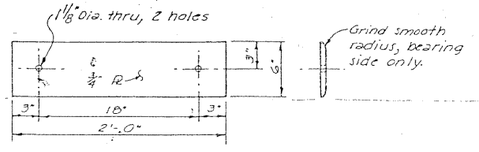


PLATE DETAIL
1½" = 1'-0"

NOTES:
1. All bolts to be economy head type, 1" except as noted.
2. All hardware to be hot dip galvanized after fabrication.
3. All piles and timber to be creosote pressure treated to 20-lb/cu.ft. min. retention for piles, 20-lb for timbers.
4. Piles to be driven tip down to 12' penetration or refusal.
5. All drilling or fabrication of timber after treatment shall be field treated as noted in Specs.
6. Malleable iron washers shall be placed between all nut and wood surfaces.
7. All timber materials to be Rough, full dimension.

As-Built 8-24-79 DCW

DO NOT SCALE THIS DRAWING – USE DIMENSIONS

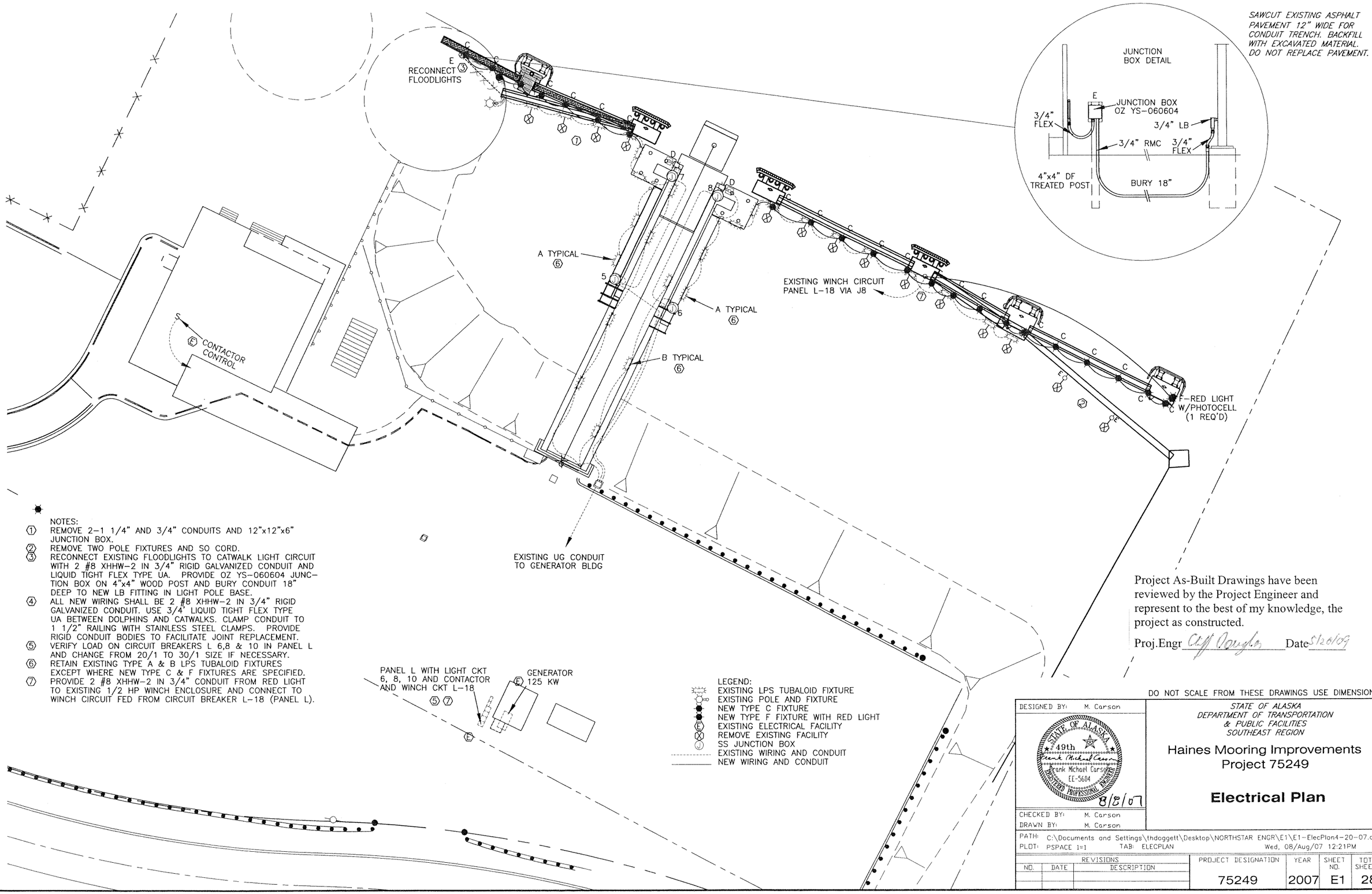
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER AND HARBORS

DOCK FENDER CONSTRUCTION DETAILS AS-BUILT

SCALE As noted	SURVEYED —	APPROVED	
DESIGNED JT/HM	DRAWN JT	Don Statter	
CHECKED	DATE 9-30-75	DIRECTOR	
PROJECT NUMBER	EXISTING STRUCTURES Sheet 26 of 28		

PROJECT NO. 75210-MT.739 Sht. 3 of 3

As-Built Drawing 5/26/09 CO



NOTES:

① REMOVE 2-1 1/4" AND 3/4" CONDUITS AND 12"x12"x6" JUNCTION BOX.

② REMOVE TWO POLE FIXTURES AND SO CORD.

③ RECONNECT EXISTING FLOODLIGHTS TO CATWALK LIGHT CIRCUIT WITH 2 #8 XHHW-2 IN 3/4" RIGID GALVANIZED CONDUIT AND LIQUID TIGHT FLEX TYPE UA. PROVIDE OZ YS-060604 JUNCTION BOX ON 4"x4" WOOD POST AND BURY CONDUIT 18" DEEP TO NEW LB FITTING IN LIGHT POLE BASE.

④ ALL NEW WIRING SHALL BE 2 #8 XHHW-2 IN 3/4" RIGID GALVANIZED CONDUIT. USE 3/4' LIQUID TIGHT FLEX TYPE UA BETWEEN DOLPHINS AND CATWALKS. CLAMP CONDUIT TO 1 1/2" RAILING WITH STAINLESS STEEL CLAMPS. PROVIDE RIGID CONDUIT BODIES TO FACILITATE JOINT REPLACEMENT.

⑤ VERIFY LOAD ON CIRCUIT BREAKERS L 6,8 & 10 IN PANEL L AND CHANGE FROM 20/1 TO 30/1 SIZE IF NECESSARY.

⑥ RETAIN EXISTING TYPE A & B LPS TUBALOID FIXTURES EXCEPT WHERE NEW TYPE C & F FIXTURES ARE SPECIFIED.

⑦ PROVIDE 2 #8 XHHW-2 IN 3/4" CONDUIT FROM RED LIGHT TO EXISTING 1/2 HP WINCH ENCLOSURE AND CONNECT TO WINCH CIRCUIT FED FROM CIRCUIT BREAKER L-18 (PANEL L).

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.

Proj.Engr Jeff Dougherty Date 5/20/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: M. Carson
DRAWN BY: M. Carson
CHECKED BY: M. Carson

STATE OF ALASKA 49th Frank Michael Carson EE-5604 REGISTERED PROFESSIONAL ENGINEER 8/8/07

PATH: C:\Documents and Settings\thdoggett\Desktop\NORTHSTAR ENGR\E1\E1-ElecPlan4-20-07.dwg
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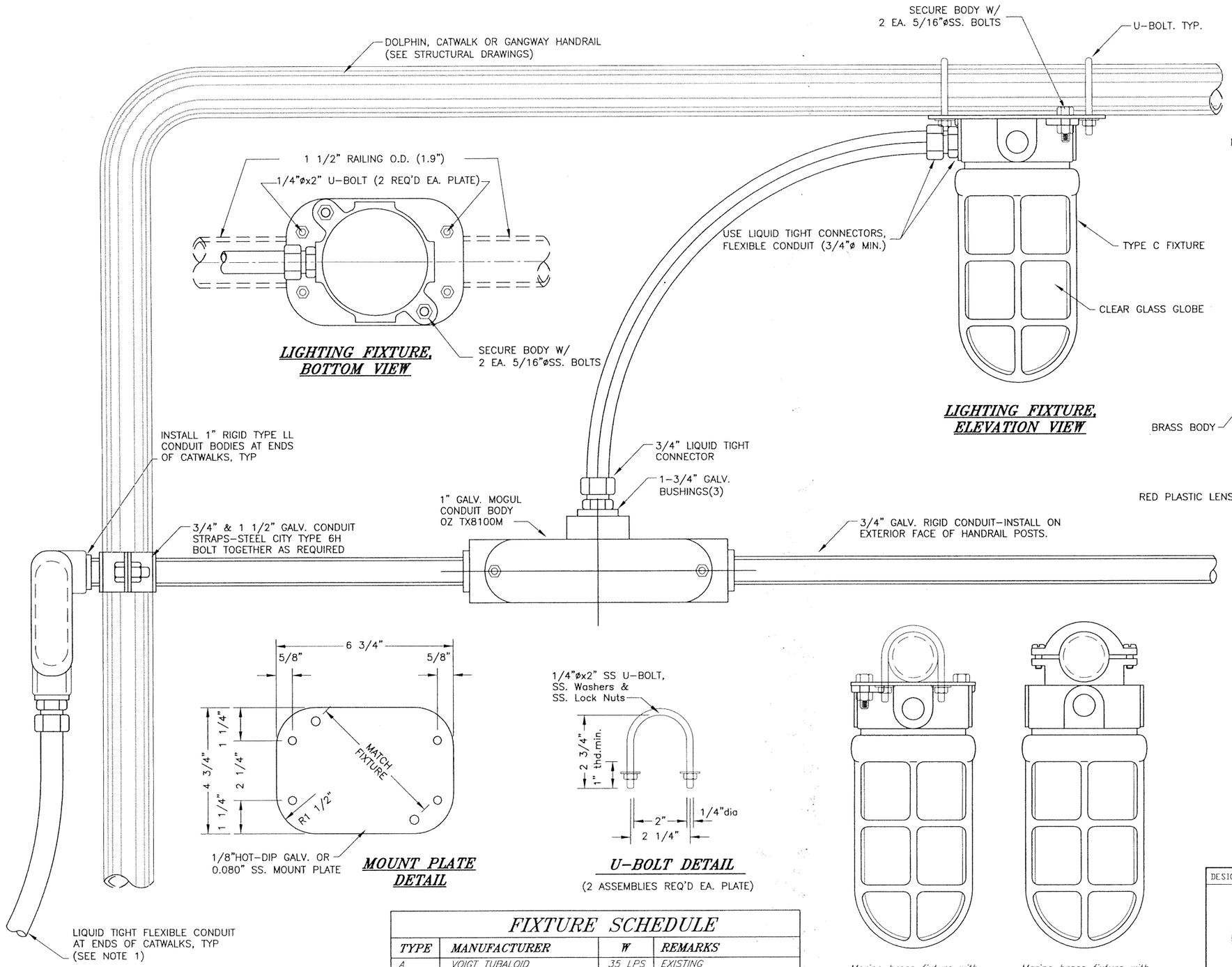
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements Project 75249

Electrical Plan

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	E1	28



LIGHTING FIXTURE, BOTTOM VIEW

LIGHTING FIXTURE, ELEVATION VIEW

MOUNT PLATE DETAIL

U-BOLT DETAIL

(2 ASSEMBLIES REQ'D EA. PLATE)

Marine brass fixture with red glass globe Pauluhn Elec Manufacturing Catalog No. 707B or approved equal

TYPE F RED LIGHTING FIXTURE, SIDE VIEW

FIXTURE SCHEDULE

TYPE	MANUFACTURER	W	REMARKS
A	VOIGT TUBALOID	35 LPS	EXISTING
B	VOIGT TUBALOID	55 LPS	EXISTING
C	PAULUHN723B/CONCH723TV	60	REPLACE EXIST. FIXTURES
D	EMCO 210	35 LPS	EXISTING 8'-0" POLE
E	UNKNOWN FLOODLIGHTS		EXISTING STEEL POLE
F	PAULUHN 707B-RED	60	RED PLASTIC LENS, PHOTO-CONTROL

Marine brass fixture with S.S. PL & U-bolts. Pauluhn Elec Manufacturing Catalog No. 723B or approved equal

Marine brass fixture with integral pipe clamp. Conch Co. Catalog No. 723-TV or approved equal

TYPE C LIGHTING FIXTURE, SIDE VIEW

(SUPPLY EITHER FIXTURE)

NOTES:
1) CONTRACTOR SHALL INSTALL LIQUIDTIGHT FLEXIBLE CONDUIT AT CATWALK ENDS TO ALLOW FOR FULL RANGE OF MOVEMENT ALONG SKIDPLATES (APPROXIMATELY 12").

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: M. Carson
DRAWN BY: M. Carson
CHECKED BY: M. Carson

STATE OF ALASKA
49th
Frank Michael Carson
EE-5604
REGISTERED PROFESSIONAL ENGINEER
8/8/07

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

Haines Mooring Improvements
Project 75249

Light Fixture/Conduit Mounting Details

PATH: Q:\Hns\75249\MF\Phase-B\Planset\E2-ElecDetails4-20-07.dwg
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REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			75249	2007	E2	28

As-Built Drawing 5/26/09 CO