

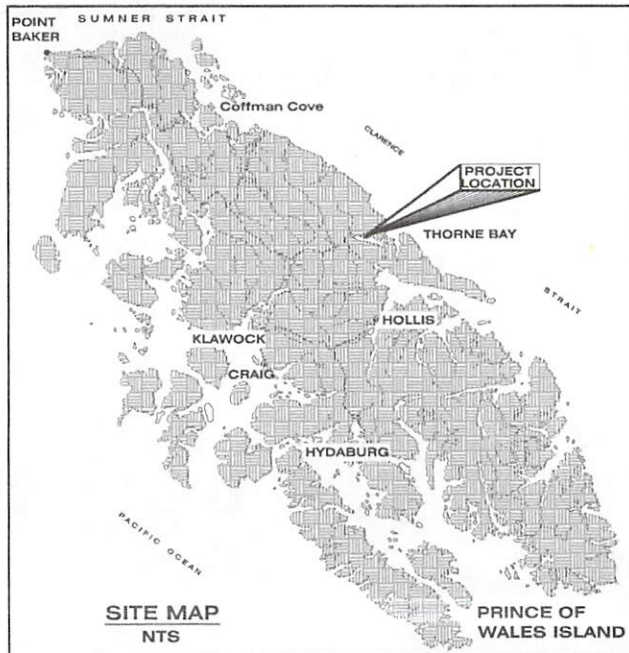
# City of Thorne Bay

## DAVIDSON LANDING HARBOR PHASE II THORNE BAY, ALASKA

PROJECT No. DC 01318-00 / 69292



TIDAL DATA	
HTL	+20.2'
MHW	+16.0'
MLLW	0.0'
ELW	-4.6'



**VICINITY MAP**  
NTS

### SHEET INDEX

SHEET NO.	DESCRIPTION
01	TITLE SHEET
02	ESTIMATE OF QUANTITIES
03	EXISTING SITE PLAN
04	NEW FLOAT PLAN
05	EXISTING FLOAT MODIFICATIONS
06	FLOAT D - 10'x20' MAIN FLOAT
07	FLOAT E - 10'x25' MAIN FLOAT
08	FLOATS D & E - MISC. DETAILS
09-11	FLOAT F - 10' WIDE MAIN FLOAT
12-13	5'x40' STALL FLOATS
14-15	FLOAT C - 25'x20' SKIFF FLOAT & 8' WIDE MAIN FLOAT
16	TRANSITION PLATES
17	MISC DETAILS

PATH: C:\P\01\69292\WP\PLANSET PHASE 2\PH\01 - TITLE SHEET.DWG TAB:01  
Thursday, July 07, 2011 3:18:54 PM  
PLOT: PSPACE OR MSPACE: 1=1(F)

### CITY OF THORNE BAY



APPROVED:

WAYNE BENNER, CITY ADMINISTRATOR DATE  
CITY OF THORNE BAY

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

CONSTRUCTION PROJECT MANAGER DATE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	69292	2011	01	17

### ESTIMATE OF QUANTITIES

ITEM #	ITEM DESCRIPTION	PAY UNIT	QUANTITY
<b>BASIC BID</b>			
202 (1)	RELOCATE EXISTING FLOATS	LUMP SUM	ALL REQUIRED
804 (1A)	ALUMINUM TRANSITION PLATES	EACH	3
805 (1A)	12.75" DIA x 1/2" WALL PIPE PILES, FURNISHED	LINEAR FOOT	840
805 (2A)	12.75" DIA x 1/2" WALL PIPE PILES, DRIVEN	EACH	6
805 (3)	18" DIA x 1/2" WALL PIPE PILES, FURNISHED	LINEAR FOOT	430
805 (4)	18" DIA x 1/2" WALL PIPE PILES, DRIVEN	EACH	6
805 (5A)	100 LB. PILE ANODE	EACH	14
806 (1)	10' x 20' TIMBER MOORING FLOAT	LUMP SUM	ALL REQUIRED
806 (2)	10' x 20' TIMBER MOORING FLOAT	LUMP SUM	ALL REQUIRED
806 (3)	EXISTING TIMBER FLOAT MODIFICATIONS	LUMP SUM	ALL REQUIRED
806 (4)	10' x 150' TIMBER MOORING FLOAT	LUMP SUM	ALL REQUIRED
806 (8A)	LEVELING FLOTATION BILLET, 8"x20"x4'-0", FURNISHED	EACH	8
806 (8A)	LEVELING FLOTATION BILLET, INSTALLED	EACH	8
806 (10A)	FIRE EXTINGUISHER STATION	EACH	4
806 (11A)	LIFE RING STATION	EACH	4
818 (7)	HARBOR SIGNS	LUMP SUM	ALL REQUIRED
840 (1)	MOBILIZATION & DEMOBILIZATION	LUMP SUM	ALL REQUIRED
842 (1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
<b>ALTERNATE "1"</b>			
805 (1C)	12.75" DIA x 1/2" WALL PIPE PILES, FURNISHED	LINEAR FOOT	275
805 (2C)	12.75" DIA x 1/2" WALL PIPE PILES, DRIVEN	EACH	4
805 (5B)	100 LB. PILE ANODE	EACH	4
806 (5)	8'x40' STALL FLOAT	EACH	4
<b>ALTERNATE "2"</b>			
804 (1B)	ALUMINUM TRANSITION PLATES	EACH	1
805 (1B)	12.75" DIA x 1/2" WALL PIPE PILES, FURNISHED	LINEAR FOOT	250
805 (2B)	12.75" DIA x 1/2" WALL PIPE PILES, DRIVEN	EACH	4
805 (5C)	100 LB. PILE ANODE	EACH	4
806 (6)	8' x 100' WALKWAY FLOAT	LUMP SUM	ALL REQUIRED
806 (7)	25' x 25' SKIFF FLOAT	LUMP SUM	ALL REQUIRED
806 (8B)	LEVELING FLOTATION BILLET, 8"x20"x4'-0", FURNISHED	EACH	4
806 (9B)	LEVELING FLOTATION BILLET, INSTALLED	EACH	4
806 (10B)	FIRE EXTINGUISHER STATION	EACH	1
806 (11B)	LIFE RING STATION	EACH	1

PILE DATA						
PILE ID	PILE SIZE	APPROX MUDLINE ELEV	EST. MIN. PENETRATION	EST. TIP ELEV	CUTOFF ELEV	EST. PILE LENGTH
1		-10		-35'		62'
2		-10		-35'		62'
3		-10		-35'		62'
4		-10		-35'		62'
5		-10		-35'		62'
6		-10		-35'		62'
7		-10		-35'		62'
8		-10		-35'		62'
9		-18		-43'		70'
10		-19		-44'		72'
11		-19	25'	-44'	+27'	72'
12		-19		-44'		72'
13		-19		-44'		72'
14		-19		-44'		72'
15		-19		-44'		72'
16	18"x12"	-15		-41'		70'
17		-17		-42'		70'
18		-16		-41'		68'
19		-17		-42'		70'
20		-17		-42'		70'
21	12.75"x12"	-15		-40'		68'
22		-14		-38'		66'

#### DESIGN SPECIFICATIONS

PER CONTRACT DOCUMENTS. SEE SPECIAL PROVISIONS. REFERENCE AS-BUILT DRAWINGS FOR EXISTING HARBOR FEATURES NOT SHOWN.

#### MATERIALS

**STEEL:**  
 HSS- ASTM A500 GRADE B  
 PILING- SEE SECTION 505 OF SPECIFICATIONS  
 PIPE- ASTM A53, GRADE B, TYPE E OR S  
 HP-SECTION- ASTM A992  
 PLATES- ASTM A36, UNLESS OTHERWISE NOTED  
 STAINLESS- ASTM A276 TYPE 316  
 PILE TIPS- APF-0-14000 OR APF 0-14001 DRIVE SHOES OR APPROVED EQUAL. DRIVESHOES ARE REQUIRED ON ALL PILING.  
**FASTENERS-** STEEL CONNECTIONS: ASTM A325  
 TIMBER CONNECTIONS: ASTM A307  
 ALUMINUM CONNECTIONS: ASTM A276 TYPE 316

**PROTECTIVE COATINGS-**  
 ALL OTHER SHAPES, DECKING, FASTENERS AND MISCELLANEOUS ASSEMBLIES TO BE HOT DIP GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH ASTM A123 AND A153.

**TENSION RODS-**  
 STEEL TENSION RODS FOR TIMBER FLOAT SYSTEMS SHALL BE ALL-THREAD REBAR, WILLIAMS FORM ENGINEERING CORP., GRADE 75 CONFORMING TO ASTM A615 OR APPROVED EQUAL, FURNISHED IN THE NOMINAL DIAMETER AND FULL LENGTH REQUIRED WITHOUT INTERNAL SPICES. TENSION NUTS SHALL BE 2" IN OVERALL LENGTH. PROVIDE JAM NUT AT ALL CONNECTIONS AFTER INITIAL AND FINAL TENSIONING. ALL TENSION RODS & HARDWARE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

**ALUMINUM:**  
 SHAPES- ASTM 6061-T6  
 PLATES- ASTM 5088 H112  
 COATINGS- TRANSITION PLATES TO BE COATED WITH NON-SKID COATING IN CONFORMANCE WITH PROJECT SPECS.

**TIMBER:**  
 SAWN- S4S DOUGLAS FIR NO. 1 OR BETTER PER WCLB/WMPA GRADING RULES.  
 DECKING- MILLED S152 DOUGLAS FIR SELECTED GRADE PER WMPA GRADING RULES.  
 GLULAM- DF/DF, COMBINATION 24F-V8. BLOCK & BACKWALL SHALL BE DF, COMBINATION 2.  
**TREATMENT-** SAWN TIMBER BELOW DECK LEVEL TO BE TREATED WITH CREOSOTE, 20 PCF RETENTION. GLULAM TIMBER BELOW DECK LEVEL & BACKWALL TO BE TREATED WITH CREOSOTE, 12 PCF RETENTION. DECKING, BULL RAILS, AND BUMPER BOARDS TO BE TREATED WITH ACZA, 0.6 PCF RETENTION.

**UHMW:**  
 ULTRA HIGH MOLECULAR WEIGHT PLASTIC (UHMW) TO BE MADE FROM MATERIALS CONFORMING TO ASTM D4020, COLOR TO BE BLACK UNLESS OTHERWISE NOTED.

**POLYSTYRENE FLOTATION:**  
 FLOTATION PLANKS SHALL BE CONSTRUCTED FROM CLOSED CELL EXPANDED POLYSTYRENE (EPS) PER ASTM D1621. MINIMUM DENSITY SHALL BE 1.1 PCF. MATERIALS SHALL HAVE A MAXIMUM WATER ABSORPTION OF 4 PERCENT BY VOLUME IN ACCORDANCE WITH ASTM C272. THE PLANKS SHALL BE CUT AND NOTCHED TO THE NOMINAL DIMENSIONS INDICATED ON THE PLANS. ALL NOTCHES AND CUTS SHALL BE PERFORMED USING A HOT-WIRE OR OTHER APPROVED METHODS. ALL FLOTATION PLANKS SHALL BE COATED AFTER FABRICATION WITH A POLYURETHANE ELASTOMERIC COATING TO A MINIMUM DRY FILM THICKNESS OF 50 MILS. POLYURETHANE COATINGS SHALL BE "HYDROSEAL 2090" BRAND OR APPROVED EQUAL. ALL FIELD CUTS, NECKS AND ABRASIONS TO THE COATING SHALL BE REPAIRED WITH ADDITIONAL COATINGS TO THE SPECIFIED THICKNESS.

#### FABRICATION

**WELDING:**  
 ALL WELDING TO BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH AWS D1.1 OR AWS D1.2. ALL WELDS TO BE 1/4" FILLET UNLESS OTHERWISE NOTED.

#### GENERAL NOTES

**TIMBER FLOAT SYSTEM:**  
 ALL FABRICATION AND CONNECTION DETAILS MAY NOT BE SHOWN. PROVIDE DETAILED SHOP DRAWINGS SHOWING ALL MEMBERS, FABRICATION METHODS/SEQUENCE AND LIFTING AND HANDLING DETAILS.

MACHINE OR POWER DRIVEN NAILS WILL NOT BE PERMITTED.

FOR LEVELING THE TIMBER FLOATS AND THE STALL FLOATS, THE CONTRACTOR SHALL PROVIDE LEVELING FLOTATION BILLETS AS NOTED ON THE BID SCHEDULE AND 1/2" DIA. X 20" LONG TREATED WOODEN DOWELS POINTED ON ONE END OR 1/2" DIA. PVC PIPE AT SHARP BEVEL IN ONE END. PROVIDE A MINIMUM OF 4 DOWELS PER LEVELING BILLET. WHERE LEVELING IS REQUIRED, PLACE LEVELING BILLET BETWEEN LOWER BILL MEMBERS AND DRIVE DOWELS THROUGH THE FLOTATION BILLETS. PIN EACH LEVELING BILLET WITH 4 DOWELS EQUALLY SPACED. DOWELS MAY BE DRIVEN FROM THE TOP DOWN BETWEEN DECK BOARDS.

ALL TIMBER BOLTS ARE ECONOMY HEAD TYPE WITH LUGS AND M.I. WASHERS, UNLESS OTHERWISE NOTED. PROVIDE DOUBLE NUTS OR JAM NUTS WHERE NOTED ON THE PLANS.

ALIGN BUMPER BOARD SPICES WITH EXTERIOR STRINGER SPICES, MINIMUM BUMPER BOARD LENGTH IS 10'-0". SECURE BUMPER BOARDS WITH 160 GALV COMMON NAILS SPACED AT 12" OC, STAGGERED ROW AND 2 NAILS AT EACH END. PREDRILL PILOT HOLE TO PREVENT SPLITTING.

DECKING SHALL BE SPACED 4" APART AND SECURED TO EACH STRINGER WITH 2-20D GALVANIZED BOX NAILS. PREDRILL ALL ENDS WHERE SPLITTING MAY OCCUR.

COUNTERBORE FOR ALL BOLT HEADS FACING DECKING OR OTHERWISE NOTED TO BE FLUSH.

CUT ALL MEMBERS TO LENGTH PRIOR TO PRESSURE TREATMENT. DRILL ALL HOLES/COUNTERBORING AND CUT ALL DAPS PRIOR TO PRESSURE TREATMENT UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE ENGINEER. TREAT ALL FIELD DRILLED HOLES AND CUTS WITH COPPER NAPHTHENATE SOLUTION.

CHAMFER OR BULLNOSE ALL GLULAM AND SAWN TIMBER BULLRAIL CORNERS PRIOR TO TREATMENT.

MILLED DECKING PLACED OVER GLULAM SUBDECKING SHALL BE PROVIDED IN NOMINAL 18-18 FOOT LENGTHS. MINIMUM LENGTH SHALL BE 10-FEET UNLESS OTHERWISE REQUIRED OR PERMITTED. NOTCH/CUT AS REQUIRED TO FIT AROUND PILE COLLAR WELDEMENTS AND OTHER ITEMS. SPACE MILLED DECKING 1/4" APART AND NAIL TO GLULAM SUBDECKING WITH 18D HOT-DIP GALVANIZED BOX NAILS. INSTALL 2 NAILS AT 18" OC (MAX) AND 2 NAILS AT EACH END. PREDRILL PILOT HOLE TO PREVENT SPLITTING AS REQUIRED. STAGGER ADJACENT DECK JOINTS A MINIMUM OF 4-FEET APART.

GLULAM SUB-DECKING SHALL BE SPACED 4" APART (EXCEPT FOR GANGWAY FLOAT. SEE PLANS) AND SECURED TO EACH STRINGER WITH GALVANIZED LAG SCREWS W/ 1/4"-THICK PLATE WASHERS OF THE SIZE AND SPACING INDICATED. PREDRILL PROPER SIZE SHAFT AND THREAD HOLES. LUBRICATE LAGS PRIOR TO INSTALLATION.

COUNTERBORE FOR ALL BOLT HEADS FACING DECKING TO BE FLUSH OR OTHERWISE COVERED BY OTHER MEMBERS AND WHERE NOTED ON THE PLANS PRIOR TO TREATMENT.

SECURE EXTERIOR GLULAM BLOCKING TO EXTERIOR STRINGERS AND DIAPHRAM MEMBERS WITH 2 EACH, 5/8" DIAM BY 9" L LAGS W/ PLATE OR W WASHERS (CISA) WITHIN 12" OF ENDS AND EVERY 2' OC (MAX) STAGGERED ROW OR AS OTHERWISE NOTED ON PLANS OR APPROVED BY THE ENGINEER. SPACE BLOCKING LAGS TO MISS OTHER HARDWARE. ALSO INSTALL ADDITIONAL LAG BOLTS THRU GLULAM SUB-DECK AND INTO EXTERIOR BLOCKING (2 LAGS PER PANEL ALONG EXTERIOR LONG SIDE AND APPROXIMATELY 3'-0" OC ALONG SHORT SIDES).

FABRICATE GLULAM DIAPHRAM MEMBERS WITH 1-1/4" NOMINAL DIAMETER HOLES AT INDICATED DIMENSIONS FOR PASSAGE OF STEEL TENSION RODS. FOR INITIAL TENSIONING, TORQUE TENSION RODS TO MAXIMUM PRACTICAL TENSION WITHOUT CRUSHING TIMBER BEARING SURFACES OR AS APPROVED BY THE ENGINEER. FOR FINAL TENSIONING, ALL TENSION RODS SHALL BE CHECKED AND NUTS AND JAM NUTS RE-TIGHTENED AFTER THE FLOAT HAS BEEN INSTALLED AND PRIOR TO PROJECT COMPLETION.

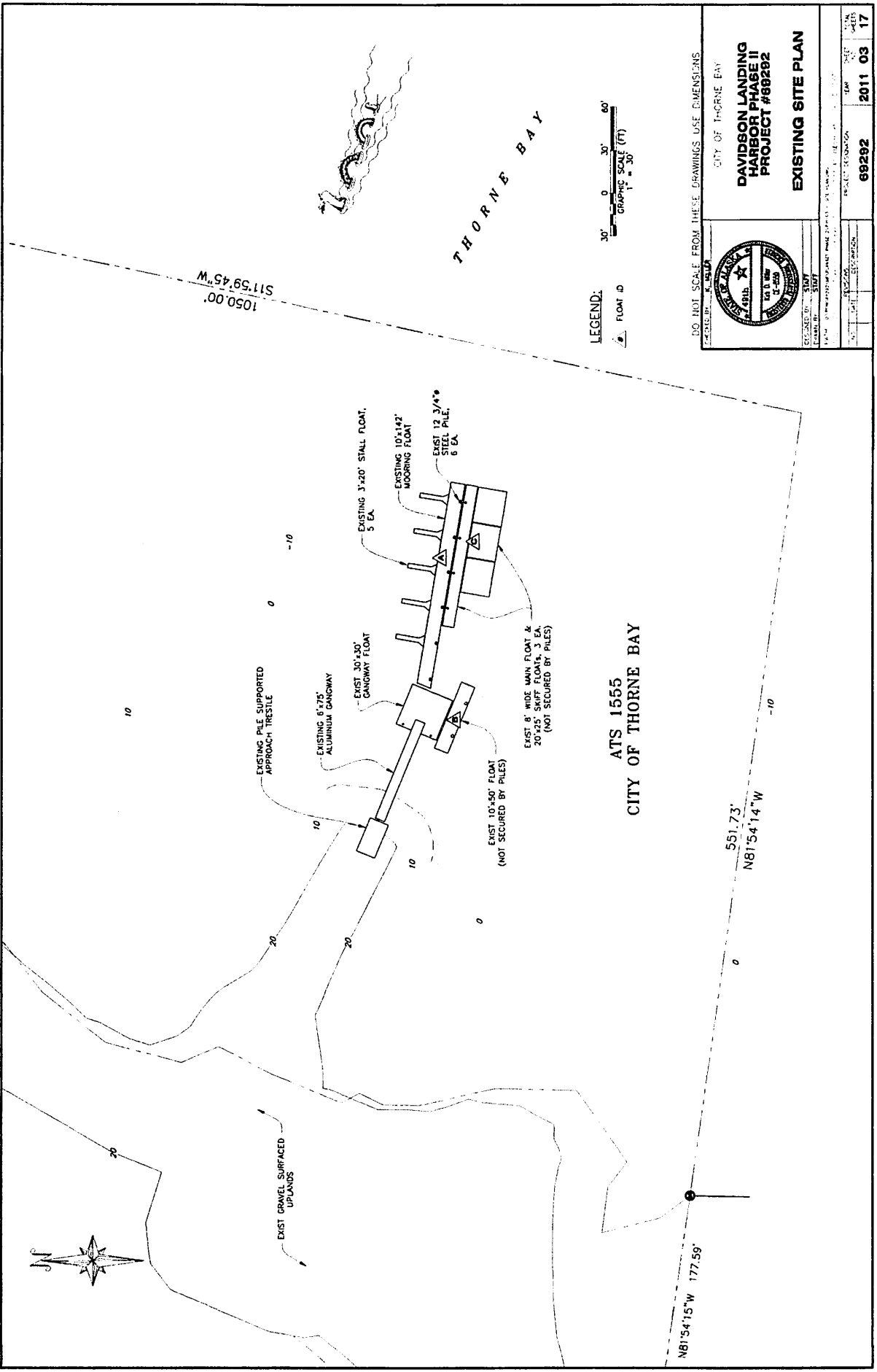
#### REFERENCE LEGEND



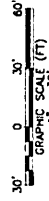
- NOTES:**
- USE THE SHEET NUMBER WHERE THE REFERENCE IS FOUND WHEN REFERENCING TO A DIFFERENT SHEET.
  - USE A DASH MARK WHEN REFERENCE IS FOUND ON THE SAME SHEET.

DO NOT SCALE FROM THESE DRAWINGS. USE DIMENSIONS.

CHECKED BY: <b>K. MELER</b>  PREPARED BY: <b>STAFF</b> DRAWN BY: <b>STAFF</b>	CITY OF THORNE BAY <b>DAVIDSON LANDING HARBOR PHASE II PROJECT #89282</b> <b>ESTIMATE OF QUANTITIES</b>
PROJECT NO.: <b>89282</b> YEAR: <b>2011</b> SHEET NO.: <b>02</b> TOTAL SHEETS: <b>17</b>	



LEGEND:  
 FLOAT ID



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

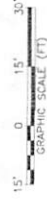


CITY OF THORNE BAY  
**DAVIDSON LANDING  
 HARBOR PHASE II  
 PROJECT #88292**  
**EXISTING SITE PLAN**

DESIGNED BY: SUTY	DATE: 01/11/11	PROJECT NO.: 69292	TOWN: 03	SHEET NO.: 17
DRAWN BY: SUTY	DATE: 01/11/11	PROJECT DESCRIPTION: DAVIDSON LANDING HARBOR PHASE II	CITY: THORNE BAY	
CHECKED BY: SUTY	DATE: 01/11/11			



THORNE BAY



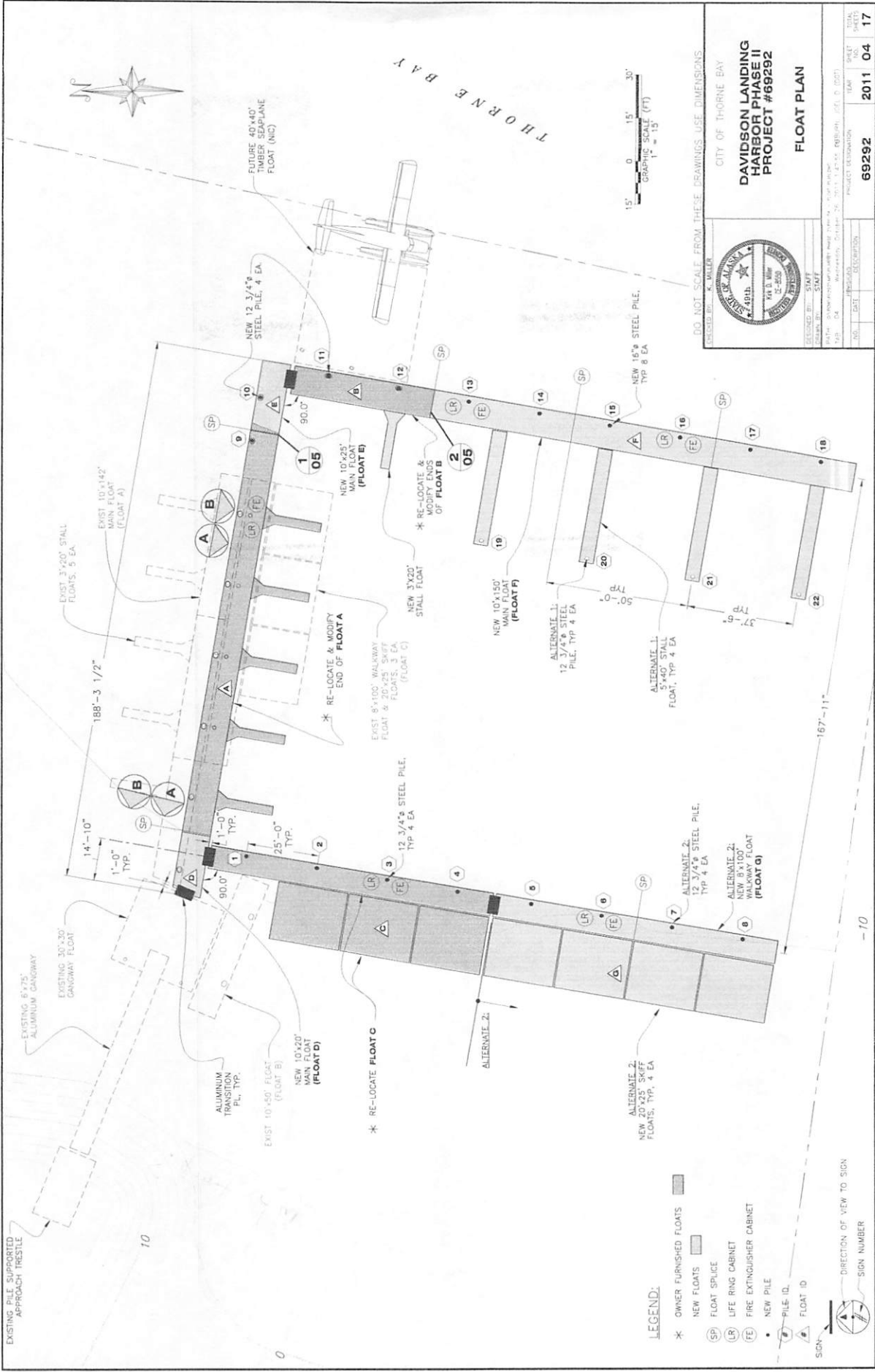
DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CITY OF THORNE BAY  
**DAVIDSON LANDING  
 HARBOR PHASE II  
 PROJECT #69292**

**FLOAT PLAN**

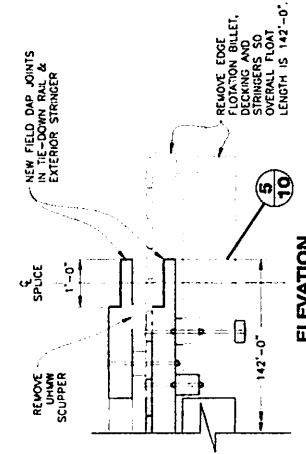
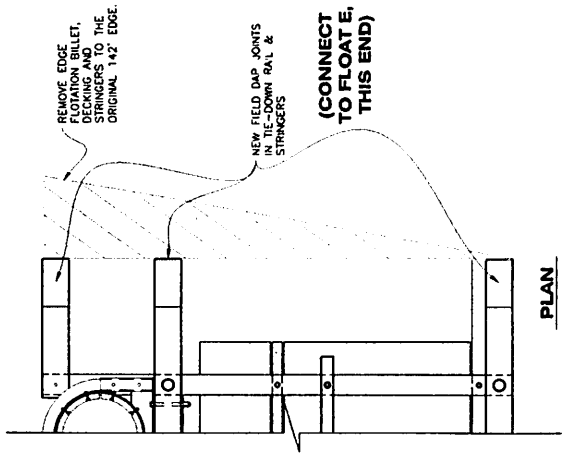


DESIGNED BY: K. WALKER  
 CHECKED BY: K. WALKER  
 DATE: 01/11/11  
 PROJECT DESCRIPTION: 69292  
 TEAM: 2011\_04  
 SHEET: 17

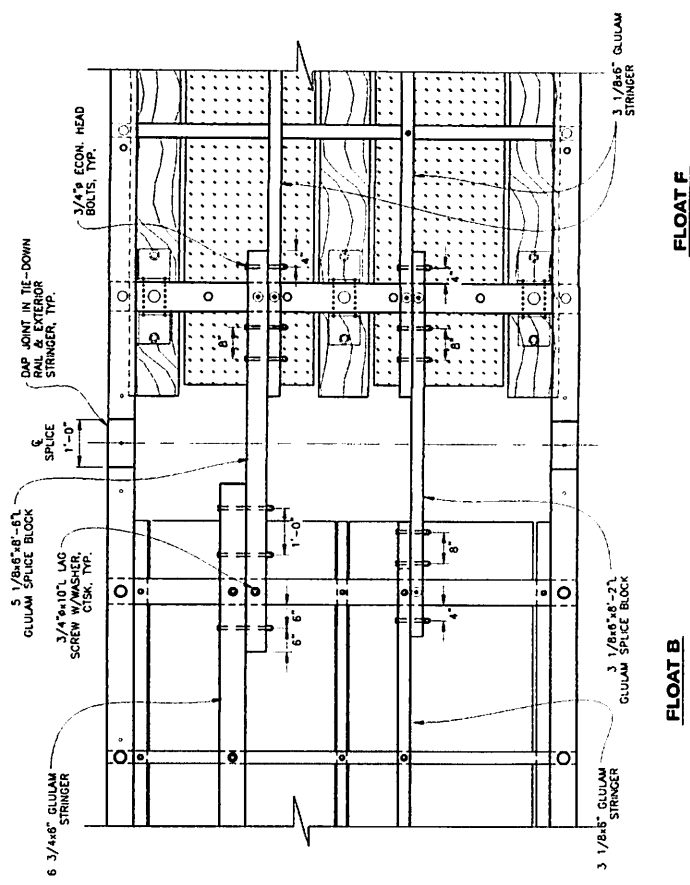


- LEGEND:**
- \* OWNER FURNISHED FLOATS
  - NEW FLOATS
  - FLOAT SPURCE
  - SP FLOAT SPURCE
  - LR LIFE RING CABINET
  - FE FIRE EXTINGUISHER CABINET
  - NEW PILE
  - PILE-ID
  - FLOAT-ID





1 - EAST END FLOAT A



FLOAT B

FLOAT F

2 - PLAN

NOTE:  
1. CONTRACTOR SHALL INSPECT EXISTING FLOATS TO VERIFY EXISTING FLOAT DIMENSIONS & SPICE DETAILS.

DO NOT SCALE FROM THESE DRAWINGS. USE DIMENSIONS.

DESIGNED BY: A. HALL

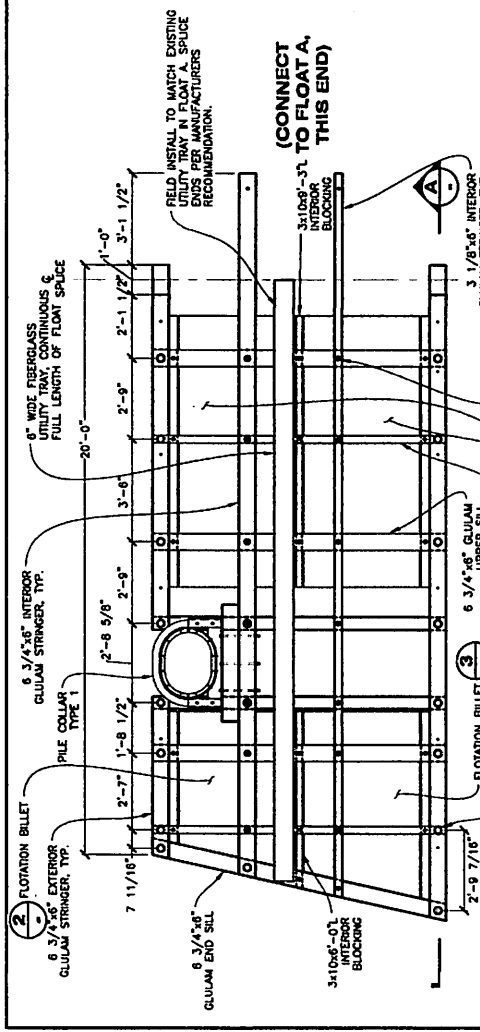
CITY OF THORNE BAY

DAVIDSON LANDING HARBOR PHASE II PROJECT #89292

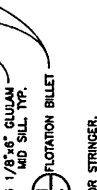
EXISTING FLOAT MODIFICATIONS

DATE: 2011 05 17

89292



**1 FLOTATION BILLET TYPE 1**



**2 FLOTATION BILLET TYPE 2**



**3 FLOTATION BILLET TYPE 3**



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS  
 CHECKED BY: K. FELER



CITY OF THORNE BAY  
**DAVIDSON LANDING HARBOR, PHASE II PROJECT #89292**  
**FLOAT D 10' x 20' MAIN FLOAT**

DESIGNED BY: J. B. FINE  
 DATE: 2011 2 12 32  
 PROJECT CALCULATION: J. B. FINE, P.E.  
 DATE: 2011 10 25 2011 2 12 32  
 SHEET NO: 08  
 TOTAL SHEETS: 17

**NOTES:**  
 1. CONTRACTOR SHALL INSPECT EXISTING FLOATS TO VERIFY EXISTING FLOAT DIMENSIONS & SPICE DETAILS.

**CONNECT TO FLOAT A, THIS END**

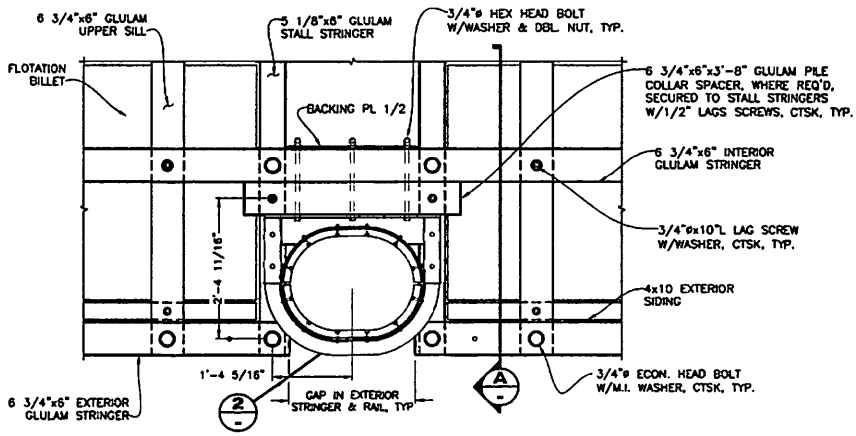
FIELD METAL TO MATCH EXISTING UTIL. TRAY IN ELIMINATE SPICE ENDS PER MANUFACTURERS RECOMMENDATION.

**FLOAT FRAMING PLAN**

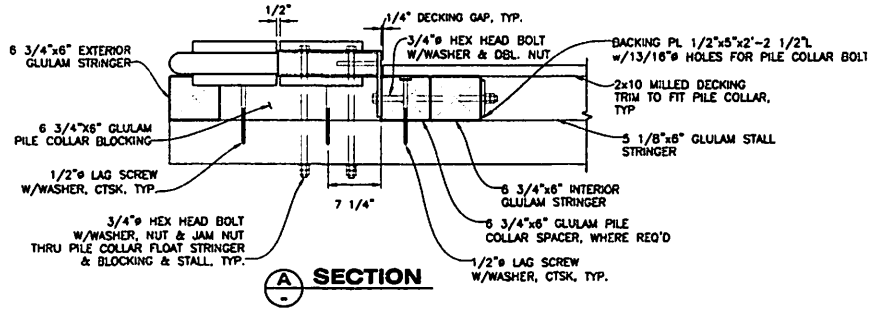
**FLOAT ELEVATION**

**TYPICAL SECTION**

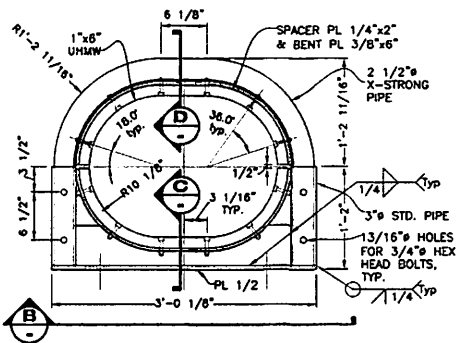




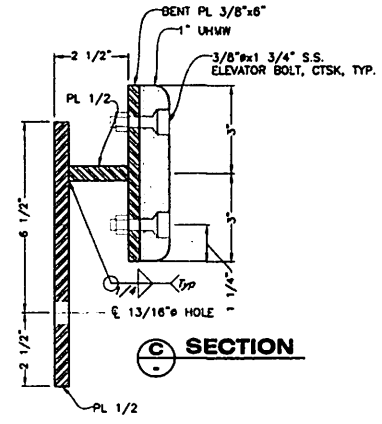
**1 TYPE I PILE COLLAR DETAIL**



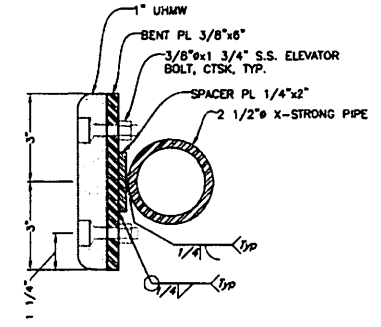
**A SECTION**



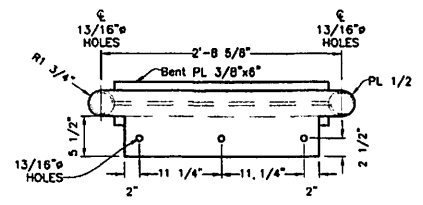
**2 PLAN**



**C SECTION**



**D SECTION**



**B SECTION**

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: K. HELMER

CITY OF THORNE BAY

**DAVIDSON LANDING HARBOR PHASE II PROJECT #89292**

**FLOATS D & E MISC DETAILS**

DESIGNED BY: STAFF  
 DRAWN BY: STAFF

PATH: G:\WORK\2011\PROJECT PHASE II\FLOATS - misc float d-e details  
 TAB: 08 Tuesday, October 25, 2011 2:41:44 PM DOSSBURN, JOEL D (DOT)

NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			<b>89292</b>	<b>2011</b>	<b>08</b>	<b>17</b>