

ESTIMATE OF QUANTITIES

ITEM #	ITEM DESCRIPTION	PAY UNIT	QUANTITY
BASIC BID			
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)	10" DIA x 1/2" WALL PIPE PILES, FURNISHED	LINEAR FOOT	430
805 (4)	10" 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
808 (8A)	LEVELING FLOTATION BILLET, 8"x20"x4'-0", FURNISHED	EACH	8
808 (8A)	LEVELING FLOTATION BILLET, INSTALLED	EACH	8
808 (10A)	FIRE EXTINGUISHER STATION	EACH	4
808 (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
ALTERNATE "1"			
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
808 (5)	8'x40' STALL FLOAT	EACH	4
ALTERNATE "2"			
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
808 (6)	8' x 100' WALKWAY FLOAT	LUMP SUM	ALL REQUIRED
808 (7)	25' x 25' SKIFF FLOAT	LUMP SUM	ALL REQUIRED
808 (8B)	LEVELING FLOTATION BILLET, 8"x20"x4'-0", FURNISHED	EACH	4
808 (9B)	LEVELING FLOTATION BILLET, INSTALLED	EACH	4
808 (10B)	FIRE EXTINGUISHER STATION	EACH	1
808 (11B)	LIFE RING STATION	EACH	1

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:

SAW- 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 D1021. 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.

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	12.75"x12"	-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	10"x12"	-19		-44		72
16		-15		-43		70
17		-17		-42		70
18		-16		-41		68
19		-17		-42		70
20	12.75"x12"	-17		-42		70
21		-15		-40		68
22		-14		-38		66

REFERENCE LEGEND

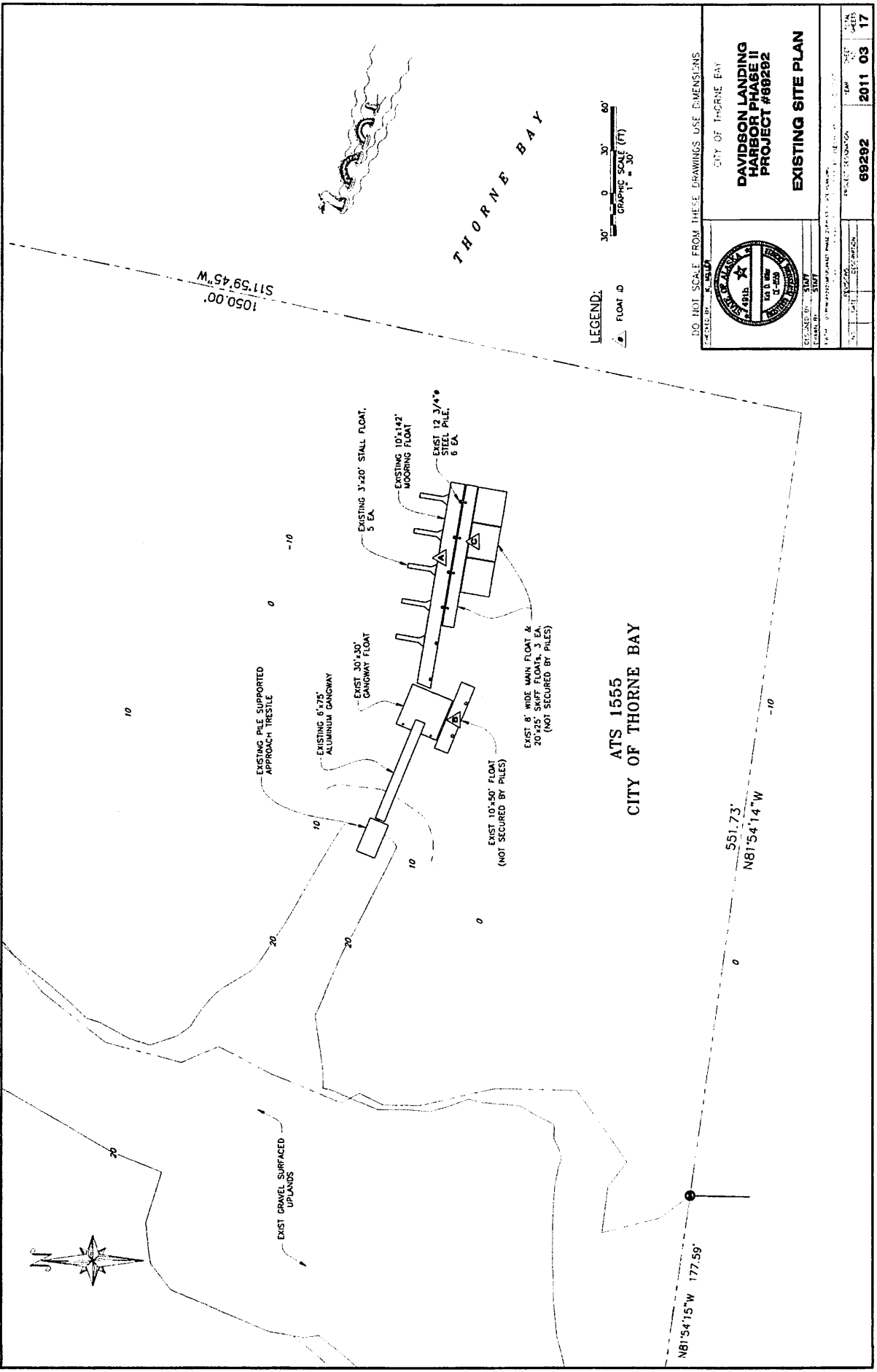


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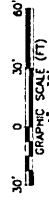
- USE THE SHEET NUMBER WHERE THE REFERENCE IS FOUND WHEN REFERENCING TO A DIFFERENT SHEET.
- USE A DASH MARK WHEN REFERENCE IS FOUND ON THE SAME SHEET.

DO NOT SCALE FROM THESE DRAWINGS. USE DIMENSIONS.

CHECKED BY: K. MILLER		CITY OF THORNE BAY		
		DAVIDSON LANDING HARBOR PHASE II PROJECT #89292		
		ESTIMATE OF QUANTITIES		
PREPARED BY: SUJAY	DATE: 01/27/2011	PROJECT DESIGNATION: 89292	YEAR: 2011	
DESIGNED BY: SUJAY	DATE: 01/27/2011	PROJECT DESIGNATION: 89292	YEAR: 2011	
NO.	DATE	DESCRIPTION	SHEET NO.	TOTAL SHEETS
			02	17



LEGEND:
 FLOAT ID



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



CITY OF THORNE BAY

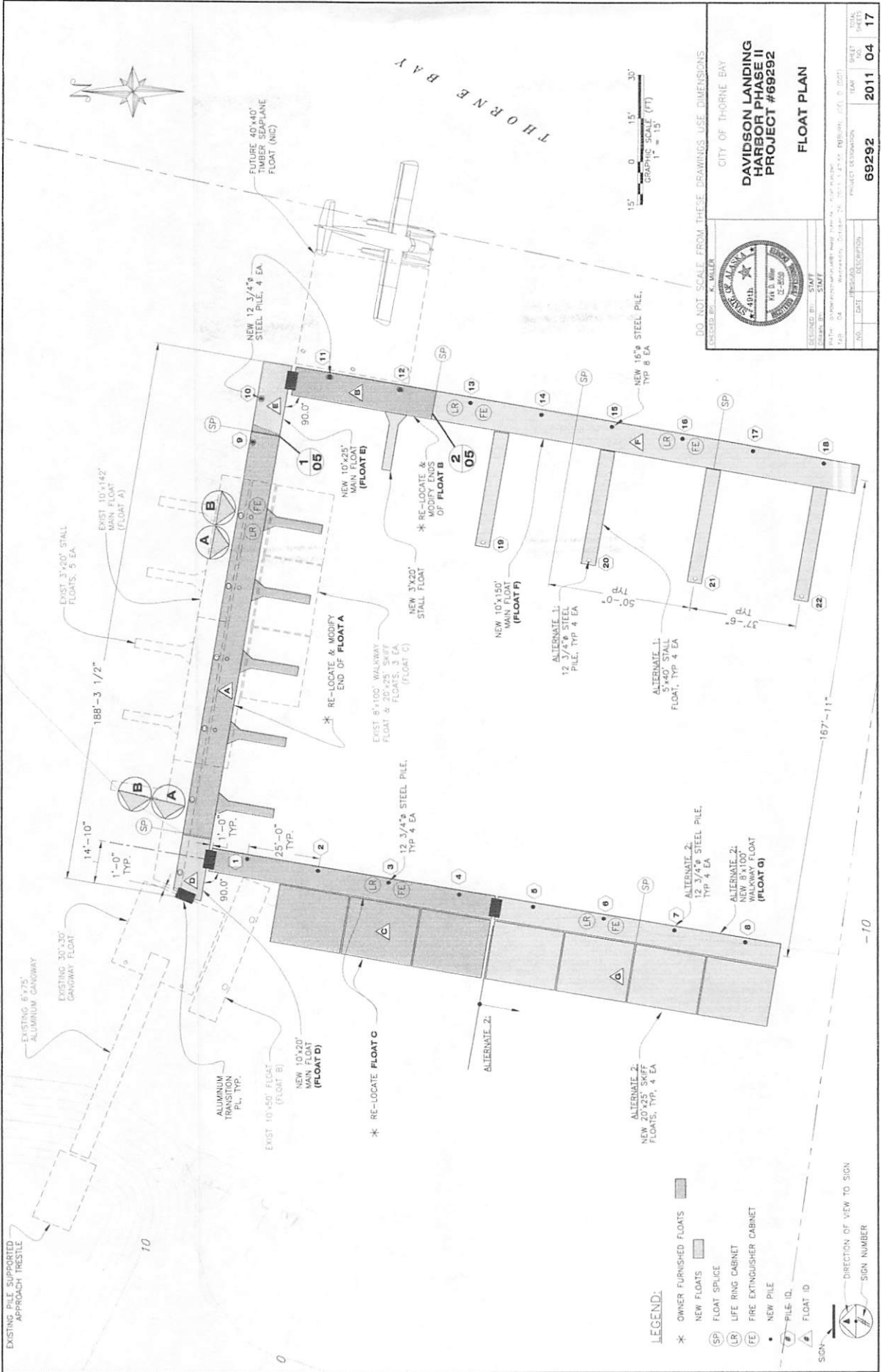
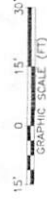
DAVIDSON LANDING
 HARBOR PHASE II
 PROJECT #88292

EXISTING SITE PLAN

DESIGNED BY: SUTY	DATE: 01/11/11	SCALE: AS SHOWN	SHEET NO: 17
DRAWN BY: SUTY	DATE: 01/11/11	PROJECT: DAVIDSON LANDING HARBOR PHASE II	DATE: 03/01/11
CHECKED BY: SUTY	DATE: 01/11/11	PROJECT NO: 69292	DATE: 03/01/11
APPROVED BY: SUTY	DATE: 01/11/11	PROJECT NAME: DAVIDSON LANDING HARBOR PHASE II	DATE: 03/01/11



THORNE BAY



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DESIGNED BY: K. MILLER

CITY OF THORNE BAY

DAVIDSON LANDING
HARBOR PHASE II
PROJECT #69292

FLOAT PLAN

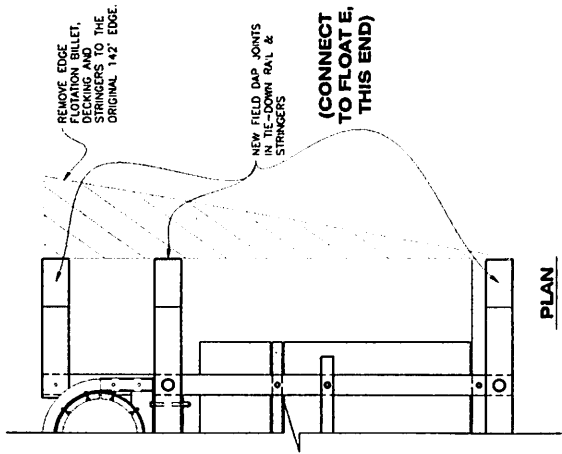
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69292 2011 04 17

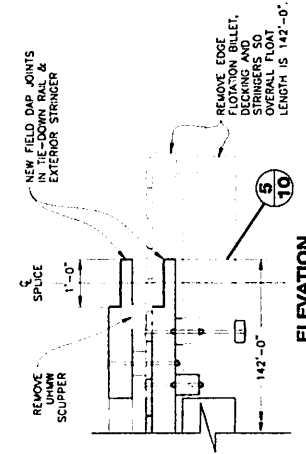
TEAM LEADER: []
PROJECT DESIGNATION: []
DATE: []
DESCRIPTION: []

DESIGNED BY: K. MILLER
DATE: []
PROJECT DESIGNATION: []
NO. DATE DESCRIPTION

- LEGEND:**
- * OWNER FURNISHED FLOATS
 - NEW FLOATS
 - FLOAT SPLICE
 - SP LIFE RING CABINET
 - LR FIRE EXTINGUISHER CABINET
 - FE NEW PILE
 - NEW PILE
 - PILE-ID
 - FLOAT-ID
- DIRECTION OF VIEW TO SIGN
- SIGN NUMBER

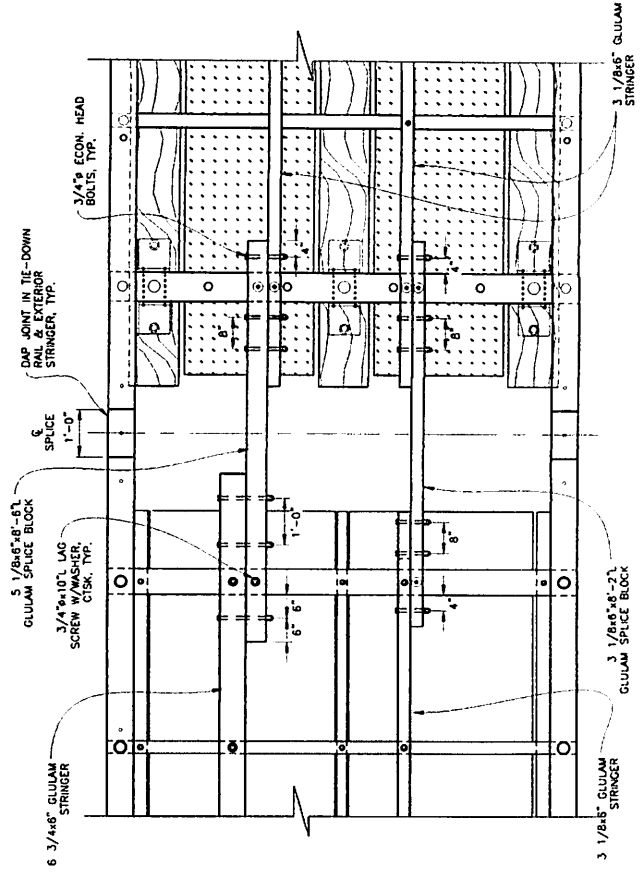


PLAN



ELEVATION

1 **DETAIL EAST END FLOAT A**



FLOAT B

FLOAT F

2 **PLAN**

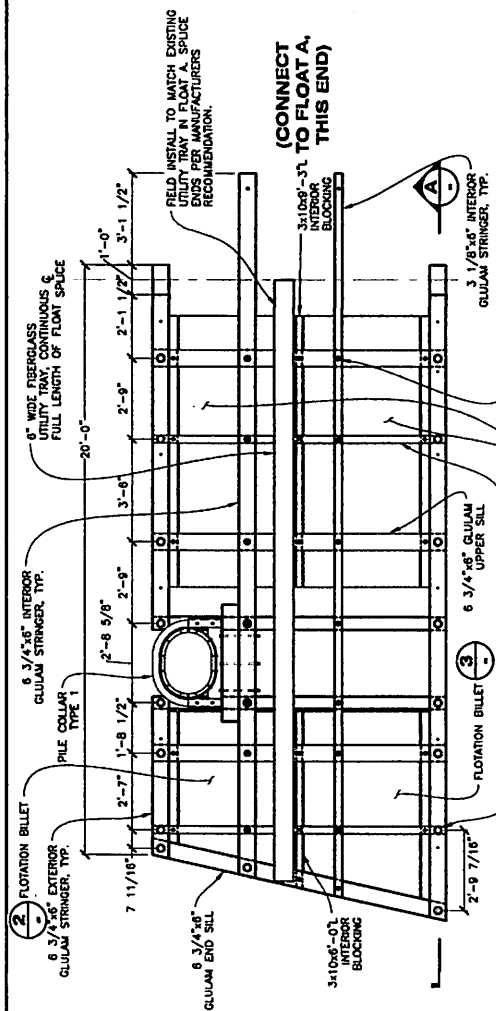
NOTE:
1. CONTRACTOR SHALL INSPECT EXISTING FLOATS TO VERIFY EXISTING FLOAT DIMENSIONS & SPICE DETAILS.

DO NOT SCALE FROM THESE DRAWINGS. USE DIMENSIONS.
CHECKED BY: A. WALKER

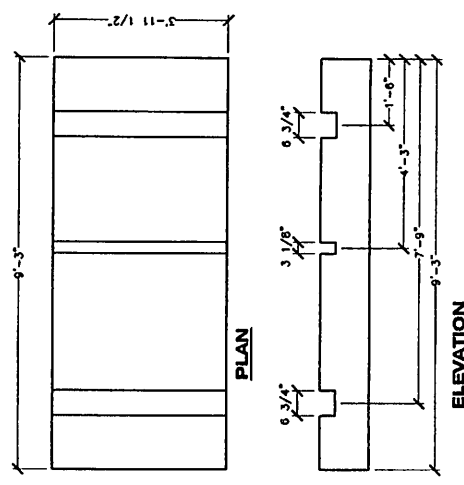


CITY OF THORNE BAY
DAVIDSON LANDING HARBOR PHASE II PROJECT #89292
EXISTING FLOAT MODIFICATIONS

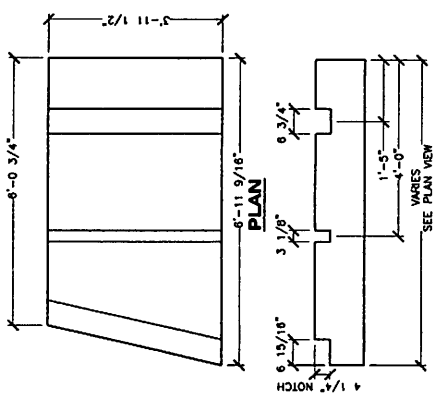
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SCALE	AS SHOWN
DESIGNED BY	AW
CHECKED BY	AW
DATE	05/17/11
PROJECT	DAVIDSON LANDING HARBOR PHASE II PROJECT #89292
DESCRIPTION	EXISTING FLOAT MODIFICATIONS



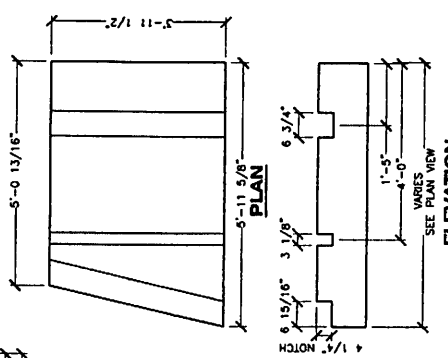
FLOAT FRAMING PLAN



1. FLOTATION BILLET TYPE 1



3. FLOTATION BILLET TYPE 3



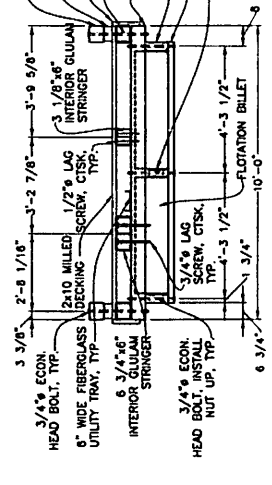
2. FLOTATION BILLET TYPE 2

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



CITY OF THORNE BAY
DAVIDSON LANDING HARBOR, PHASE II PROJECT #88292
FLOAT D
10' x 20' MAIN FLOAT

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



TYPICAL SECTION

NO.	DATE	DESCRIPTION	SCALE	SHEET NO.	TOTAL SHEETS
				2011 08	17

NO. DATE	DESCRIPTION	NO. DATE	DESCRIPTION
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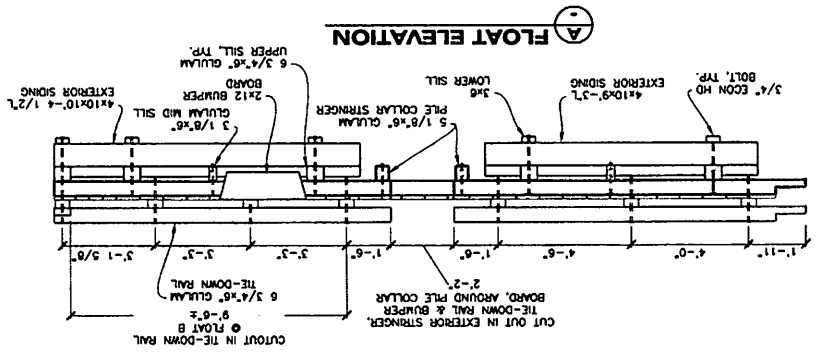
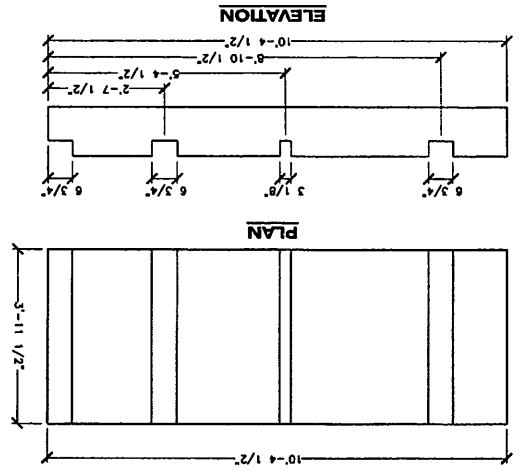
DAVIDSON LANDING HARBOR PHASE II PROJECT #89292
 10 X 25' MAIN FLOAT
 CITY OF THORNE BAY

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

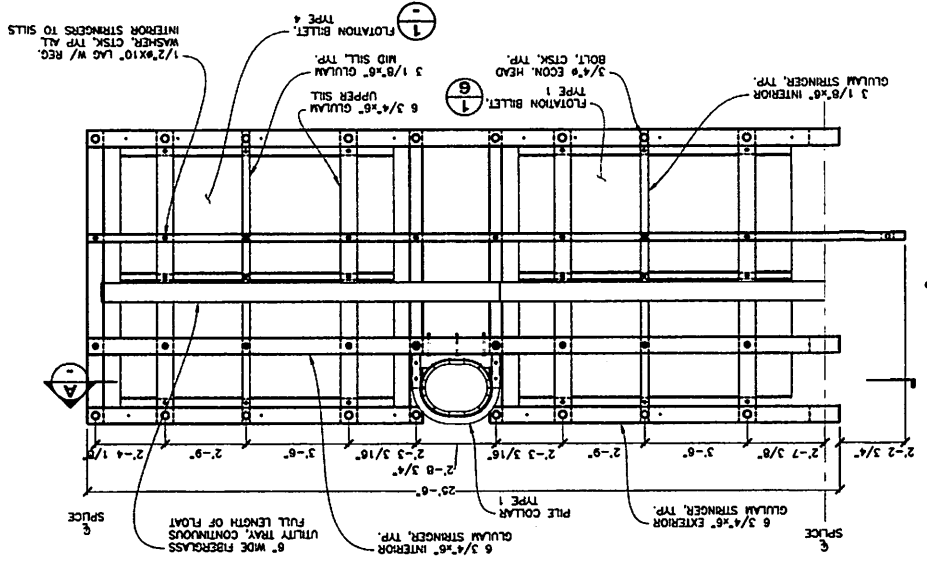
DESIGNED BY: STAFF
 CHECKED BY: R. MILLER

DATE: 2011 07 17

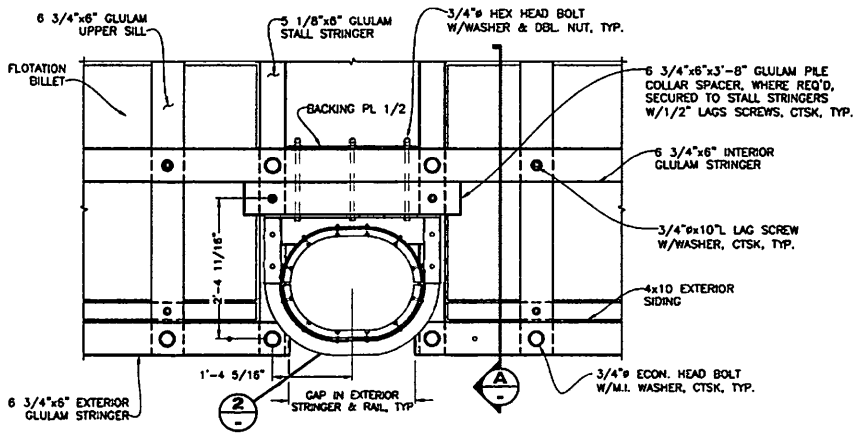
TYPE 4
 FLOTATION BILLET



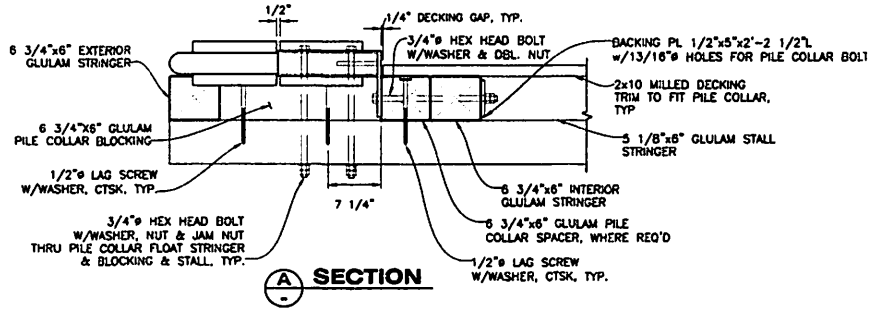
Float Framing Plan



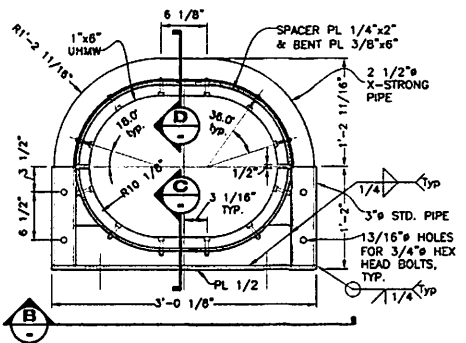
(CONNECT TO FLOAT A, THIS END)



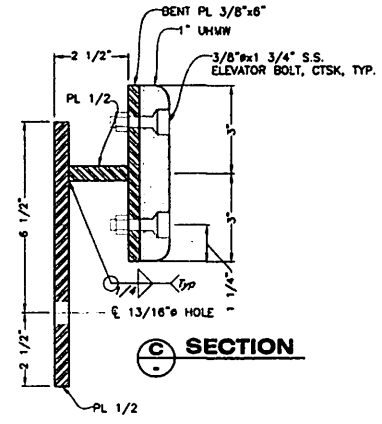
1 TYPE I PILE COLLAR DETAIL



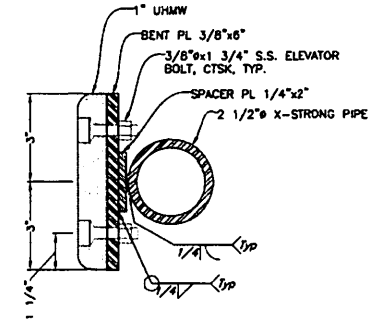
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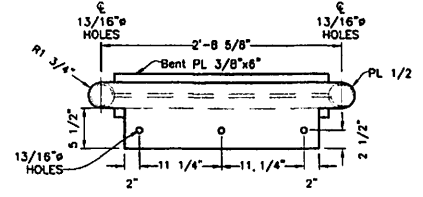
2 PLAN



C SECTION



D SECTION



B SECTION

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: K. HELMER

DESIGNED BY: STAFF
 DRAWN BY: STAFF

PATH: G:\WORK\2011\PROJECT PHASE II\PHASE II - Misc Float D-E DETAILS
 TAB: 08 Tuesday, October 25, 2011 2:41:44 PM DOSSBURN, JOEL D (DOT)

CITY OF THORNE BAY
DAVIDSON LANDING HARBOR PHASE II PROJECT #89292
FLOATS D & E MISC DETAILS

NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			89292	2011	08	17