

DOUGLAS HARBOR RENOVATION

CBJ CONTRACT NO. DH 16 - 001

Volume 2 of 2

95% DESIGN REVIEW SUBMITTAL

PLANS



OCTOBER 2015

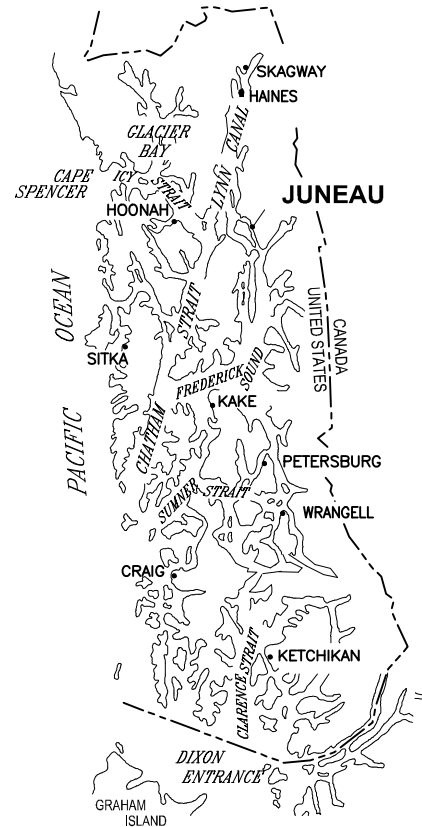
CITY & BOROUGH OF JUNEAU, ALASKA

DOUGLAS HARBOR RENOVATION

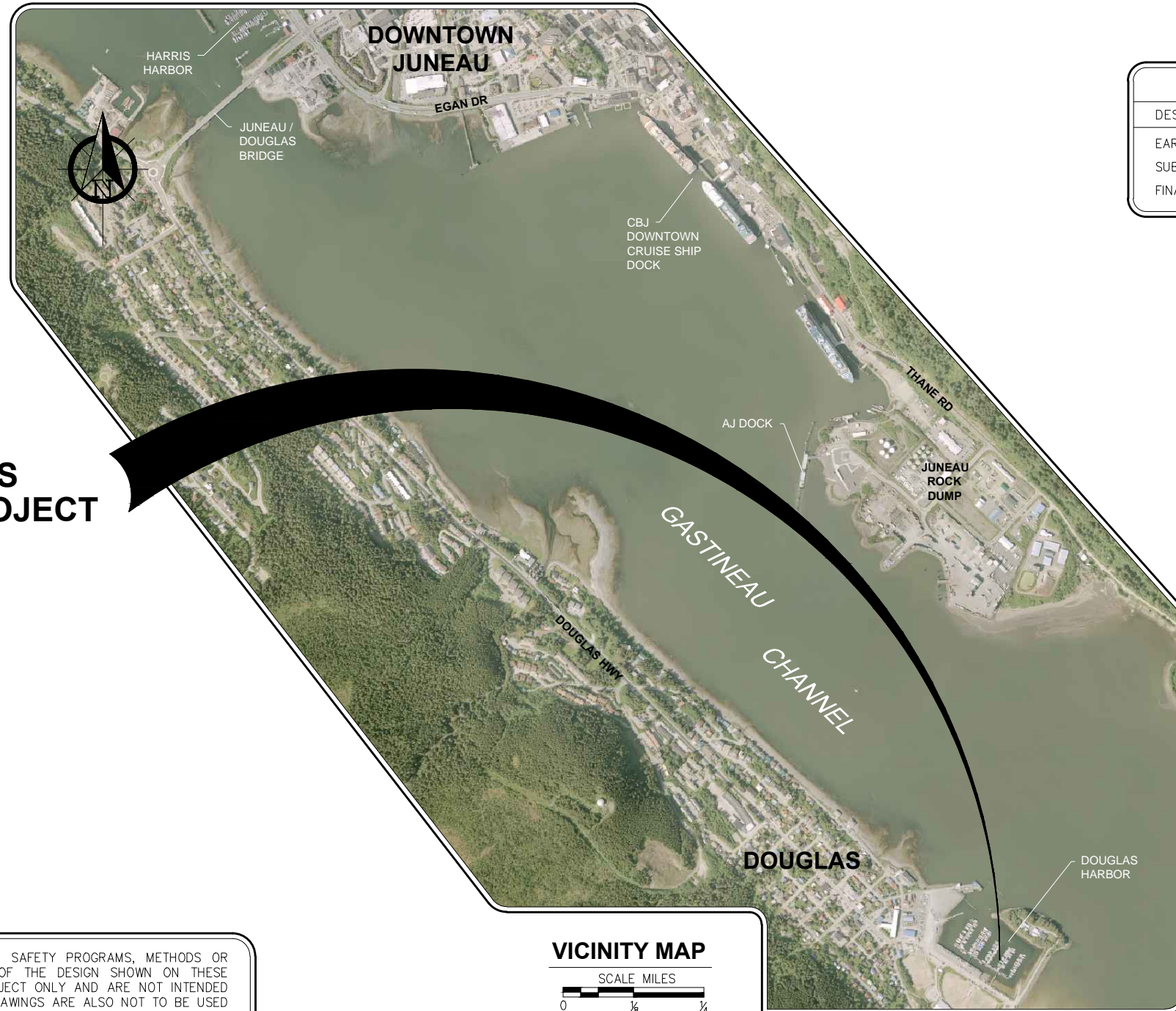
CBJ CONTRACT - DH 16-001



LOCATION MAP

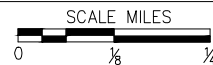


SOUTHEAST ALASKA



THIS PROJECT

VICINITY MAP



AERIAL PHOTO FROM AEROMAP

PROJECT SCHEDULE

DESCRIPTION	SCHEDULE
EARLIEST FIELD START	MAY-2, 2016
SUBSTANTIAL COMPLETION	NOV-15, 2016
FINAL COMPLETION	NOV-30, 2016

TIDAL DATA **ELEV. (FT)**

HIGHEST OBSERVED WATER LEVEL	+24.58
MEAN HIGHER HIGH WATER (MHHW)	+16.30
MEAN HIGH WATER (MHW)	+15.34
MEAN SEA LEVEL (MSL)	+8.56
MEAN TIDE LEVEL (MTL)	+8.47
MEAN LOWER WATER (MLW)	+1.60
MEAN LOWER LOW WATER (MLLW)	0.0
LOWEST OBSERVED WATER LEVEL	-6.12

FROM:
NOAA NOS/CO-OPS STATION ID: 9452210 JUNEAU, ALASKA

PND ENGINEERS, INC. (PND) IS NOT RESPONSIBLE FOR SAFETY PROGRAMS, METHODS OR PROCEDURES OF OPERATION, OR THE CONSTRUCTION OF THE DESIGN SHOWN ON THESE DRAWINGS. DRAWINGS ARE FOR THE USE OF THIS PROJECT ONLY AND ARE NOT INTENDED FOR REUSE WITHOUT WRITTEN APPROVAL FROM PND. DRAWINGS ARE ALSO NOT TO BE USED IN ANY MANNER THAT WOULD CONSTITUTE A DETRIMENT DIRECTLY OR INDIRECTLY TO PND.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PJD CHECKED: JLD
DRAWN: PJD APPROVED: JLD

SCALE: AS SHOWN

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
COVER SHEET, VICINITY MAP AND TIDAL DATA

PND PROJECT NO.: 152037

1.01

SHEET
1 OF 82

DRAWING INDEX

SHEET NO.	DWG. NO.	TITLE
GENERAL		
1	OF 82 1.01	COVER SHEET AND VICINITY MAP
2	OF 82 1.02	DRAWING INDEX
3	OF 82 1.03	LEGEND, ABBREVIATIONS AND GENERAL NOTES
4	OF 82 1.04	EXISTING CONDITIONS AND DEMOLITION SITE PLAN
5	OF 82 1.05	BASE BID GENERAL SITE PLAN
6	OF 82 1.06	BASE BID UPLANDS SITE PLAN
ADD ALT A		
7	OF 82 2.01	ADD. ALT. A SITE PLAN
8	OF 82 2.02	ADD. ALT. A RETAINING WALL SECTION
9	OF 82 2.03	ADD. ALT. A RETAINING WALL PLAN
10	OF 82 2.04	ADD. ALT. A RETAINING WALL ELEVATIONS AND DETAILS
11	OF 82 2.05	ADD. ALT. A RETAINING WALL ELEVATIONS
12	OF 82 2.06	ADD. ALT. A PARTIAL PLAN TOP OF GANGWAY
13	OF 82 2.07	ADD. ALT. A GANGWAY ABUTMENT DETAILS
14	OF 82 2.08	ADD. ALT. A GANGWAY DETAILS
ADD ALT B		
15	OF 82 3.01	ADD. ALT. B UPLANDS SITE PLAN
16	OF 82 3.02	ADD. ALT. B APPROACH DOCK PLAN AND ELEVATION
17	OF 82 3.03	ADD. ALT. B APPROACH DOCK PLAN AND ELEVATION
18	OF 82 3.04	ADD. ALT. B PILE SCHEDULE AND DETAILS
19	OF 82 3.05	ADD. ALT. B BATTER PILE WELDMENT DETAILS
20	OF 82 3.06	ADD. ALT. B PILE CAP DETAILS
21	OF 82 3.07	ADD. ALT. B STRINGER CONNECTION DETAILS
22	OF 82 3.08	ADD. ALT. B BULLRAIL AND RAILING DETAILS
23	OF 82 3.09	ADD. ALT. B BULLRAIL AND RAILING DETAILS
24	OF 82 3.10	ADD. ALT. B GANGWAY CONNECTION DETAILS
25	OF 82 3.11	ADD. ALT. B CONCRETE ABUTMENT SECTION
26	OF 82 3.12	ADD. ALT. B CONCRETE ABUTMENT DETAILS
27	OF 82 3.13	ADD. ALT. B MISCELLANEOUS DETAILS
GANGWAY		
28	OF 82 4.01	ADD. ALT. A & B GANGWAY MODIFICATIONS
29	OF 82 4.02	ADD. ALT. A & B EXISTING GANGWAY DETAILS
30	OF 82 4.03	ADD. ALT. A & B EXISTING GANGWAY DETAILS
31	OF 82 4.04	ADD. ALT. A & B EXISTING GANGWAY DETAILS

DRAWING INDEX

SHEET NO.	DWG. NO.	TITLE
MOORAGE FLOATS		
32	OF 82 5.01	BASE BID FLOAT PLAN AND PILE LAYOUT
33	OF 82 5.02	FLOAT PILE SCHEDULE AND DETAILS
34	OF 82 5.03	HEADWALK DETAILED FLOAT PLAN
35	OF 82 5.04	MAINWALK A DETAILED FLOAT PLAN
36	OF 82 5.05	MAINWALK B DETAILED FLOAT PLAN
37	OF 82 5.06	MAINWALK C DETAILED FLOAT PLAN
38	OF 82 5.07	FLOTATION SCHEDULES
39	OF 82 5.08	GANGWAY LANDING FLOAT PLAN
40	OF 82 5.09	GANGWAY LANDING FLOAT DECK PLAN AND ELEVATION
41	OF 82 5.10	TYPICAL 10'x42' MODULE PLAN AND ELEVATION
42	OF 82 5.11	TYPICAL 10'x50' MODULE PLAN AND ELEVATION
43	OF 82 5.12	TYPICAL 10'x60' MODULE PLAN AND ELEVATION
44	OF 82 5.13	TYPICAL 12'x48' MODULE PLAN AND ELEVATION
45	OF 82 5.14	MAINWALK B FLOAT MODULE T-1 PLAN AND ELEVATION
46	OF 82 5.15	HEADWALK FLOAT MODULE H-3 PLAN AND ELEVATION
47	OF 82 5.16	3'x24' FINGER FLOAT MODULE
48	OF 82 5.17	4'x32' FINGER FLOAT MODULE
49	OF 82 5.18	6'x42' FINGER FLOAT MODULE
MOORAGE FLOAT DETAILS		
50	OF 82 6.01	TYPICAL FLOAT SECTIONS
51	OF 82 6.02	TYPICAL FLOAT SECTIONS
52	OF 82 6.03	TYPICAL FLOAT SECTIONS
53	OF 82 6.04	MODULE END CONNECTION DETAILS
54	OF 82 6.05	MODULE END CONNECTION DETAILS
55	OF 82 6.06	MODULE END CONNECTION DETAILS
56	OF 82 6.07	PIANO HINGE DETAILS
57	OF 82 6.08	PIANO HINGE DETAILS
58	OF 82 6.09	PIANO HINGE DETAILS
59	OF 82 6.10	BALLAST TANK AND FLOTATION TUB DETAILS
60	OF 82 6.11	FLOTATION BILLET DETAILS
61	OF 82 6.12	TRANSITION BRIDGE DETAILS
62	OF 82 6.13	BULLRAIL STANDARD DETAILS
63	OF 82 6.14	MISCELLANEOUS FLOAT MODULE DETAILS
64	OF 82 6.15	MISCELLANEOUS FLOAT MODULE DETAILS
65	OF 82 6.16	MISCELLANEOUS FLOAT MODULE DETAILS
66	OF 82 6.17	MISCELLANEOUS FLOAT MODULE DETAILS
67	OF 82 6.18	INTERNAL PILE HOOP DETAILS
68	OF 82 6.19	EXTERNAL PILE HOOP DETAILS
69	OF 82 6.20	FLOAT APPURTENANCE SUPPORT DETAILS
70	OF 82 6.21	ELECTRICAL SUPPORT POST DETAILS
71	OF 82 6.22	LIGHT POLE AND ELECTRICAL SUPPORT DETAILS
72	OF 82 6.23	ELECTRICAL PEDESTAL BASE WELDMENT DETAILS

DRAWING INDEX

SHEET NO.	DWG. NO.	TITLE
STRUCTURAL		
73	OF 82 7.01	UTILITY BUILDING PLANS AND ELEVATION
74	OF 82 7.02	UTILITY BUILDING DETAILS
UTILITY LAYOUT		
75	OF 82 8.01	WATER AND FIRE SYSTEM SCHEMATIC SITE PLAN
76	OF 82 8.02	UTILITY SYSTEM UPLANDS DETAILS
77	OF 82 8.03	FLOAT MOUNTED UTILITY ROUTING DETAILS
78	OF 82 8.04	FLOAT MOUNTED UTILITY DETAILS
79	OF 82 8.05	FLOAT MOUNTED UTILITY DETAILS
80	OF 82 8.06	FLOAT MOUNTED UTILITY DETAILS
81	OF 82 8.07	WASTEWATER PUMPOUT SYSTEM
82	OF 82 8.08	WASTEWATER PUMPOUT SYSTEM DETAILS

ELECTRICAL DRAWING INDEX

SHEET NO.	DWG. NO.	TITLE
1	OF 18 E2.01	SITE PLAN
2	OF 18 E2.02	NEW PLAN - POWER
3	OF 18 E2.03	ENLARGED A & B FLOAT PLANS - POWER
4	OF 18 E2.04	ENLARGED HEADWALK & C FLOAT PLANS - POWER
5	OF 18 E2.04A	ENLARGED HEADWALK & C FLOAT PLANS - POWER (ALT A)
6	OF 18 E2.04B	ENLARGED HEADWALK & C FLOAT PLANS - POWER (ALT B)
7	OF 18 E2.05	SINGLE LINE DIAGRAMS
8	OF 18 E2.06	ELECTRICAL DETAILS
9	OF 18 E2.07	ELECTRICAL DETAILS
10	OF 18 E3.01	ENLARGED A & B FLOAT PLANS - LIGHTING
11	OF 18 E3.02	ENLARGED C FLOAT PLAN - LIGHTING
12	OF 18 E3.03	ENLARGED HEADWALK FLOAT PLAN - LIGHTING (BASE BID)
13	OF 18 E3.03A	ENLARGED HEADWALK FLOAT PLAN - LIGHTING (ALT A)
14	OF 18 E3.03B	ENLARGED HEADWALK FLOAT PLAN - LIGHTING (ALT B)
15	OF 18 E3.04	PEDESTAL DETAILS
16	OF 18 E3.05	GANGWAY DETAILS
17	OF 18 E3.06	WIRING DIAGRAM - PEDESTALS
18	OF 18 E3.07	DETAILS

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: WRB CHECKED: JLD SCALE:
DRAWN: DRD APPROVED: JLD

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
DRAWING INDEX

PND PROJECT NO.: 152037

1.02
SHEET
2 OF 82

\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G Drawings\Design\1.02 DRAWING INDEX.dwg. 10/30/2015 11:32:26 PM

ABBREVIATIONS

A		H	HUB & TACK	Q	QUANTITY
@	AT	HD	HEAVY DUTY	QTY	
AC	ASBESTOS CEMENT PIPE	H&T	HUB & TACK	R	
ACP	ASPHALT CONCRETE PAVEMENT	HD	HEAVY DUTY	RAD	RADIUS
ADA	AMERICANS WITH DISABILITIES ACT	H&T	HUB & TACK	RE	RIM ELEVATION
ADJ	ADJUSTABLE	H&T	HUB & TACK	REF	REFERENCE
APF	ASSOCIATED PILE AND FITTING CORP.	H&T	HUB & TACK	REINF	REINFORCEMENT
APPROX.	APPROXIMATE	H&T	HUB & TACK	REQD	REQUIRED
or APPX.		H&T	HUB & TACK	RET	RETAINING
ATS	ALASKA TIDELANDS SURVEY	H&T	HUB & TACK	RO	ROUGH OPENING
AV	AIR RELEASE VALVE	H&T	HUB & TACK	ROW	RIGHT OF WAY
B		I		S	
BCC	BEGINNING OF CURB CUT	I	IN ACCORDANCE WITH	S	SOUTH
BFV	BUTTERFLY VALVE	IAW	IN ACCORDANCE WITH	SCHED/SCH	SCHEDULE
BLDG	BUILDING	ID	INSIDE DIAMETER	SD	STORM DRAIN
BOP/BP	BEGINNING OF PROJECT	IE	INVERT ELEVATION	SDI	STORM DRAIN INLET STRUCTURE
BTM, BOT	BOTTOM	IN	INCH	SDO	STORM DRAIN OUTLET STRUCTURE
C		IP	IRON PIPE	SDR	STANDARD DIMENSION RATIO
C&G	CURB & GUTTER	INCL	INCLUDE (D) (ING)	SF	SQUARE FOOT
CB	CATCH BASIN	INCL	INCLUDE (D) (ION)	SHLDR	SHOULDER
CBJ	CITY & BOROUGH OF JUNEAU	INSUL	INSULATE (D) (ION)	SI	STREET INTERSECTION
CI	CAST IRON	INV	INVERT	SPEC	SPECIFICATION (S)
CIP	CAST-IN-PLACE	J		SQ	SQUARE
CJ	CONTROL JOINT	JB	JUNCTION BOX	SRB	SHOT ROCK BORROW
CL	CENTER LINE	L		SSC	SANITARY SEWER CONNECTION
CLR	CLEAR	LBS	POUNDS	SS	STAINLESS STEEL, SANITARY SEWER
CMP	CORRUGATED METAL PIPE	LF	LINEAR FEET	SDMH	STORM DRAIN MANHOLE
CO	CLEANOUT	LL	LIVE LOAD	SSMH	SANITARY SEWER MANHOLE
C.O.E.	CORPS OF ENGINEERS	LOC	LOCATION	STA	STATION
COMM	COMMUNICATION	LS	LUMP SUM	STD	STANDARD
CONC.	CONCRETE	M		STL	STEEL
CP	COMPLETE PENETRATION	MAX	MAXIMUM	STRG	STRONG
CPEP/CP	CORRUGATED POLYETHYLENE PIPE	M.E.	MATCH EXISTING	SW	SIDEWALK
COR	CORNER	MECH	MECHANICAL	SWR	SEWER
CSC	COUNTERSINK	MFR	MANUFACTURE (R)	SY	SQUARE YARD
CTR	CENTER	MH	MANHOLE	SYM	SYMMETRICAL
CY	CUBIC YARD	MJ	MECHANICAL JOINT	t	
D		MI	MALLEABLE IRON	T	THICK
DCP	DISSIMILAR PIPE COUPLING	MIN	MINIMUM	T&B	TOP AND BOTTOM
D/DIA	DIAMETER	MLLW	MEAN LOWER LOW WATER	T&G	TONGUE AND GROOVE
DBL	DOUBLE	MSF	1000 SQUARE FEET	TBC	TOP BACK OF CURB
DEMO	DEMOLITION	MSE	MECHANICALLY STABILIZED EARTH	TBD	TO BE DETERMINED
DL	DEAD LOAD	MTL	MATERIAL (S)	TBM	TEMPORARY BENCH MARK
DIP	DUCTILE IRON PIPE	N		TD	TRENCH DRAIN
DIM	DIMENSION	N	NORTH	TEL	TELEPHONE
DN	DOWN	NFS	NON FROST SUSCEPTIBLE	TEMP	TEMPERATURE, TEMPORARY
DTL	DETAIL	NIC	NOT IN CONTRACT	TH	TEST HOLE
E		NO	NUMBER	THK	THICK
E	EAST	NTS	NOT TO SCALE	TRANS	TRANSVERSE
EA.	EACH	O		TV	TELEVISION
EC	EDGE OF CONCRETE	OBD	OVERBURDEN	TYP	TYPICAL
ECC	END OF CURB CUT	OC	ON CENTER	U	
EG	EXISTING GRADE	OD	OUTSIDE DIAMETER	UBC	UNIFORM BUILDING CODE
EJ	EXPANSION JOINT	OG	ORIGINAL GROUND	UE	UNDERGROUND ELECTRIC
EL/ELEV	ELEVATION	OHE	OVERHEAD ELECTRICAL	UMC	UNIFORM MECHANICAL CODE
ELEL	ELECTRICAL	OWS	OIL-WATER SEPARATOR	UHMW	ULTRA HIGH MOLECULAR WEIGHT
EOP	END OF PROJECT	OPP	OPPSITE	UON/UNO	UNLESS OTHERWISE NOTED
EP	END PROJECT/EDGE OF PAVEMENT	P		UPC	UNIFORM PLUMBING CODE
EPED	ELECTRICAL PEDESTAL	PE	POLYETHYLENE	V	
EQ	EQUAL	PED	PEDESTAL	VB	VALVE BOX
EQUIP	EQUIPMENT	PER	PERIMETER	VERT	VERTICAL
EST	ESTIMATE	PERF	PERFORATE (D)	VG	VALLEY GUTTER
EW	EACH WAY	PI	POINT OF INTERSECTION	W	
EXC	EXCAVATE	PLWD	PLYWOOD	W	WEST
EXIST, (E)	EXISTING	PL	PROPERTY LINE, PLATE	W/	WITH
F		POC	POINT OF CURVE	WD	WOOD
FC	FACE OF CURB	PP	POLYPROPYLENE	WELDMT	WELDMENT
FD	FLOOR DRAIN	PRC	POINT OF REVERSE CURVATURE	WL	WATERLINE
FF	FINISHED FLOOR	PROJ	PROJECT	WPED	WATER PEDESTAL
FG	FINISHED GRADE	PRKG	PARKING	WQU	WATER QUALITY UNIT
FH	FIRE HYDRANT, FLAT HEAD	PRV	PRESSURE REDUCING VALVE	WV	WATER VALVE
FIN	FINISH (ED)	PSI	POUND PER SQUARE INCH	WW	WATER WATER
FM	FORCE MAIN SEWER	PT	POINT, PRESSURE TREATED,	WWTP	WASTE WATER TREATMENT PLANT
FND	FOUNDATION	PVC	POINT OF TANGENCY	W/O	WITHOUT
FOC	FACE OF CURB	PVI	POINT OF VERTICAL INTERSECTION	X	
FPED	FIRE PEDESTAL			XFMR	TRANSFORMER
FT	FOOT			<PT	ANGLE POINT
FTG	FOOTING				
FL	FLOWLINE OR FLANGE				
G					
GAL	GALLON				
GALV	GALVANIZED				
GB	GRADE BREAK				
GLB	GLUE LAMINATED BEAM				
GPM	GALLONS PER MINUTE				
GRD	GROUND				
GV	GATE VALVE				

EXISTING	PROPOSED	
-----	-----	CENTERLINE
-----	-----	EDGE ACP OR GRAVEL ROADWAY
- X - X - X -		FENCE
---OHE---		OVERHEAD ELECTRIC LINE
-----		PROPERTY LINE
---UE---		UNDERGROUND ELECTRIC LINE
---SS---		UNDERGROUND SANITARY SEWER LINE
-----		UNDERGROUND STORM DRAIN PIPE
---Wx---	---W---	UNDERGROUND WATER LINE
⊠		SET SPIKE OR PK NAIL
⊙		SURVEY MONUMENT
⊙		BOREHOLE
PND-04-1		CATCH BASIN
⊠		ELECTRIC PEDESTAL
⊠ XFMR		ELECTRIC TRANSFORMER
⊙ FH		FIRE HYDRANT
⊠		GUY ANCHOR
+ -25.2	23.2	GROUND SPOT ELEVATION (MLLW)
⊠		JUNCTION BOX
⊠ WV	⊠ WV	KEY BOX/WATER VALVE
⊙		LIGHT POLE OR PILE MOUNTED LIGHT
⊙ SSMH		SANITARY SEWER MANHOLE
⊠		SIGN
⊙ SDMH		STORM DRAIN MANHOLE
⊙		STORM DRAIN MANHOLE W/ CONC. AREA DRAIN
⊠ TR		TELEPHONE RISER
⊙		TREE(S)
⊙		UTILITY POLE
⊠		SECTION OR DETAIL CALLOUT
⊠		LOCATION OF DETAIL OR REFERENCE DRAWING

GENERAL NOTES

1. EROSION AND POLLUTION CONTROL PLANS

THE CONTRACTOR SHALL DEVELOP AND SUBMIT FOR ENGINEER AND AGENCY REVIEW AND APPROVAL A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THIS PLAN SHALL INCLUDE AN EROSION AND SEDIMENT CONTROL PLAN BASED UPON THE CONTRACTOR'S SCHEDULING, EQUIPMENT AND WORK. TO THE GREATEST EXTENT POSSIBLE FOLLOW THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT/PF) ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE (ASWPPPG). THE PLAN SHALL CONSIDER FIRST PREVENTING EROSION, THEN MINIMIZING AND TRAPPING SEDIMENT PRIOR TO ITS ENTERING THE WATERWAYS. THE PLAN MUST ADDRESS THE SITE-SPECIFIC CONTROLS AND MANAGEMENT FOR THE CONSTRUCTION SITE AS WELL AS ALL MATERIAL SITES, WASTE DISPOSAL SITES AND AFFECTED AREAS. THE PLAN MUST INCORPORATE ALL THE REQUIREMENTS OF THE PROJECT PERMITS. BEST MANAGEMENT PRACTICES AS LISTED IN THE ASWPPPG SHALL BE USED.

THE CONTRACTOR SHALL PREPARE A HAZARDOUS MATERIAL CONTROL PLAN (HMCP) FOR THE HANDLING, STORAGE, CLEAN-UP AND DISPOSAL OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES. THE CONTRACTOR SHALL LIST AND GIVE LOCATIONS OF ALL HAZARDOUS MATERIALS, INCLUDING FIELD OFFICE MATERIALS, TO BE USED AND STORED ON-SITE AND THEIR ESTIMATED QUANTITIES. THE PLAN SHALL PROVIDE DETAILS FOR STORING THESE MATERIALS AS WELL AS DISPOSING WASTE PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS GENERATED BY THE PROJECT.

IDENTIFY THE LOCATIONS WHERE HAZARDOUS MATERIAL STORAGE, FUELING AND MAINTENANCE ACTIVITIES WILL TAKE PLACE. IF ON-SITE, DESCRIBE THE MAINTENANCE ACTIVITIES AND LIST ALL CONTROLS TO PREVENT THE ACCIDENTAL SPILLAGE OF OIL, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS. DETAIL PROCEDURES FOR CONTAINMENT AND CLEANUP OF HAZARDOUS SUBSTANCES INCLUDING A LIST OF THE TYPES AND QUANTITIES OF EQUIPMENT AND MATERIALS AVAILABLE ON-SITE TO BE USED.

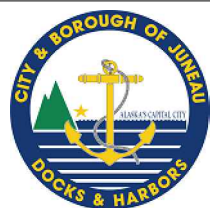
THE PLAN SHALL PROVIDE DETAILS FOR PREVENTION, CONTAINMENT, CLEAN-UP AND DISPOSAL OF SOIL AND WATER CONTAMINATED BY ACCIDENTAL SPILLS AND FOR UNEXPECTED CONTAMINATED SOIL AND WATER ENCOUNTERED DURING CONSTRUCTION.

- MATCH EXISTING GRADES AT PROJECT LIMITS AND WHERE REQUIRED TO MATCH ELEVATIONS AT EXISTING ROADS.
- THE LOCATIONS OF EXISTING FEATURES AND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADDITIONAL UTILITIES MAY BE PRESENT HOWEVER ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS IN THE FIELD AS NECESSARY, PRIOR TO BEGINNING WORK. THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD SHALL BE RECORDED ON THE CONTRACTOR'S RECORD DRAWINGS. CONTACT LOCAL UTILITY COMPANIES PRIOR TO ANY/ ALL EXCAVATIONS AT THE FOLLOWING TELEPHONE NUMBERS:

DIAL BEFORE YOU DIG!
586-1333
UNDERGROUND POWER, TELEPHONE, T.V., COMMUNICATIONS, WATER AND SEWER LINES ARE IN THE AREA. UTILITIES SHOWN HERE DO NOT SUBSTITUTE FOR FIELD LOCATES.

- CBJ ENGINEERING STANDARD DETAILS BOOK DATED AUGUST, 2011 IS MADE A PART OF THIS CONTRACT, WITH CURRENT REVISIONS AS APPLICABLE.
- PROPERTY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION OR BETTER AT NO ADDITIONAL COST.
- GRADING AND ALIGNMENT OF PIPE, STRUCTURES & FINAL SURFACING ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER TO FIT SITE CONDITIONS. GRADE ALL IMPROVEMENTS WITH POSITIVE DRAINAGE AWAY FROM STRUCTURES.
- PROPERTY LINE LOCATIONS USED IN THESE PLANS ARE DERIVED FROM RECORD PLATS AND DO NOT REPRESENT A BOUNDARY SURVEY.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PJD CHECKED: JLD
DRAWN: PJD APPROVED: JLD

SCALE: AS SHOWN

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
LEGEND, ABBREVIATIONS AND GENERAL NOTES

1.03
SHEET 3 OF 82

PND PROJECT NO.: 152037

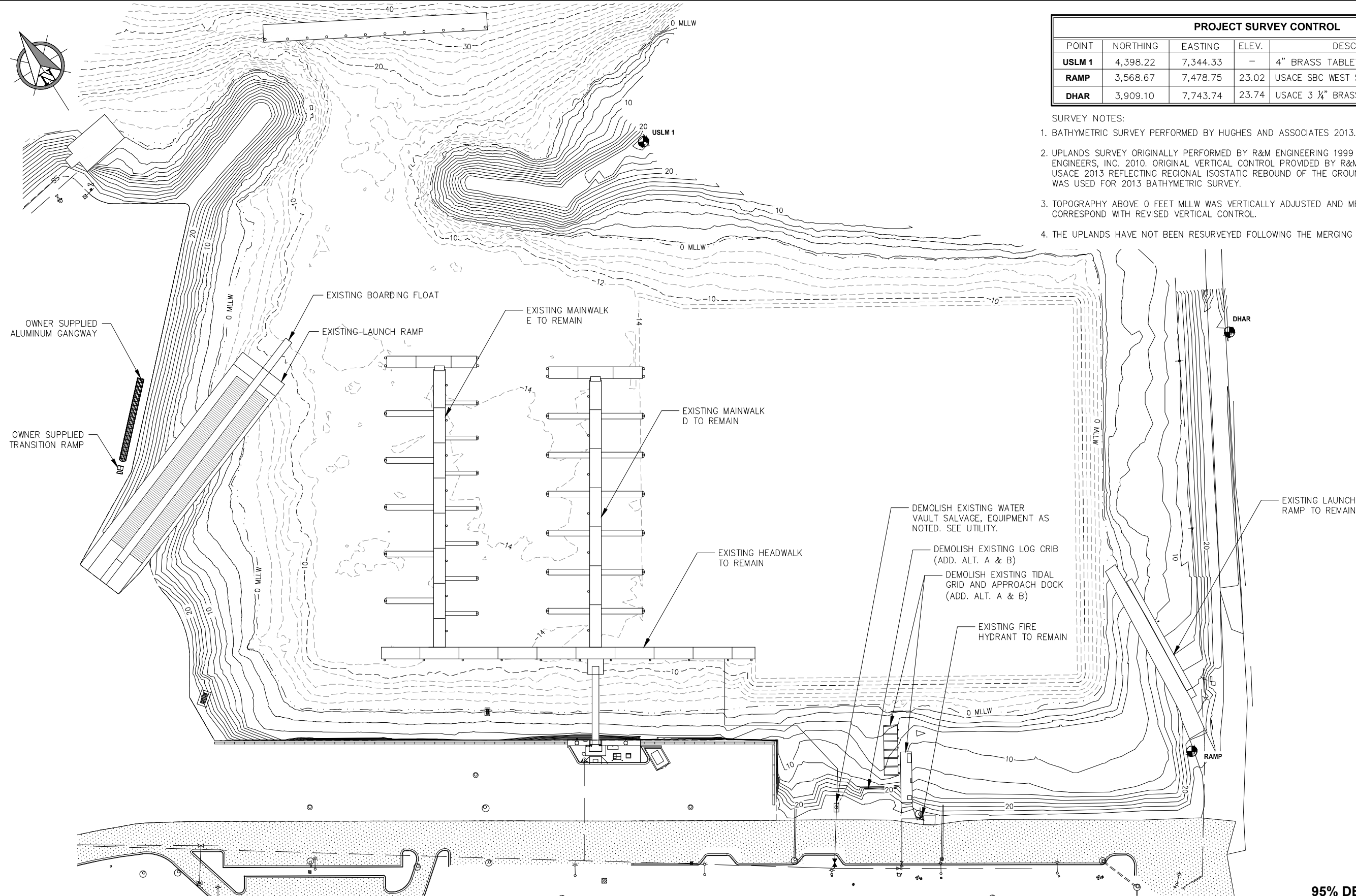
\\Pnfd\ata\d\152037\Drawings\Design\1.03 Legend Abbreviations.dwg, 10/30/2015 11:33:39 PM



PROJECT SURVEY CONTROL				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
USLM 1	4,398.22	7,344.33	-	4" BRASS TABLET IN ROCK
RAMP	3,568.67	7,478.75	23.02	USACE SBC WEST SIDE OF RAMP, END PVMNT
DHAR	3,909.10	7,743.74	23.74	USACE 3 1/4" BRASS CAP IN GRANITE BOULDER

SURVEY NOTES:

- BATHYMETRIC SURVEY PERFORMED BY HUGHES AND ASSOCIATES 2013.
- UPLANDS SURVEY ORIGINALLY PERFORMED BY R&M ENGINEERING 1999 WITH ADDITIONAL SURVEY BY PND ENGINEERS, INC. 2010. ORIGINAL VERTICAL CONTROL PROVIDED BY R&M ENGINEERING 1999 WAS REVISED BY USACE 2013 REFLECTING REGIONAL ISOSTATIC REBOUND OF THE GROUND SURFACE. REVISED VERTICAL CONTROL WAS USED FOR 2013 BATHYMETRIC SURVEY.
- TOPOGRAPHY ABOVE 0 FEET MLLW WAS VERTICALLY ADJUSTED AND MERGED WITH BATHYMETRIC CONTOURS TO CORRESPOND WITH REVISED VERTICAL CONTROL.
- THE UPLANDS HAVE NOT BEEN RESURVEYED FOLLOWING THE MERGING OF BATHYMETRIC AND UPLAND CONTOURS.



95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PJD CHECKED: JLD
DRAWN: PJD APPROVED: JLD

SCALE: SCALE IN FEET
0 50 100 FT.

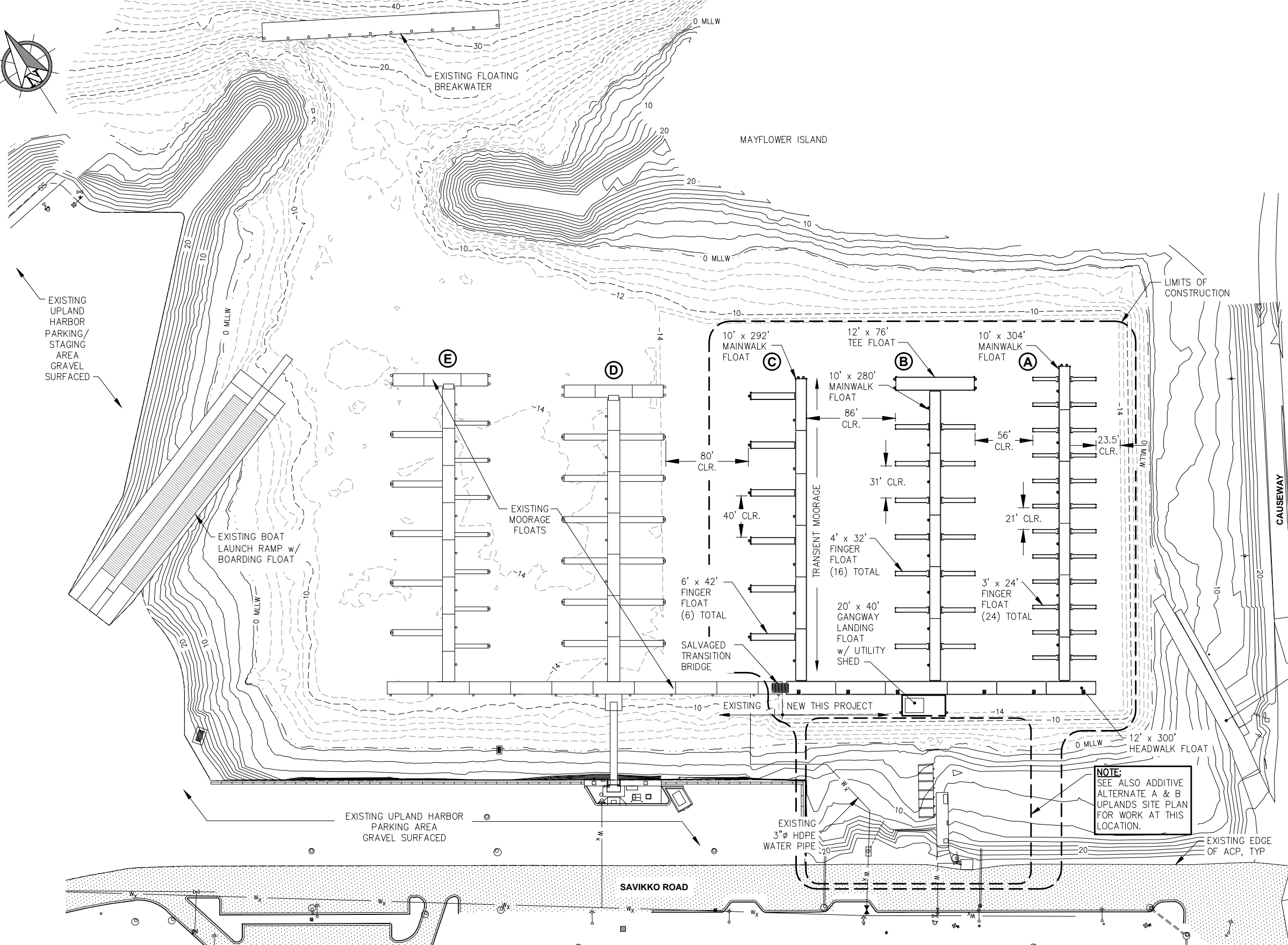
DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

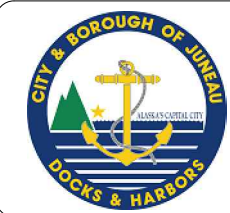
SHEET TITLE:
**EXISTING CONDITIONS AND
DEMOLITION SITE PLAN**

PND PROJECT NO.: 152037

1.04
SHEET
4 OF 82



95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: PJD APPROVED: JLD

SCALE: SCALE IN FEET
0 50 100 FT.

DATE: 10/27/2015

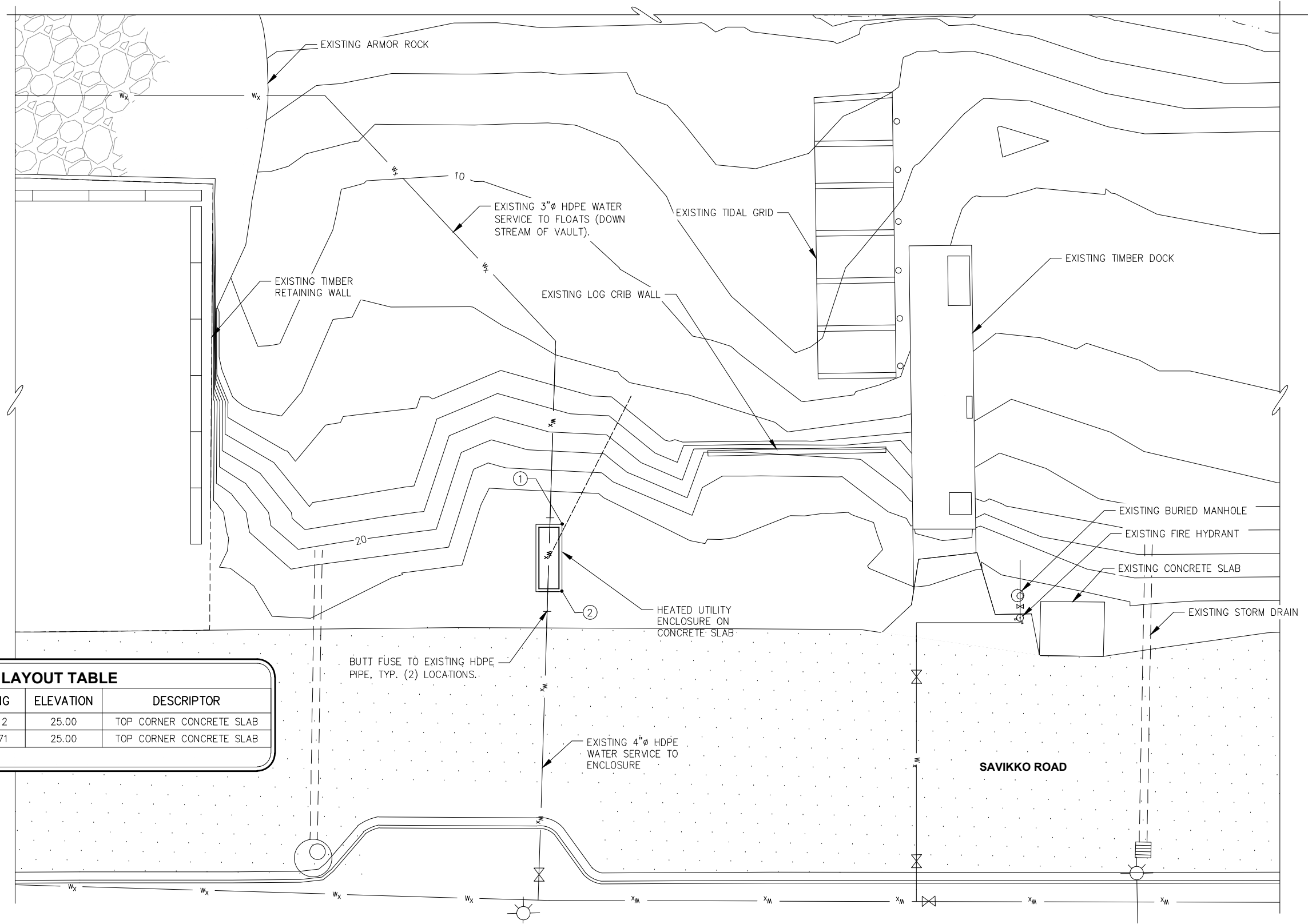
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **BASE BID GENERAL SITE PLAN**

PND PROJECT NO.: 152037

1.05
SHEET 5 OF 82

\\Pnd\jdata\152037 Douglas Harbor Renovation\G. Drawings\Design\1.05 GENERAL SITE PLAN.dwg. 10/30/2015 1:13:51 PM



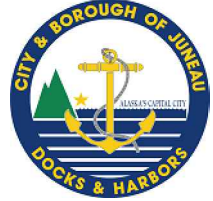
SITE LAYOUT TABLE

PT #	NORTHING	EASTING	ELEVATION	DESCRIPTOR
1	3721.378	7146.412	25.00	TOP CORNER CONCRETE SLAB
2	3711.062	7139.771	25.00	TOP CORNER CONCRETE SLAB

BUTT FUSE TO EXISTING HDPE PIPE, TYP. (2) LOCATIONS.

**PARTIAL SITE PLAN
APPROACH DOCK**

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: SCALE IN FEET
DRAWN: KLL APPROVED: JLD 0 10 20 FT.

DATE: 10/27/2015

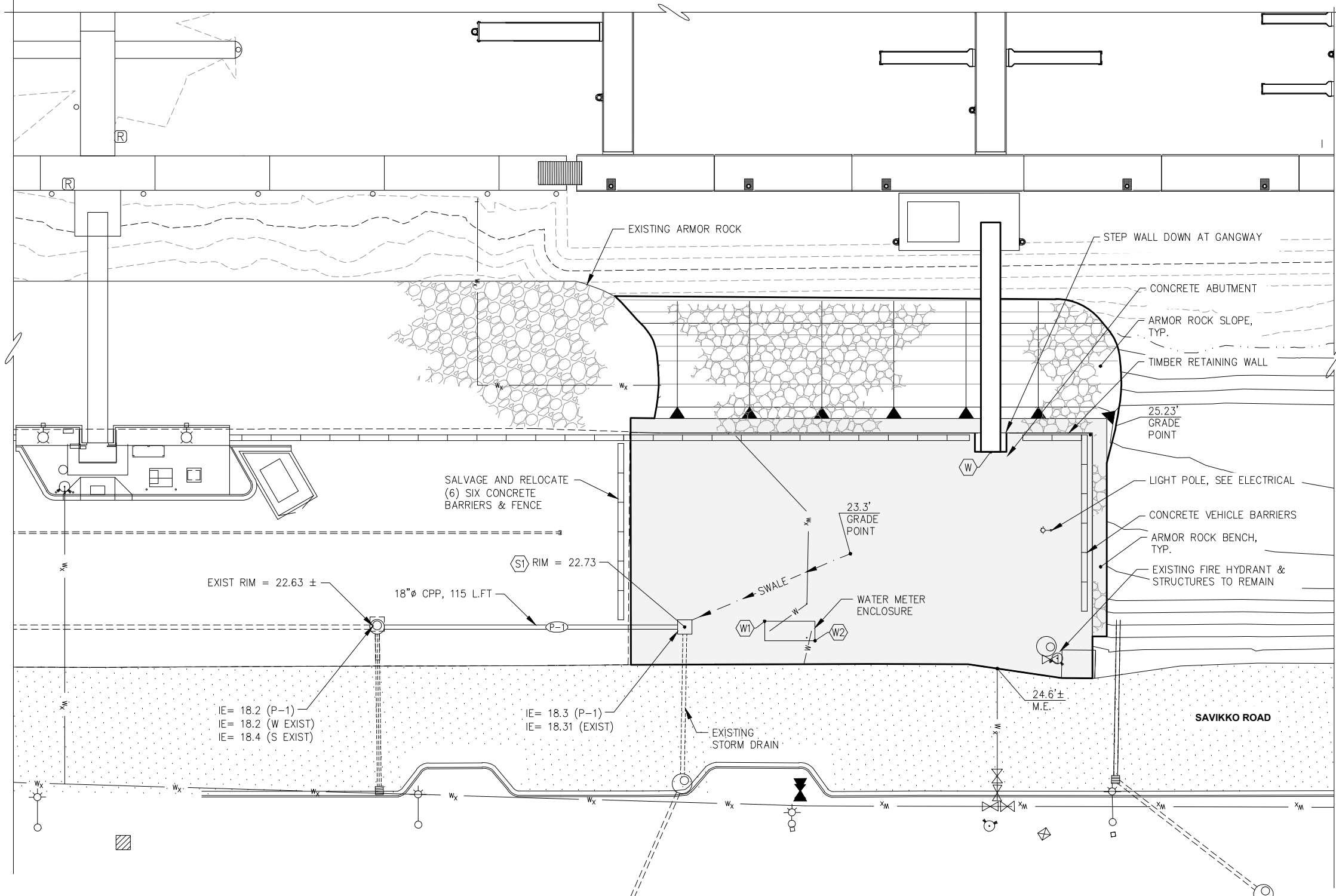
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **BASE BID
UPLANDS SITE PLAN**

PND PROJECT NO.: 152037

1.06
SHEET
6 OF 82

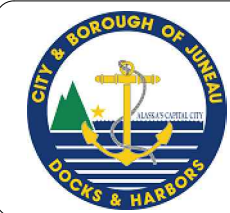
\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\1.06 Uplands Site Plan-Base Bidding_10/30/2015 11:40:01 PM



**PARTIAL SITE PLAN
ALTERNATE A RETAINING WALL**

STRUCTURE SUMMARY					
PT #	NORTHING	EASTING	TYPE	ELEVATION	DESCRIPTION
(S1)	3740.2648	7105.7298	IV/WAD		16" SUMP
(W1)	3726.8365	7130.2584			CONCRETE PAD CORNER
(W2)	3711.6435	7141.3898			CONCRETE PAD CORNER

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD
DRAWN: PJD APPROVED: JLD

SCALE: SCALE IN FEET
0 20 40 FT.

DATE: 10/27/2015

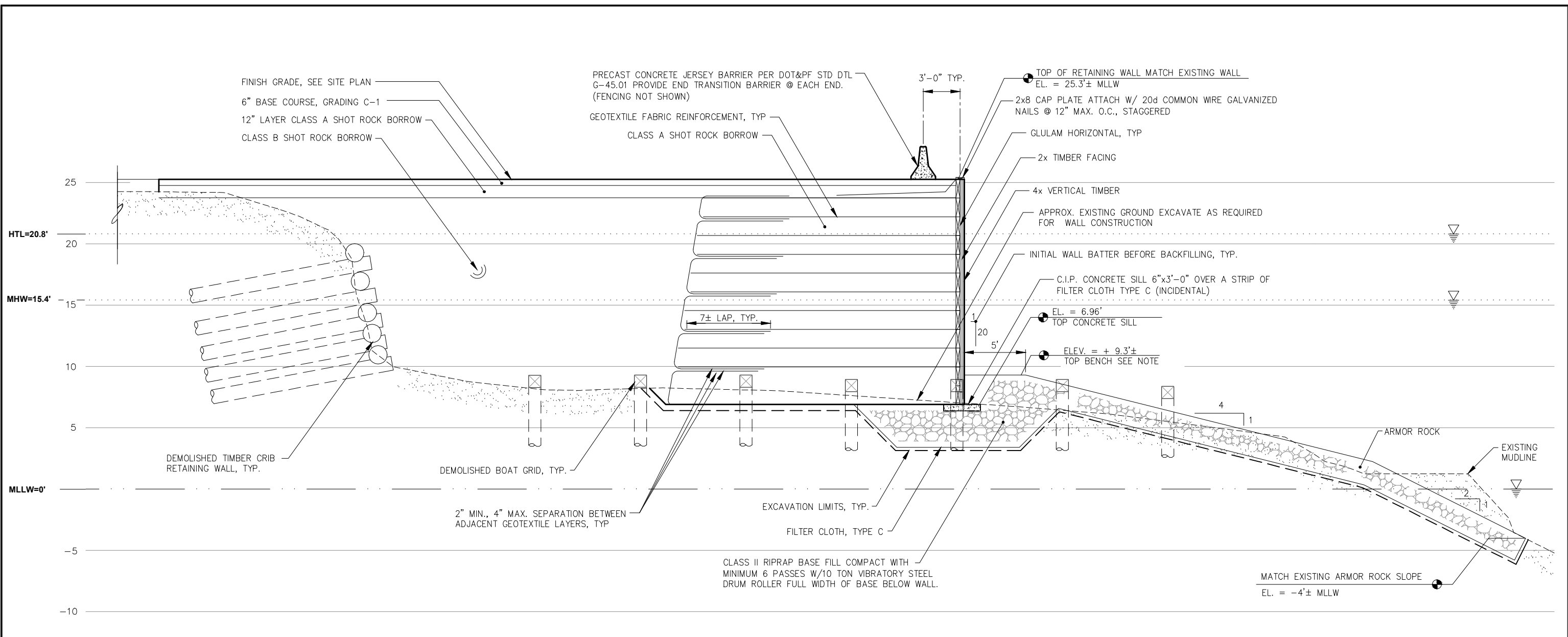
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **ADDITIVE ALTERNATE A
SITE PLAN**

PND PROJECT NO.: 152037

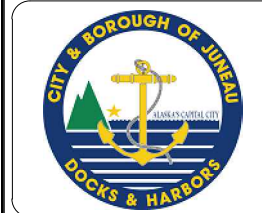
2.01
SHEET
7 OF 82

I:\Prof\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\2.01-ADD ALT A.dwg, 10/30/2015 1:41:14 PM



A
-
RETAINING WALL SECTION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD
DRAWN: PJD APPROVED: JLD

SCALE: SCALE IN FEET
0 2' 4'

DATE: 10/27/2015

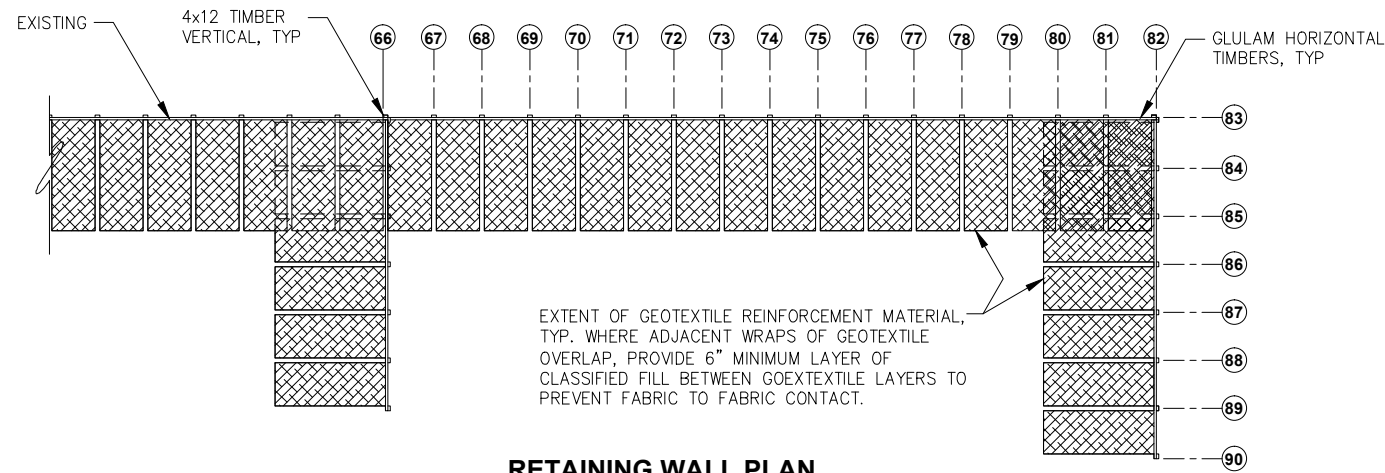
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **ADDITIVE ALTERNATE A**
RETAINING WALL SECTION

PND PROJECT NO.: 152037

2.02
SHEET
8 OF 82

\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G Drawings\Design\2.02-ADD-ALT A.dwg, 10/30/2015 1:44:23 PM



RETAINING WALL PLAN

GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE AMOCO 2044 OR APPROVED EQUAL. THE GEOTEXTILE ROLLS SHALL BE TAGGED SHOWING THE NUMBER OF SQUARE YARDS CONTAINED IN THE ROLL. FIELD SEAMS IN GEOTEXTILE WILL NOT BE ALLOWED. GEOTEXTILE MUST BE PROVIDED IN MINIMUM WIDTHS AND LENGTHS SUFFICIENT TO PROVIDE WRAPS AS SHOWN ON THE PLANS. DURING SHIPMENT, STORAGE, AND PLACEMENT, THE GEOTEXTILE SHALL BE PROTECTED FROM DIRECT SUNLIGHT, MOISTURE, ULTRAVIOLET RAYS, TEMPERATURES GREATER THAN 100F, MUD, DIRT, DUST AND DEBRIS.

CARE SHALL BE TAKEN TO ASSURE THAT CUTS OR TEARS DO NOT OCCUR IN THE GEOTEXTILE DURING PLACEMENT OR DURING BACKFILL. IN PARTICULAR, GEOTEXTILE WRAPS AROUND THE HORIZONTAL GLULAM TIMBERS MUST HAVE NO TEARS OR CUTS. IF TEARS OR CUTS OCCUR AT ANY TIME DURING CONSTRUCTION OF THE WALL, THE SECTION OF DAMAGED GEOTEXTILE SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST.

EACH LAYER OF WALL CONSTRUCTION SHALL BE COMPLETED ENTIRELY BEFORE BEGINNING THE NEXT LAYER. THE GEOTEXTILE SHALL BE STRETCHED OUT IN THE DIRECTION PERPENDICULAR TO THE WALL FACE TO ENSURE THAT NO SLACK OCCURS IN THE GEOTEXTILE PRIOR TO BACKFILLING. COMPACTION WITHIN FOUR FEET OF WALL FACE SHALL BE ACHIEVED USING A LIGHT MECHANICAL TAMPER APPROVED BY THE ENGINEER AND SHALL BE DONE IN A MANNER AS NOT TO CAUSE DAMAGE OR DISTORTION TO THE WALL FACING ELEMENTS OR GEOTEXTILE REINFORCING LAYERS.

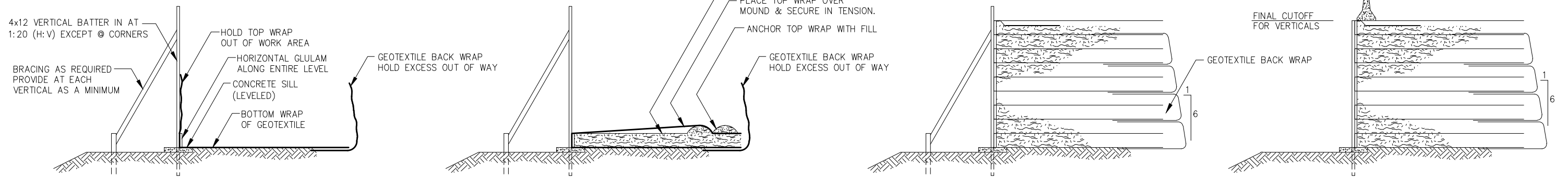
DURING CONSTRUCTION, THE WALL FACE SHALL BE BATTERED TO ACCOMMODATE STRETCH OF GEOTEXTILE REINFORCEMENT. A BRACING SYSTEM FOR VERTICAL MEMBERS WILL BE REQUIRED DURING CONSTRUCTION TO MAINTAIN THE BATTER. THE AMOUNT OF BATTER IS SHOWN ON THE PLANS.

GEOTEXTILE SHALL BE PLACED SMOOTH WITH NO BUNCHING DUE TO MISALIGNMENT. GEOTEXTILE SHALL BE PLACED AND HELD TAUT WHILE THE SPECIFIED COVER MATERIAL IS PLACED OVER GEOTEXTILE.

THE CONTRACTOR SHALL SUBMIT A WALL CONSTRUCTION PLAN FOR APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL MONITOR WALL POSITION AT VARIOUS WALL HEIGHTS DURING FILL PLACEMENT. IF WALL MOVEMENT IS EXCESSIVE OR NOT CONSISTENT, THE CONTRACTOR SHALL MODIFY CONSTRUCTION METHODS TO ACHIEVE A STRAIGHT, PLUMB WALL.

SAMPLE CONSTRUCTION PLAN

THE SAMPLE PLAN ILLUSTRATED BELOW IS FOR INFORMATION ONLY AND DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR SUBMITTING A CONSTRUCTION PLAN FOR ENGINEER REVIEW.



1. COMPLETE REQUIRED EXCAVATION FOR ENTIRE WALL LENGTH PRIOR TO BEGINNING WALL CONSTRUCTION.
2. INSTALL 4x12 VERTICAL TIMBERS SO THAT THEY EXTEND ABOVE THE FINAL WALL HEIGHT. VERTICALS SHALL HAVE A BATTER FOR CONSTRUCTION TO COMPENSATE FOR STRETCH OF GEOTEXTILE.
3. PROVIDE BRACING AT EACH VERTICAL (MINIMUM) TO MAINTAIN BATTER.
4. INSTALL CONCRETE SILL AT BASE OF WALL TO PROVIDE LEVEL CONSTRUCTION SURFACE.
5. PLACE GEOTEXTILE AT REQUIRED LOCATIONS FOR THE ENTIRE LEVEL.
6. INSTALL HORIZONTAL GLULAM AND BOLT TO 4x12 VERTICAL TIMBERS.
7. STAPLE GEOTEXTILE TO HORIZONTAL GLULAM.
8. PULL BOTTOM WRAP OF GEOTEXTILE TAUT AND SECURE ADEQUATELY TO HOLD GEOTEXTILE IN TENSION.

9. HOLD BOTH TOP WRAP AND EXCESS BACK WRAP OF GEOTEXTILE OUT OF WAY. PLACE FILL AND COMPACT TO TOP LEVEL OF HORIZONTAL GLULAM.
10. AT APPROPRIATE LEVELS, PULL TOP OF GEOTEXTILE BACK WRAP TAUT AND SECURE ADEQUATELY TO HOLD GEOTEXTILE IN TENSION. PLACE PORTION OF FILL NEAR BACK OF FABRIC, CREATING A SMALL MOUND. PULL TOP WRAP OF GEOTEXTILE TAUT OVER MOUND, CREATING A GAP BETWEEN GEOTEXTILE AND TOP OF FILL LAYER. SECURE GEOTEXTILE TO HOLD FIRMLY IN TENSION.
12. PLACE PORTION OF FILL ON BACKSIDE OF MOUND TO ANCHOR FABRIC.

13. REPEAT STEPS 5-12 UNTIL ENTIRE WALL IS CONSTRUCTED. PLACE ADJACENT FILL CONCURRENTLY IN COMPACTED LIFTS.

14. REMOVE BRACING.
15. CUTOFF VERTICAL 4x12 AT DESIGNATED FINISH LEVEL.
16. INSTALL 2x8 CAP PLATE
17. COMPLETE CONSTRUCTION OF ALL OTHER WALL ELEMENTS AS SHOWN ON THE PLANS.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD SCALE: NTS
DRAWN: KLL APPROVED: JLD

DATE: 10/27/2015

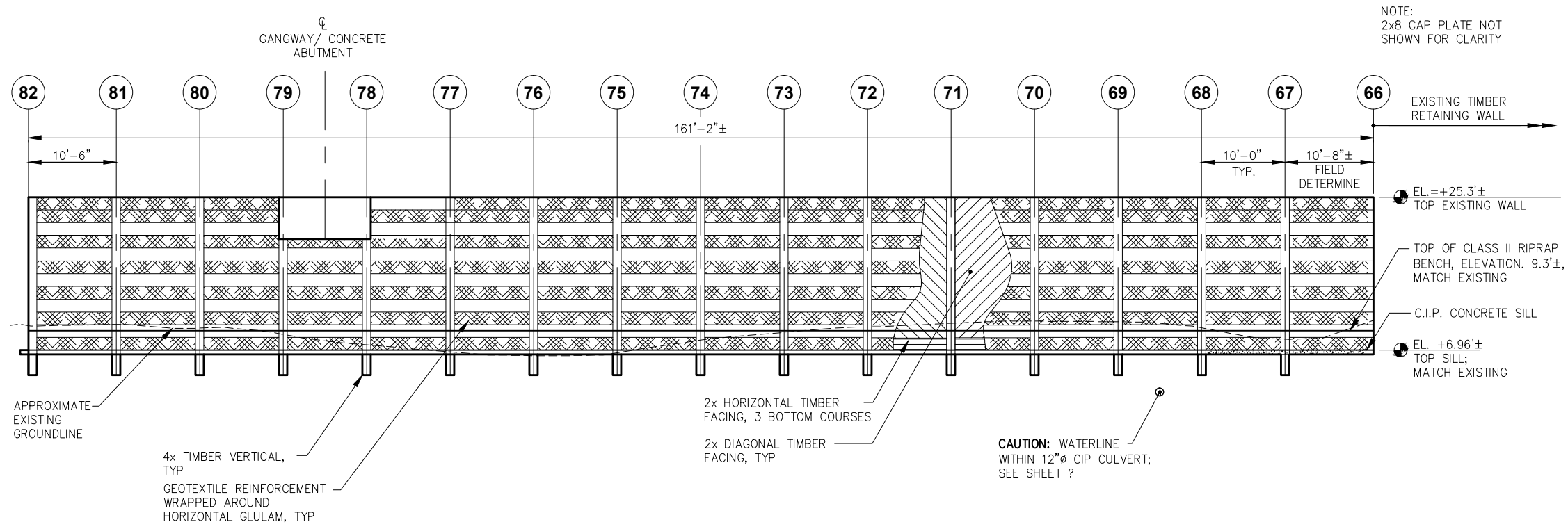
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **ADD. ALT. A**
RETAINING WALL PLAN

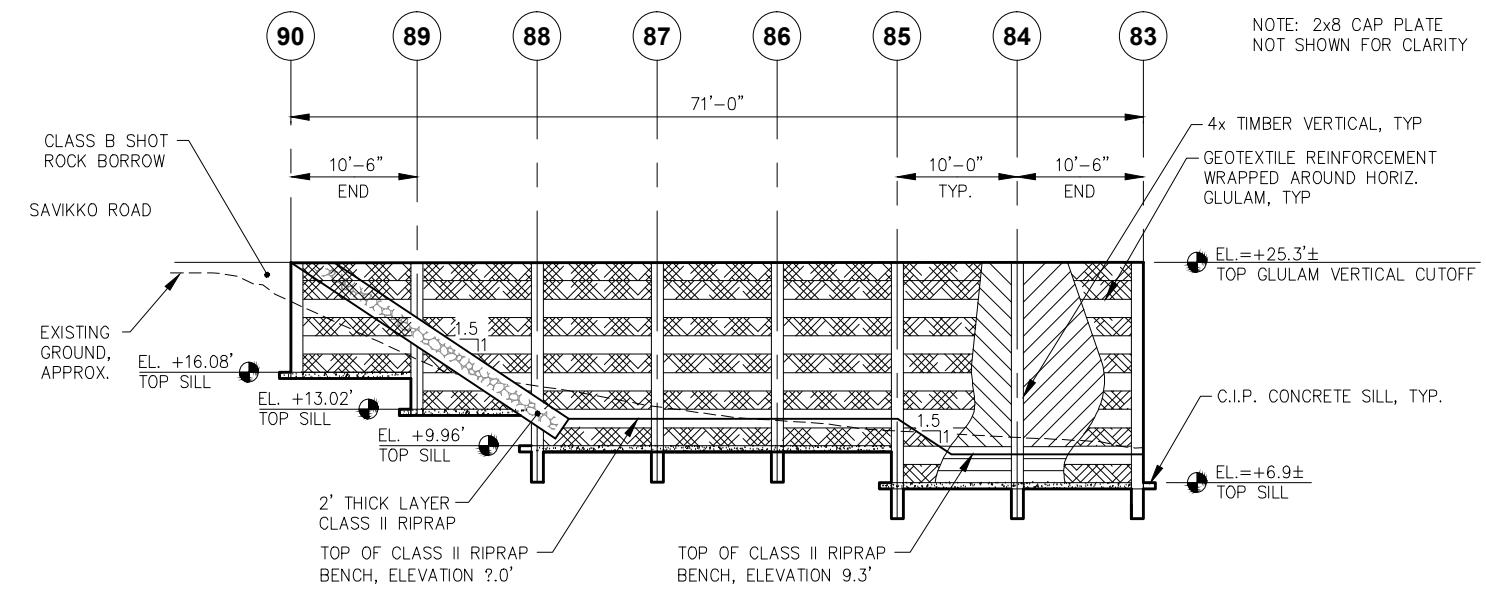
PND PROJECT NO.: 152037

2.03
SHEET
9 OF 82

\\Pnfd\ata\d\152037\152037-DH16-001-ADD ALT A.dwg, 10/30/2015 1:42:27 PM

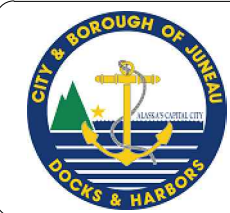


WALL ELEVATION



SIDE WALL ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD SCALE: SCALE IN FEET

DRAWN: PJD APPROVED: JLD 0 8 16 FT.

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

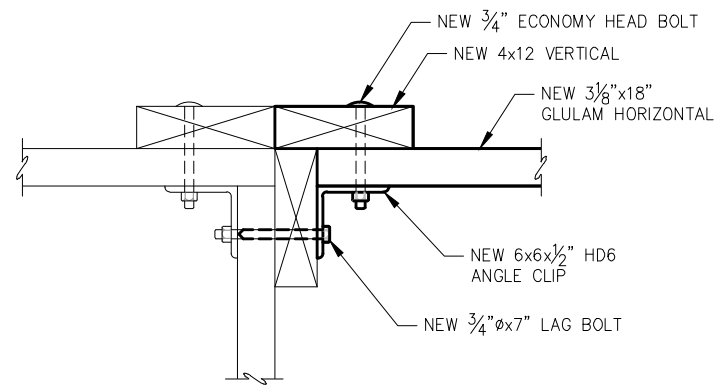
SHEET TITLE:
ADDITIVE ALTERNATE A
RETAINING WALL ELEVATIONS

PND PROJECT NO.: 152037 203.DWG

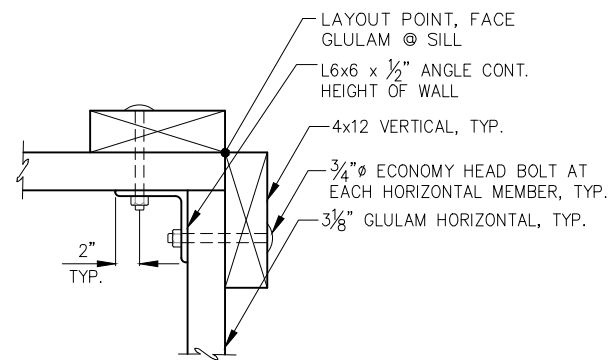
2.04

SHEET
10 OF 82

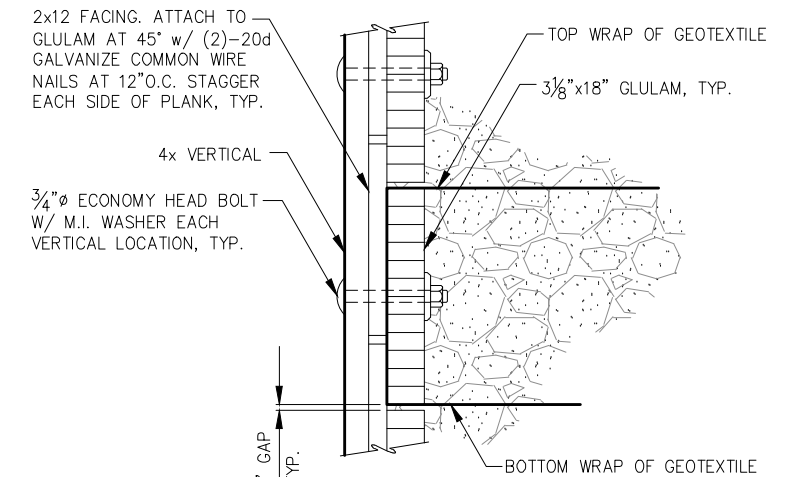
\\Pnd\jdata\dl15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\2.04-ADD ALT A.dwg_10/30/2015 1:43:32 PM



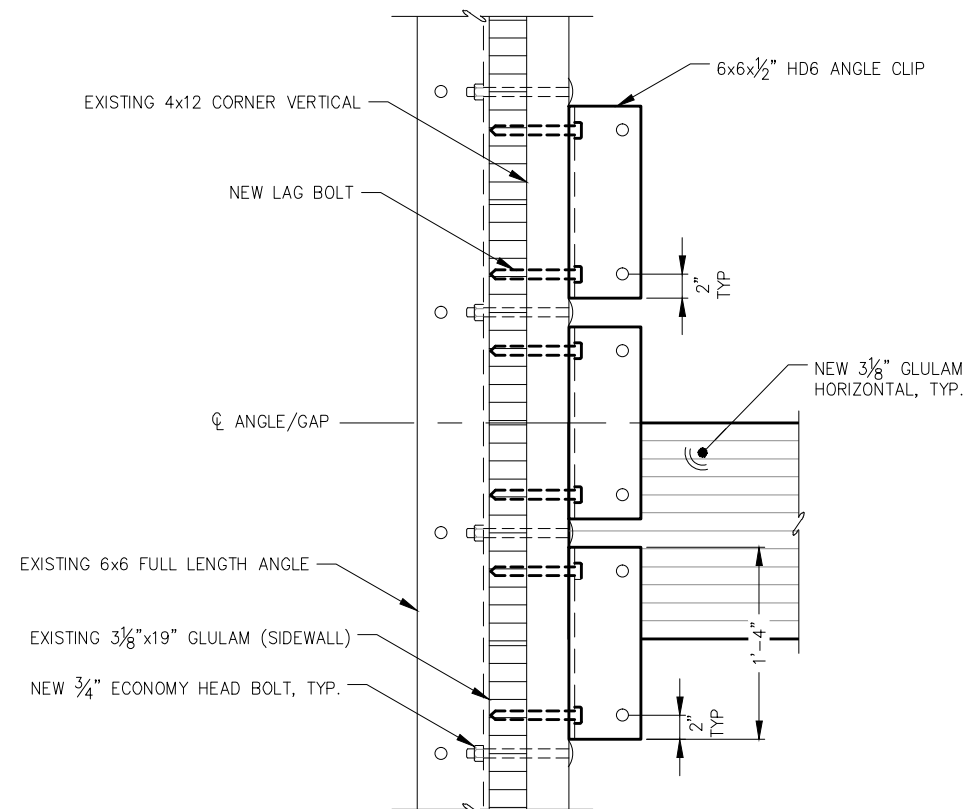
EXISTING 90 DEGREE CORNER DETAIL



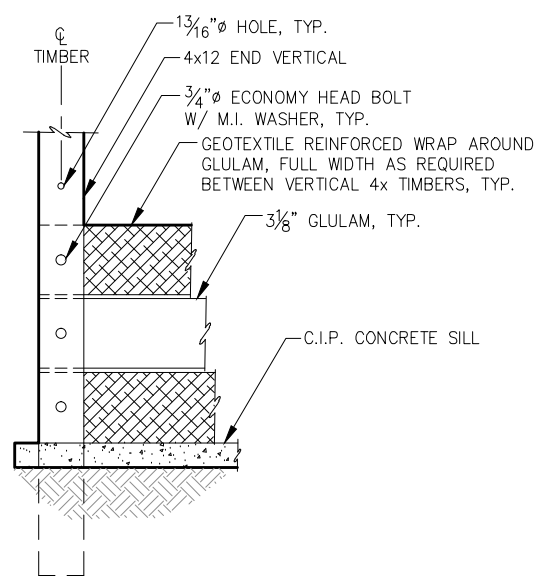
90 DEGREE CORNER DETAIL



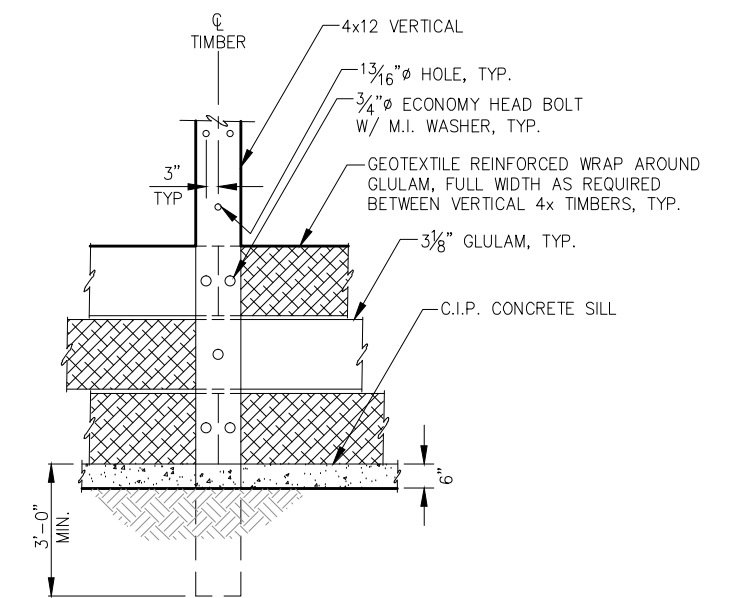
TYPICAL SECTION AT VERTICAL



TYPICAL SECTION AT EXISTING VERTICAL



END CONNECTION FOR 4x12 VERTICAL



TYPICAL CONNECTIONS AT 4x12 VERTICAL

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD
DRAWN: JLD APPROVED: JLD

SCALE: NTS

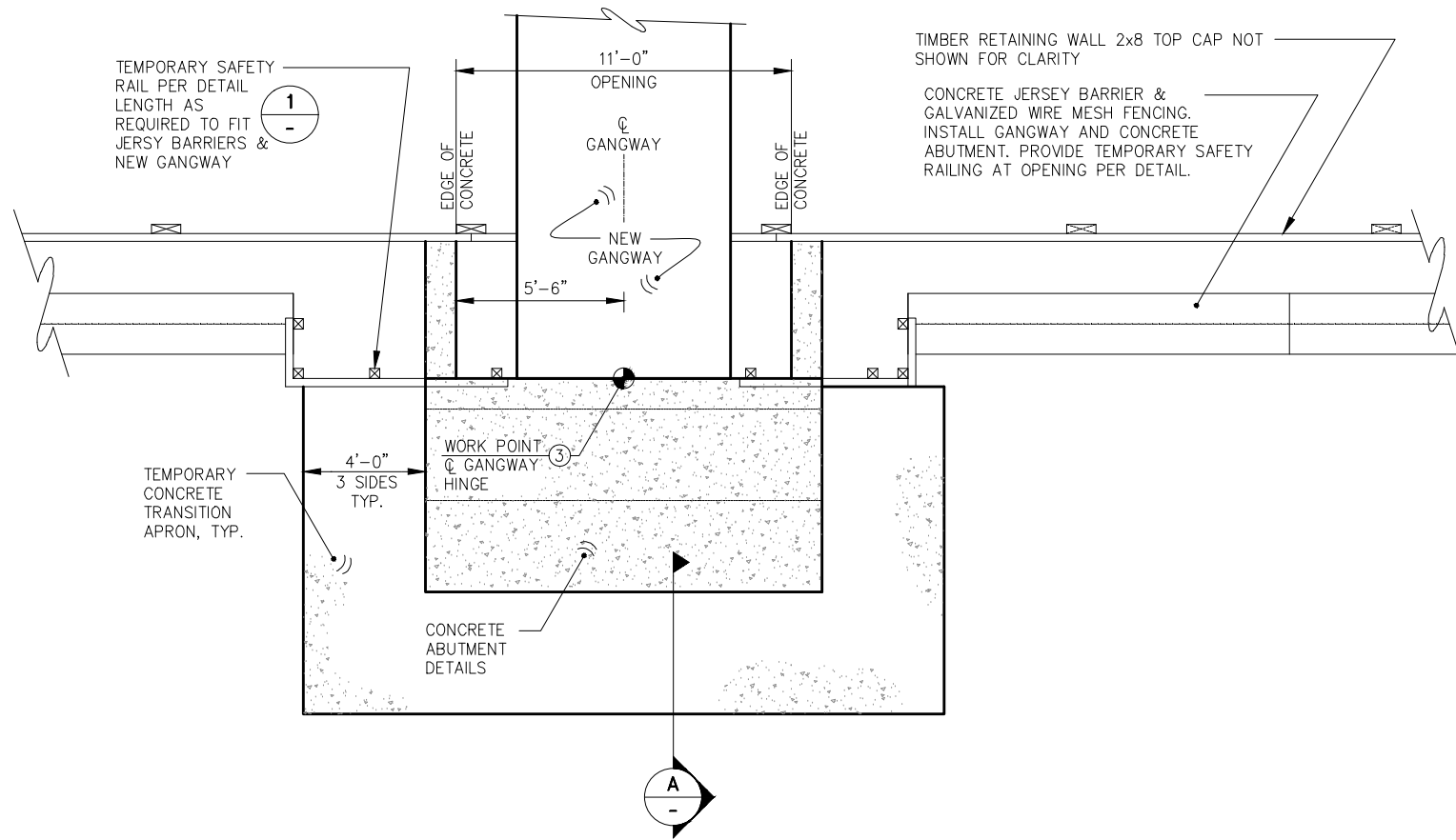
DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

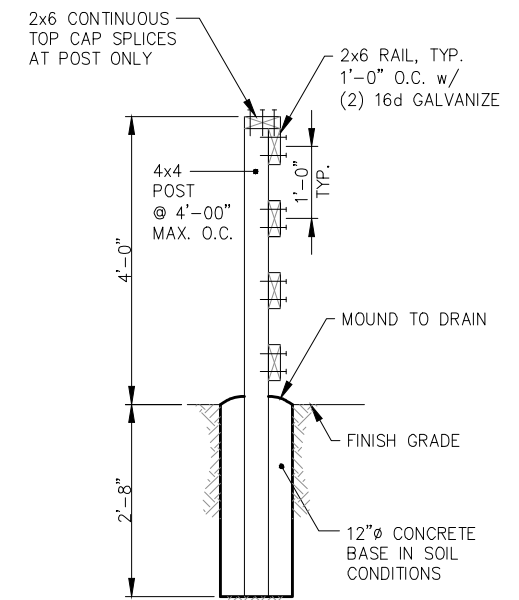
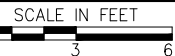
SHEET TITLE:
**ADD. ALT. A RETAINING
WALL ELEVATIONS AND DETAILS**
PND PROJECT NO.: 152037

2.05
SHEET
11 OF 82

\\Pnd\jdata\dl15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\2.06-ADD-ALT A.dwg, 10/30/2015 1:44:41 PM



PARTIAL SITE PLAN



- NOTES:
- PROVIDE (3) EA. 5/8"Ø GALVANIZE EPOXY ANCHOR BOLTS @ 1'-0" O.C. TO ATTACH POST TO CONCRETE ABUTMENT NEAR GANGWAY.
 - ALL TIMBER PRESSURE TREATED 0.6 PCF ACZA.

1 DETAIL TEMPORARY SAFETY RAIL

95% DESIGN REVIEW SUBMITTAL

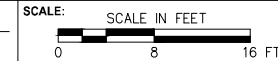


REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD
DRAWN: KLL APPROVED: JLD



DATE: 10/27/2015

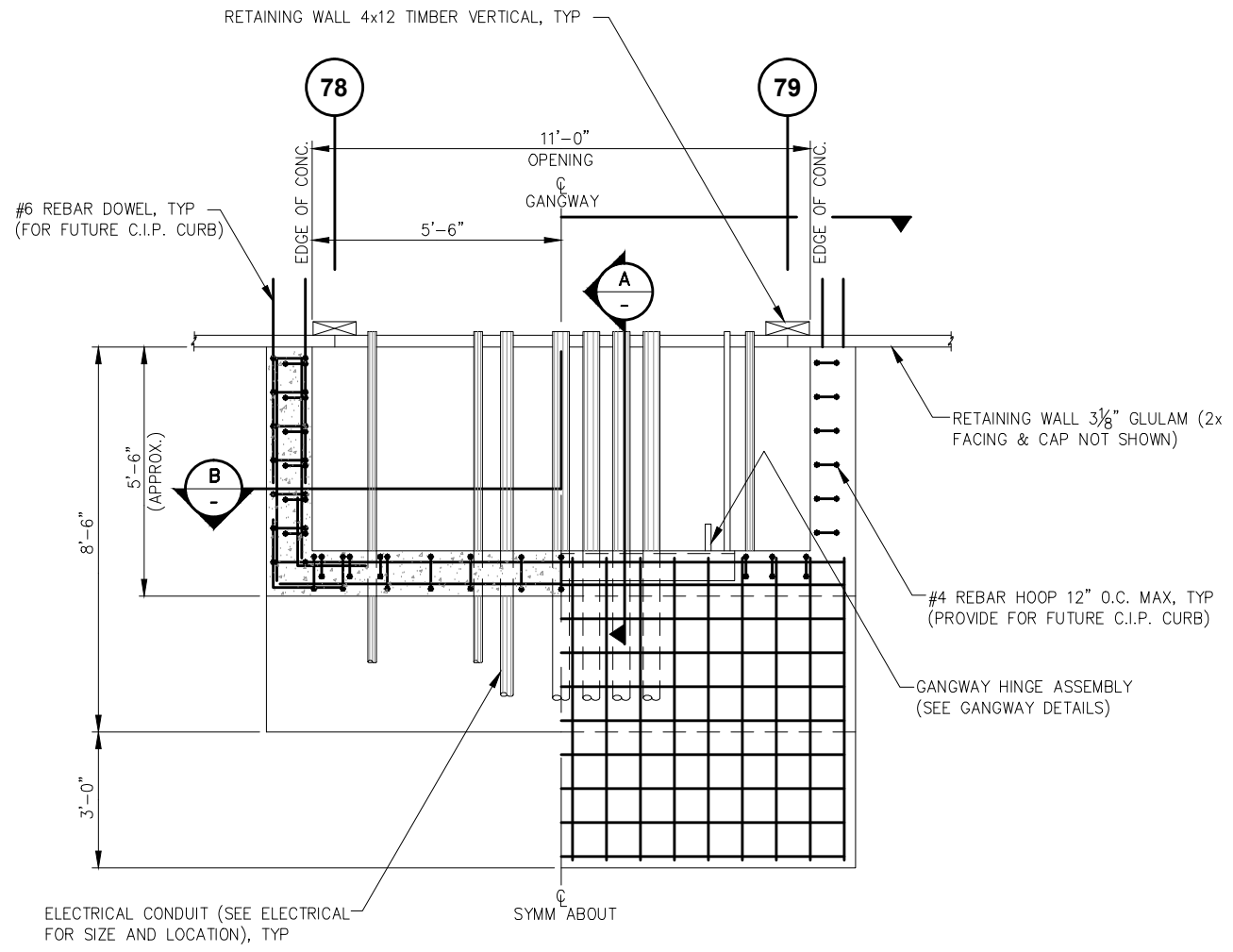
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**ADD. ALT. A
PARTIAL PLAN TOP OF GANGWAY**

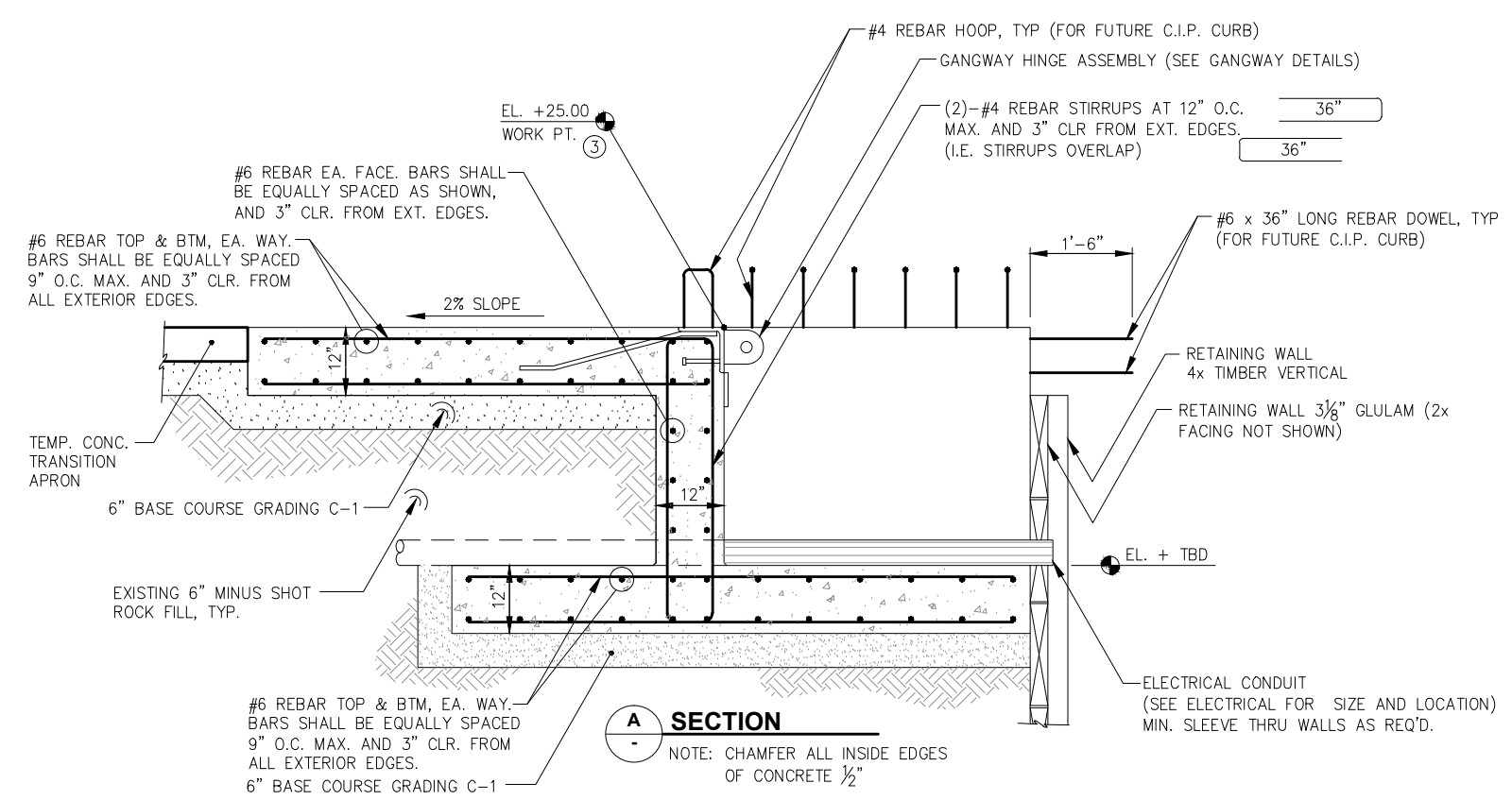
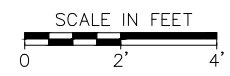
PND PROJECT NO.: 152037

2.06

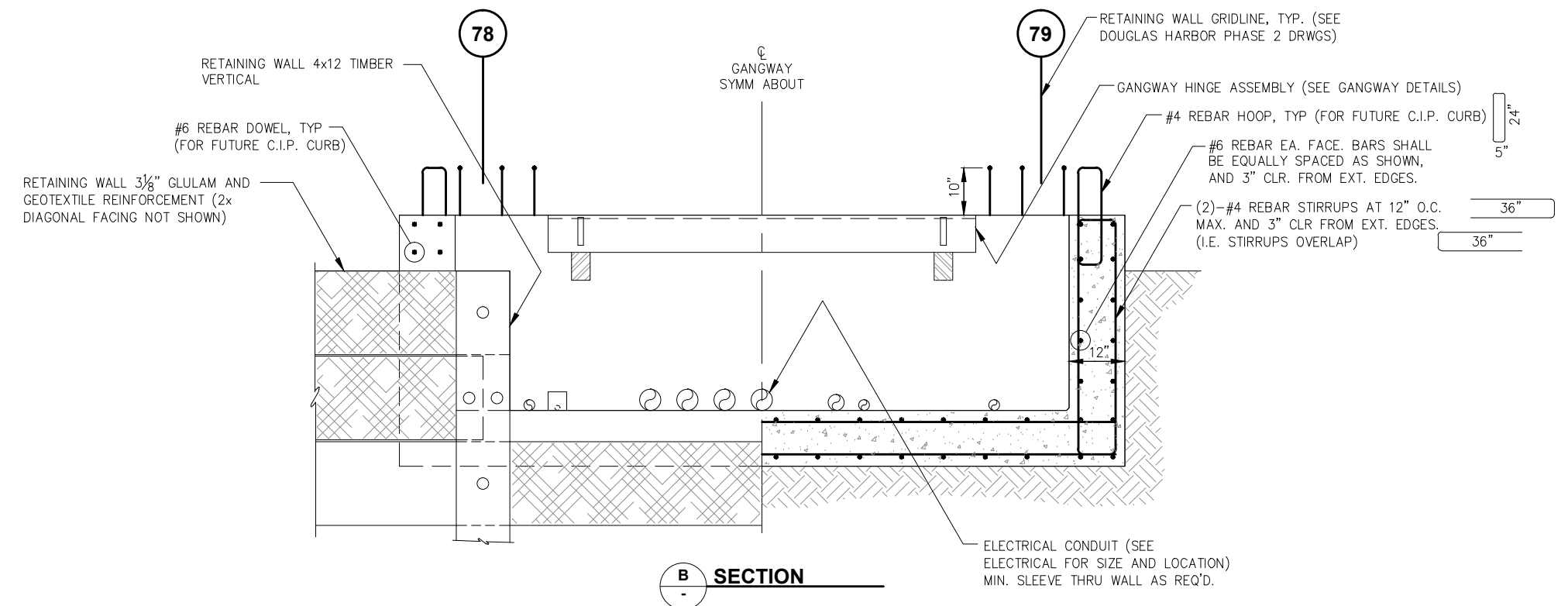
SHEET
12 OF 82



GANGWAY ABUTMENT PLAN



SECTION A
NOTE: CHAMFER ALL INSIDE EDGES OF CONCRETE 1/2"



SECTION B

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD
DRAWN: JLD APPROVED: JLD

SCALE: SCALE IN FEET

DATE: 10/27/2015

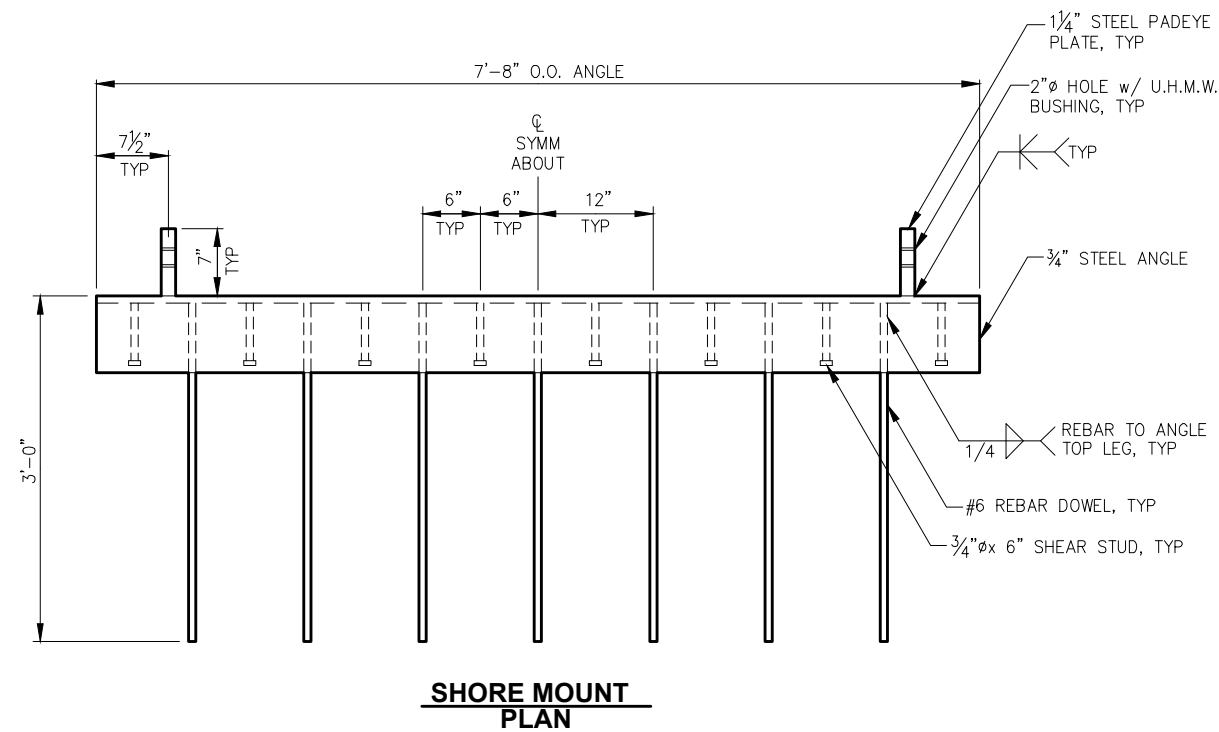
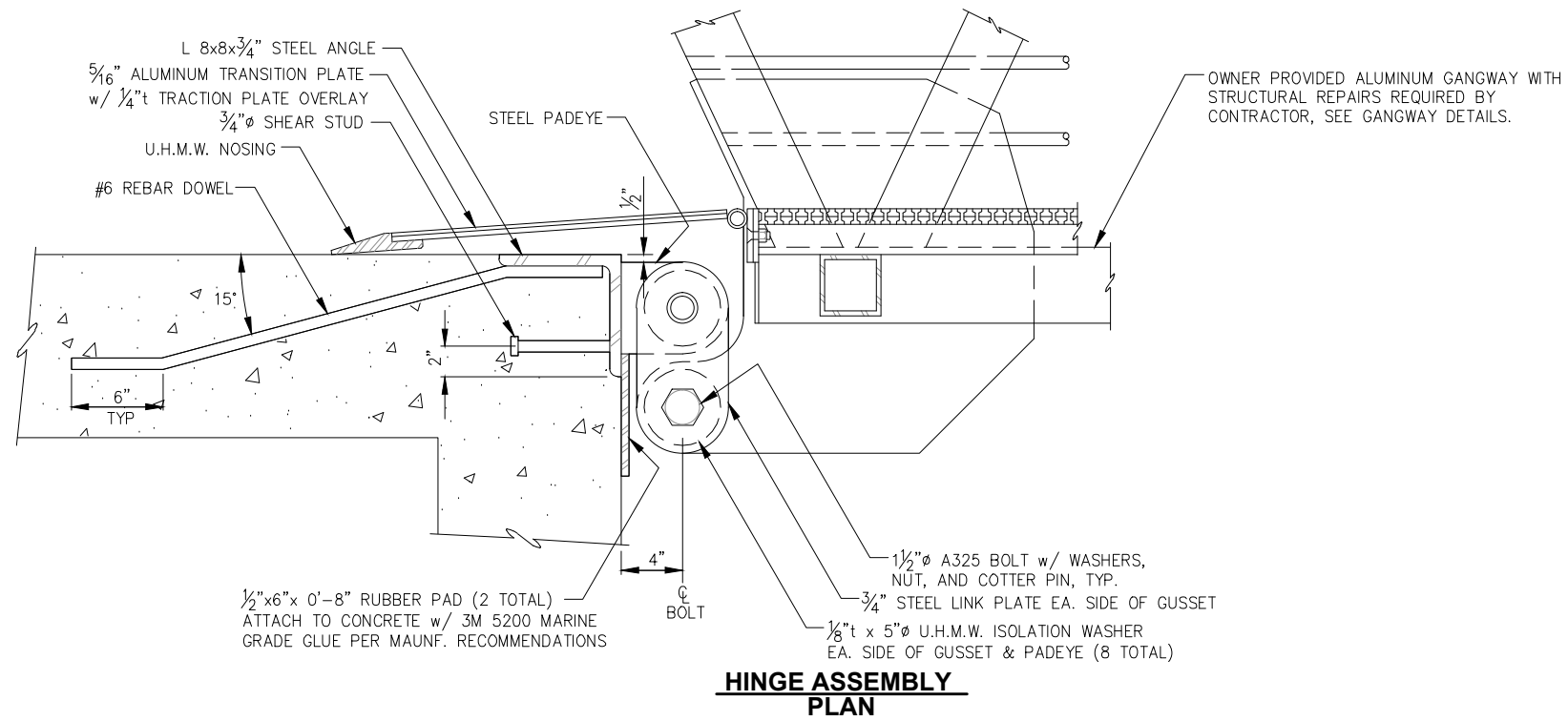
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **ADD. ALT. A**
GANGWAY ABUTMENT DETAILS

PND PROJECT NO.: 152037

2.07
SHEET
13 OF 82

\\Profjndata\d15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\2.07-ADD ALT A.dwg_10/30/2015 1:44:47 PM



95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: PLR CHECKED: JLD
DRAWN: JLD APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

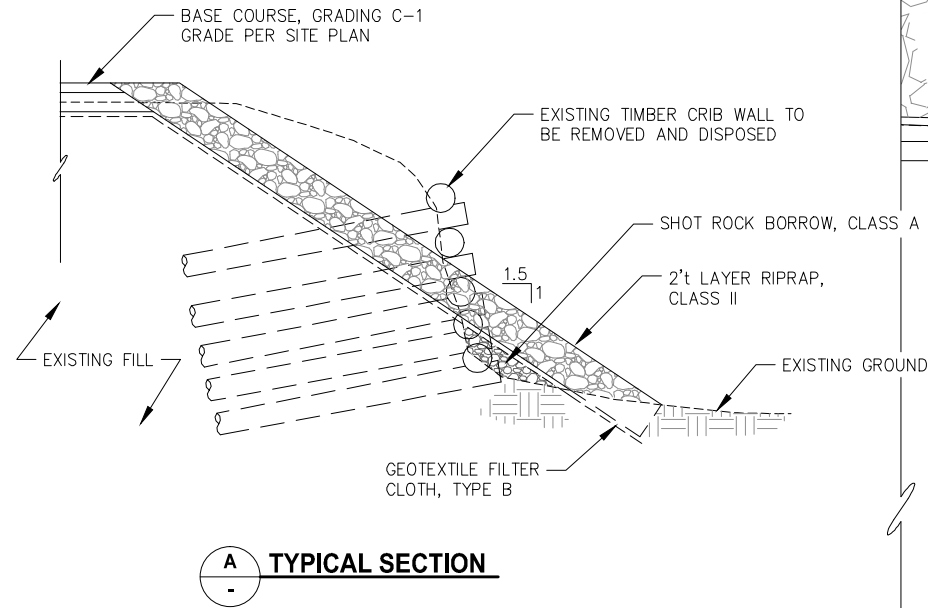
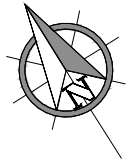
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**ADD. ALT. A
GANGWAY DETAILS**

PND PROJECT NO.: 152037

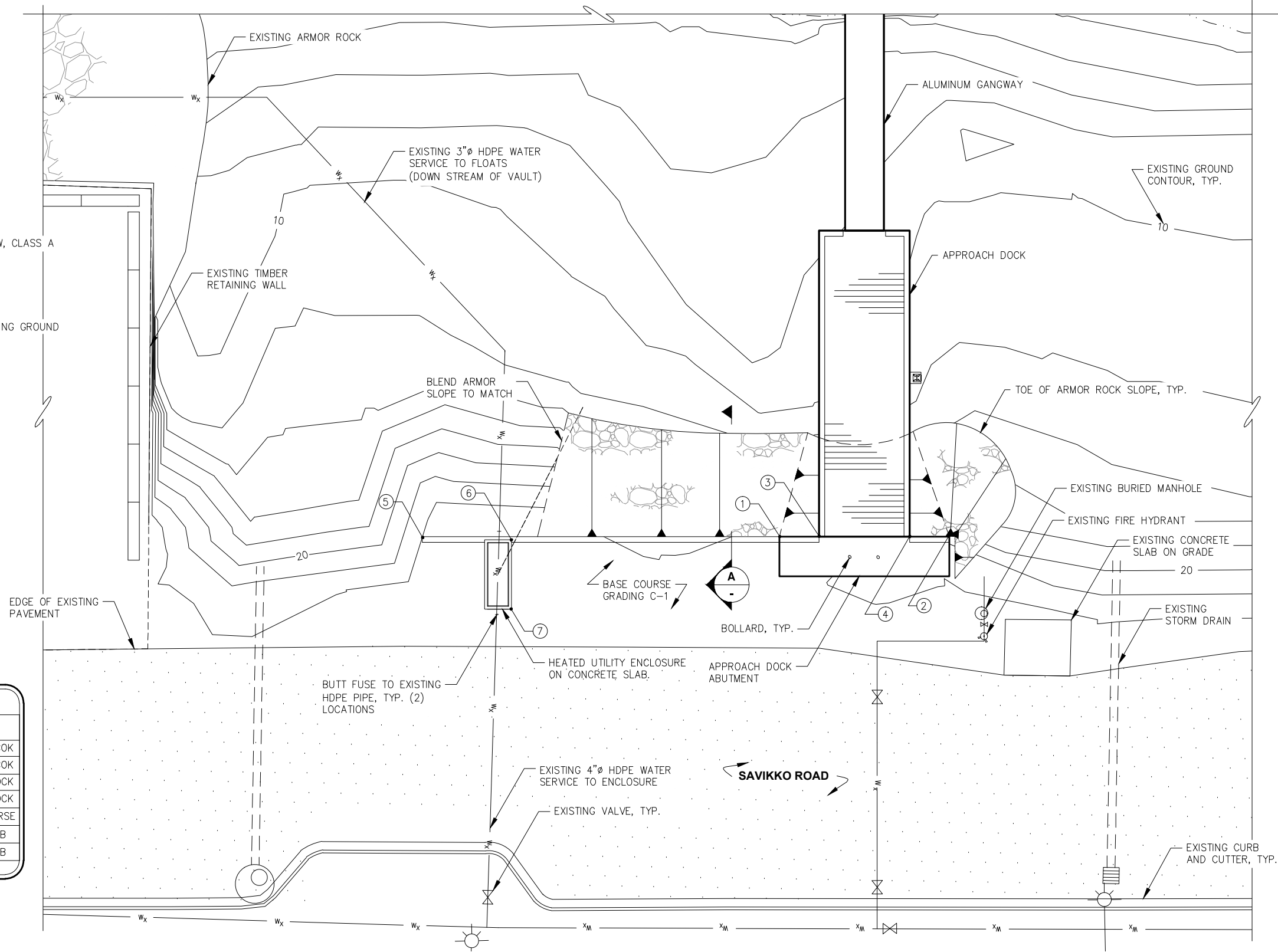
2.08

SHEET
14 OF 82



A TYPICAL SECTION

SITE LAYOUT TABLE				
PT #	NORTHING	EASTING	ELEVATION	DESCRIPTOR
1	3696.219	7186.498	25.00	GRADE POINT, TOP ARMOR ROCK
2	3679.981	7211.724	25.00	GRADE POINT, TOP ARMOR ROCK
3	3692.431	7192.384	19.67	GRADE POINT, TOP ARMOR ROCK
4	3683.770	7205.838	19.67	GRADE POINT, TOP ARMOR ROCK
5	3730.345	7133.484	24.00	GRADE POINT, TOP BASE COURSE
6	3721.378	7146.412	24.50	TOP CORNER CONCRETE SLAB
7	3711.062	7139.771	24.50	TOP CORNER CONCRETE SLAB



**PARTIAL SITE PLAN
APPROACH DOCK**

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: SCALE IN FEET
DRAWN: KLL APPROVED: JLD 0 10 20 FT.

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

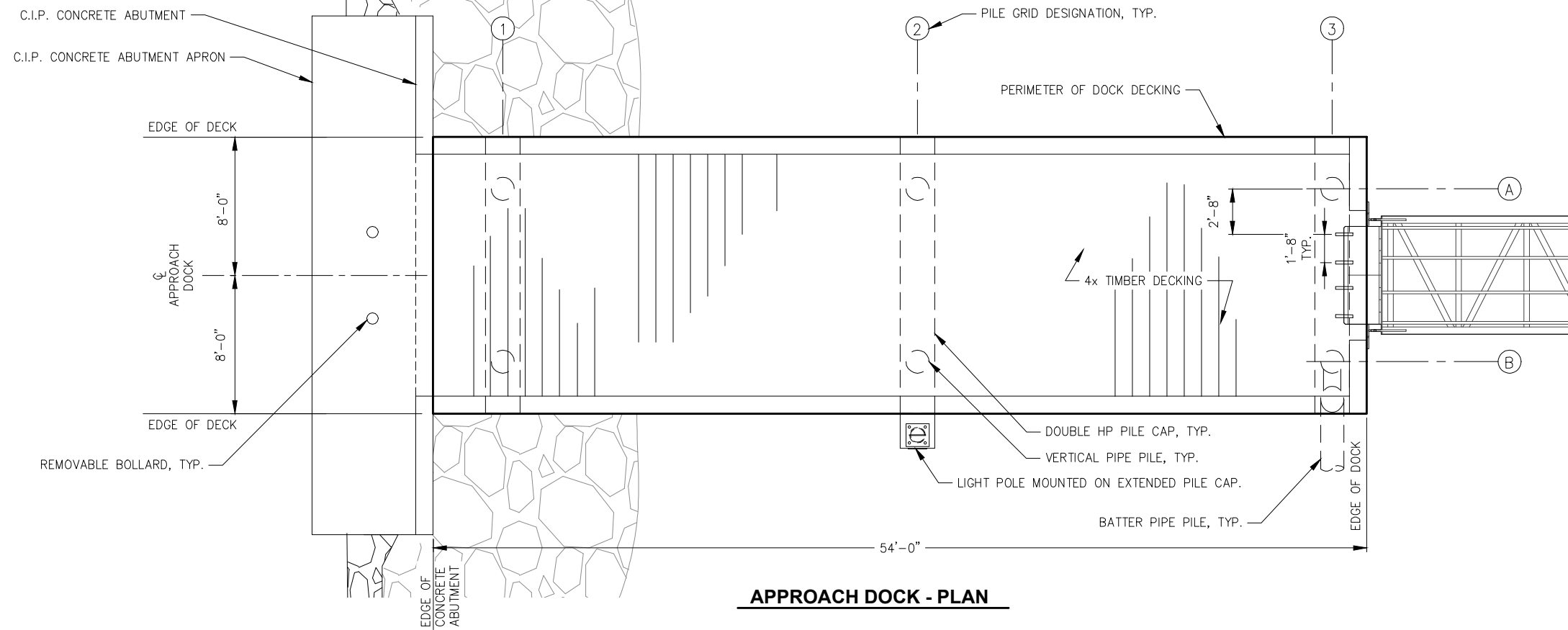
SHEET TITLE: **ADD. ALT. B
UPLANDS SITE PLAN**

PND PROJECT NO.: 152037

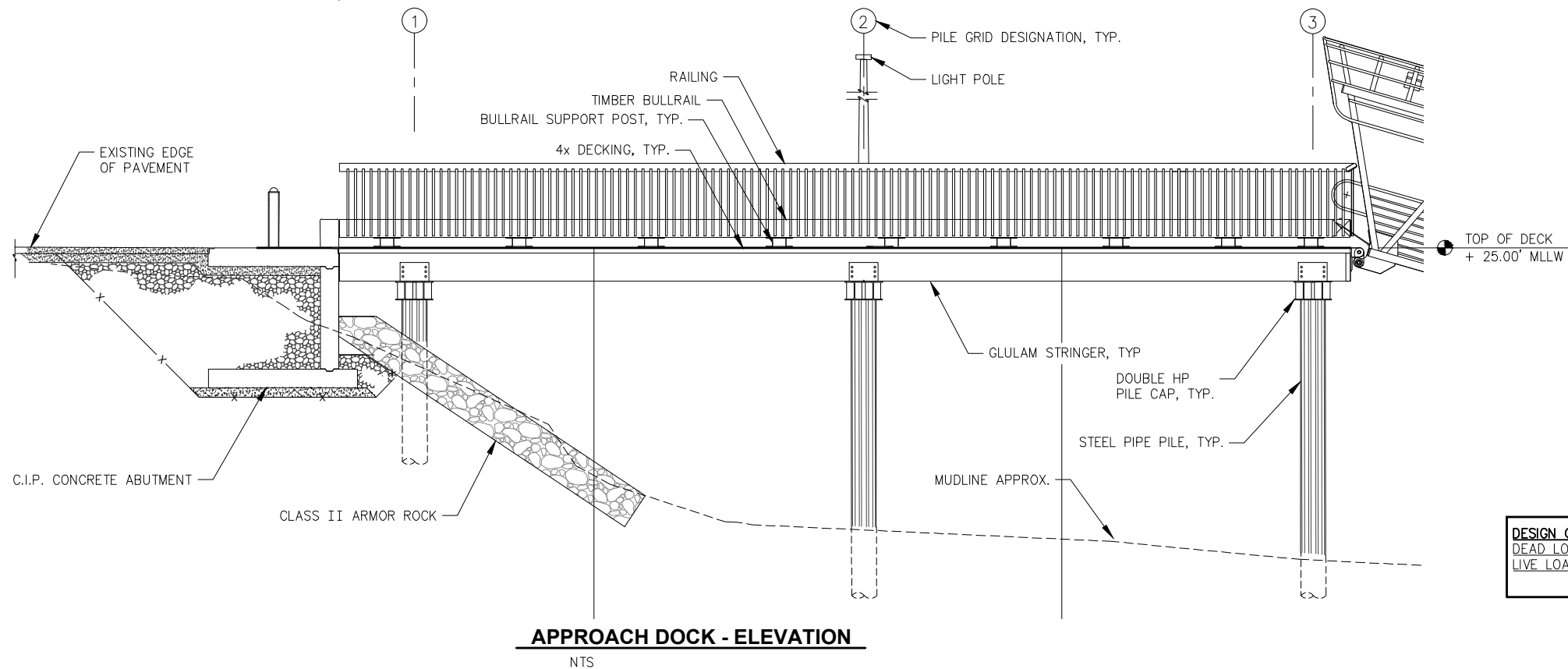
3.01

SHEET
15 OF 82

\\Pnjdutad\cd\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.01 Uplands Site Plan-ADD ALT B.dwg, 10/30/2015 11:50:01 PM



APPROACH DOCK - PLAN



APPROACH DOCK - ELEVATION

DESIGN CRITERIA:
DEAD LOAD: WEIGHT OF ALL MATERIALS OF CONSTRUCTION.
LIVE LOADS: 1. AASHTO H15-44 DESIGN TRUCK.
2. 100 PSF UNIFORM LIVE LOAD.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD
DRAWN: LRG APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

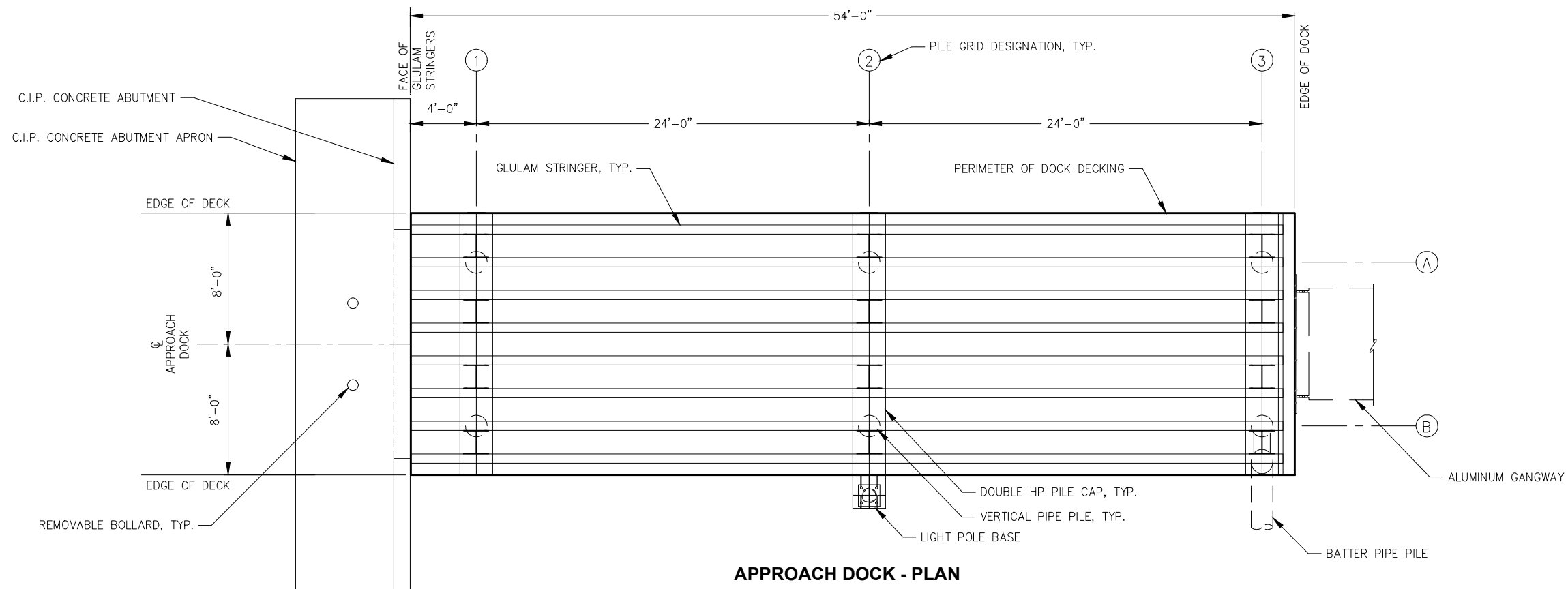
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**ADD. ALT. B APPROACH
DOCK PLAN AND ELEVATION**

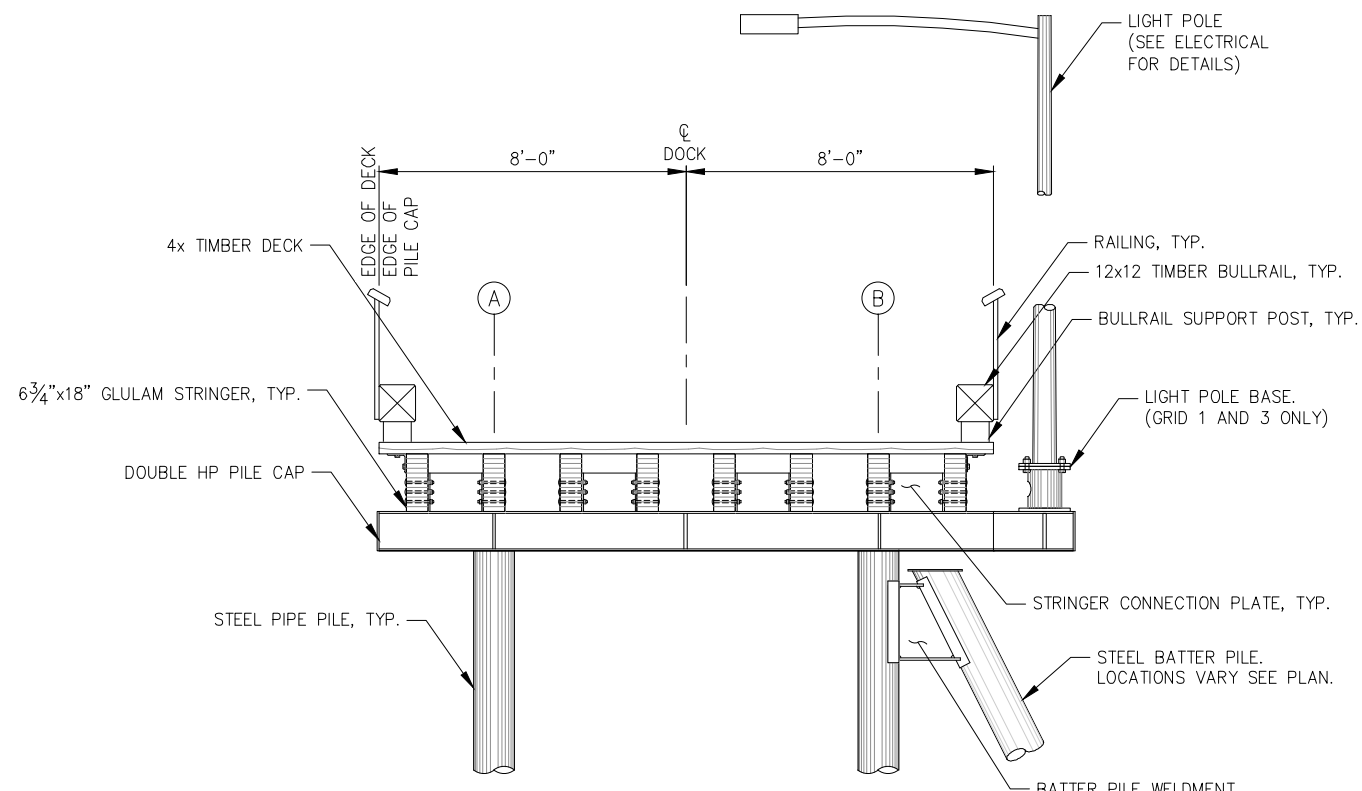
PND PROJECT NO.: 152037

3.02

SHEET
16 OF 82



APPROACH DOCK - PLAN



APPROACH DOCK TYPICAL SECTION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD
DRAWN: DRD APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

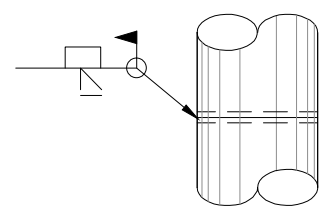
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**ADD. ALT. B APPROACH
DOCK PLAN AND ELEVATION**

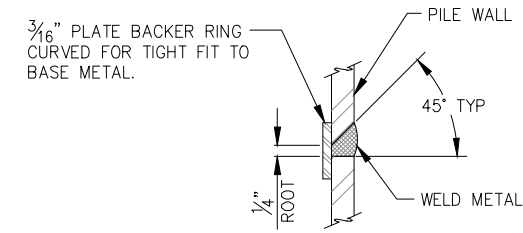
PND PROJECT NO.: 152037

3.03

SHEET
17 OF 82

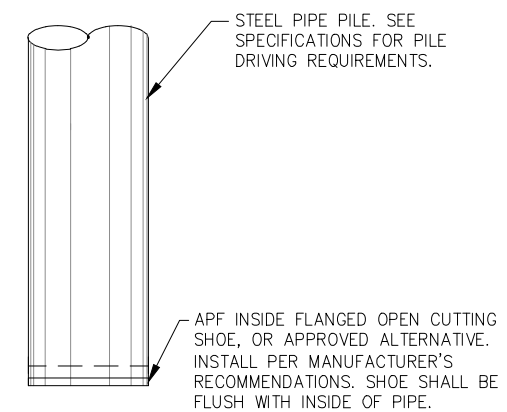


ELEVATION



TYPICAL SECTION

TYPICAL PIPE SPLICE WELD
TYPICAL FOR ALL FIELD PIPE PILE SPLICES

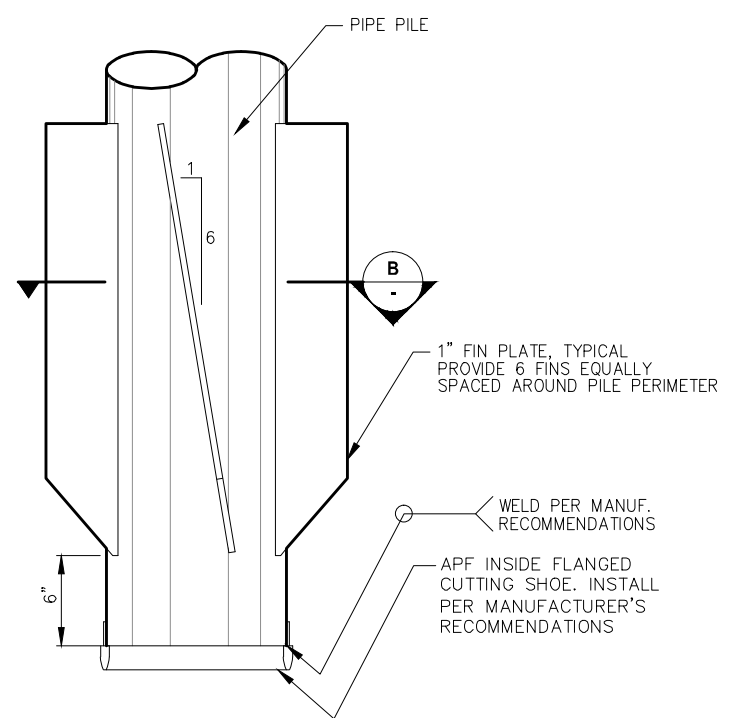


ELEVATION

TYPICAL PILE TIP

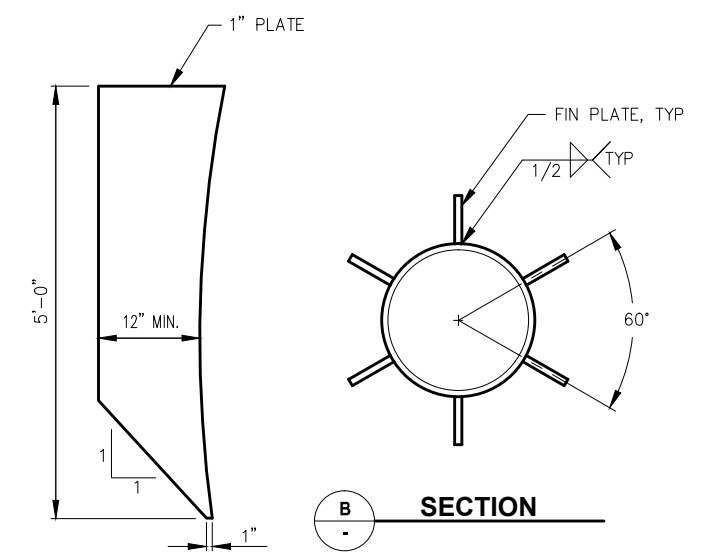
NOTE: INSTALL AT ALL LOCATIONS SHOWN IN PILE SCHEDULE

APPROACH DOCK - PILE SCHEDULE							
GRID	DESIGNATION	ULTIMATE COMPRESSION LOAD (KIPS)	ULTIMATE TENSION LOAD (KIPS)	PILE DIAMETER (IN)	PILE WALL THICKNESS (IN)	REQUIRED FURNISHED LENGTH (FT)	PILE TIP
1-A	VERTICAL	36		16	0.500		INSIDE CUTTING SHOE
1-B	VERTICAL	36		16	0.500		INSIDE CUTTING SHOE
2-A	VERTICAL	42		16	0.500		INSIDE CUTTING SHOE
2-B	VERTICAL	42		16	0.500		INSIDE CUTTING SHOE
3-A	VERTICAL	42		16	0.500		INSIDE CUTTING SHOE
3-B(V)	VERTICAL	42	31	16	0.500		SPIN FIN
3-B(B)	BATTER	43.2	43.2	16	0.500		SPIN FIN



SPIN FIN® PILE TIP DETAILS

INSTALL OPEN TIP DRIVING SHOE ONLY, WITHOUT FINS, AT LOCATIONS INDICATED ON PILE SCHEDULE



FIN PLATE

NOTE: MINIMUM WIDTH OF FIN PLATE SHALL INCREASE ONE INCH IF OUTSIDE EDGE OF FINS ARE CURVED TO MATCH INSIDE EDGE.

SPIN FIN® PILE IS A REGISTERED TRADEMARK OF PND ENGINEERS, INC.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: NTS
DRAWN: DRD APPROVED: JLD

CITY & BOROUGH OF JUNEAU, ALASKA DOUGLAS HARBOR RENOVATION CBJ PROJECT - DH16-001

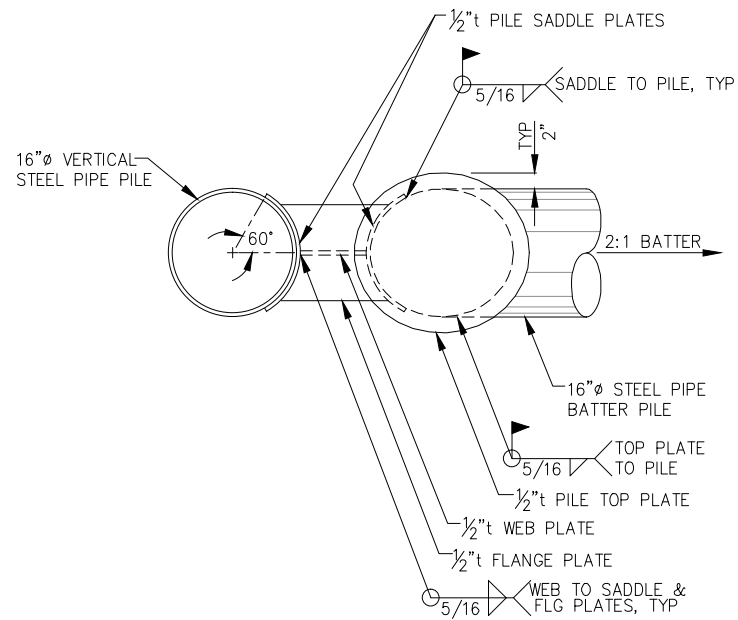
SHEET TITLE: **ADD. ALT. B PILE SCHEDULE AND DETAILS**

DATE: 10/27/2015

PND PROJECT NO.: 152037

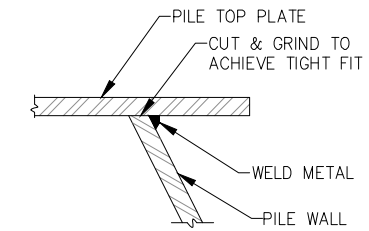
3.04
SHEET 18 OF 82

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.04 Approach Dock Pile Schedule and Details.dwg, 10/30/2015 1:15:18 PM

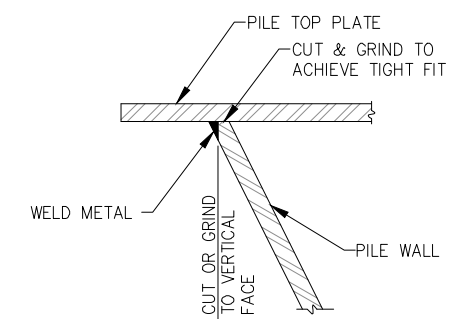


SINGLE BATTER PILE CONNECTION PLAN

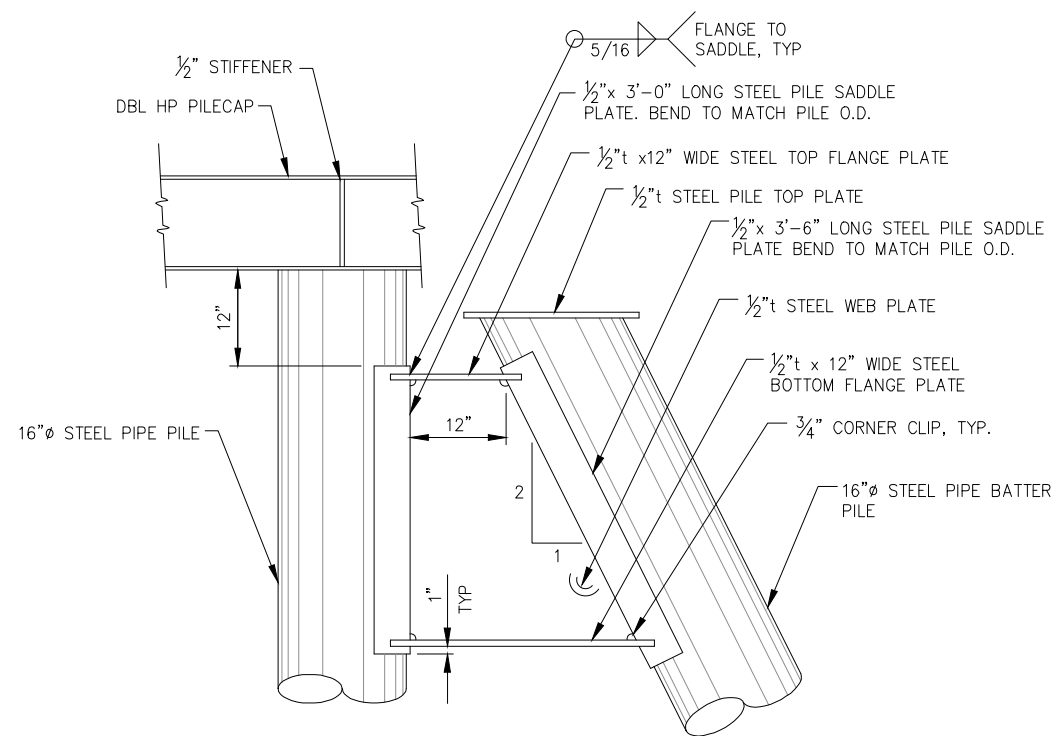
NOTE:
1. SEE DOCK PLAN FOR BATTER PILE LOCATION AND ORIENTATION.



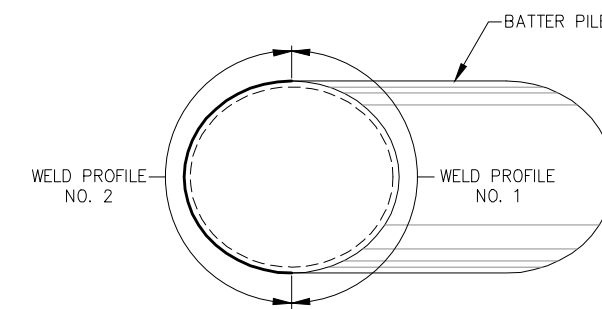
WELD PROFILE NO. 1



WELD PROFILE NO. 2



BATTER PILE WELMENT ELEVATION



WELD PROFILES

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: NTS
DRAWN: LRG APPROVED: JLD

DATE: 10/27/2015

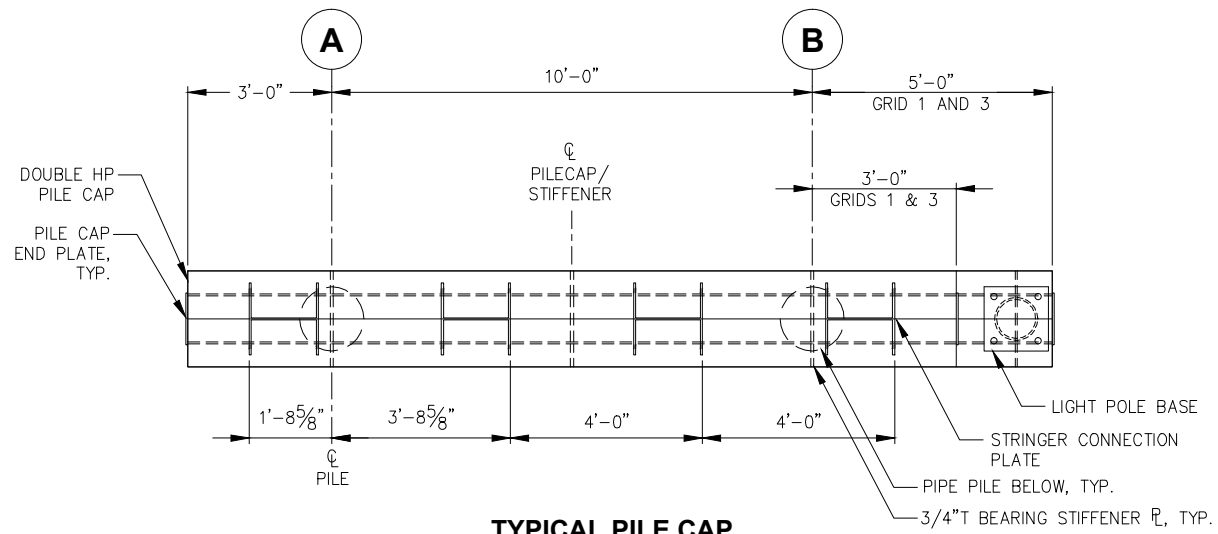
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **ADD. ALT. B
BATTER PILE WELDMNT DETAILS**

PND PROJECT NO.: 152037

3.05
SHEET
19 OF 82

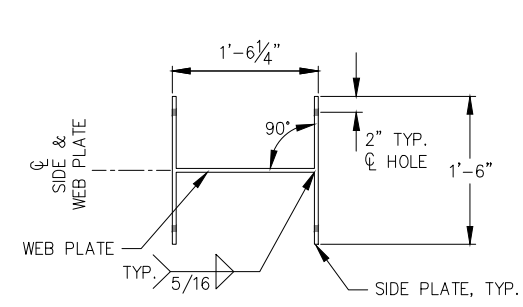
\\Pnfd\data\dl15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.05 Approach Dock & Batter Pile Connection Details.dwg_10/30/2015 1:15:22 PM



TYPICAL PILE CAP

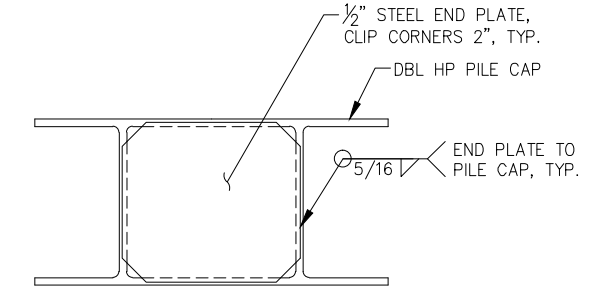
NOTES:

- ALL PLATE DIMENSIONS ARE TO THE OUTSIDE OF SIDE PLATES, UNLESS OTHERWISE NOTED.
- ALL PILE CAPS STEEL DBL HP12x84, UNLESS OTHERWISE NOTED.

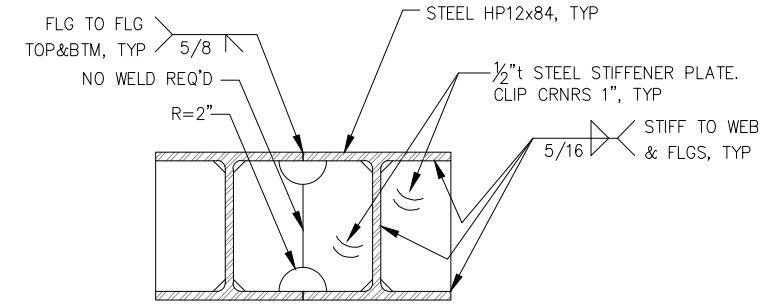


STRINGER CONNECTION PLATE

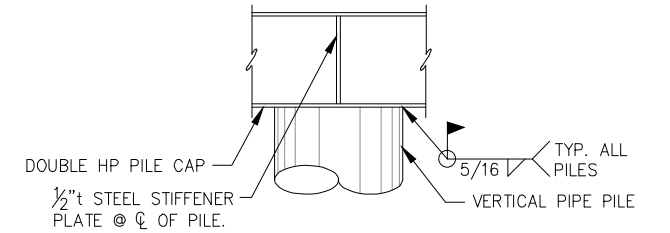
NOTE:
ALL PLATES 1/2" t STEEL UNLESS NOTED OTHERWISE.



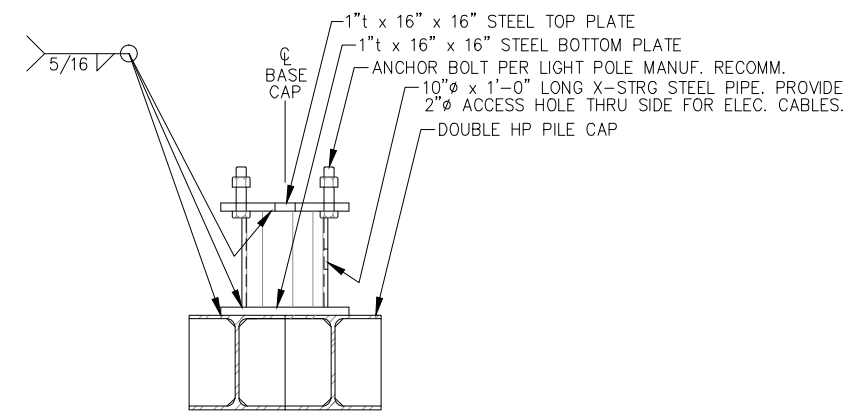
TYPICAL END PLATE DETAIL



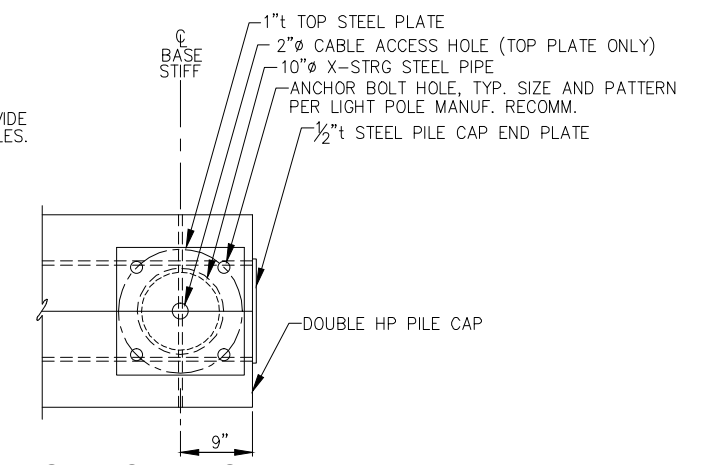
TYPICAL PILE CAP SECTION



TYPICAL PILE CONNECTION TO PILE CAP



LIGHT POLE BASE ELEVATION



LIGHT POLE BASE PLAN

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: NTS
DRAWN: DRD APPROVED: JLD

DATE: 10/27/2015

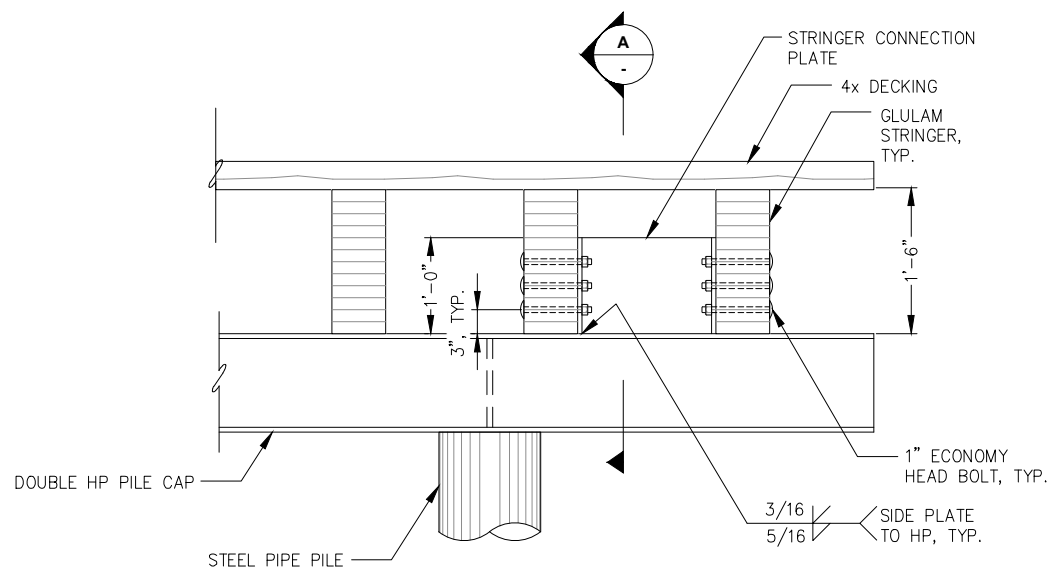
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **ADD. ALT. B PILE CAP DETAILS**

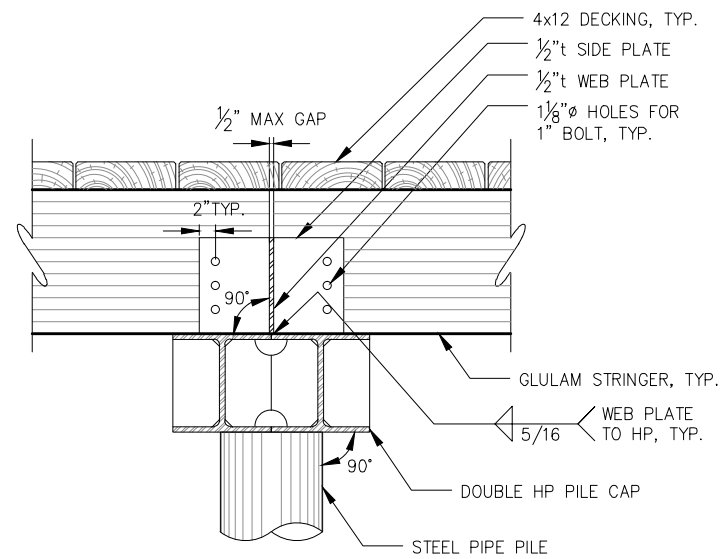
PND PROJECT NO.: 152037

3.06
SHEET 20 OF 82

\\Pnjd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.06 Approach Dock Pilecap Details.dwg, 10/30/2015 11:52:28 PM



TYPICAL STRINGER CONNECTION DETAILS



TYPICAL STRINGER CONNECTION DETAILS

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD
DRAWN: DRD APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

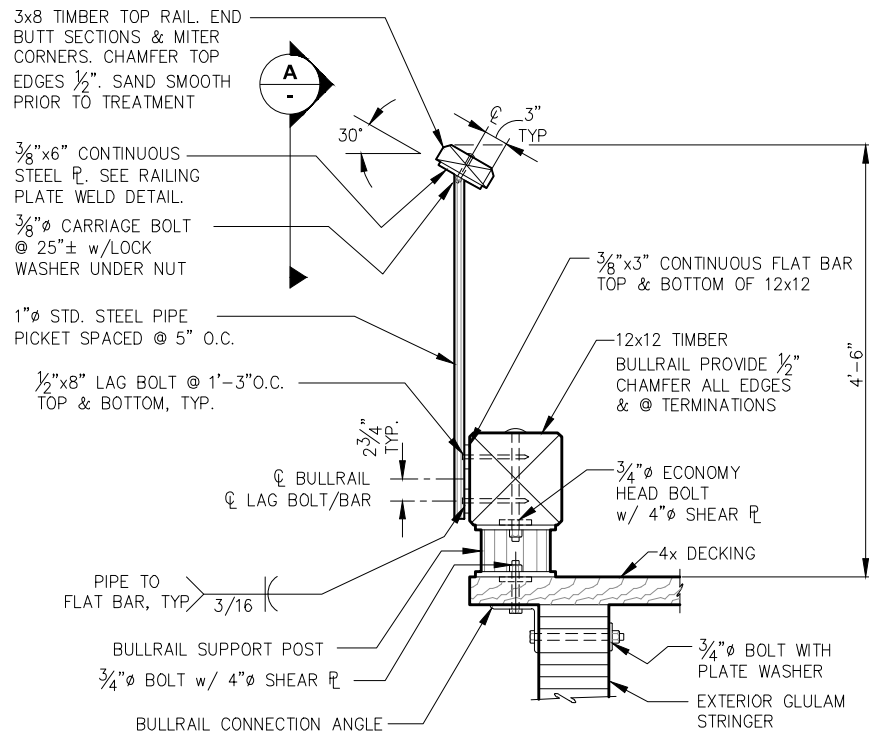
SHEET TITLE: **ADD. ALT. B**
STRINGER CONNECTION DETAILS

PND PROJECT NO.: 152037

3.07

SHEET
21 OF 82

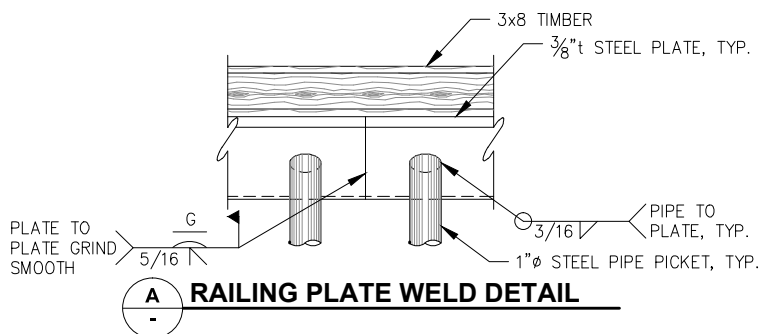
\\Pnfd\data\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.07 Approach Dock Stringer Details.dwg, 10/30/2015 1:15:33 PM



TYPICAL BULLRAIL/ RAILING DETAIL

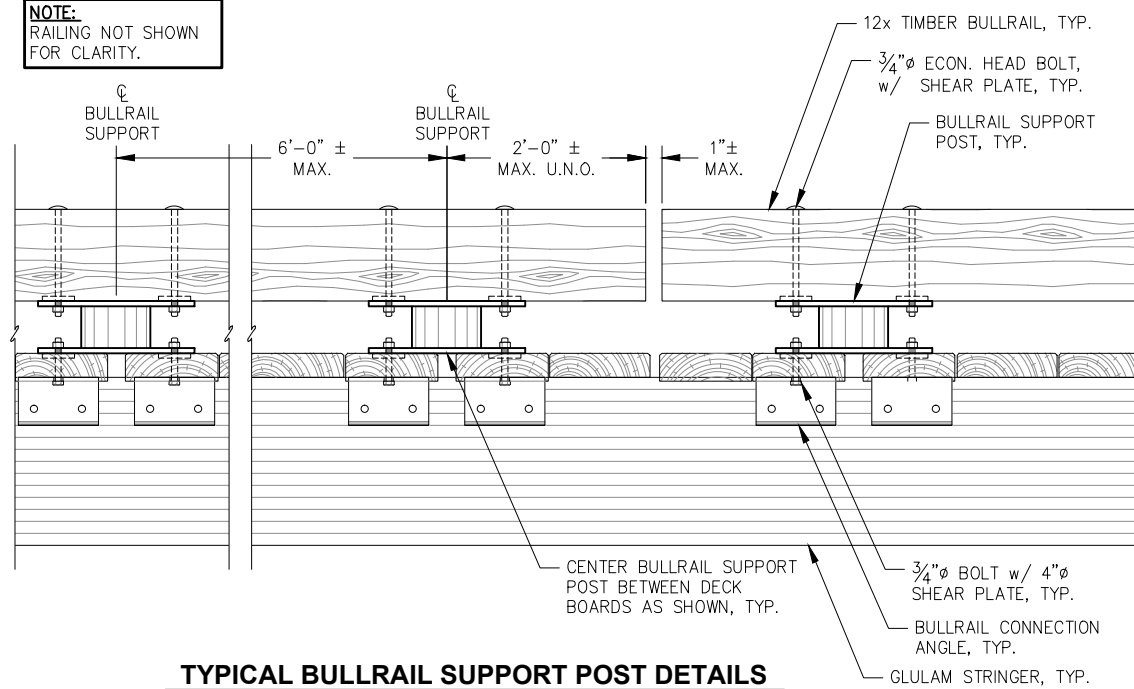
NOTE:
LOCATE BULLRAIL POSTS TO AVOID
CONFLICT W/ HANDRAIL LAG BOLTS.

NOTE: RAILING PLATE SHALL
BE WELDED TO CREATE A
CONTINUOUS RAIL ALONG ALL
STRAIGHT LENGTHS AND ALL
CORNERS, U.N.O.



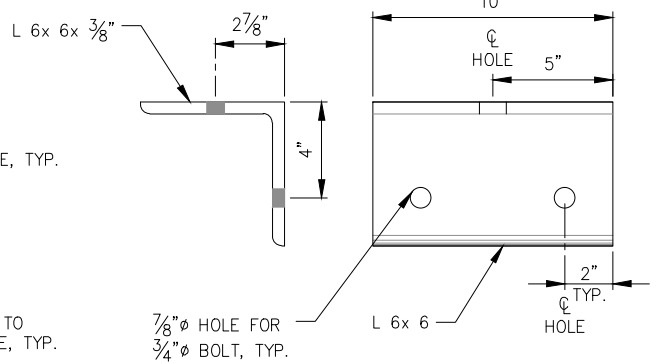
RAILING PLATE WELD DETAIL

NOTE:
RAILING NOT SHOWN
FOR CLARITY.

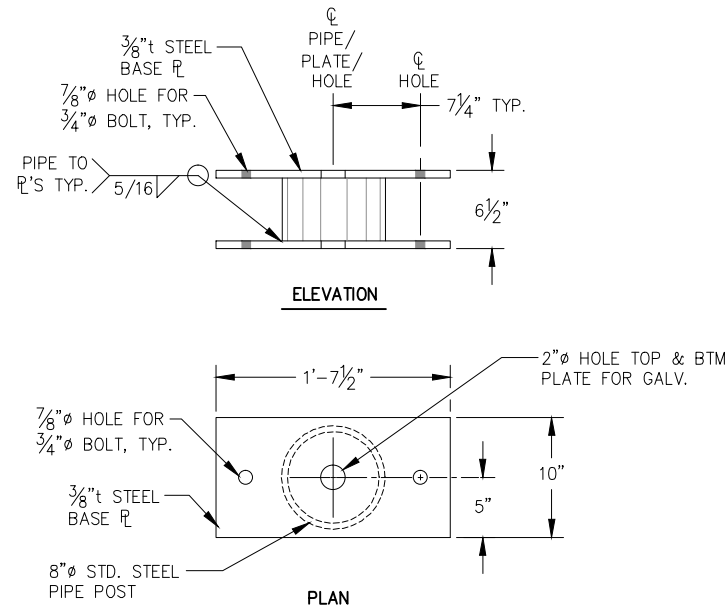


TYPICAL BULLRAIL SUPPORT POST DETAILS

NOTE:
BULLRAIL SEGMENTS SHALL BE
SUPPORTED BY AT LEAST TWO
BULLRAIL SUPPORT POSTS.



TYPICAL BULLRAIL CONNECTION ANGLE



TYPICAL BULLRAIL SUPPORT POST

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD
DRAWN: LRG APPROVED: JLD

SCALE: NTS

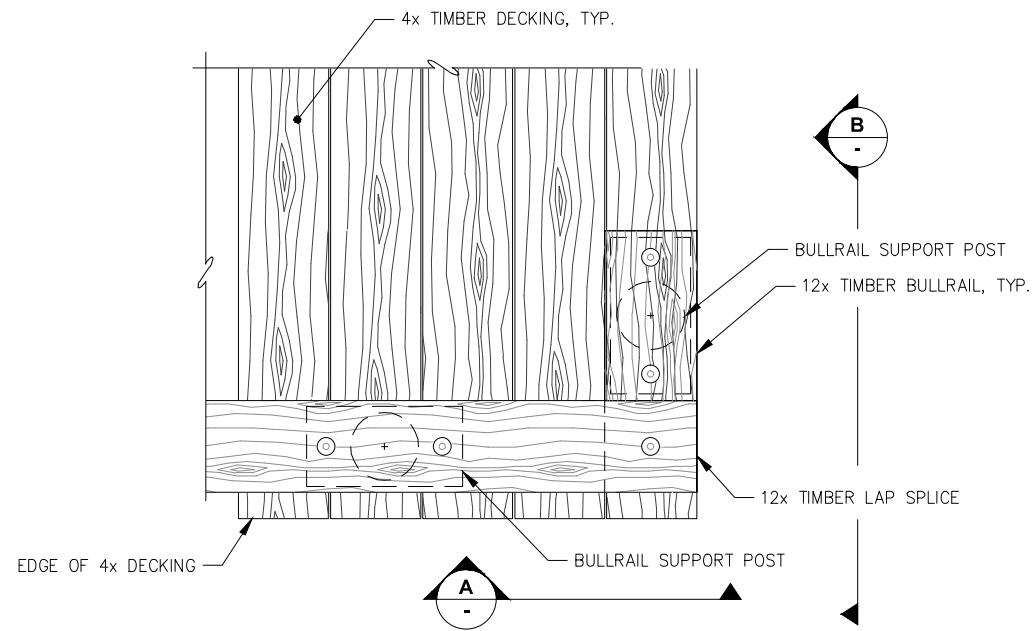
DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**ADD. ALT. B
BULLRAIL AND RAILING DETAILS**

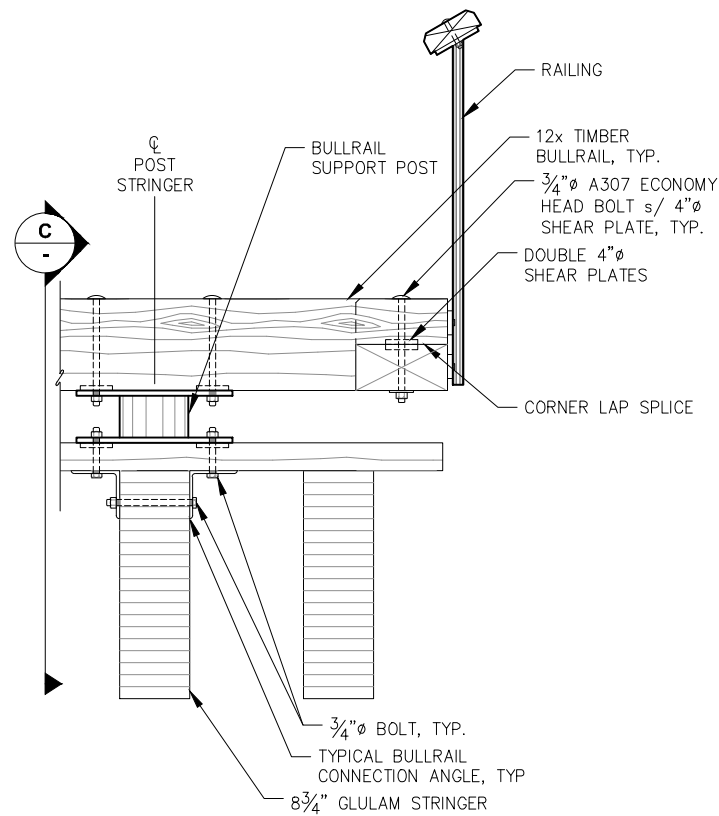
PND PROJECT NO.: 152037

3.08
SHEET
22 OF 82



BULLRAIL CORNER PLAN

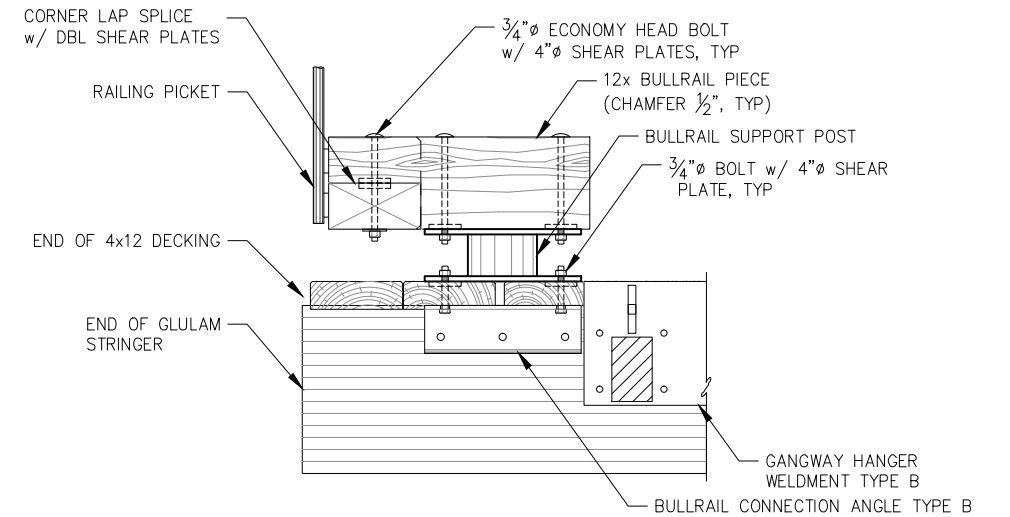
NOTE: RAILING NOT SHOWN FOR CLARITY.



BULLRAIL CORNER END ELEVATION

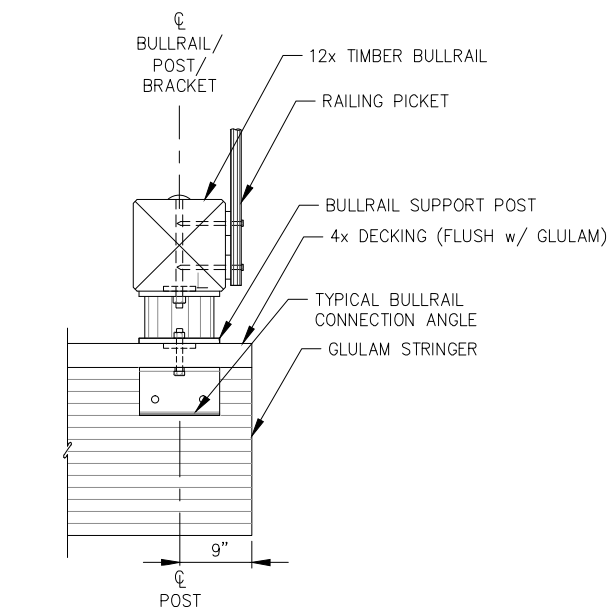
NOTE: DETAIL ALSO APPLIES TO C-FLOAT APPROACH DOCK.

NOTE: PARTIAL RAILING ONLY SHOWN FOR CLARITY.



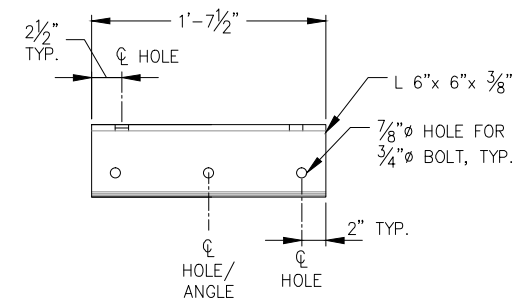
BULLRAIL CORNER SIDE ELEVATION

NOTE: PARTIAL RAILING ONLY SHOWN FOR CLARITY.



BULLRAIL SUPPORT POST CONNECTION

NOTE: DETAIL ALSO APPLIES TO C-FLOAT APPROACH DOCK.



BULLRAIL CONNECTION BRACKET TYPE B (1 TOTAL)

NOTE: ALL DETAILS NOT SHOWN SIMILAR TO TYPICAL BULLRAIL CONNECTION BRACKET

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MLB CHECKED: JLD
DRAWN: KLL APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

95% DESIGN REVIEW SUBMITTAL

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

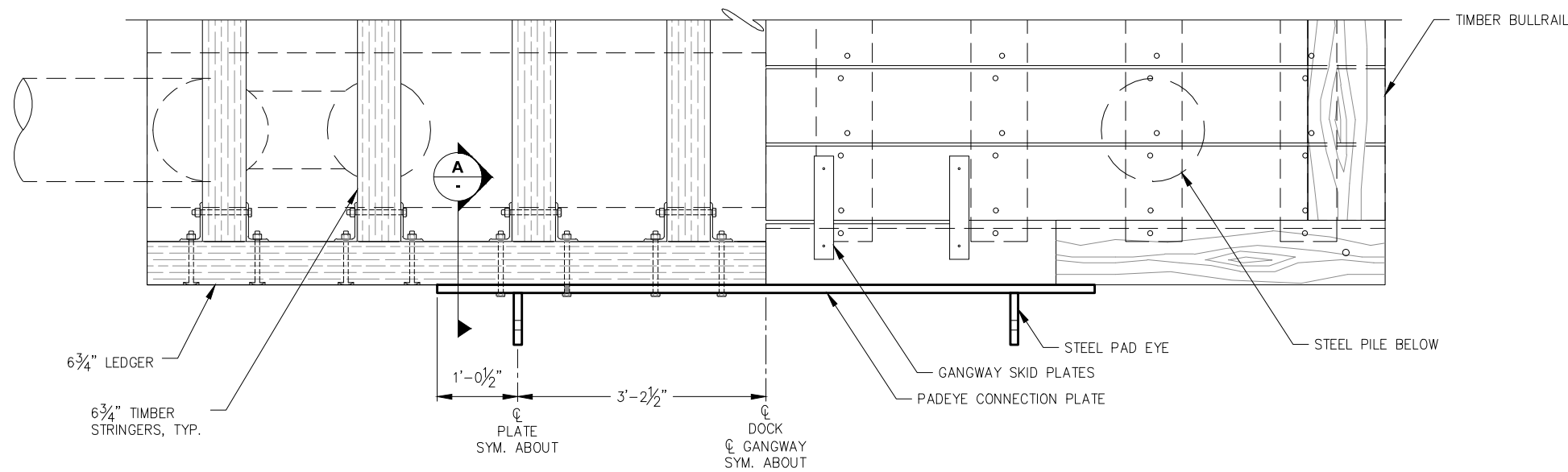
SHEET TITLE: ADD. ALT. B
BULLRAIL AND RAILING DETAILS

PND PROJECT NO.: 152037

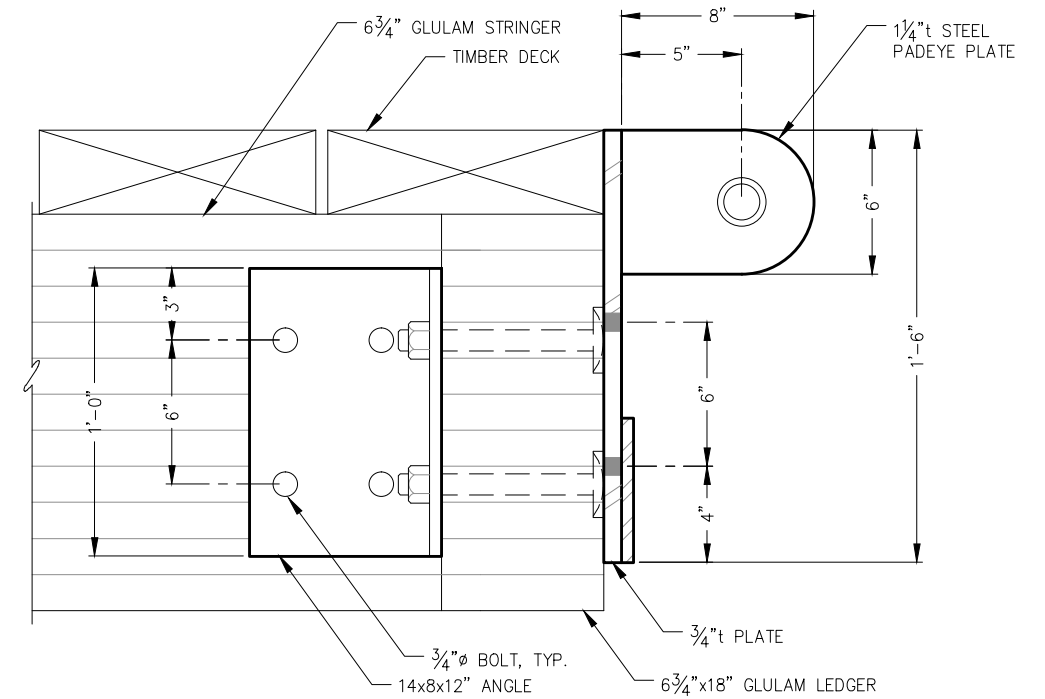
3.09

SHEET 23 OF 82

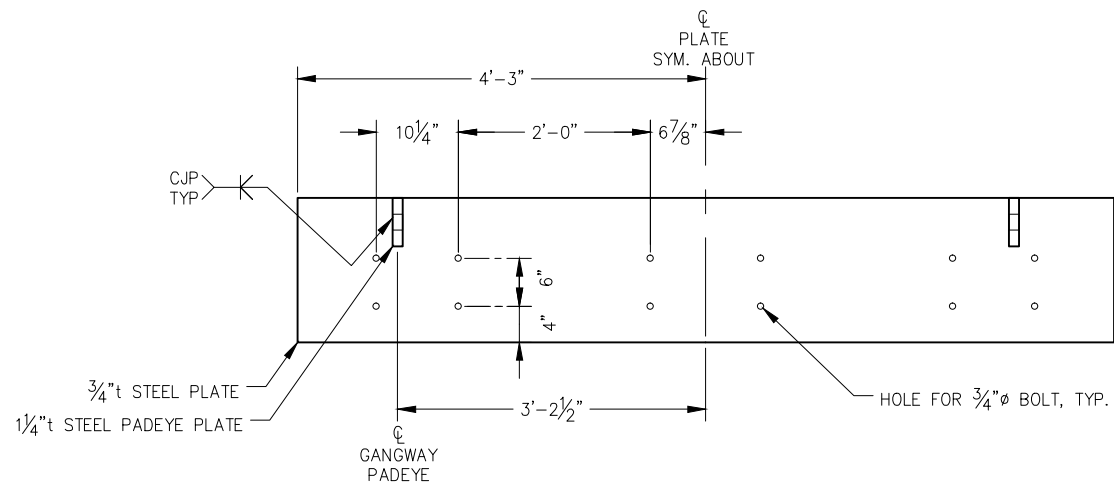




GANGWAY CONNECTION PLAN



A GANGWAY PAD EYE CONNECTION DETAIL



GANGWAY CONNECTION PLATE ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MLB CHECKED: JLD
DRAWN: KLL APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

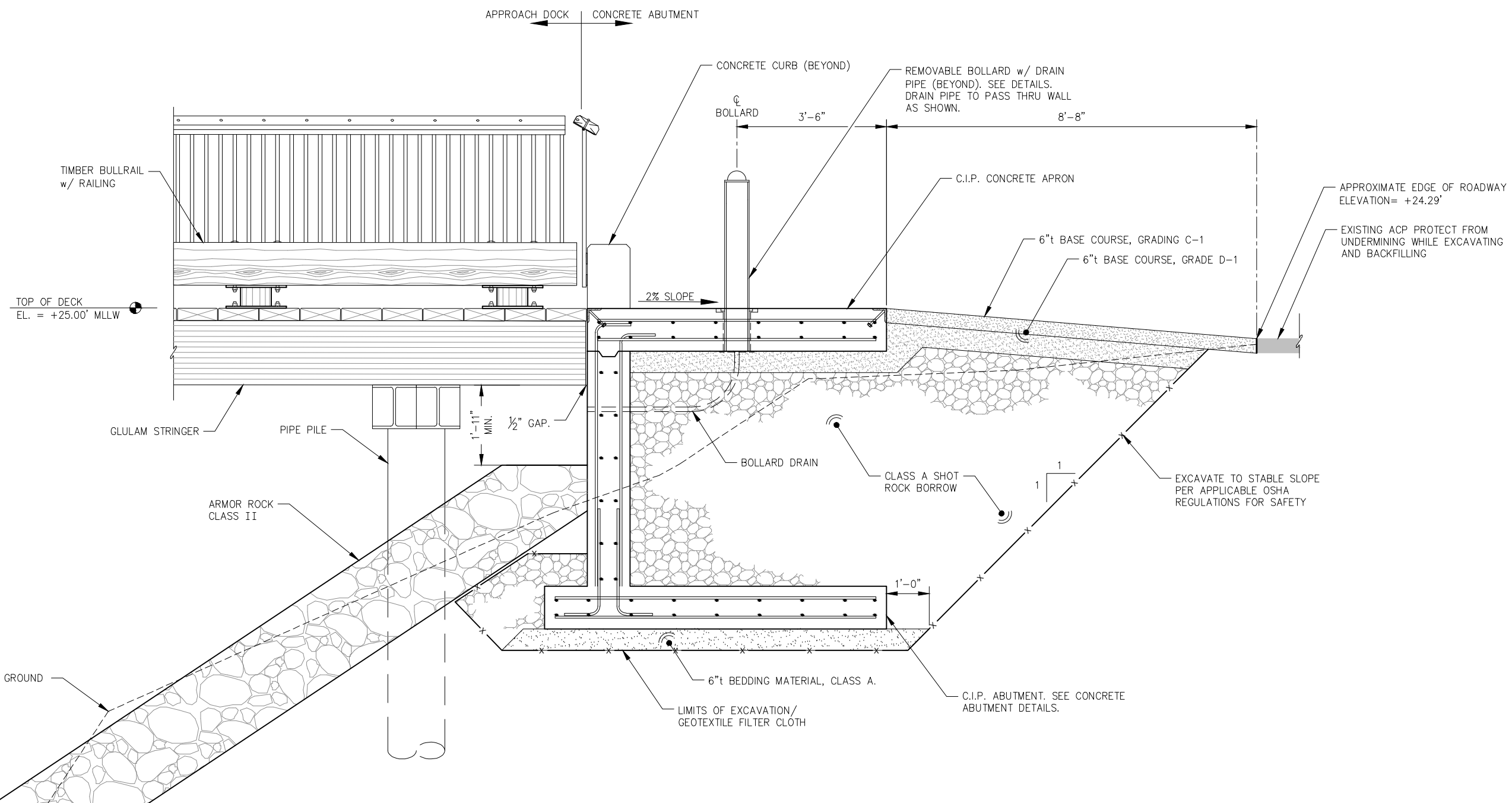
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **ADD. ALT. B
GANGWAY CONNECTION DETAILS**

PND PROJECT NO.: 152037

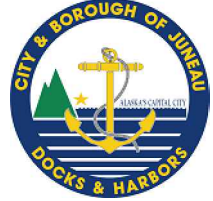
3.10
SHEET
24 OF 82

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.08_3.10 Approach Dock Bullrail and Railing.dwg, 10/30/2015 1:15:46 PM



CONCRETE ABUTMENT SECTION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: NTS
DRAWN: LRG APPROVED: JLD

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

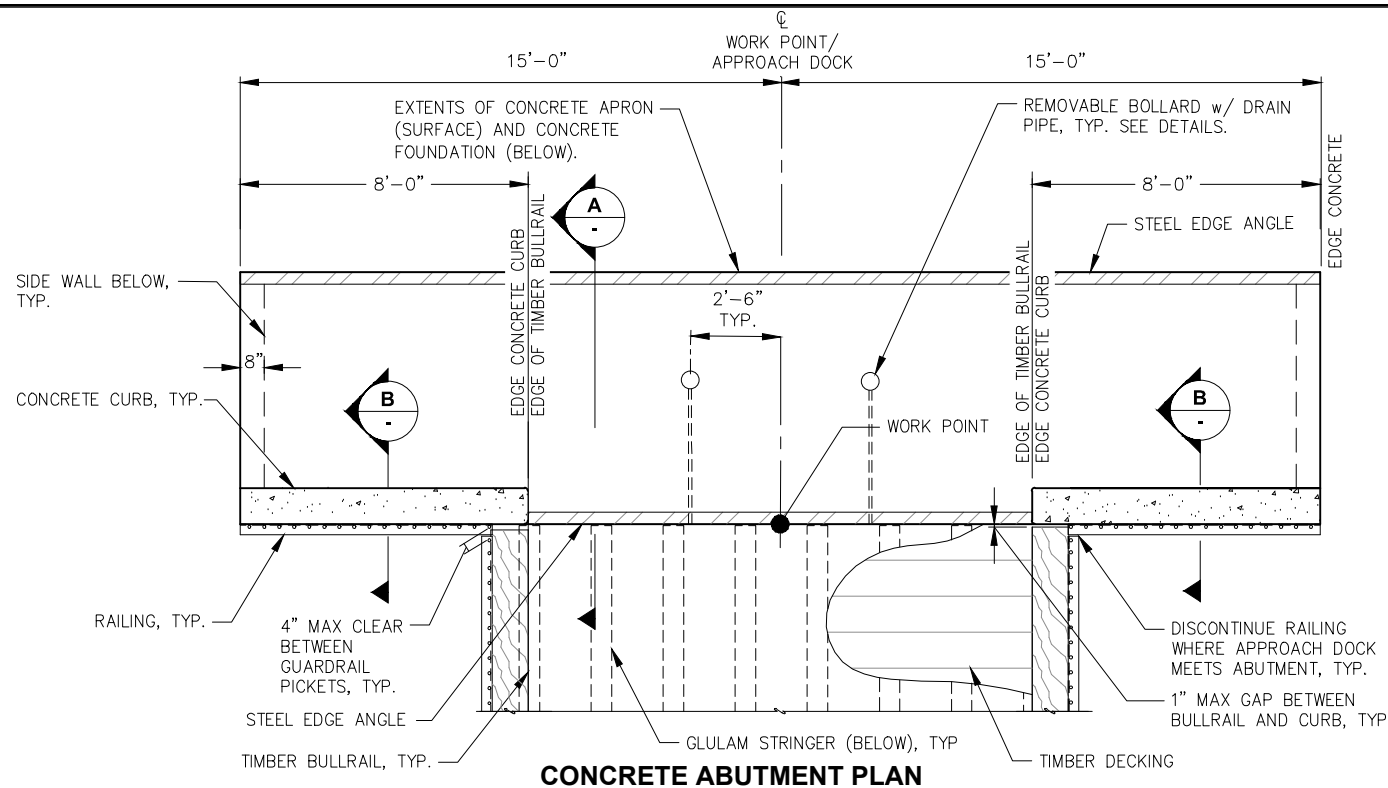
SHEET TITLE: **ADD. ALT. B**
CONCRETE ABUTMENT SECTION

PND PROJECT NO.: 152037

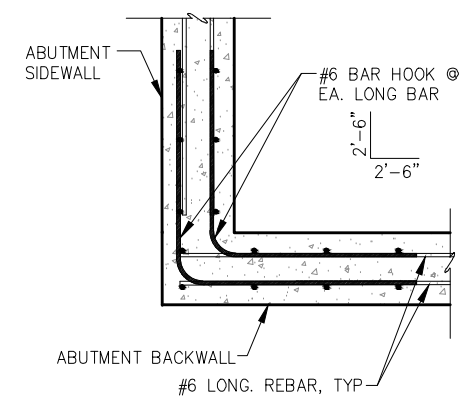
DATE: 10/27/2015

3.11
SHEET
25 OF 82

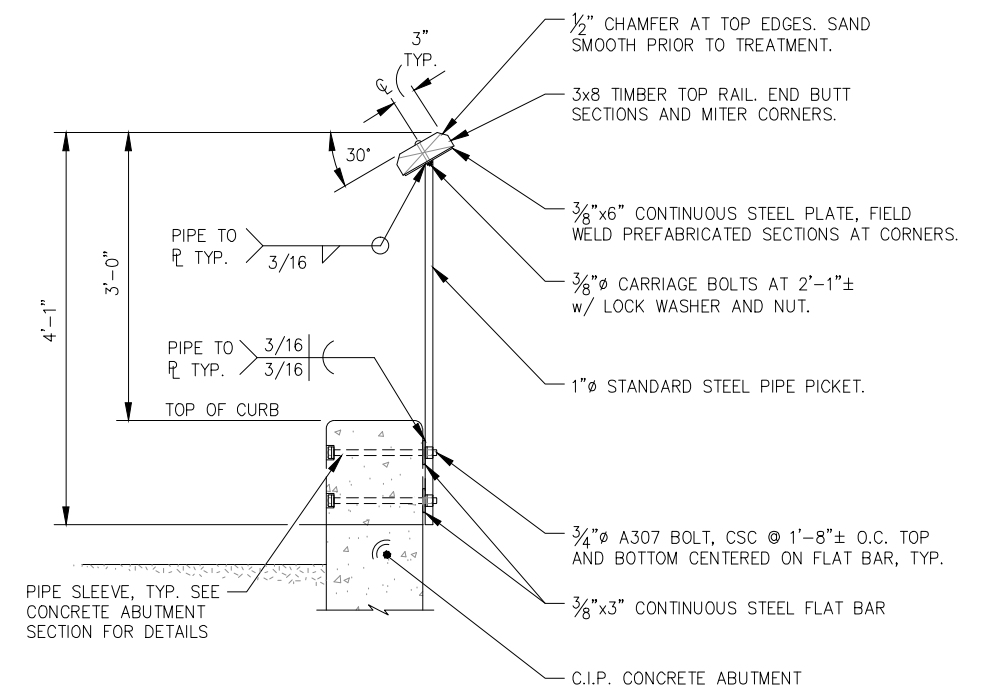
I:\Proj\juneau\152037 Douglas Harbor Renovation\G. Drawings\Design\3.11 Approach Dock Abutment Section.dwg, 10/30/2015 11:53 PM



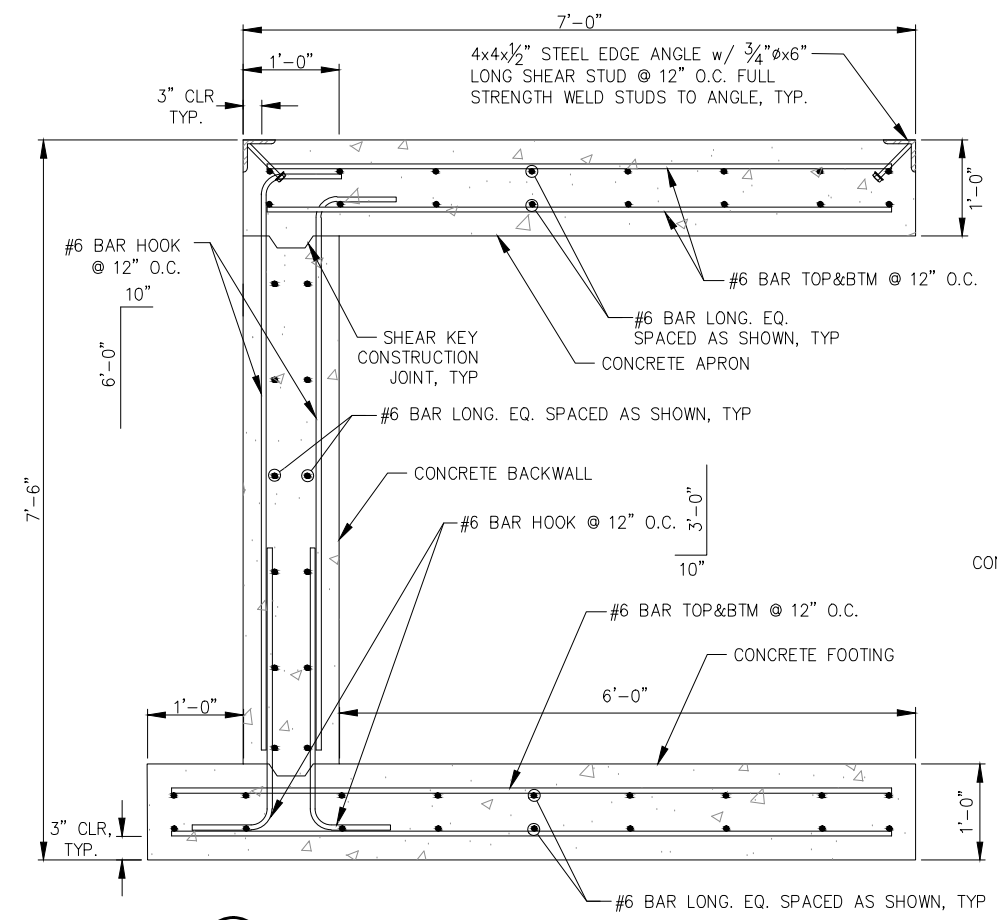
CONCRETE ABUTMENT PLAN



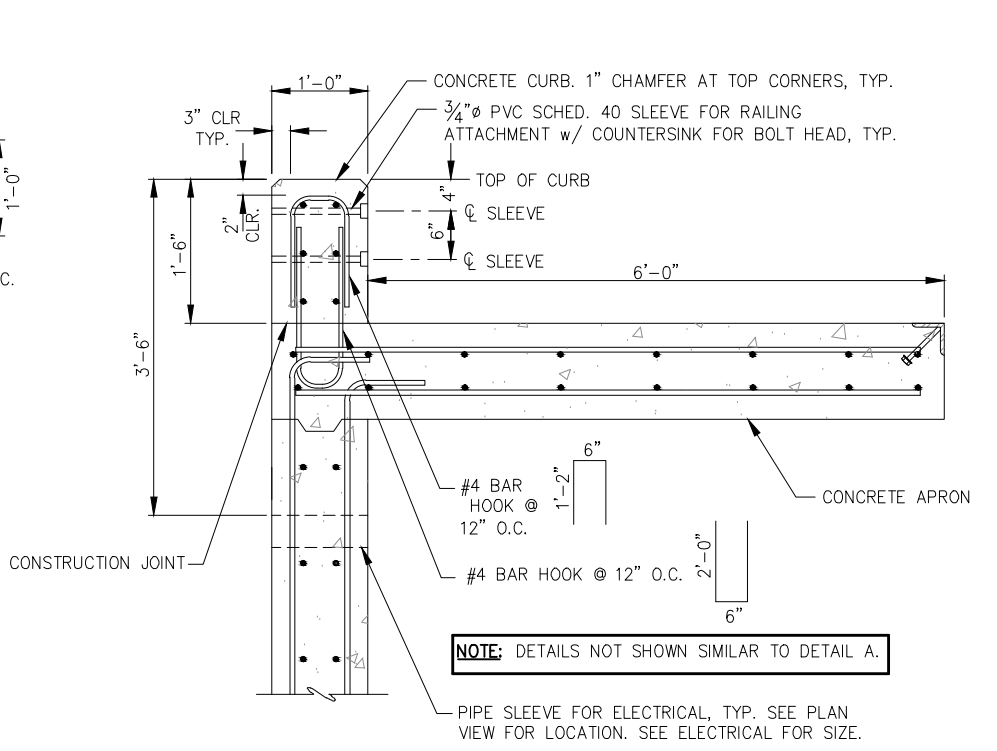
CORNER REBAR PLAN



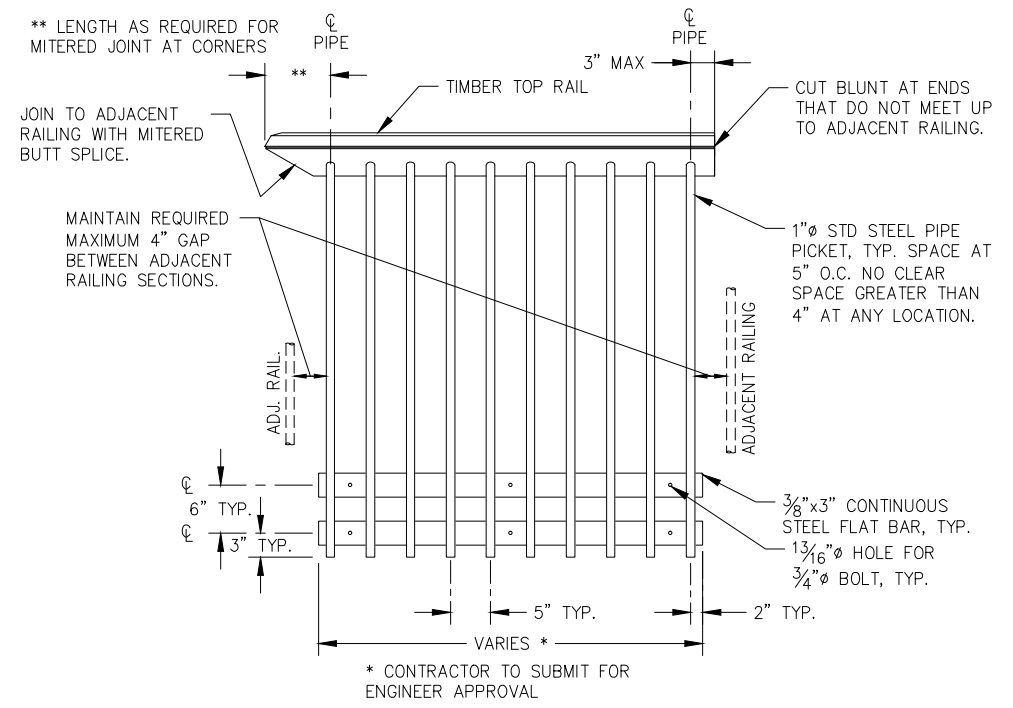
TYPICAL ABUTMENT RAILING SECTION



A CONCRETE ABUTMENT SECTION



B CONCRETE ABUTMENT SECTION



TYPICAL ABUTMENT RAILING DETAILS



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: NTS
DRAWN: LRG APPROVED: JLD

95% DESIGN REVIEW SUBMITTAL

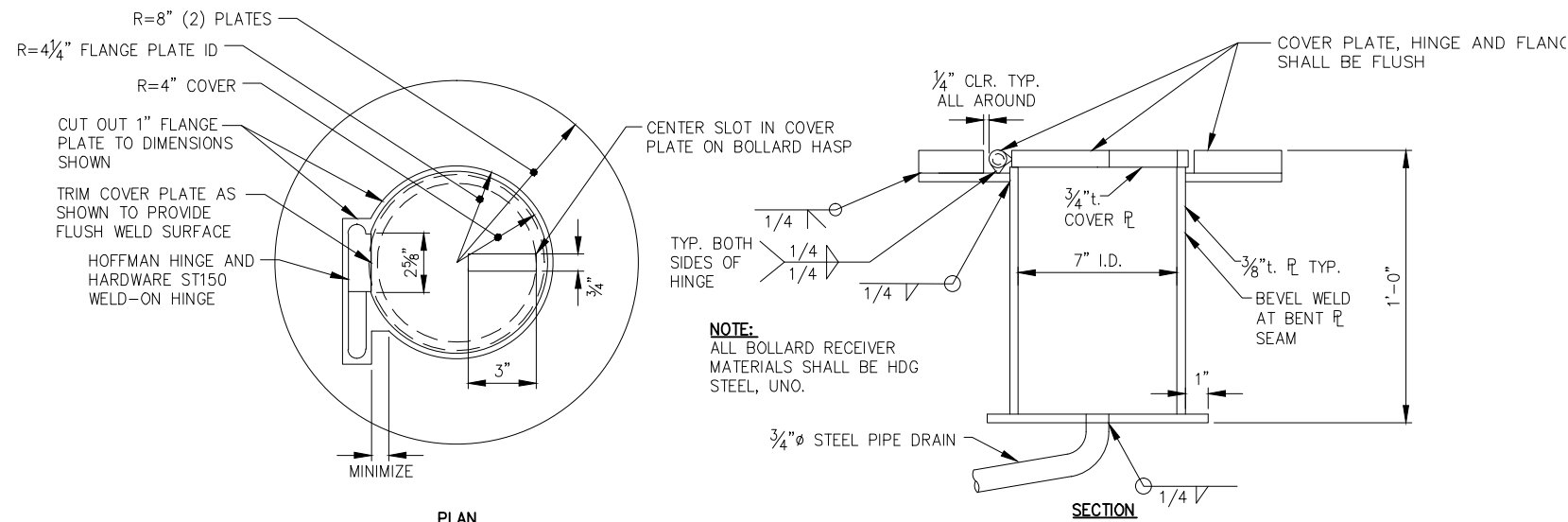
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **ADD. ALT. B
CONCRETE ABUTMENT DETAILS**

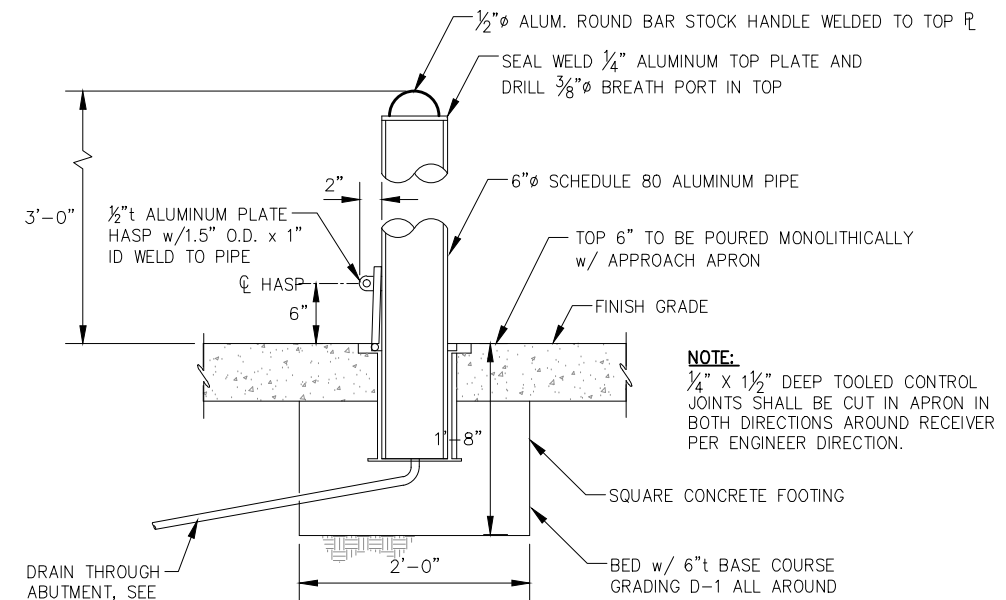
DATE: 10/27/2015

3.12
SHEET
26 OF 82

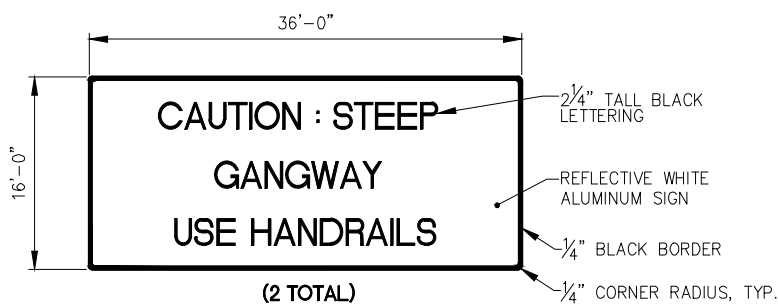
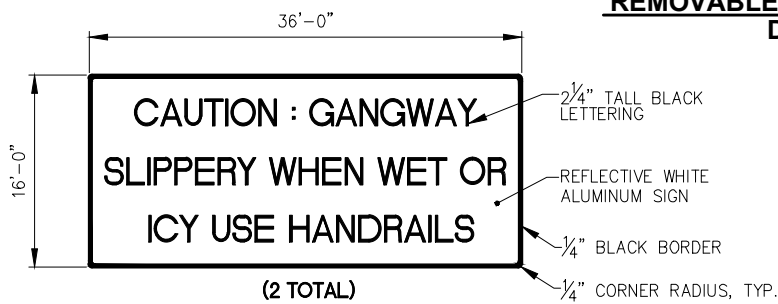
\\Proj\jdata\15XX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.12.3.13 Abutment Details.dwg, 10/30/2015 1:15:58 PM



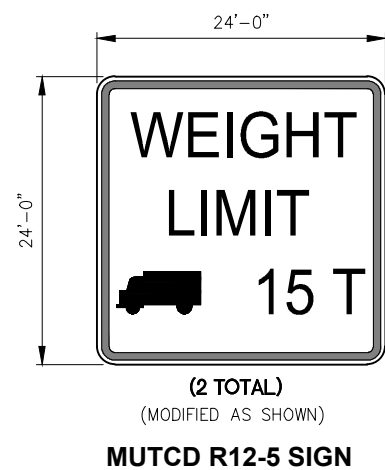
**REMOVABLE BOLLARD RECEIVER
DETAIL**



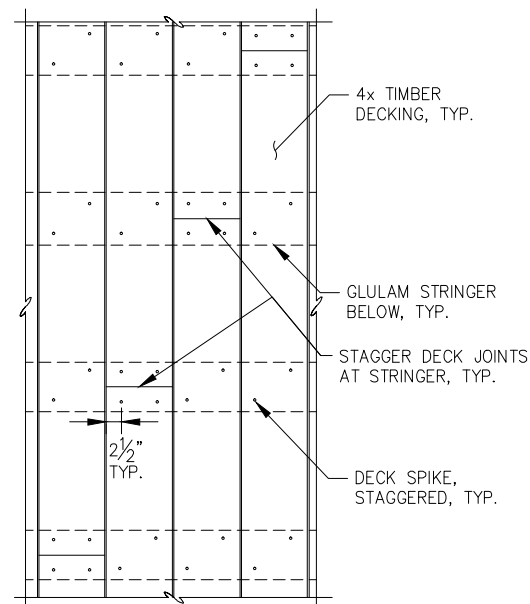
REMOVABLE BOLLARD



GANGWAY SIGNAGE

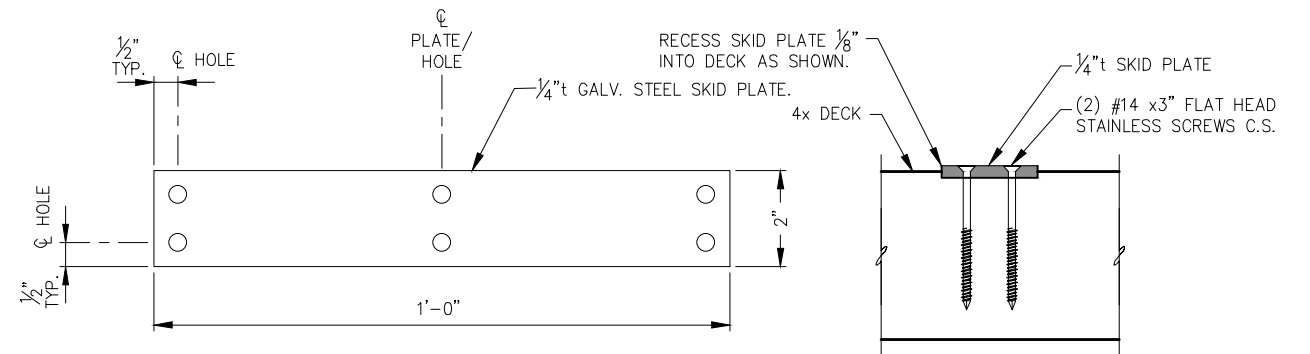


- NOTES:**
1. MOUNT SIGNS TO APPROACH DOCK SAFETY RAILS w/(4) HOT DIPPED GALVANIZED U-BOLTS, OR SIMILAR. FINAL LOCATION PER OWNER/ENGINEER.

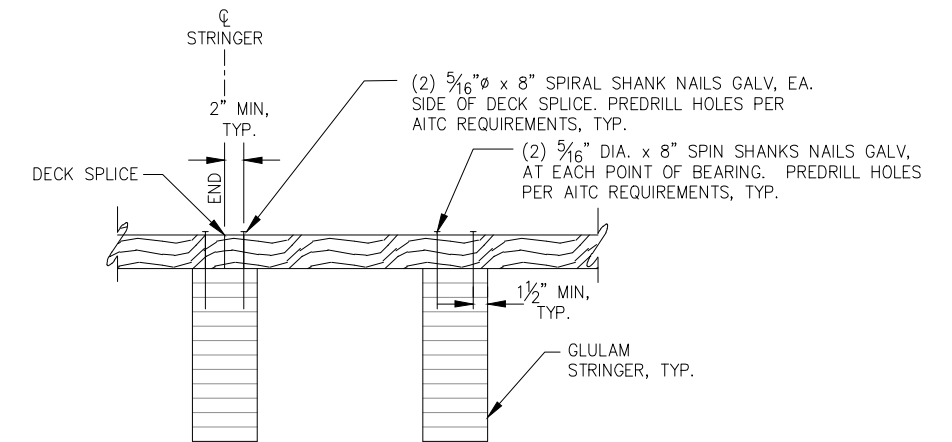


TYPICAL DECK STAGGER

- NOTES:**
1. ALL DECK TIMBER SHALL BE SUPPORTED BY A MINIMUM OF TWO STRINGERS.
 2. DECK BOARDS SHALL BE SPLICED WITH A RANDOM LAYOUT WITH NO TWO ADJACENT BOARDS SPLICED AT SAME JOIST.
 3. DECK TIMBER BOARDS SHALL HAVE A MINIMUM LENGTH OF 12'-0", AT BULLRAIL POST LOCATIONS.

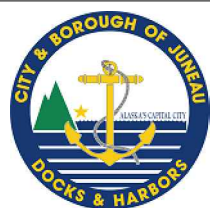


**SKID PLATE DETAIL
(12 TOTAL)**



**TYPICAL DECK TO STRINGER
CONNECTION**

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD
DRAWN: LRG APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

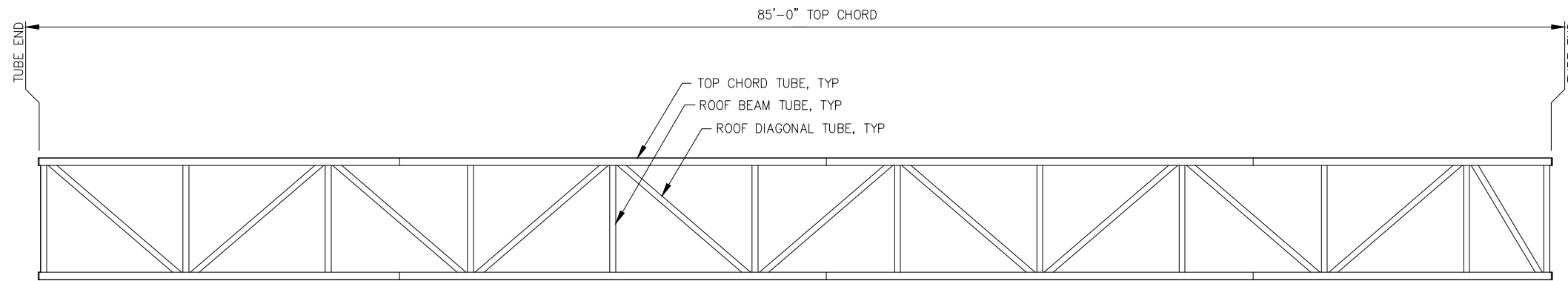
SHEET TITLE: **ADD. ALT. B
MISCELLANEOUS DETAILS**

PND PROJECT NO.: 152037

3.13

SHEET
27 OF 82

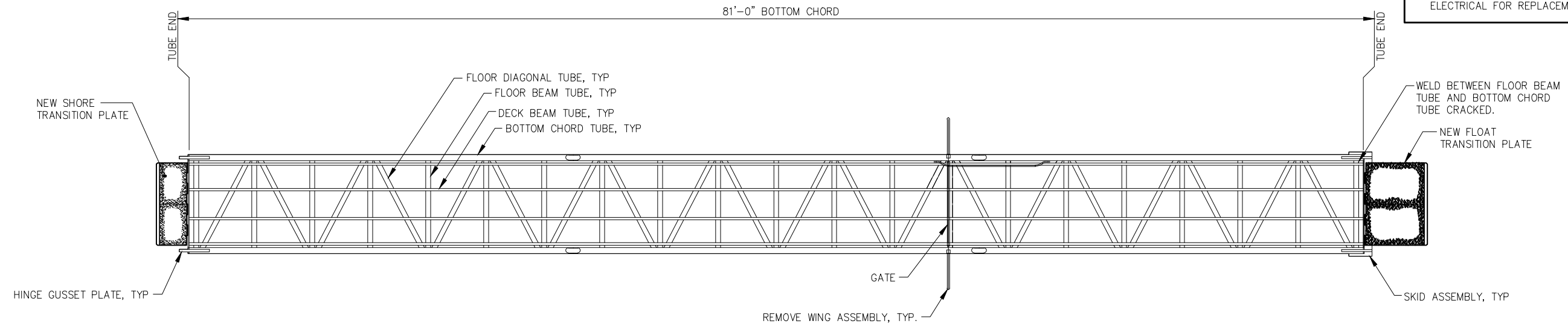
\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\3.12.3.13 Abutment Details.dwg. 10/30/2015 1:16:00 PM



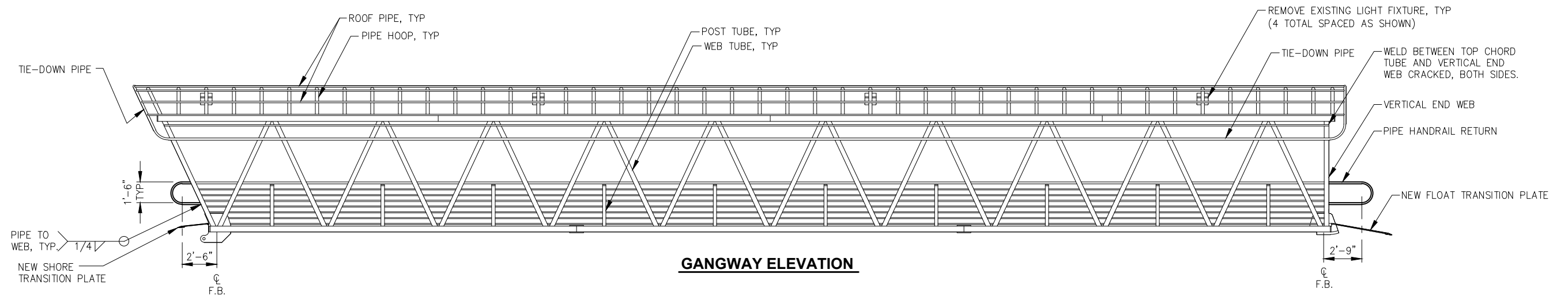
GANGWAY ROOF PLAN

NOTE: 1"Ø ROOF PIPES AND 2½"Ø PIPE HOOPS NOT SHOWN THIS VIEW FOR CLARITY.

- REFURBISHMENT NOTES:**
THE OWNER FURNISHED GANGWAY SHALL BE REFURBISHED AS FOLLOWS:
1. WELDS IDENTIFIED AS CRACKED SHALL BE FULLY GROUND OUT TO BASE METAL AND WELDED AS INDICATED.
 2. BROKEN/BENT ROOF PIPE SECTIONS SHALL BE CUT OUT AND REPAIRED AS SHOWN IN DETAILS.
 3. EXISTING TRANSITION PLATES SHALL BE REMOVED FROM GANGWAY AND REPLACED AS SHOWN IN DETAILS.
 4. EXISTING WING ASSEMBLIES SHALL BE CUT OFF AND WELD AREAS SHALL BE GROUND SMOOTH.
 5. EXISTING GANGWAY COVERING SHALL BE PRESSURE WASHED, REPAIRED AS NEEDED, AND INSTALLED ON THE GANGWAY.
 6. CONTRACTOR SHALL REPLACE IN-KIND 6 EACH. GRATING PANELS, INCLUDING HARDWARE, THAT HAVE COME OFF THE GANGWAY.
 7. EXISTING LIGHT FIXTURES AND ALL ASSOCIATED CONDUIT AND FASTENERS SHALL BE REMOVED FROM GANGWAY. SEE ELECTRICAL FOR REPLACEMENT COMPONENTS.



GANGWAY FLOOR PLAN



GANGWAY ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: JLD CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

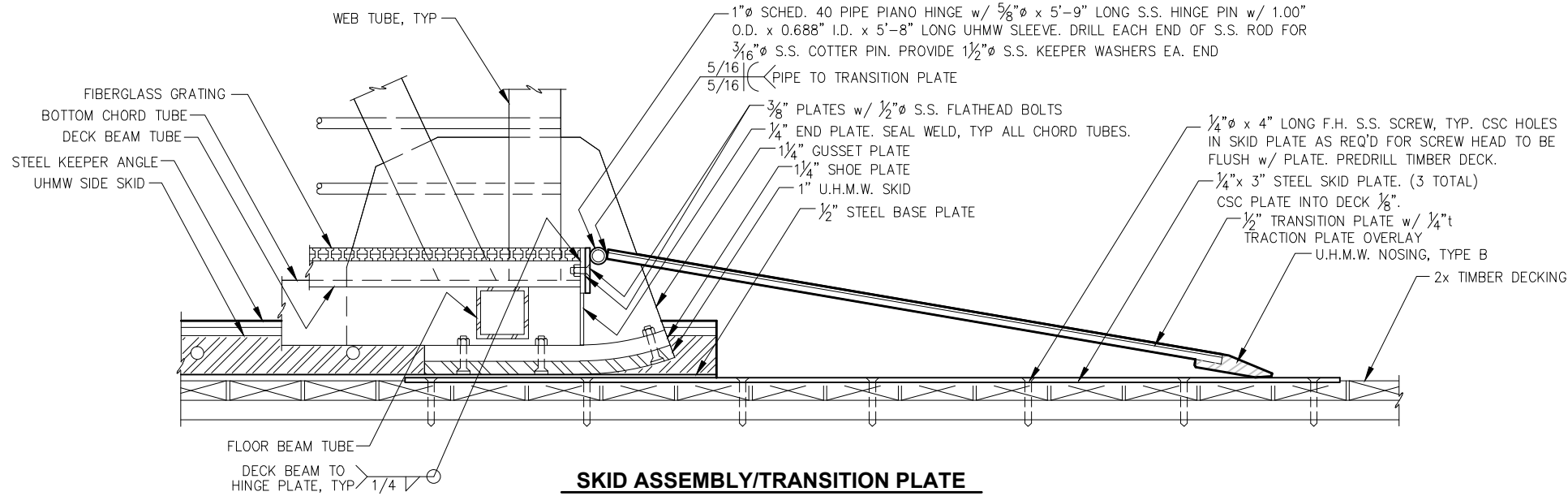
SHEET TITLE: **ADD. ALT. A & B
GANGWAY MODIFICATION**

PND PROJECT NO.: 152037

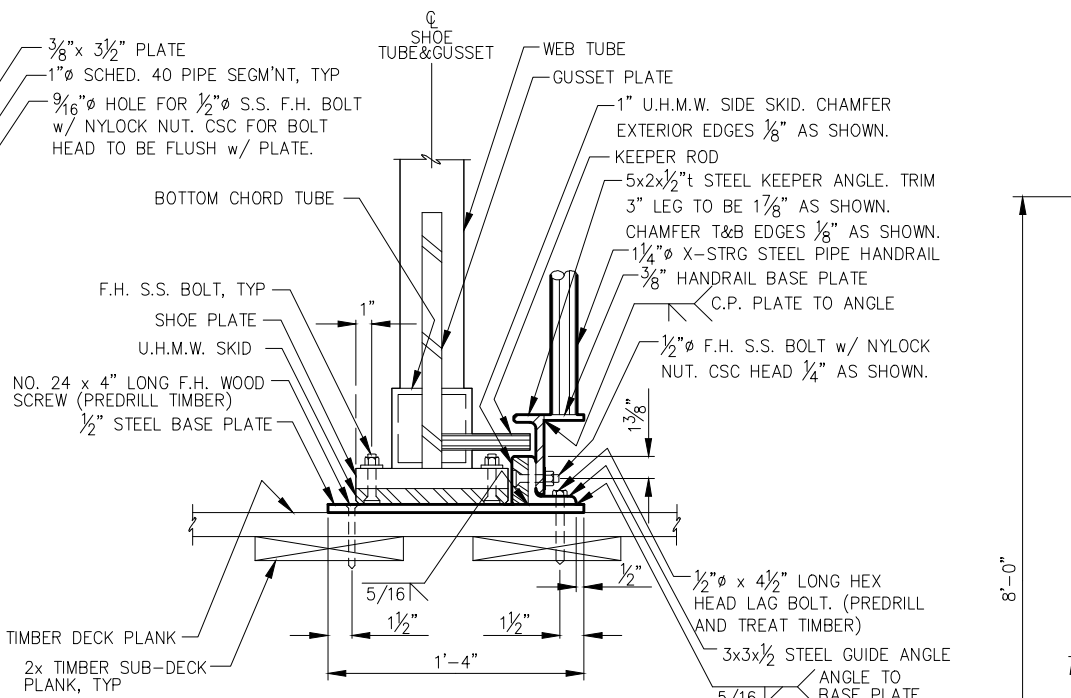
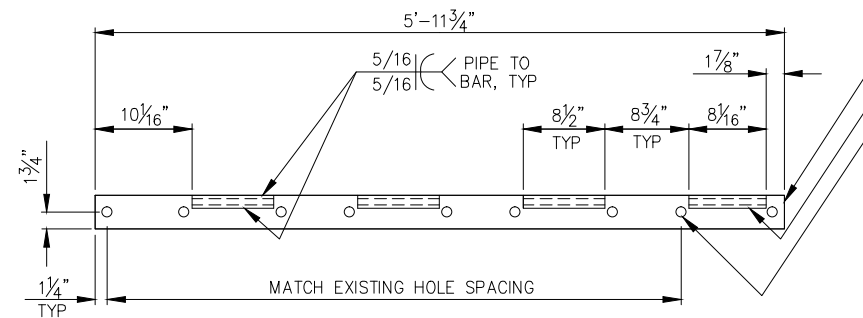
4.01

SHEET
28 OF 82

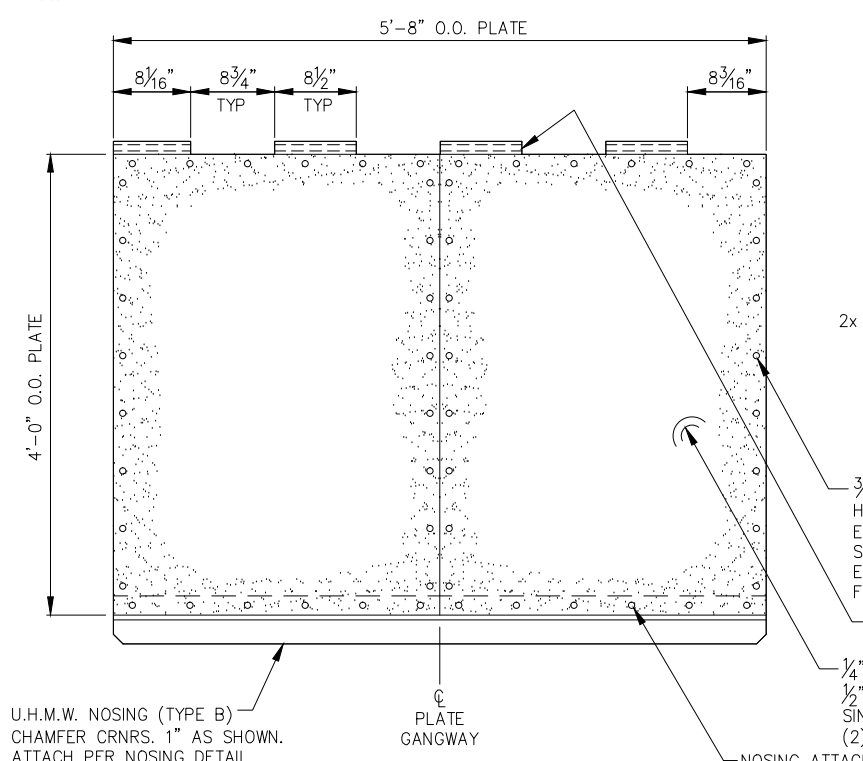
\\Proj\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\4.01-4.04 GANGWAY.DWG. 10/30/2015 1:16:07 PM



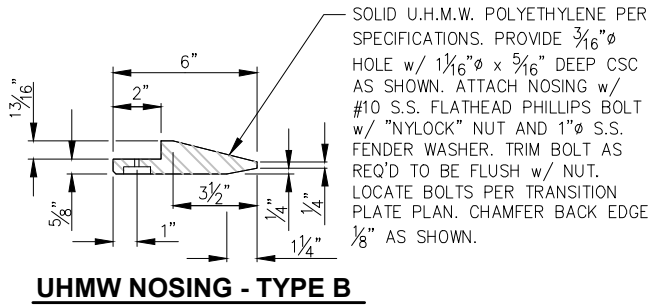
SKID ASSEMBLY/TRANSITION PLATE



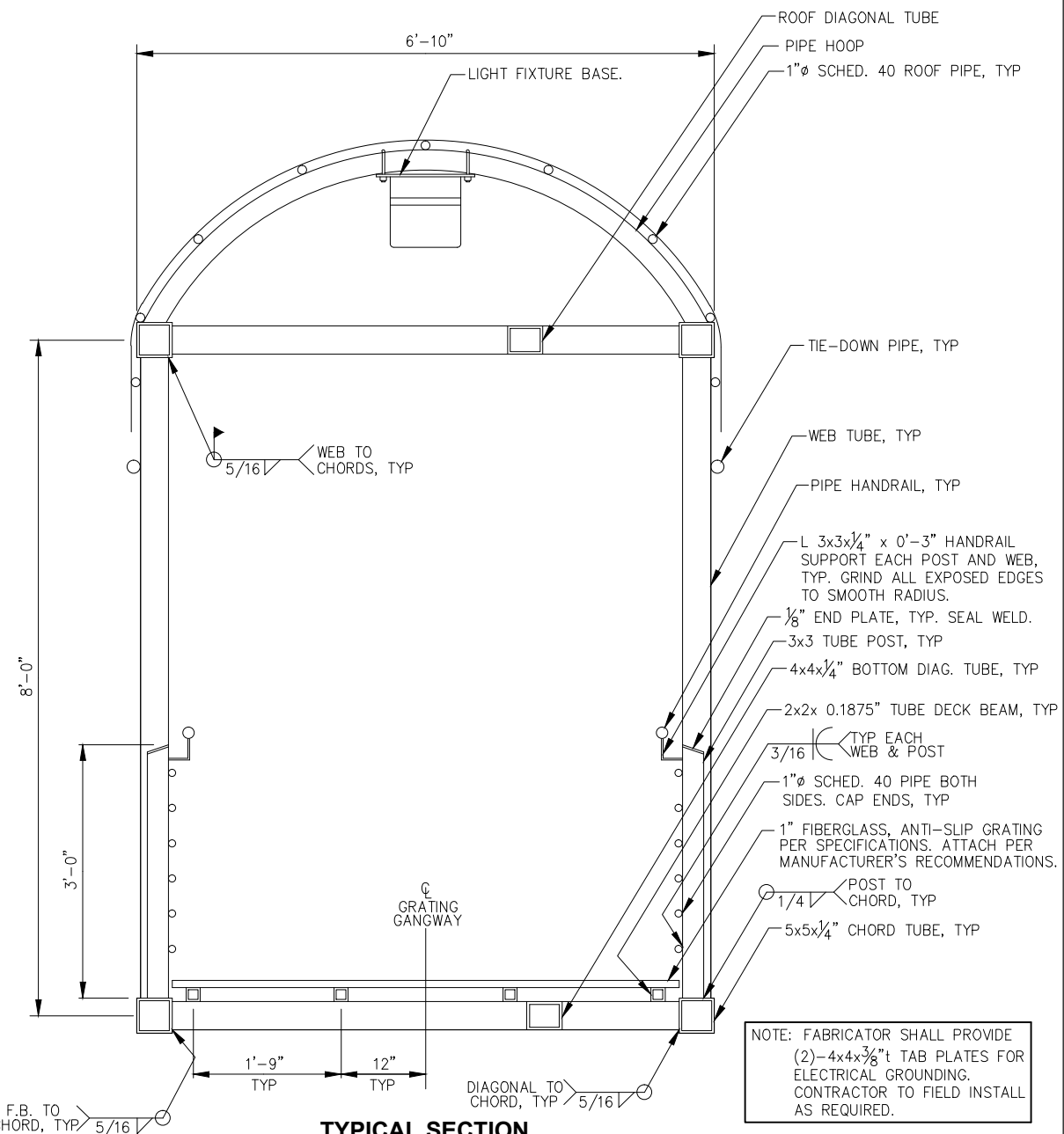
SKID ASSEMBLY SECTION



FLOAT TRANSITION PLATE



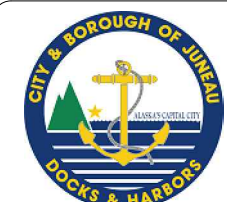
UHMW NOSING - TYPE B



TYPICAL SECTION

95% DESIGN REVIEW SUBMITTAL

NOTE: FABRICATOR SHALL PROVIDE (2)-4x4x3/8" TAB PLATES FOR ELECTRICAL GROUNDING. CONTRACTOR TO FIELD INSTALL AS REQUIRED.



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: JLD CHECKED: JLD SCALE: NTS
DRAWN: WRB APPROVED: JLD

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

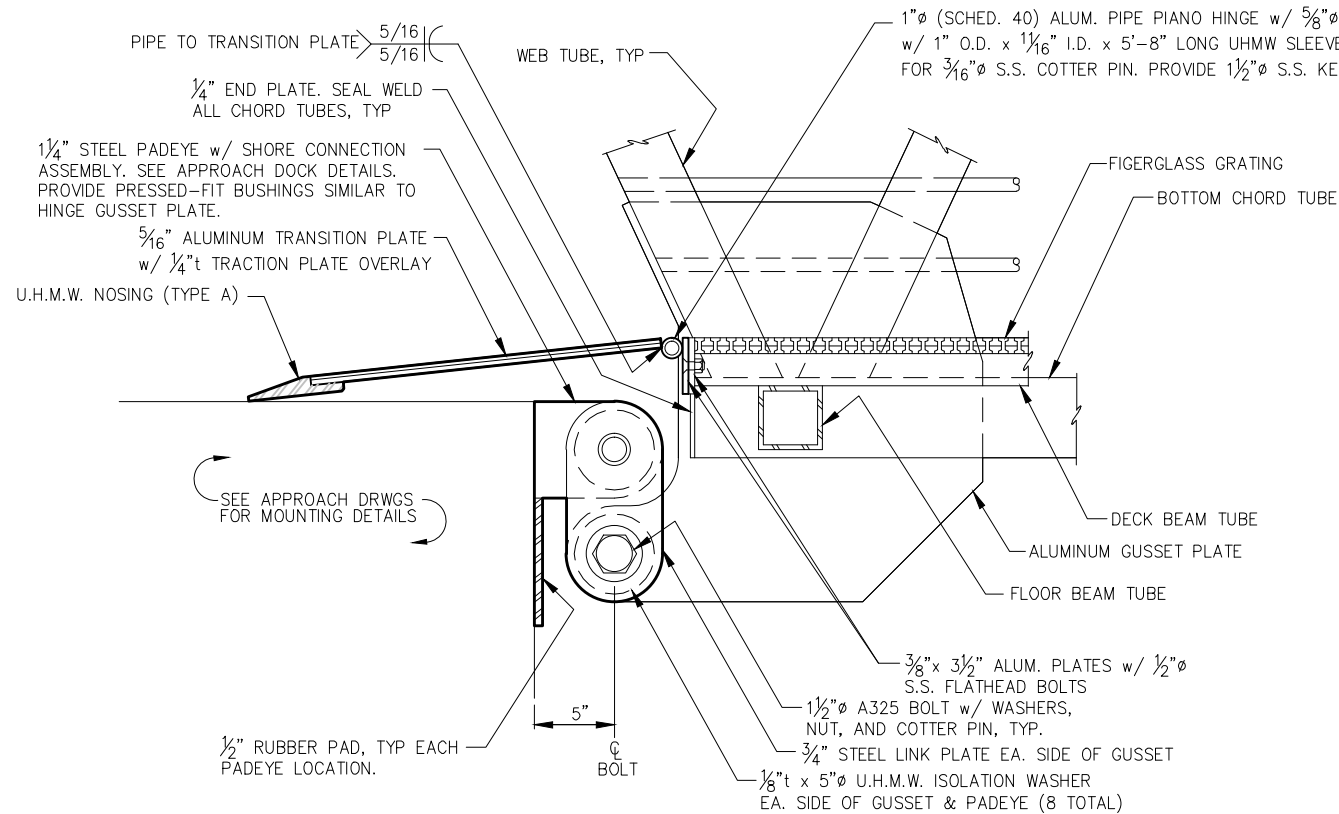
SHEET TITLE: **ADD. ALT. A & B**
EXISTING GANGWAY DETAILS

DATE: 10/27/2015

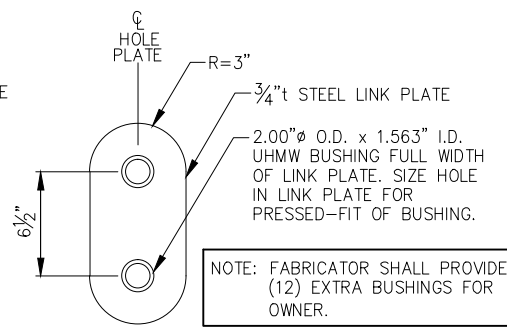
PND PROJECT NO.: 152037

4.02
SHEET
29 OF 82

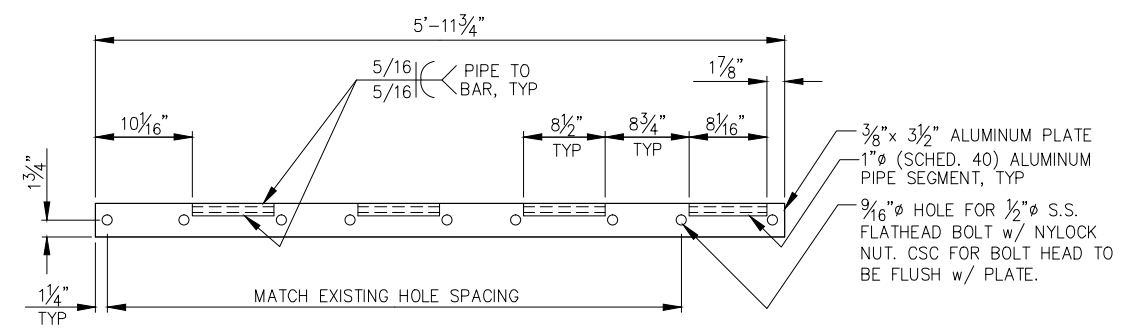
\\Pnfd\data\152037\Design\4.01-4.04 GANGWAY.DWG, 10/30/2015 1:16:11 PM



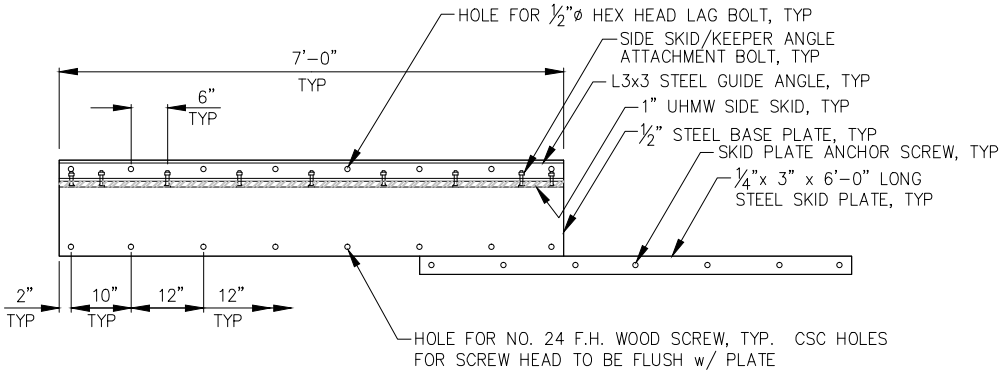
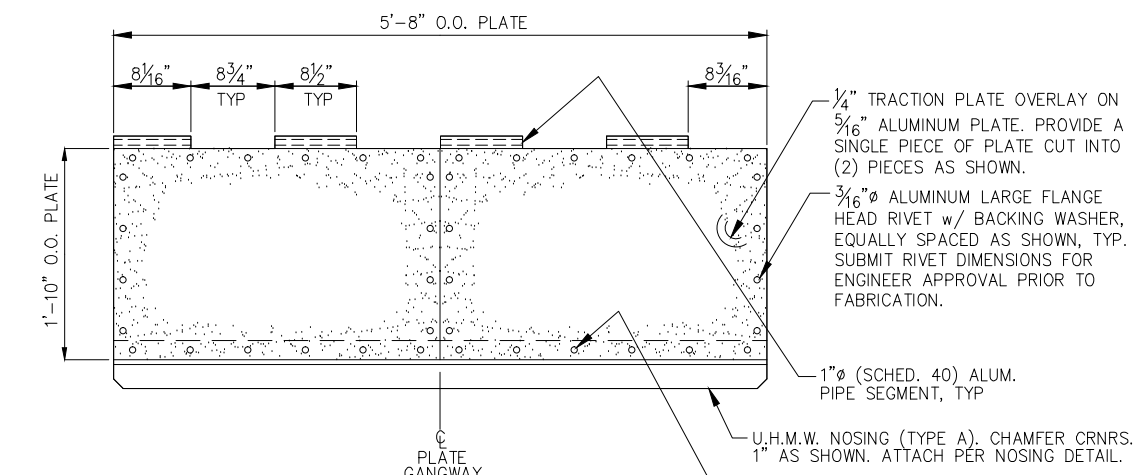
HINGE ASSEMBLY



LINK PLATE
(4 TOTAL)

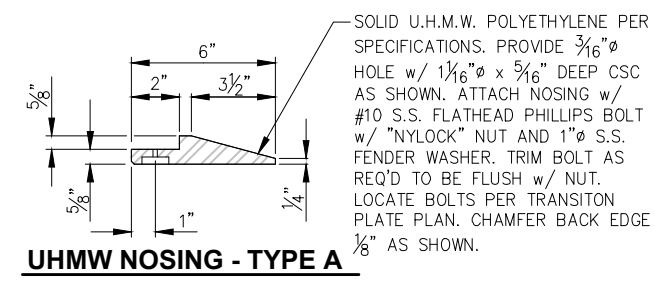


SHORE TRANSITION PLATE

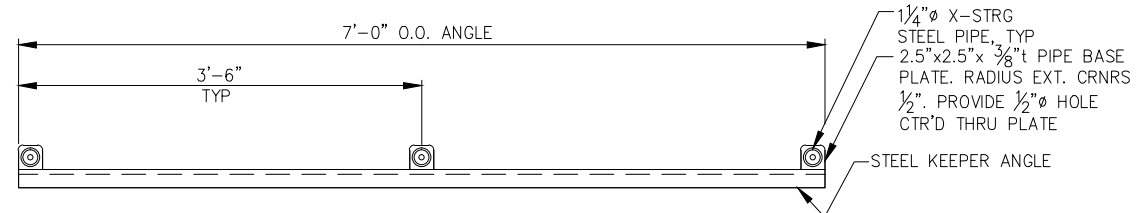


SKID BASE PLATE/GUIDE ANGLE ASSEMBLY - PLAN

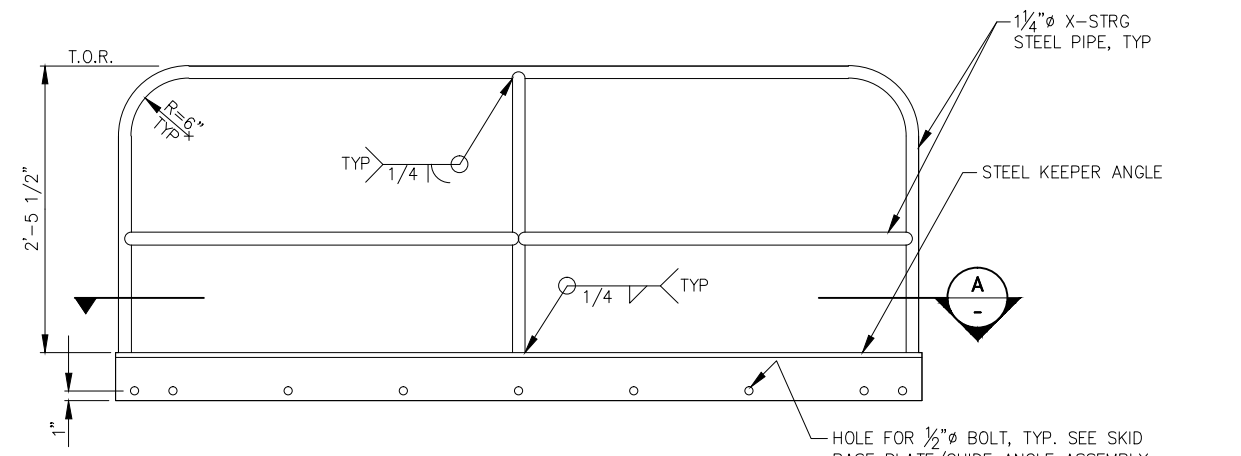
NOTE: STEEL KEEPER ANGLES NOT SHOWN FOR CLARITY. PERMANENTLY ATTACH SKID BASE PLATE TO FLOAT AT ENGINEER DIRECTED LOCATION ONLY AFTER SEVERAL TIDE CYCLES TO ASSURE PROPER POSITION.



UHMW NOSING - TYPE A



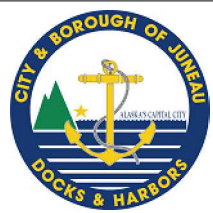
KEEPER ANGLE/HANDRAIL - PLAN



KEEPER ANGLE/HANDRAIL - ELEVATION

(2 TOTAL - PROVIDE EACH SIDE OF GANGWAY)

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: JLD CHECKED: JLD SCALE: NTS
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

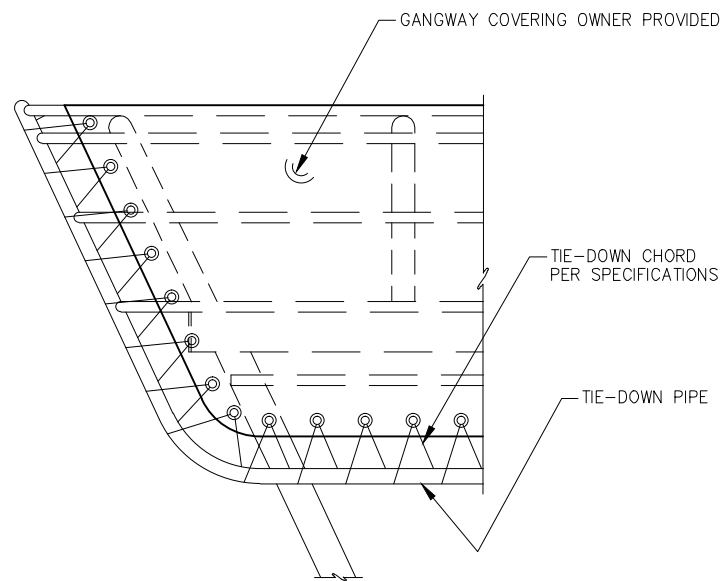
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **ADD. ALT. A & B**
EXISTING GANGWAY DETAILS

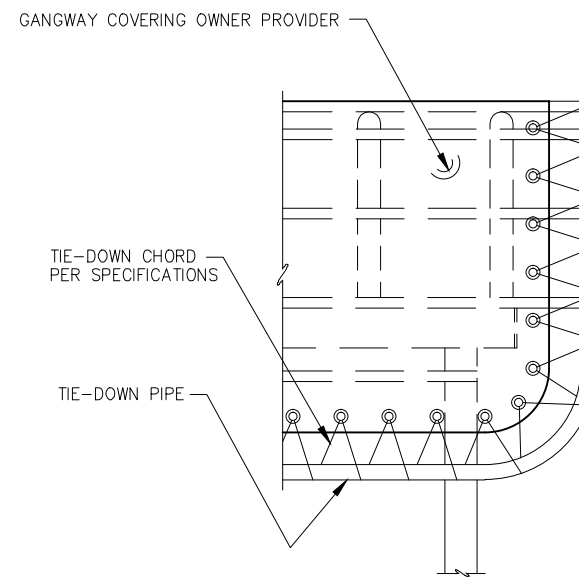
PND PROJECT NO.: 152037

4.03
SHEET 30 OF 82

\\Proj\jdata\152037\Drawings\Design\4.01-4.04 GANGWAY.DWG. 10/30/2015 1:16:15 PM



COVERING - SHORE END ELEVATION



COVERING - FLOAT END ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: JLD CHECKED: JLD
DRAWN: JLD APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

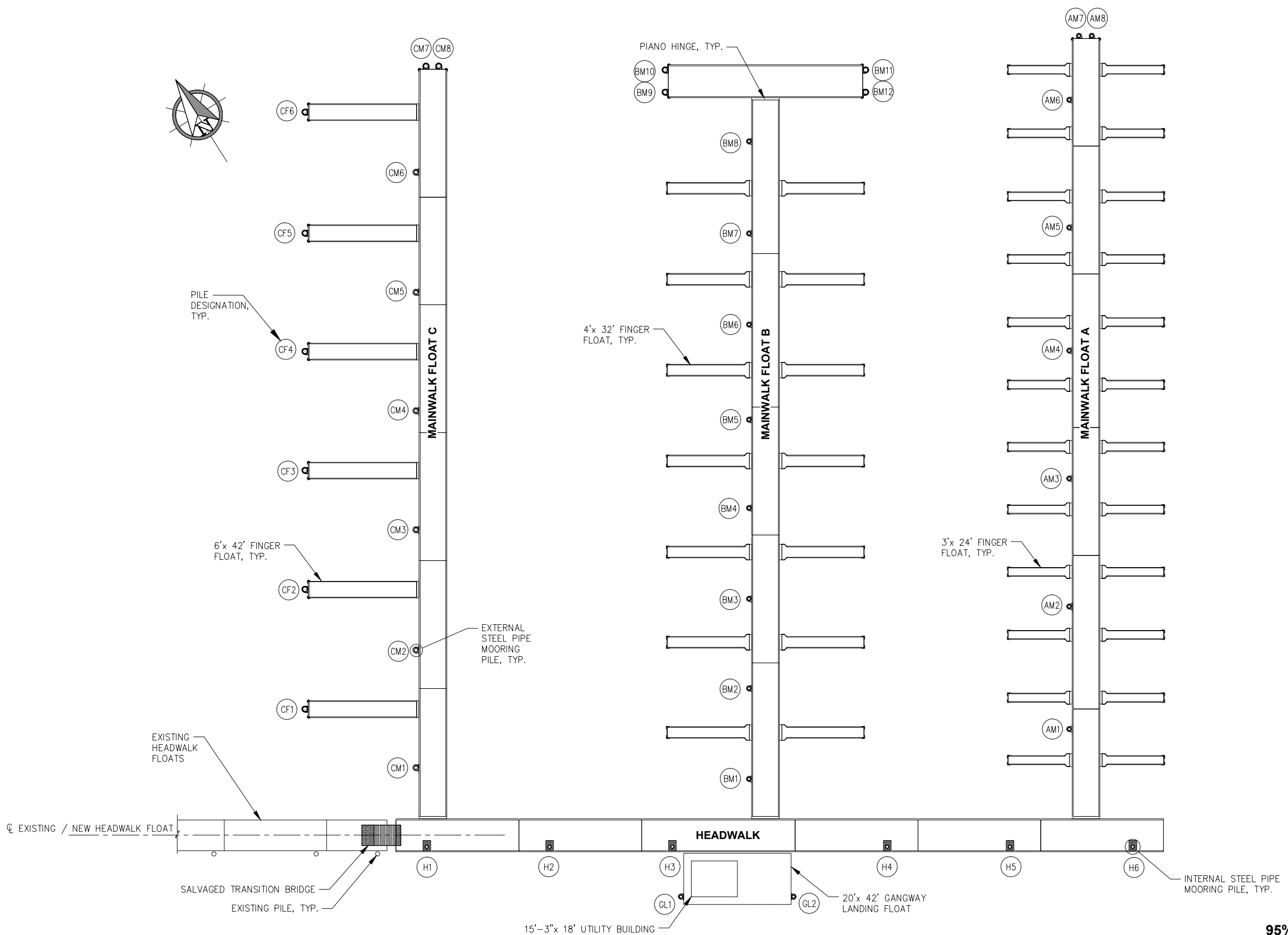
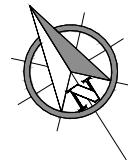
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **ADD. ALT. A & B
EXISTING GANGWAY DETAILS**

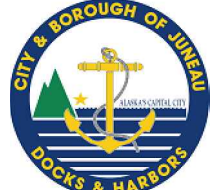
PND PROJECT NO.: 152037

4.04

SHEET
31 OF 82



95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE: SCALE IN FEET
0 20 40 FT.

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **BASE BID FLOAT PLAN AND PILE LAYOUT**

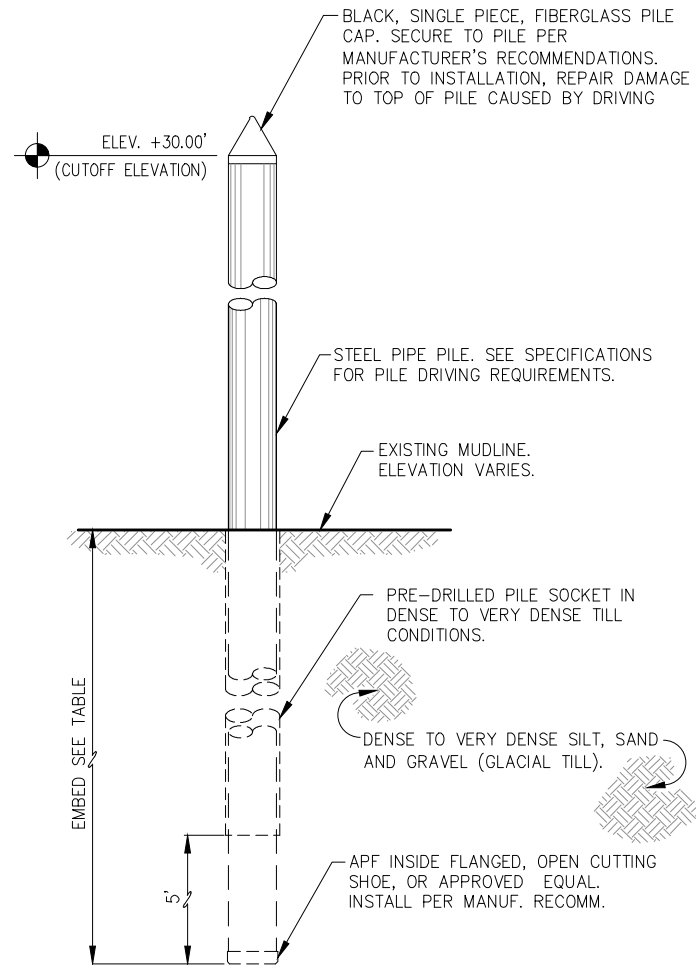
PND PROJECT NO.: 152037

5.01
SHEET
32 OF 82

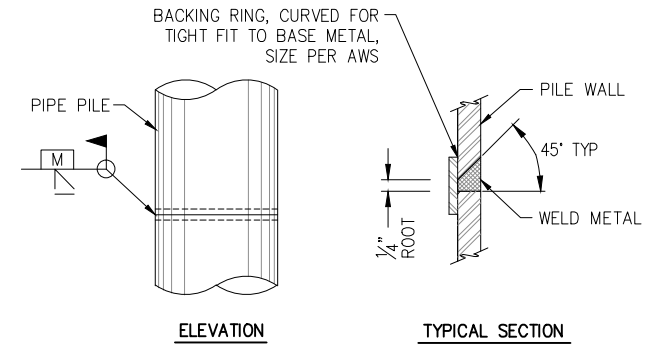
\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.01 OVERALL FLOAT PLAN AND PILE LAYOUT.dwg, 10/30/2015 11:16:31 PM

FLOAT PILE SCHEDULE			
PILE #	LOCATION	MIN. PILE LENGTH (FT)	PILE SIZE
1	GL1	70'	12.75"Ø x 0.500"t.
2	GL2	70'	12.75"Ø x 0.500"t.
3	H1	70'	12.75"Ø x 0.500"t.
4	H2	70'	12.75"Ø x 0.500"t.
5	H3	70'	12.75"Ø x 0.500"t.
6	H4	70'	12.75"Ø x 0.500"t.
7	H5	70'	12.75"Ø x 0.500"t.
8	H6	70'	12.75"Ø x 0.500"t.
9	AM1	70'	12.75"Ø x 0.500"t.
10	AM2	70'	12.75"Ø x 0.500"t.
11	AM3	70'	12.75"Ø x 0.500"t.
12	AM4	70'	12.75"Ø x 0.500"t.
13	AM5	70'	12.75"Ø x 0.500"t.
14	AM6	70'	12.75"Ø x 0.500"t.
15	AM7	70'	12.75"Ø x 0.500"t.
16	AM8	70'	12.75"Ø x 0.500"t.
17	BM1	70'	12.75"Ø x 0.500"t.
18	BM2	70'	12.75"Ø x 0.500"t.
19	BM3	70'	12.75"Ø x 0.500"t.
20	BM4	70'	12.75"Ø x 0.500"t.
21	BM5	70'	12.75"Ø x 0.500"t.
22	BM6	70'	12.75"Ø x 0.500"t.
23	BM7	70'	12.75"Ø x 0.500"t.
24	BM8	70'	12.75"Ø x 0.500"t.
25	BM9	70'	16"Ø x 0.500"t.
26	BM10	70'	16"Ø x 0.500"t.
27	BM11	70'	16"Ø x 0.500"t.
28	BM12	70'	16"Ø x 0.500"t.
29	CM1	70'	16"Ø x 0.500"t.
30	CM2	70'	16"Ø x 0.500"t.
31	CM3	70'	16"Ø x 0.500"t.
32	CM4	70'	16"Ø x 0.500"t.
33	CM5	70'	16"Ø x 0.500"t.
34	CM6	70'	16"Ø x 0.500"t.
35	CM7	70'	16"Ø x 0.500"t.
36	CM8	70'	16"Ø x 0.500"t.
37	CF1	70'	16"Ø x 0.500"t.
38	CF2	70'	16"Ø x 0.500"t.
39	CF3	70'	16"Ø x 0.500"t.
40	CF4	70'	16"Ø x 0.500"t.
41	CF5	70'	16"Ø x 0.500"t.
42	CF6	70'	16"Ø x 0.500"t.

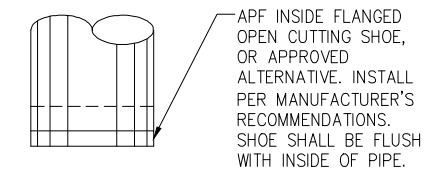
NOTES:
 1. SEE "OVERALL FLOAT PLAN AND PILE LAYOUT" FOR LOCATION OF PILES WITHIN FLOAT SYSTEM.



TYPICAL PILE DETAIL - STANDARD INSTALLATION



TYPICAL PILE SPLICE WELD
 TYPICAL FOR ALL SHOP & FIELD PIPE PILE SPLICES. CONTRACTOR MAY SUBMIT ALTERNATIVE PILE SPLICE DETAIL FOR ENGINEER APPROVAL.



OPEN SHOE DETAIL

REQUIRED EMBEDMENT		
PILE SIZE	SOFTER SOIL	DENSE TIL
12 3/4"Ø	20'	15'
16"Ø	25'	20'

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
 ENGINEERS, INC.
 9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS	CHECKED: JLD	SCALE: NTS
DRAWN: WRB	APPROVED: JLD	

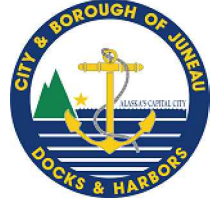
DATE: 10/27/2015

95% DESIGN REVIEW SUBMITTAL

CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

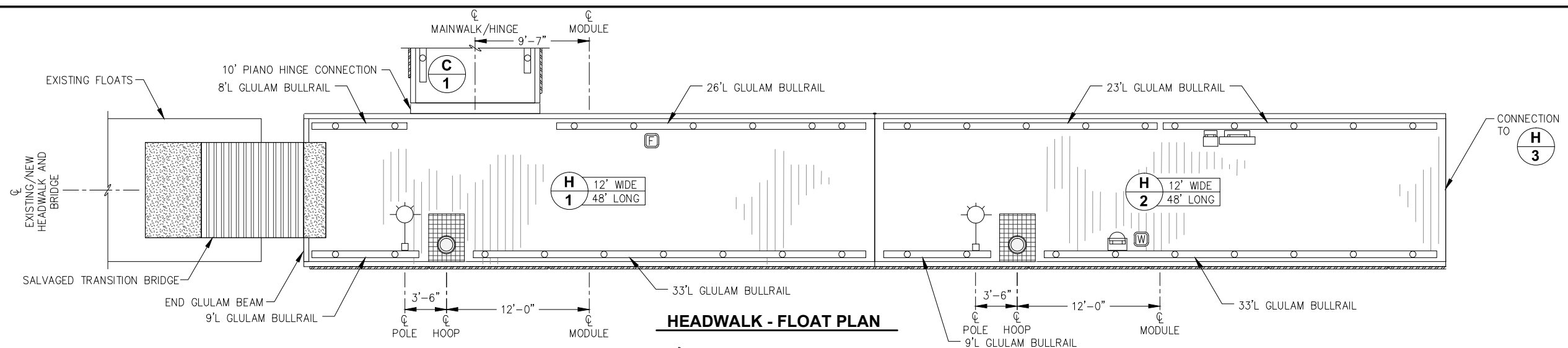
SHEET TITLE:
FLOAT PILE SCHEDULE AND DETAILS
 PND PROJECT NO.: 152037

5.02
 SHEET
 33 OF 82



\\pnd\juneau\152037\Drawings\Design\5.02 Float Pile Schedule and Details.dwg, 10/30/2015 1:16:37 PM

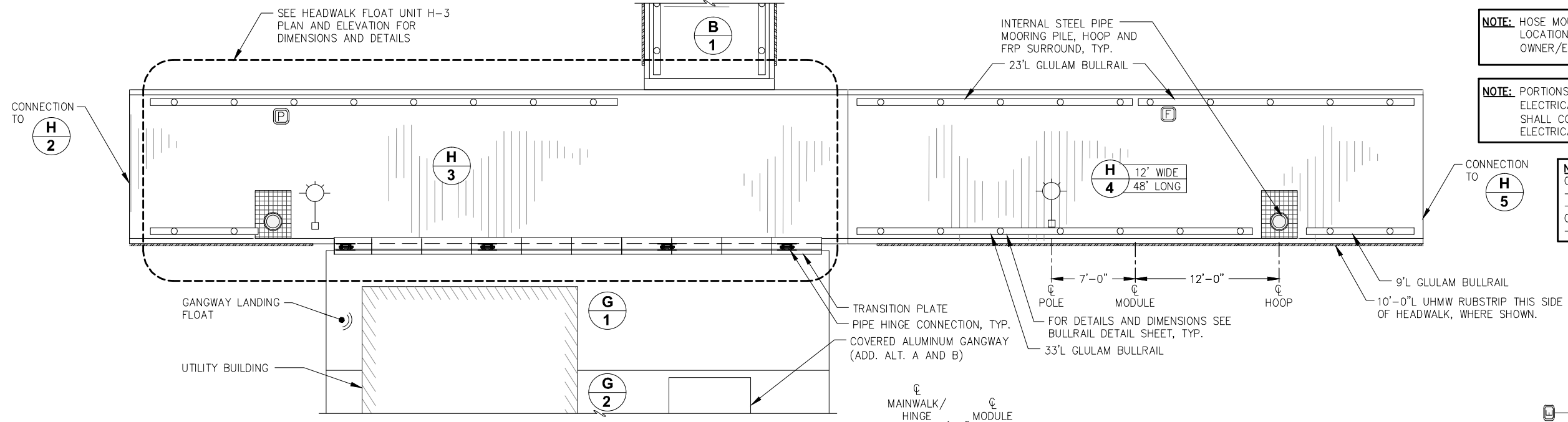
\\Pnfd\data\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.03_5.06 Detailed Float Plans.dwg, 10/30/2015 11:16:45 PM



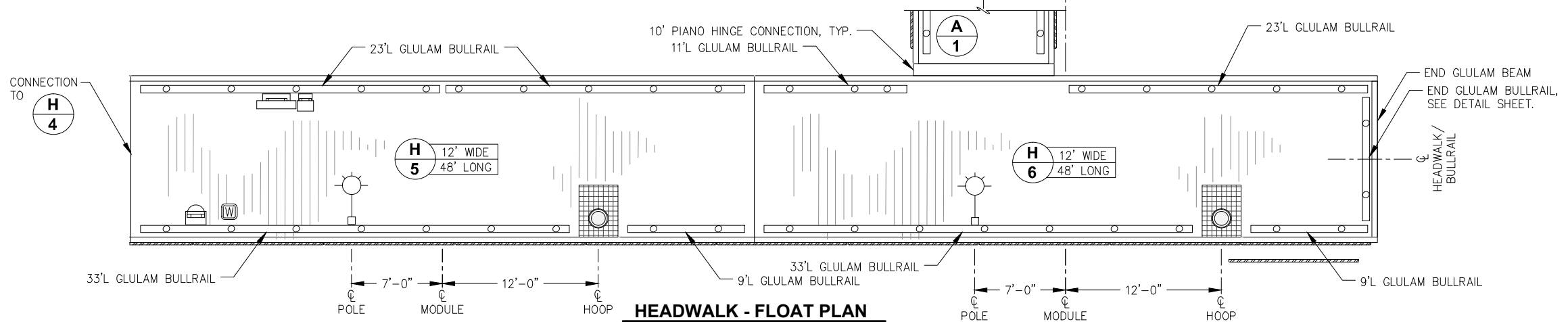
NOTE: HOSE MOUNT, LIFE RING AND FIRE EXTINGUISHER CABINET LOCATIONS SHOWN ARE APPROXIMATE. FIELD LOCATE PER OWNER/ENGINEER DIRECTION.

NOTE: PORTIONS OF DECKING MAY NEED TO BE INSTALLED AFTER ELECTRICAL CABLES AND/OR PEDESTALS. FABRICATOR SHALL COORDINATE w/ GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR AS REQUIRED.

NOTE:
OMIT UPPER WALER BOLTS WITHIN LIMITS OF:
- PIPE HINGE CONNECTION, TYP.
- PILE HOOP WELDMENT, TYP.
OMIT WALER BOLTS WITHIN LIMITS OF:
- PIANO HINGE CONNECTION, TYP.



HEADWALK - FLOAT PLAN

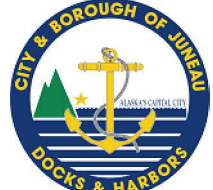


HEADWALK - FLOAT PLAN

LEGEND:

- = LIGHT POLE WITH ELECTRICAL PEDESTAL
- = LIGHT POLE ONLY
- = ELECTRICAL PEDESTAL ONLY
- = FIRE EXTINGUISHER AND LIFE RING
- = FIRE STANDPIPE
- = FIRE PUMPOUT
- = WATER PEDESTAL
- = HOSE MOUNT
- = UHMW RUBSTRIP

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

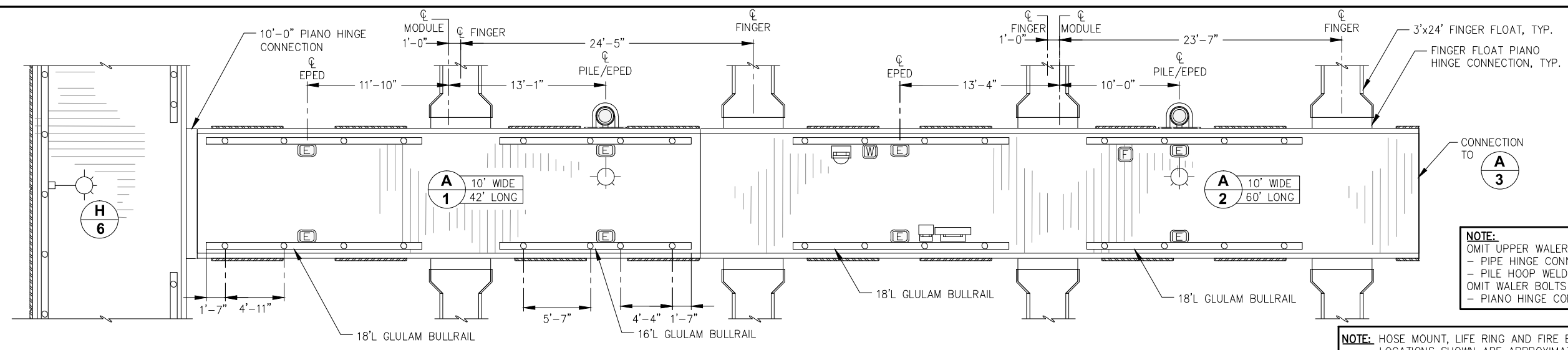
DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**HEADWALK
DETAILED FLOAT PLAN**

5.03
SHEET
34 OF 82

PND PROJECT NO.: 152037

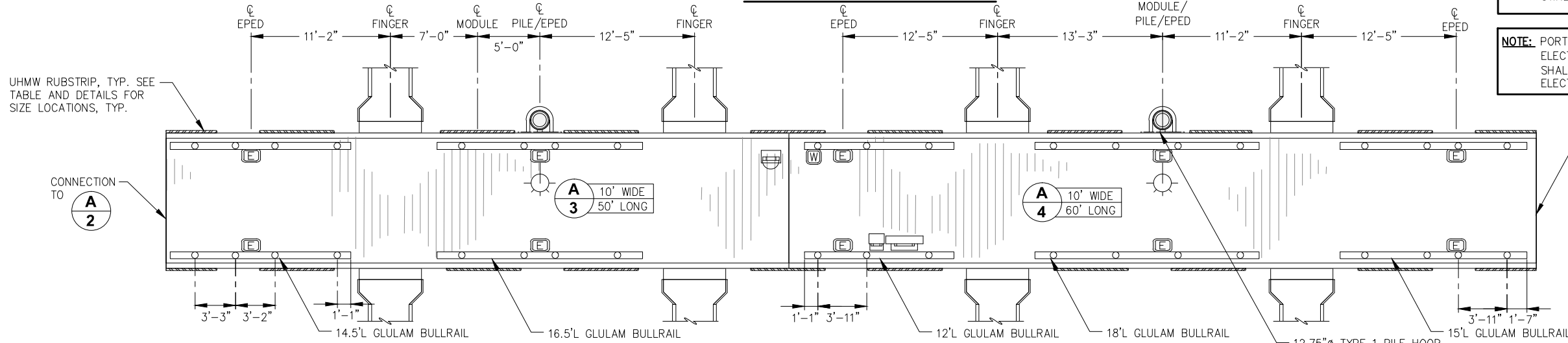


NOTE:
 OMIT UPPER WALER BOLTS WITHIN LIMITS OF:
 - PIPE HINGE CONNECTION, TYP.
 - PILE HOOP WELDMENT, TYP.
 OMIT WALER BOLTS WITHIN LIMITS OF:
 - PIANO HINGE CONNECTION, TYP.

NOTE: HOSE MOUNT, LIFE RING AND FIRE EXTINGUISHER CABINET LOCATIONS SHOWN ARE APPROXIMATE. FIELD LOCATE PER OWNER/ENGINEER DIRECTION.

NOTE: PORTIONS OF DECKING MAY NEED TO BE INSTALLED AFTER ELECTRICAL CABLES AND/OR PEDESTALS. FABRICATOR SHALL COORDINATE w/ GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR AS REQUIRED.

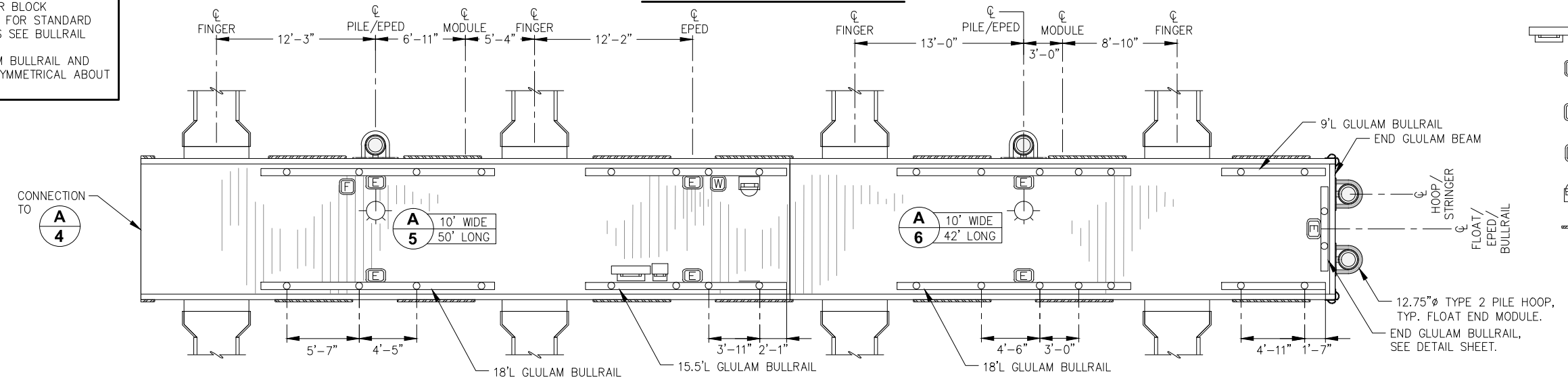
MAINWALK A - FLOAT PLAN



- LEGEND:**
- = LIGHT POLE w/ ELECTRICAL PEDESTAL
 - = LIGHT POLE ONLY
 - = ELECTRICAL PEDESTAL ONLY
 - = FIRE EXTINGUISHER AND LIFE RING
 - = FIRE STANDPIPE
 - = FIRE PUMPOUT
 - = WATER PEDESTAL
 - = HOSE MOUNT
 - = UHMW RUBSTRIP

BULLRAIL NOTES:
 1. NON-STANDARD SCUPPER BLOCK DIMENSIONS ARE SHOWN. FOR STANDARD DETAILS AND DIMENSIONS SEE BULLRAIL STANDARD DETAILS, TYP.
 2. MAINWALK FLOAT GLULAM BULLRAIL AND SCUPPER BLOCKS ARE SYMMETRICAL ABOUT FLOAT CENTERLINE, TYP.

MAINWALK A - FLOAT PLAN



MAINWALK A - FLOAT PLAN

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
 DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

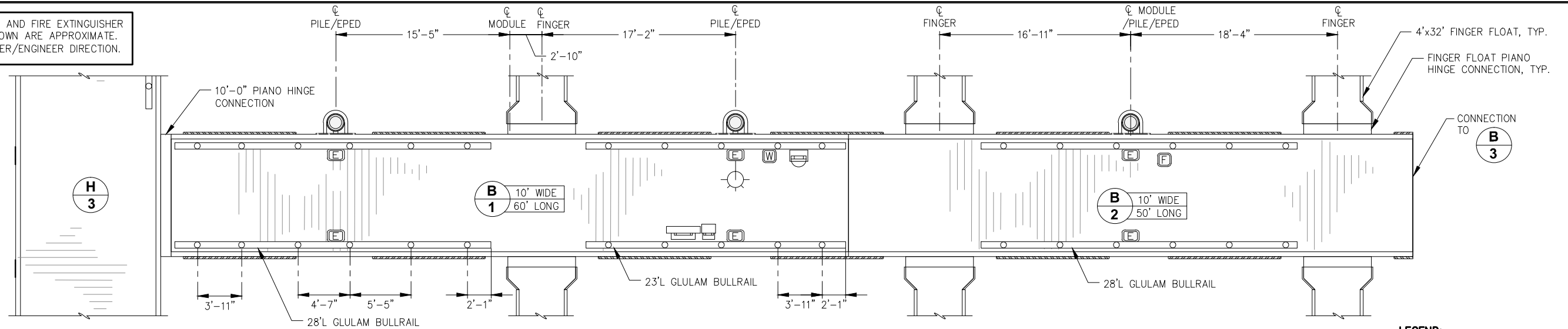
SHEET TITLE: **MAINWALK A**
DETAILED FLOAT PLAN

PND PROJECT NO.: 152037

5.04
 SHEET
35 OF 82

\\Pnfd\atd\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.03_5.06 Detailed Float Plans.dwg, 10/20/2015 11:16:51 PM

NOTE: HOSE MOUNT, LIFE RING AND FIRE EXTINGUISHER CABINET LOCATIONS SHOWN ARE APPROXIMATE. FIELD LOCATE PER OWNER/ENGINEER DIRECTION.



MAINWALK B - FLOAT PLAN

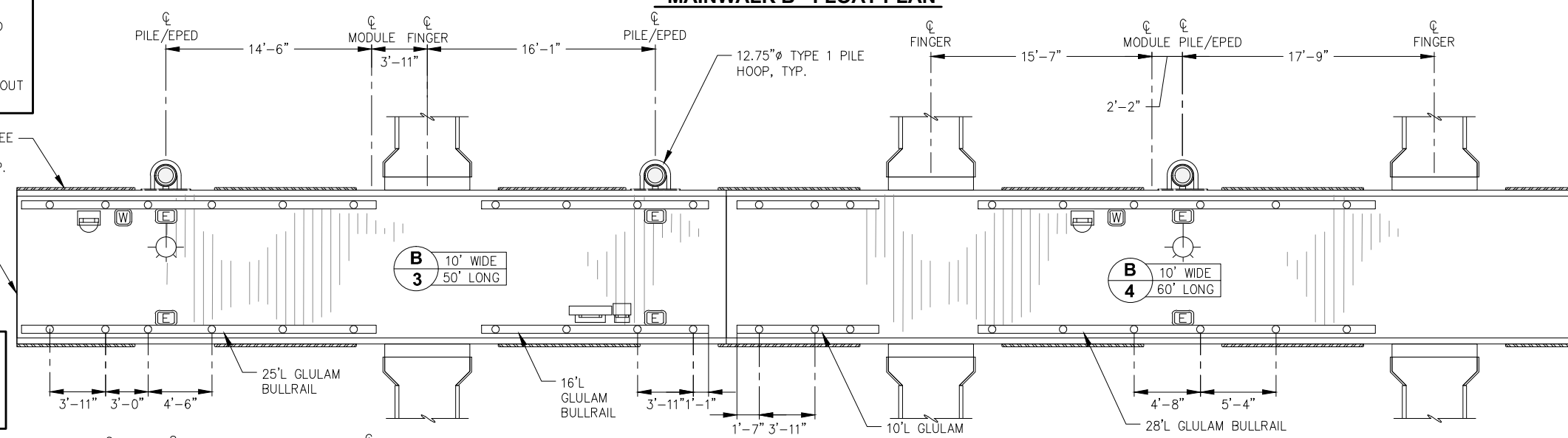
BULLRAIL NOTES:

- NON-STANDARD SCUPPER BLOCK DIMENSIONS ARE SHOWN. FOR STANDARD DETAILS AND DIMENSIONS SEE BULLRAIL STANDARD DETAILS, TYP.
- MAINWALK FLOAT GLULAM BULLRAIL AND SCUPPER BLOCKS ARE SYMMETRICAL ABOUT FLOAT CENTERLINE, TYP.

UHMW RUBSTRIP, TYP. SEE TABLE AND DETAILS FOR SIZE AND LOCATION, TYP.

NOTE:

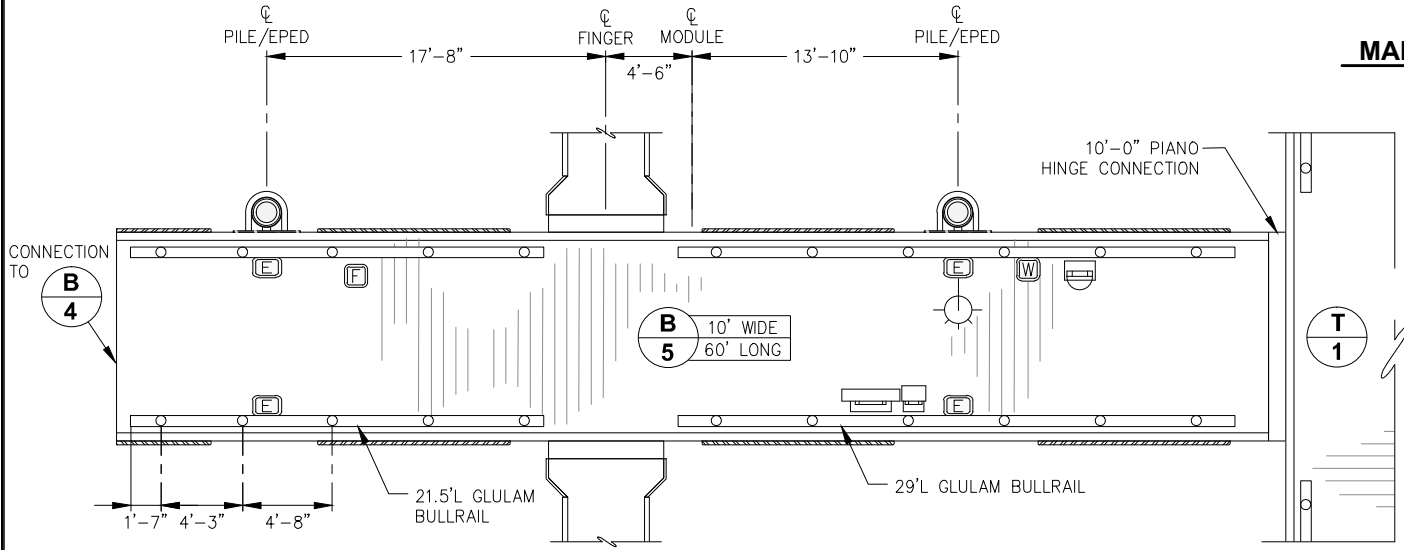
- OMIT UPPER WALER BOLTS WITHIN LIMITS OF:
 - PIPE HINGE CONNECTION, TYP.
 - PILE HOOP WELDMENT, TYP.
- OMIT WALER BOLTS WITHIN LIMITS OF:
 - PIANO HINGE CONNECTION, TYP.



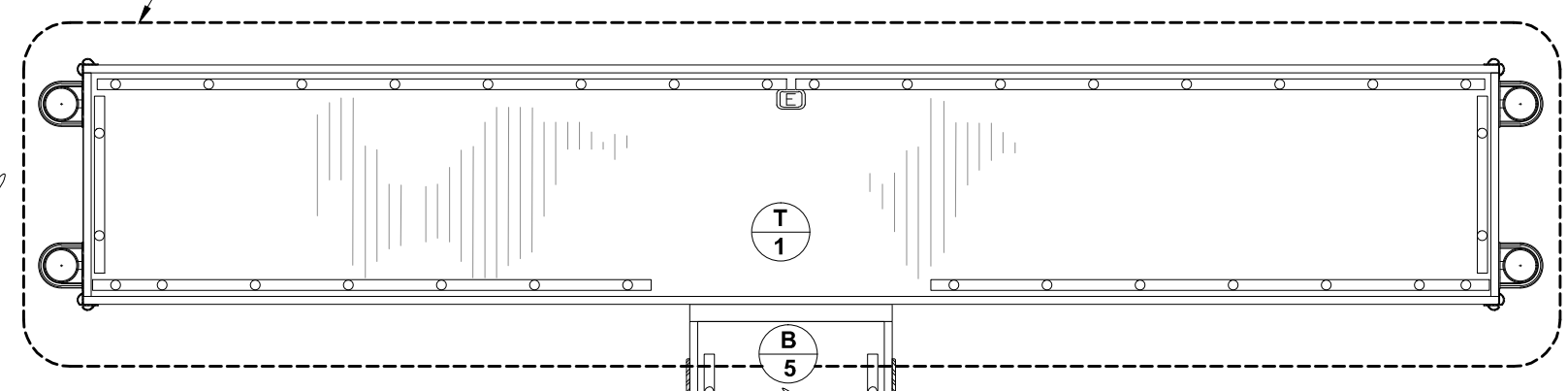
MAINWALK B - FLOAT PLAN

NOTE: PORTIONS OF DECKING MAY NEED TO BE INSTALLED AFTER ELECTRICAL CABLES AND/OR PEDESTALS. FABRICATOR SHALL COORDINATE w/ GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR AS REQUIRED.

SEE TEE FLOAT MODULE PLAN AND ELEVATION FOR DIMENSIONS AND DETAILS



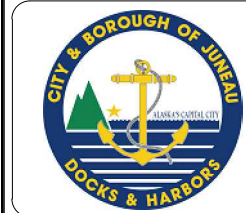
MAINWALK B - FLOAT PLAN



MAINWALK B - FLOAT PLAN

- LEGEND:**
- = LIGHT POLE WITH ELECTRICAL PEDESTAL
 - = LIGHT POLE ONLY
 - = ELECTRICAL PEDESTAL ONLY
 - = FIRE EXTINGUISHER AND LIFE RING
 - = FIRE STANDPIPE
 - = FIRE PUMPOUT
 - = WATER PEDESTAL
 - = HOSE MOUNT
 - = UHMW RUBSTRIP

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

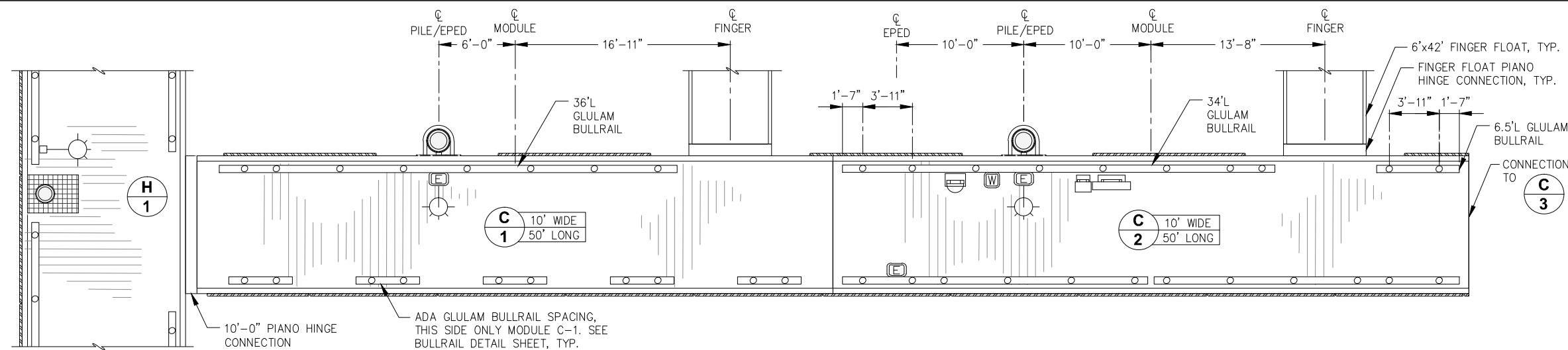
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **MAINWALK B**
DETAILED FLOAT PLAN

PND PROJECT NO.: 152037

5.05
SHEET
36 OF 82

I:\Prof\juneau\152037 Douglas Harbor Renovation\G. Drawings\Design\5.03_5.06 Detailed Float Plans.dwg, 10/30/2015 11:16:56 PM



BULLRAIL NOTES:

- NON-STANDARD SCUPPER BLOCK DIMENSIONS ARE SHOWN. FOR STANDARD DETAILS AND DIMENSIONS SEE BULLRAIL STANDARD DETAILS, TYP.
- MAINWALK FLOAT GLULAM BULLRAIL AND SCUPPER BLOCKS ARE SYMMETRICAL ABOUT FLOAT CENTERLINE, TYP.

NOTE:

OMIT UPPER WALER BOLTS WITHIN LIMITS OF:

- PIPE HINGE CONNECTION, TYP.
- PILE HOOP WELDMENT, TYP.

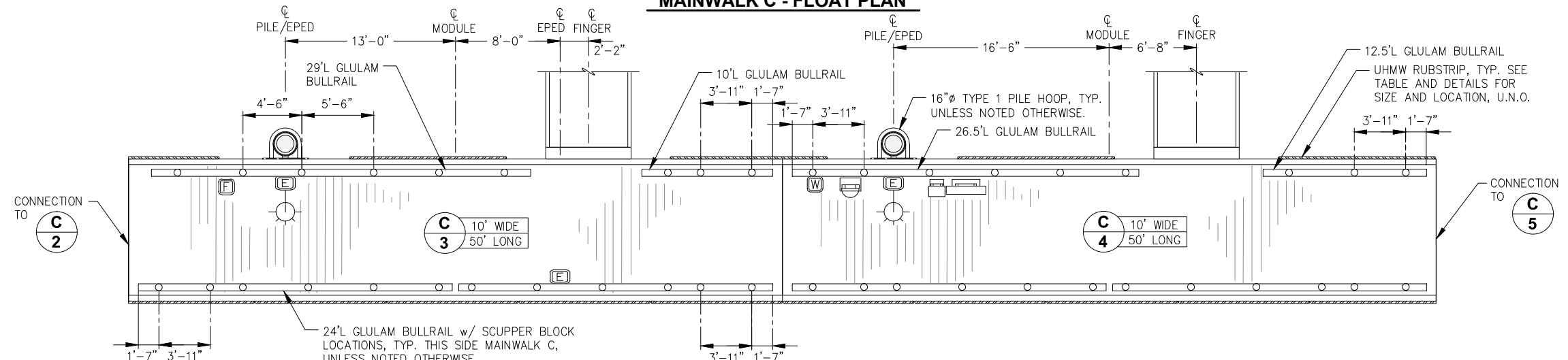
OMIT WALER BOLTS WITHIN LIMITS OF:

- PIANO HINGE CONNECTION, TYP.

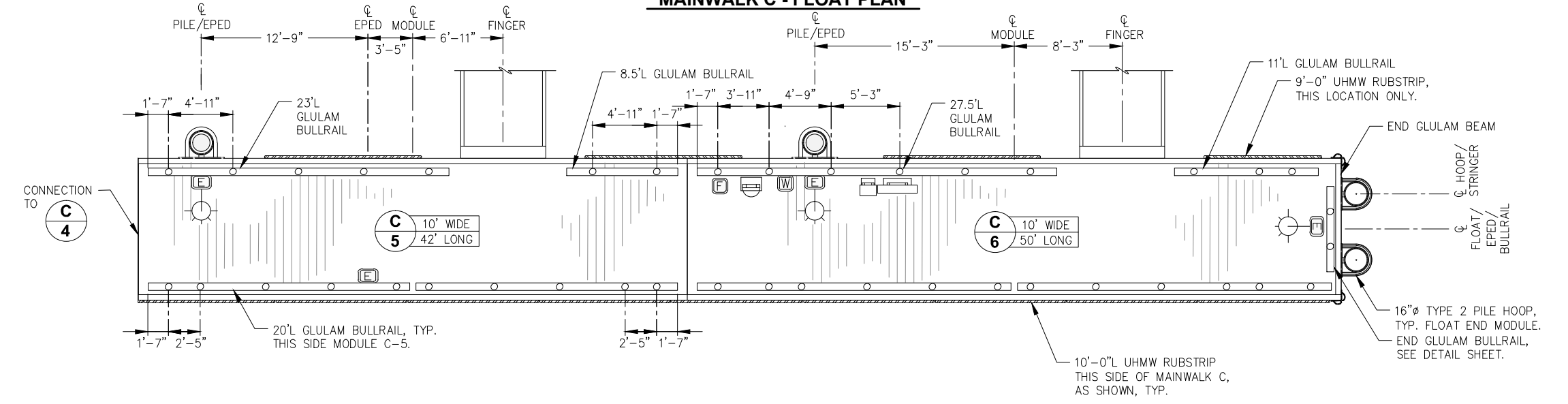
NOTE: HOSE MOUNT, LIFE RING AND FIRE EXTINGUISHER CABINET LOCATIONS SHOWN ARE APPROXIMATE. FIELD LOCATE PER OWNER/ENGINEER DIRECTION.

NOTE: PORTIONS OF DECKING MAY NEED TO BE INSTALLED AFTER ELECTRICAL CABLES AND/OR PEDESTALS. FABRICATOR SHALL COORDINATE w/ GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR AS REQUIRED.

MAINWALK C - FLOAT PLAN



MAINWALK C - FLOAT PLAN



MAINWALK C - FLOAT PLAN

- LEGEND:**
- = LIGHT POLE WITH ELECTRICAL PEDESTAL
 - = LIGHT POLE ONLY
 - = ELECTRICAL PEDESTAL ONLY
 - = FIRE EXTINGUISHER AND LIFE RING
 - = FIRE STANDPIPE
 - = FIRE PUMPOUT
 - = WATER PEDESTAL
 - = HOSE MOUNT
 - = UHMW RUBSTRIP

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **MAINWALK C
DETAILED FLOAT PLAN**

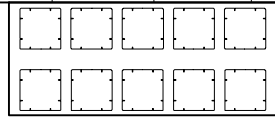
5.06
SHEET
37 OF 82

PND PROJECT NO.: 152037

\\Pnjd\atd\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.03_5.06 Detailed Float Plans.dwg, 10/30/2015 11:17:01 PM

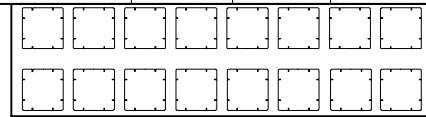
MODULE: 12'x28'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



MODULE: 10'x42'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



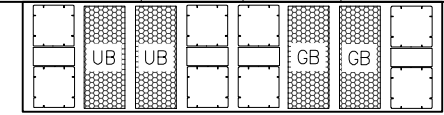
FINGER: 24'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



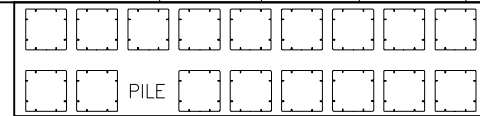
MODULE: G1				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET (UB)				
POLYSTYRENE BILLET (GB)				

** SEE NOTE 1 THIS SHEET.



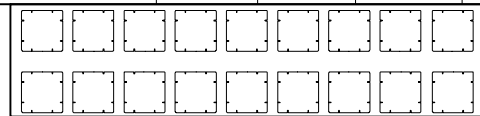
MODULE: 12'x48'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



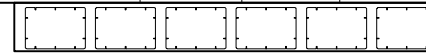
MODULE: 10'x50'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



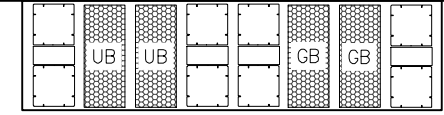
FINGER: 32'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



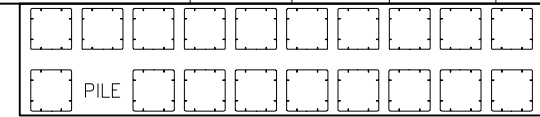
MODULE: G2				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET (UB)				
POLYSTYRENE BILLET (GB)				

** SEE NOTE 1 THIS SHEET.



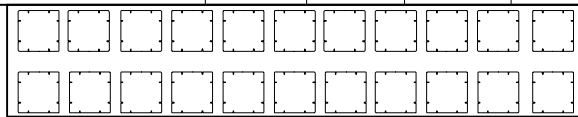
MODULE: 12'x60'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



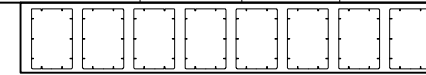
MODULE: 10'x60'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



FINGER: 42'				
ITEM DESCRIPTION	LENGTH	WIDTH	HEIGHT	QUANTITY
FLOTATION TUB				
FLOTATION TUB				
BALLAST TANK				
POLYSTYRENE BILLET				

** SEE NOTE 1 THIS SHEET.



- NOTES:
- HEIGHT SHOWN IN TABLE REFERS TO DISTANCE FROM BOTTOM OF SILL TO BOTTOM OF BILLET, NOT OVERALL HEIGHT OF BILLET. SEE FLOTATION BILLET DETAILS SHEET FOR BILLET DIMENSIONS AND DETAILS.
 - BALLAST TANK WALL THICKNESS TO BE 0.375".
 - FLOTATION TUB WALL THICKNESS TO BE 0.175"
 - F= FLOTATION TUB
B= BALLAST TANK
P= POLYSTYRENE BILLET
UB= UTILITY BUILDING BILLET
GB= GANGWAY BILLET

95% DESIGN REVIEW SUBMITTAL



REVISIONS				
REV.	DATE	DESCRIPTION	DWN.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

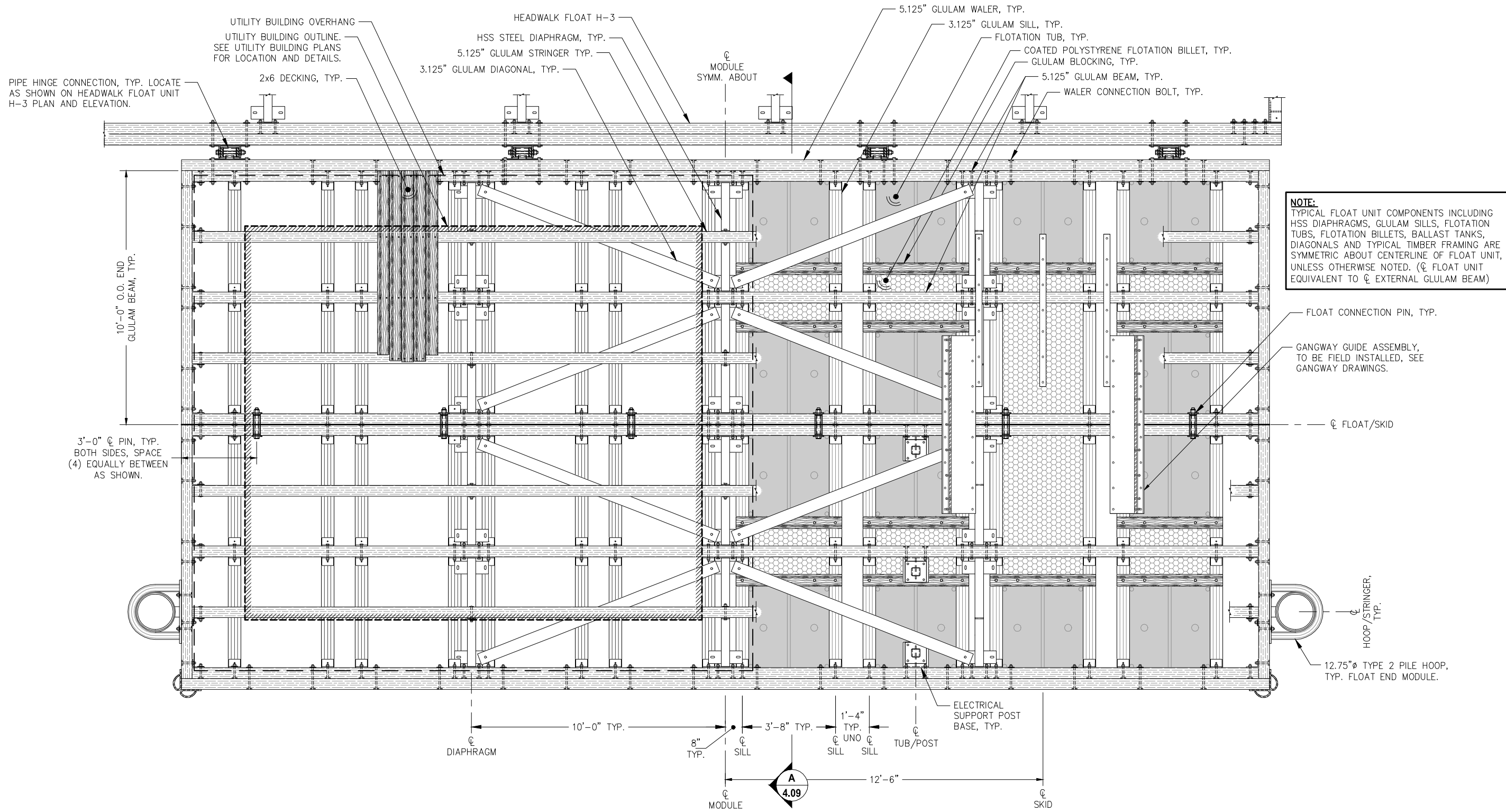
SHEET TITLE:
FLOTATION SCHEDULES

PND PROJECT NO.: 152037

5.07
SHEET
38 OF 82

I:\Prof\jdata\15XXX\152037 Douglas Harbor Renovation\G Drawings\Design\5.07 Flotation Schedule.dwg, 10/30/2015 11:17:07 PM

\\Pnfd\data\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.08-5.09 Gangway Landing Float.dwg, 10/30/2015 1:17:13 PM



NOTE:
TYPICAL FLOAT UNIT COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONALS AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF FLOAT UNIT, UNLESS OTHERWISE NOTED. (CL FLOAT UNIT EQUIVALENT TO CL EXTERNAL GLULAM BEAM)

GANGWAY LANDING FLOAT PLAN

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

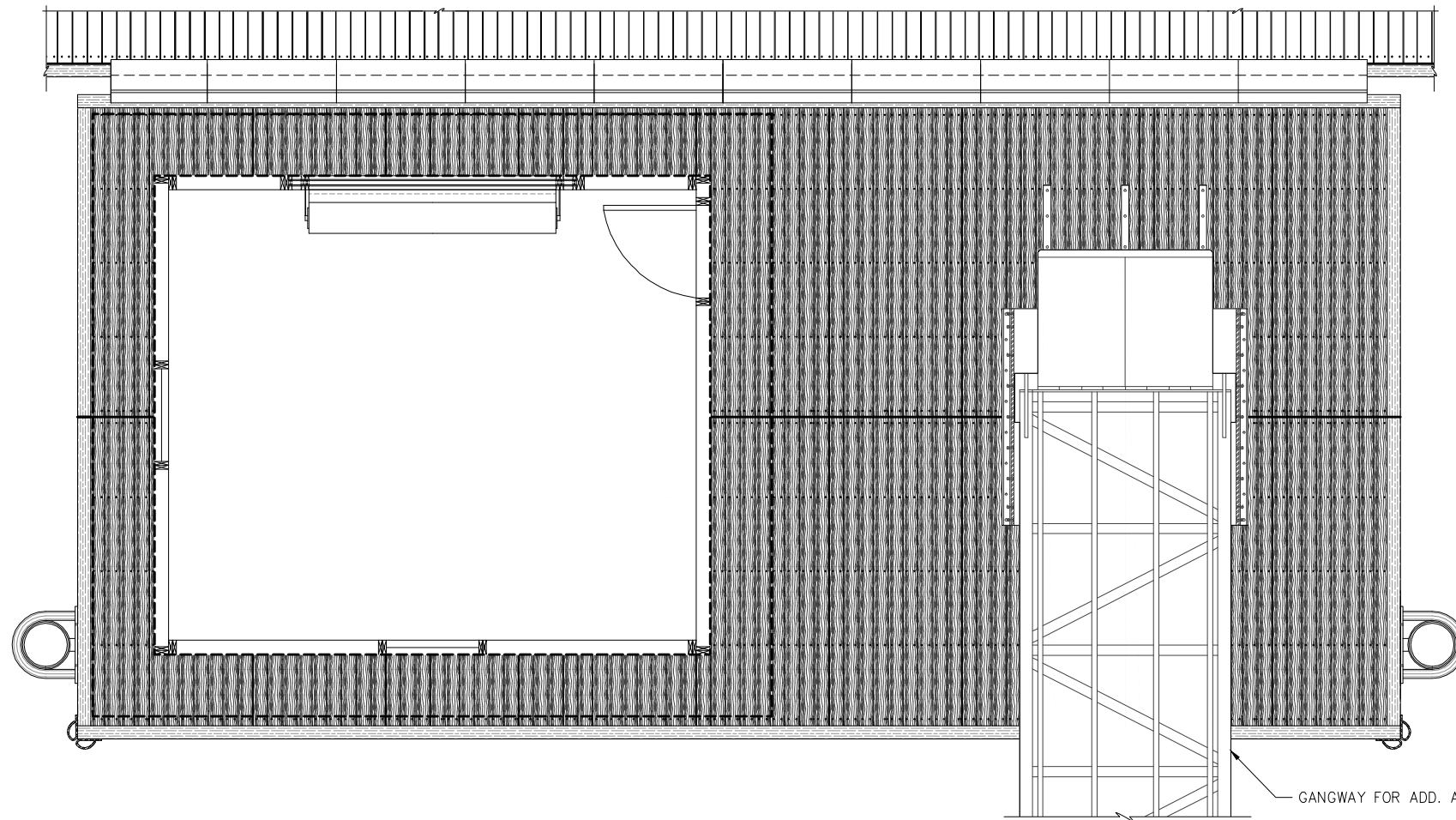
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
GANGWAY LANDING FLOAT PLAN

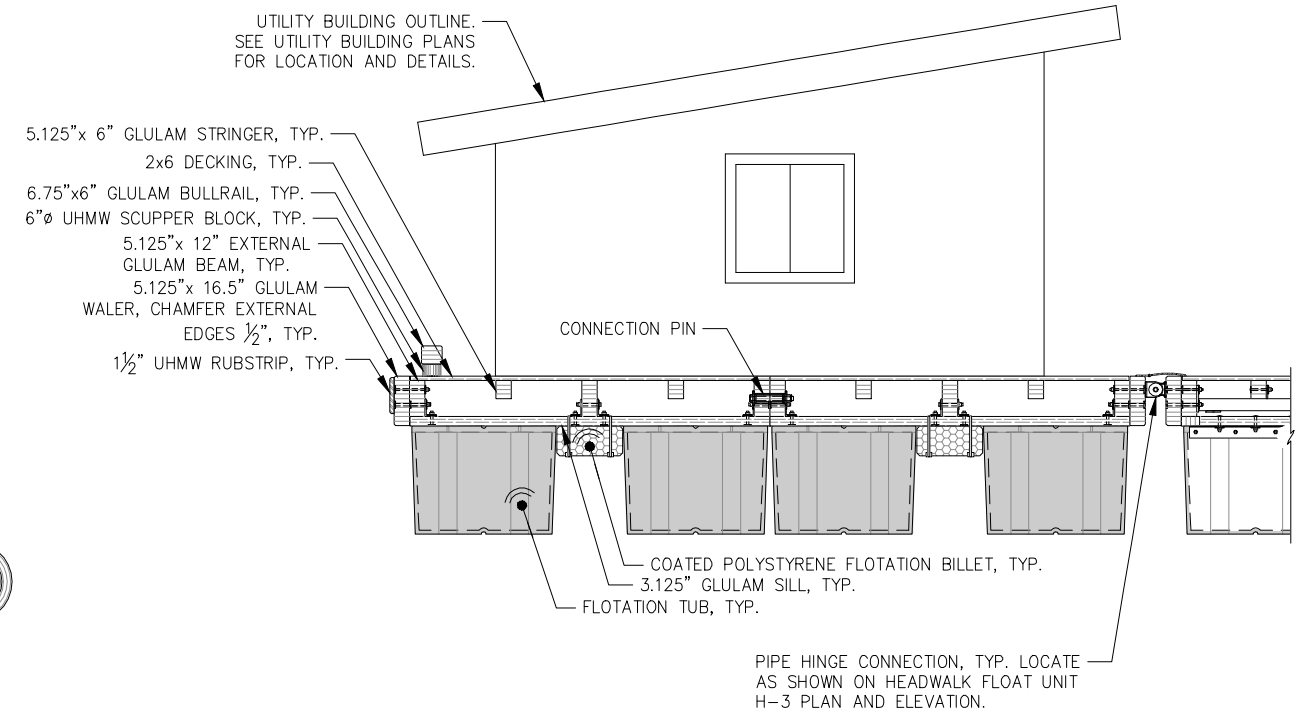
DATE: 10/27/2015

PND PROJECT NO.: 152037

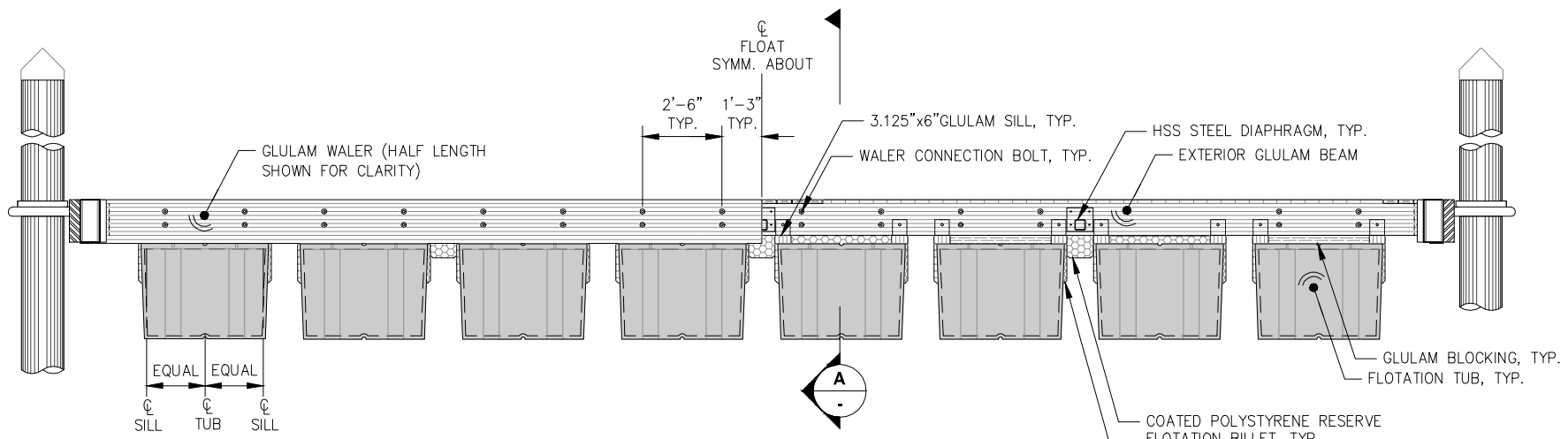
5.08
SHEET
39 OF 82



GANGWAY LANDING FLOAT - DECK PLAN

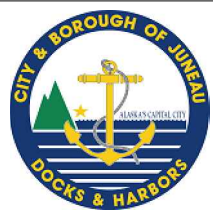


A GANGWAY LANDING FLOAT - SECTION



GANGWAY LANDING FLOAT - ELEVATION
(UHMW RUBSTRIP NOT SHOWN FOR CLARITY)

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

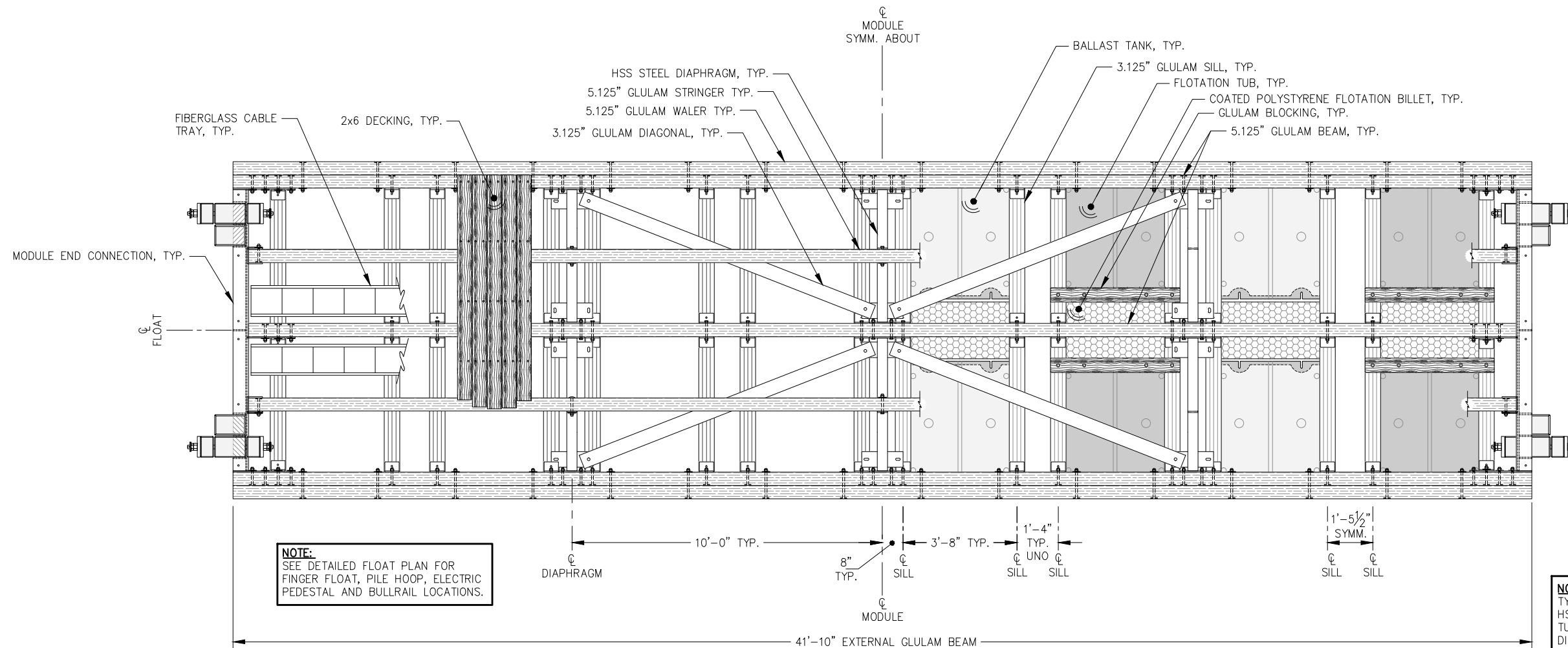
SHEET TITLE:
GANGWAY LANDING FLOAT
DECK PLAN AND ELEVATION

DATE: 10/27/2015

PND PROJECT NO.: 152037

5.09
SHEET
40 OF 82

\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.08-5.09 Gangway Landing Float.dwg, 10/30/2015 11:17:16 PM

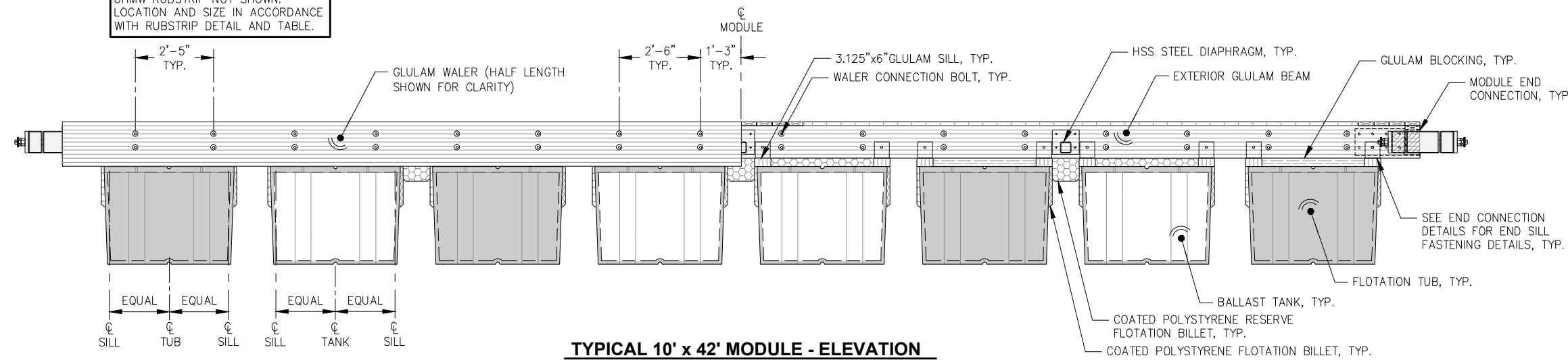


NOTE:
SEE DETAILED FLOAT PLAN FOR FINGER FLOAT, PILE HOOP, ELECTRIC PEDESTAL AND BULLRAIL LOCATIONS.

NOTE:
TYPICAL FLOAT MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONALS AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED. (CL MODULE EQUIVALENT TO CL EXTERNAL GLULAM BEAM)

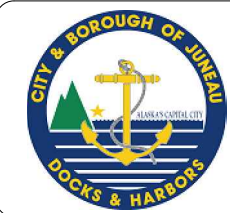
TYPICAL 10' x 42' MODULE - PLAN

NOTE:
UHMW RUBSTRIP NOT SHOWN. LOCATION AND SIZE IN ACCORDANCE WITH RUBSTRIP DETAIL AND TABLE.



TYPICAL 10' x 42' MODULE - ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

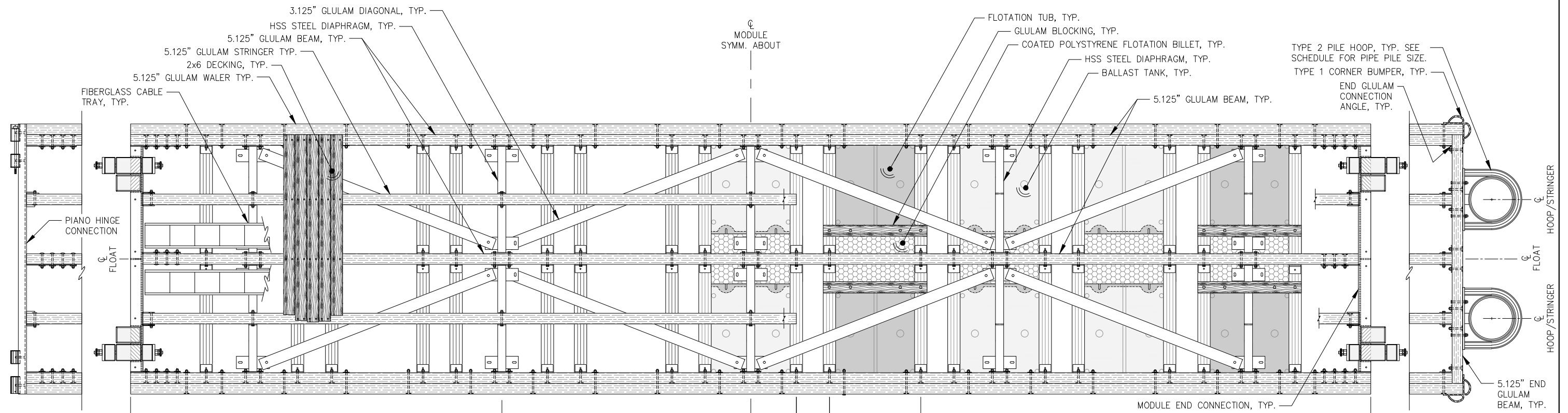
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
TYPICAL 10' x 42' MODULE
PLAN AND ELEVATION

PND PROJECT NO.: 152037

5.10
SHEET
41 OF 82

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.10 10x42 Module.dwg. 10/30/2015 11:22 PM



NOTE:
 SUBSTITUTE MODULE END CONNECTION w/ PIANO HINGE CONNECTION, AS SHOWN, FLOAT MODULES

A 1 B 1 C 1 B 5 SYMM.

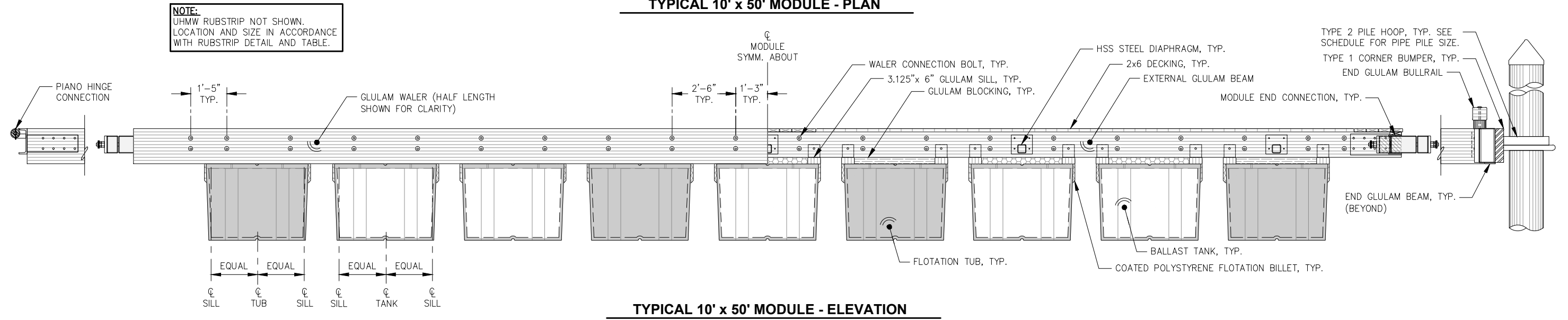
NOTE:
 SEE DETAILED FLOAT PLAN FOR FINGER FLOAT, PILE HOOP, ELECTRIC PEDESTAL AND BULLRAIL LOCATIONS.

NOTE:
 TYPICAL FLOAT MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONALS AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED. (CL MODULE EQUIVALENT TO CL EXTERNAL GLULAM BEAM)

NOTE:
 SUBSTITUTE MODULE END CONNECTION w/ END GLULAM AND PILE HOOPS, AS SHOWN, FLOAT MODULES

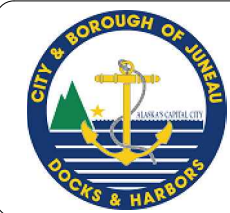
A 6 C 6

TYPICAL 10' x 50' MODULE - PLAN



TYPICAL 10' x 50' MODULE - ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
 DRAWN: WRB APPROVED: JLD

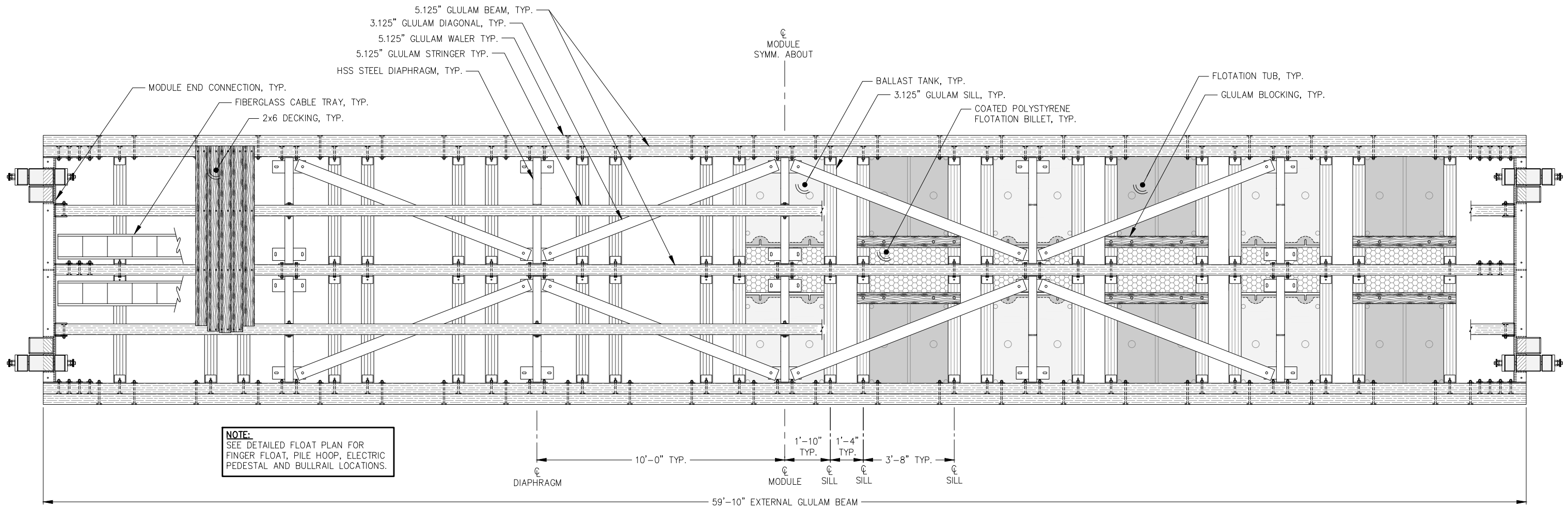
**CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001**

SHEET TITLE:
**TYPICAL 10' x 50' MODULE
 PLAN AND ELEVATION**

5.11
 SHEET
 42 OF 82

PND PROJECT NO.: 152037

I:\Prof\juneau\152037 Douglas Harbor Renovation\G. Drawings\Design\5.11 10x50 Module.dwg_10/30/2015 11:27 PM



NOTE:
SEE DETAILED FLOAT PLAN FOR FINGER FLOAT, PILE HOOP, ELECTRIC PEDESTAL AND BULLRAIL LOCATIONS.

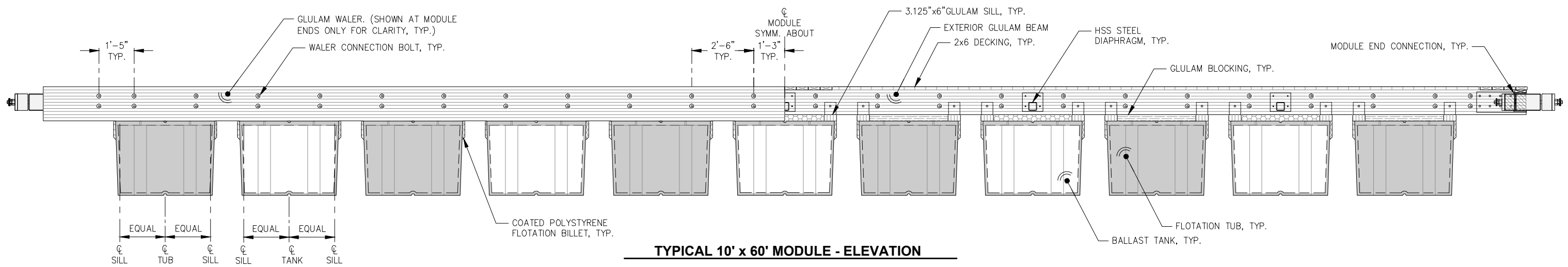
TYPICAL 10' x 60' MODULE - PLAN

NOTE:
SEE TYPICAL 10' x 50' MODULE PLAN AND ELEVATION FOR PIANO HINGE SUBSTITUTION ON FLOAT MODULE,
A 1 B 1 THIS END.

NOTE:
UHMW RUBSTRIP NOT SHOWN. LOCATION AND SIZE IN ACCORDANCE WITH RUBSTRIP DETAIL AND TABLE.

NOTE:
TYPICAL FLOAT MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONALS AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED. (CL MODULE EQUIVALENT TO CL EXTERNAL GLULAM BEAM)

NOTE:
SEE TYPICAL 10' x 50' MODULE PLAN AND ELEVATION FOR PIANO HINGE SUBSTITUTION ON FLOAT MODULE,
B 6 THIS END.



TYPICAL 10' x 60' MODULE - ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

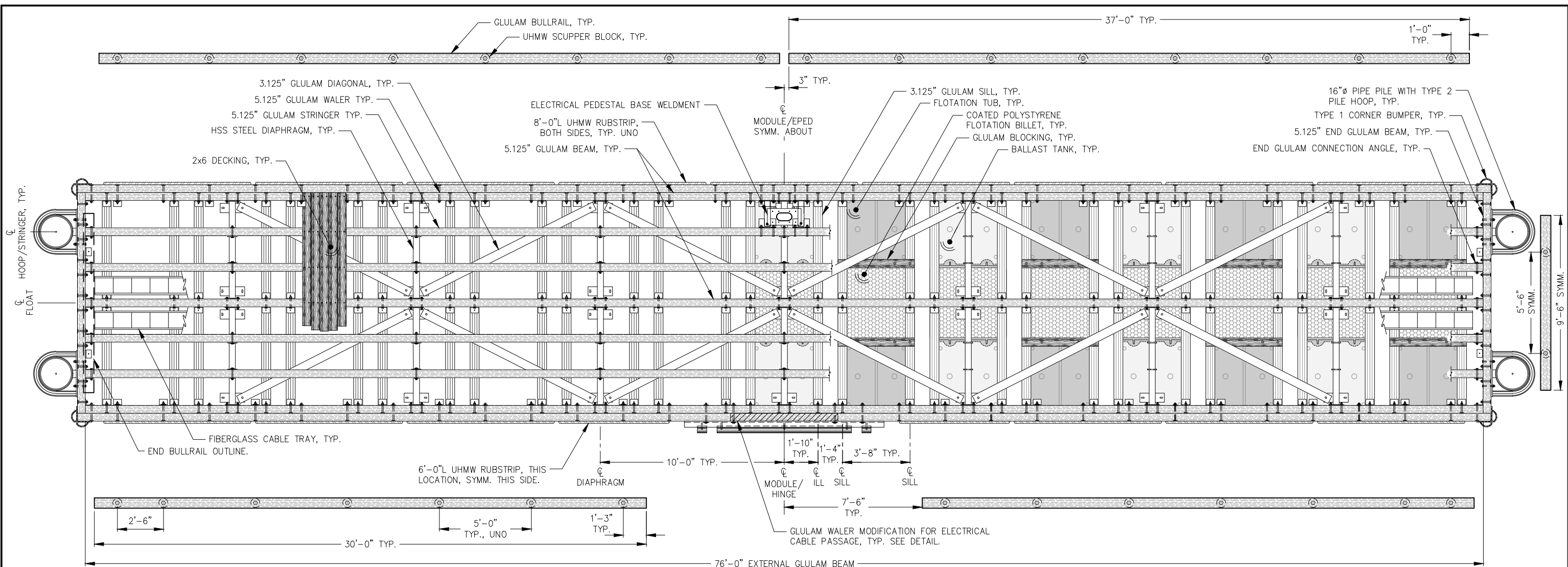
SHEET TITLE:
**TYPICAL 10' x 60' MODULE
PLAN AND ELEVATION**

DATE: 10/27/2015

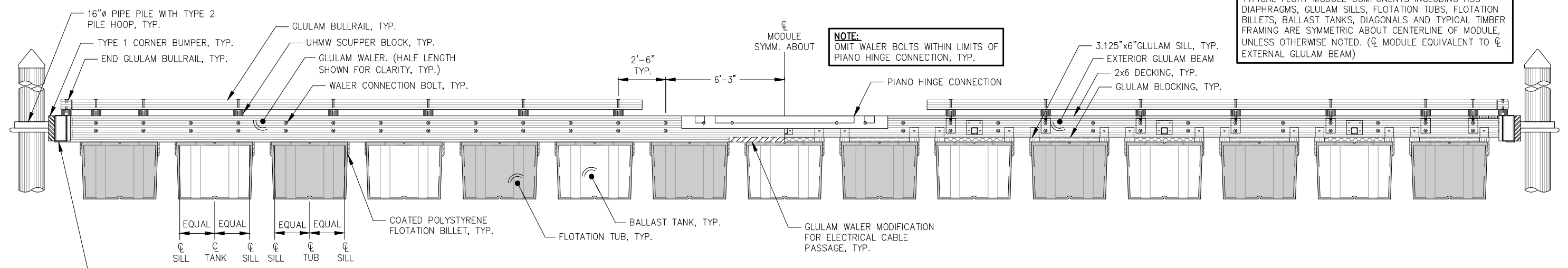
PND PROJECT NO.: 152037

5.12
SHEET
43 OF 82

I:\Prof\juneau\152037 Douglas Harbor Renovation\G. Drawings\Design\5.12 10x60 Module.dwg, 10/30/2015 11:732 PM



FLOAT MODULE T-1 - PLAN

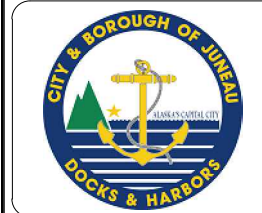


FLOAT MODULE T-1 - ELEVATION

NOTE:
TYPICAL FLOAT MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONALS AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED. (CL MODULE EQUIVALENT TO CL EXTERNAL GLULAM BEAM)

NOTE:
OMIT WALER BOLTS WITHIN LIMITS OF PIANO HINGE CONNECTION, TYP.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
 9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
 DRAWN: WRB APPROVED: JLD

**CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001**

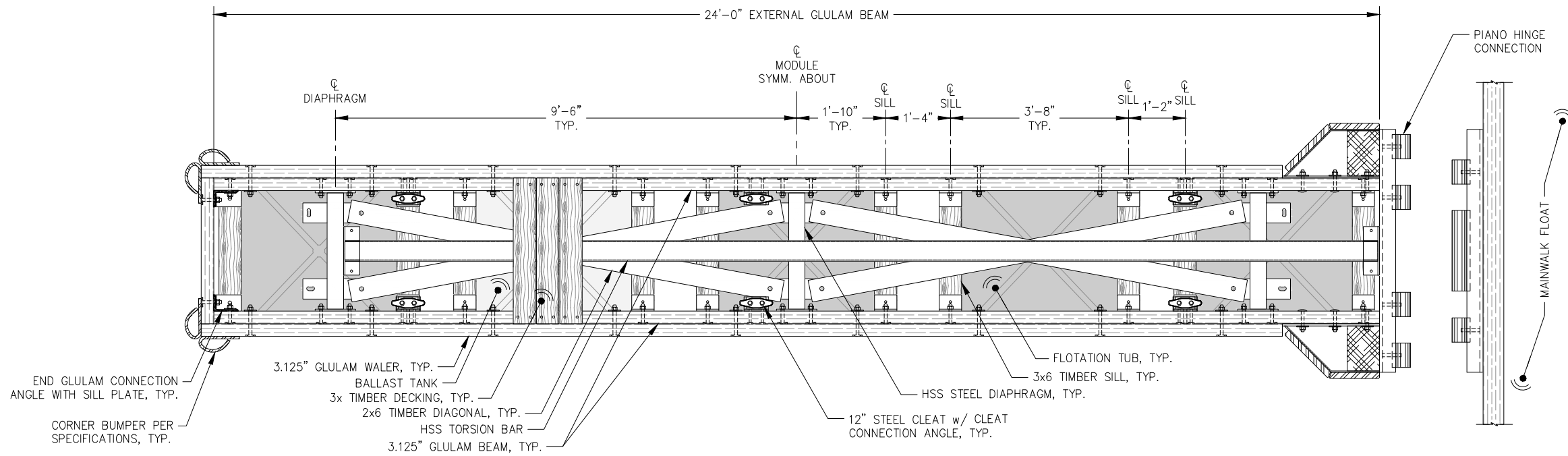
SHEET TITLE:
**MAINWALK B FLOTATION MODULE T-1
 PLAN AND ELEVATION**

DATE: 10/27/2015

PND PROJECT NO.: 152037

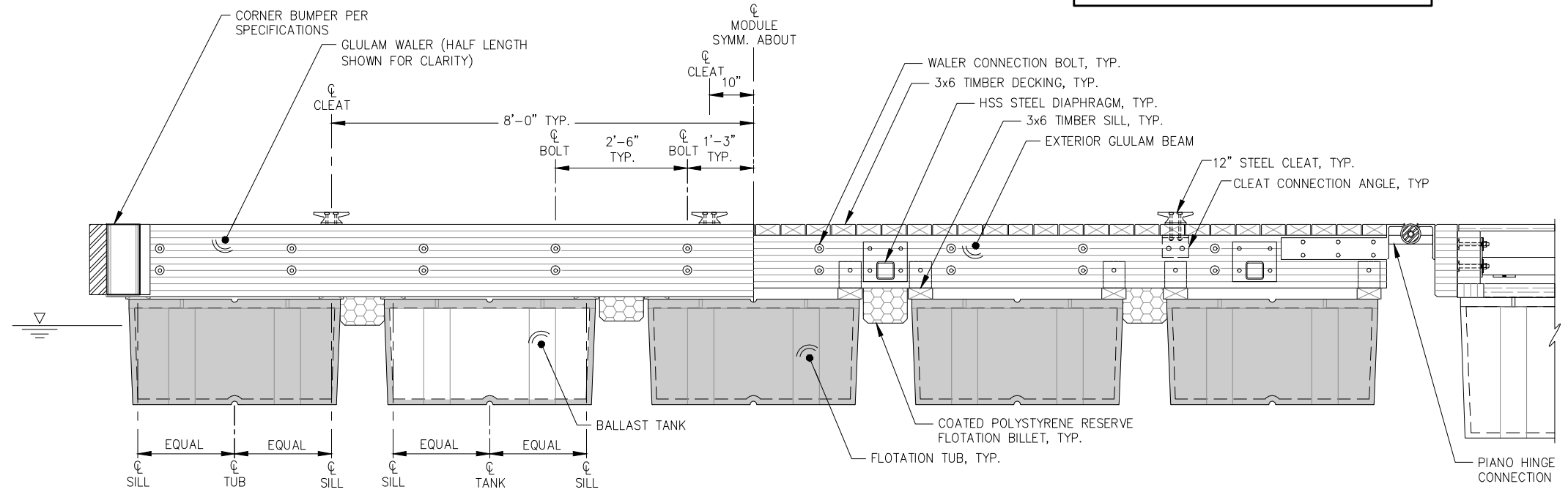
5.14
 SHEET
 45 OF 82

I:\Prof\juneau\152037 Douglas Harbor Renovation\G. Drawings\Design\5.14 Tee Float Module.DWG, 10/30/2015 11:43 PM



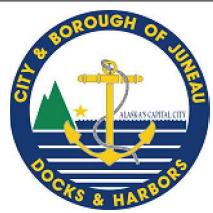
3' x 24' FINGER FLOAT MODULE PLAN

NOTE:
TYPICAL FINGER FLOAT MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONAL AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED.



3' x 24' FINGER FLOAT MODULE ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

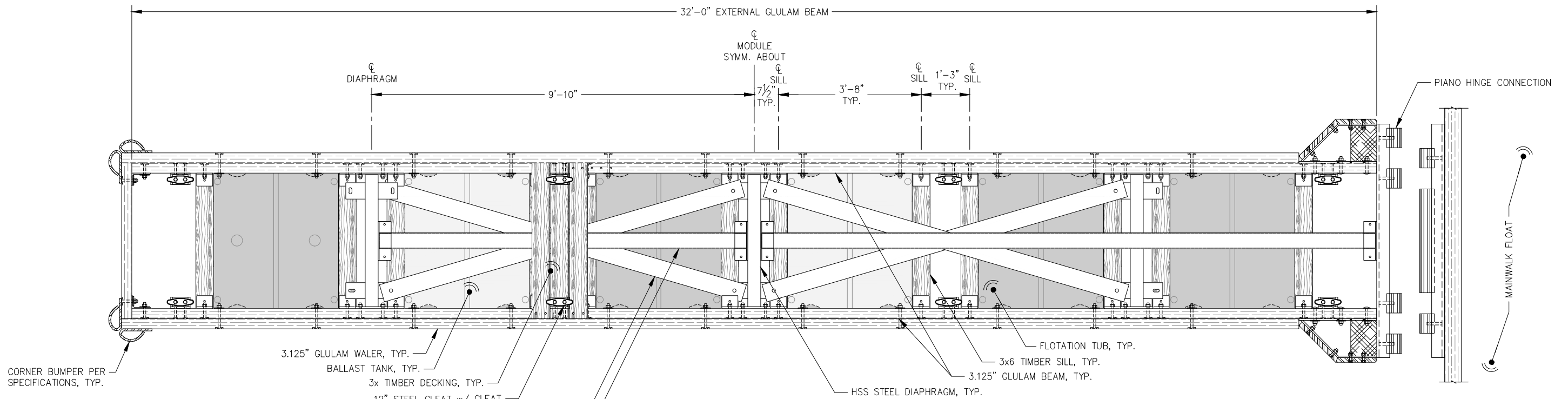
SHEET TITLE:
3' x 24' FINGER FLOAT MODULE

DATE: 10/27/2015

PND PROJECT NO.: 152037

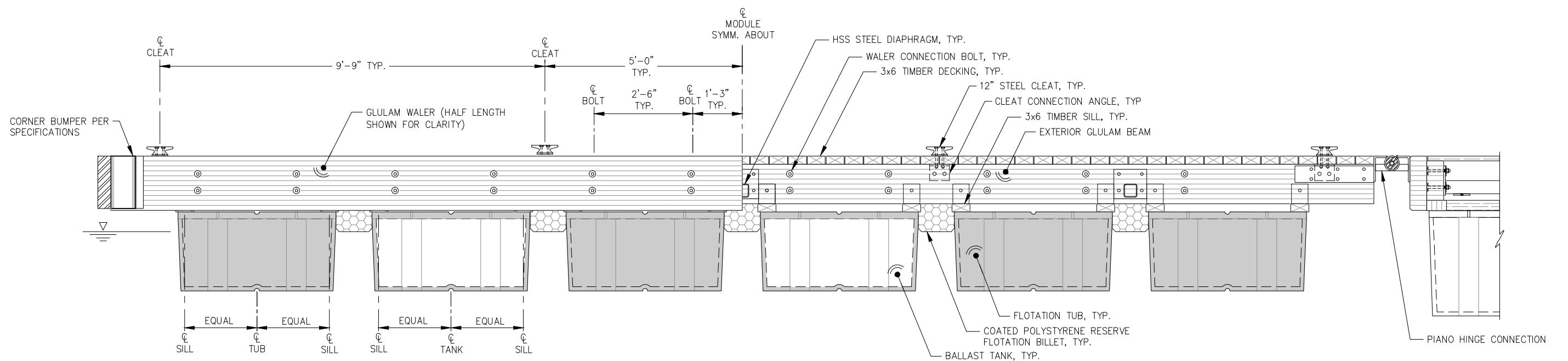
5.16
SHEET
47 OF 82

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\5.16 3x24 Finger Module.dwg. 10/30/2015 1:17:57 PM



4' x 32' FINGER FLOAT MODULE PLAN

NOTE:
TYPICAL FINGER FLOAT MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONAL AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED.



4' x 32' FINGER FLOAT MODULE ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE:

DATE: 10/27/2015

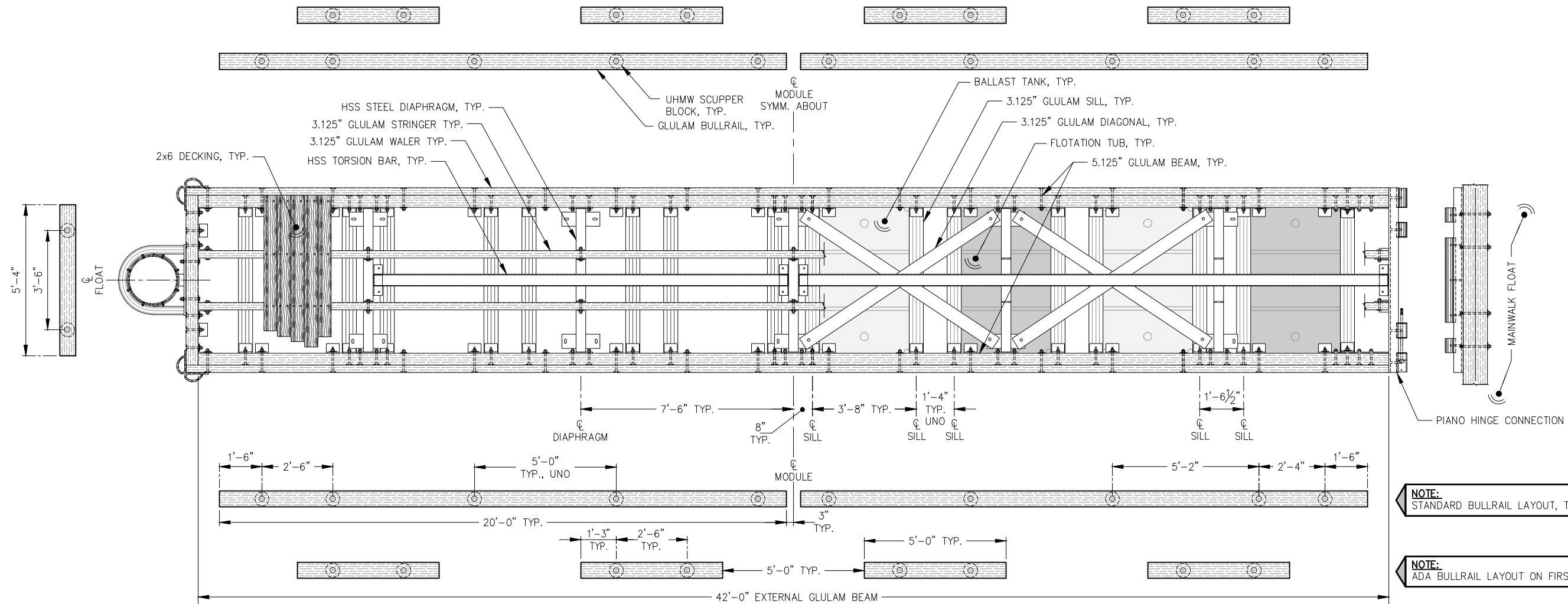
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
4' x 32' FINGER FLOAT MODULE

5.17

PND PROJECT NO.: 152037

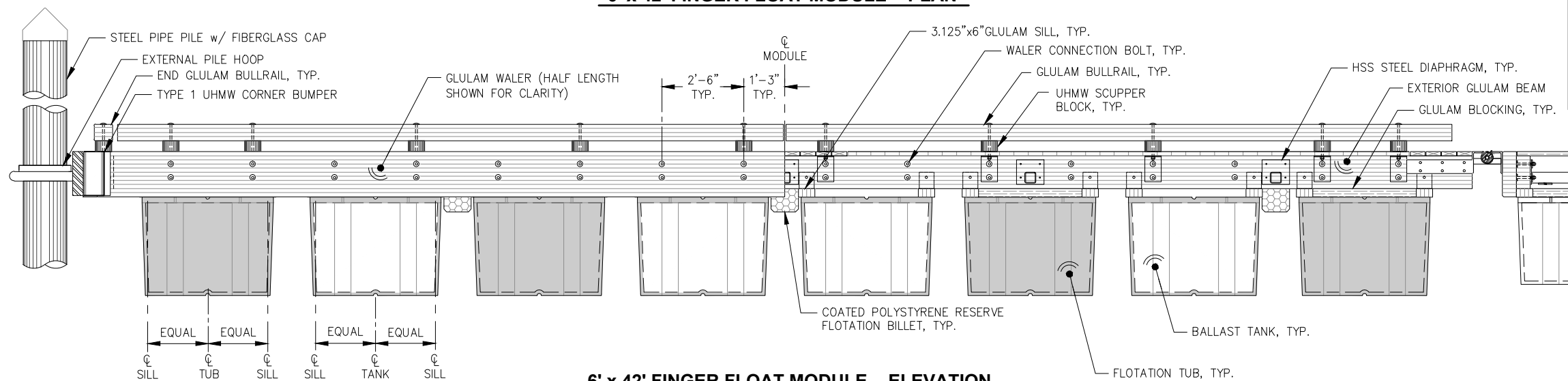
SHEET
48 OF 82



6' x 42' FINGER FLOAT MODULE - PLAN

NOTE:
STANDARD BULLRAIL LAYOUT, TYP., SYMM.

NOTE:
ADA BULLRAIL LAYOUT ON FIRST FINGER, MAINWALK C, SYMM.



6' x 42' FINGER FLOAT MODULE - ELEVATION

NOTE:
TYPICAL FLOTATION MODULE COMPONENTS INCLUDING HSS DIAPHRAGMS, GLULAM SILLS, FLOTATION TUBS, FLOTATION BILLETS, BALLAST TANKS, DIAGONALS AND TYPICAL TIMBER FRAMING ARE SYMMETRIC ABOUT CENTERLINE OF MODULE, UNLESS OTHERWISE NOTED. (CL MODULE EQUIVALENT TO CL EXTERNAL GLULAM BEAM)

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

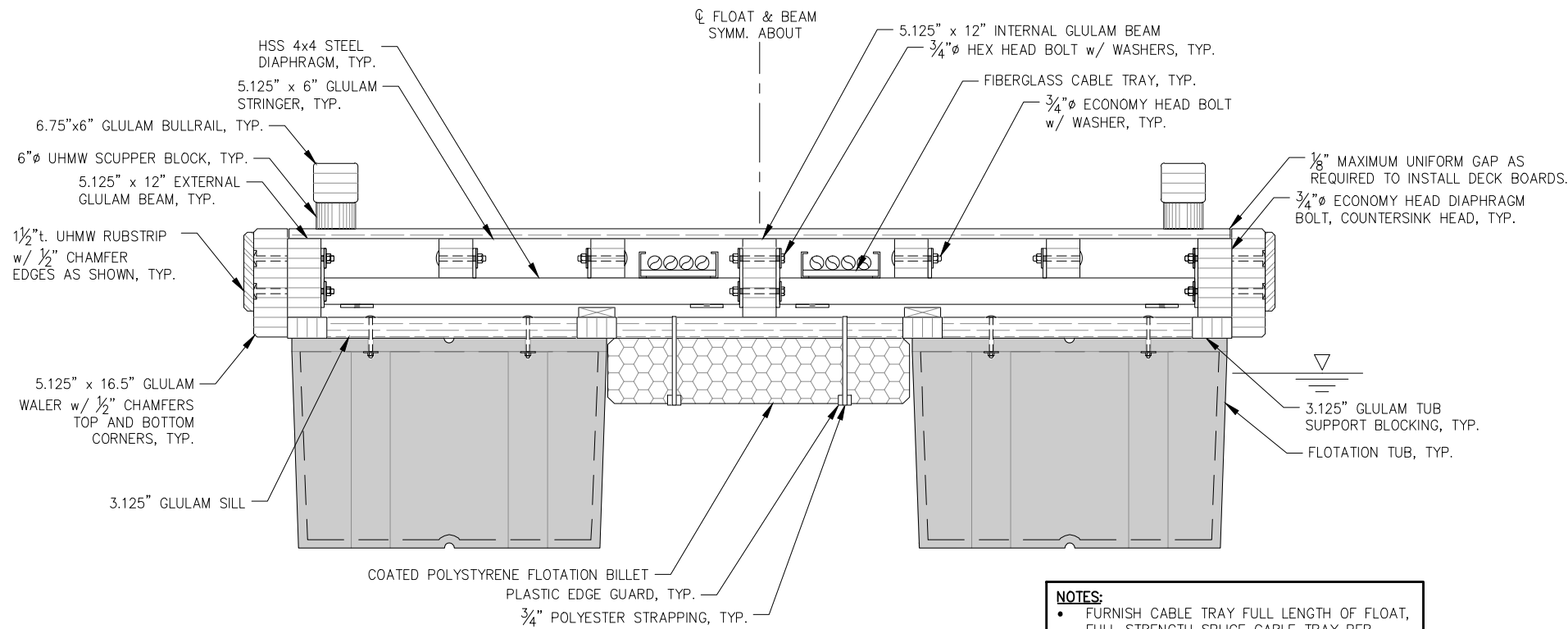
SHEET TITLE:
6' x 42' FINGER FLOAT MODULE

PND PROJECT NO.: 152037

5.18
SHEET
49 OF 82

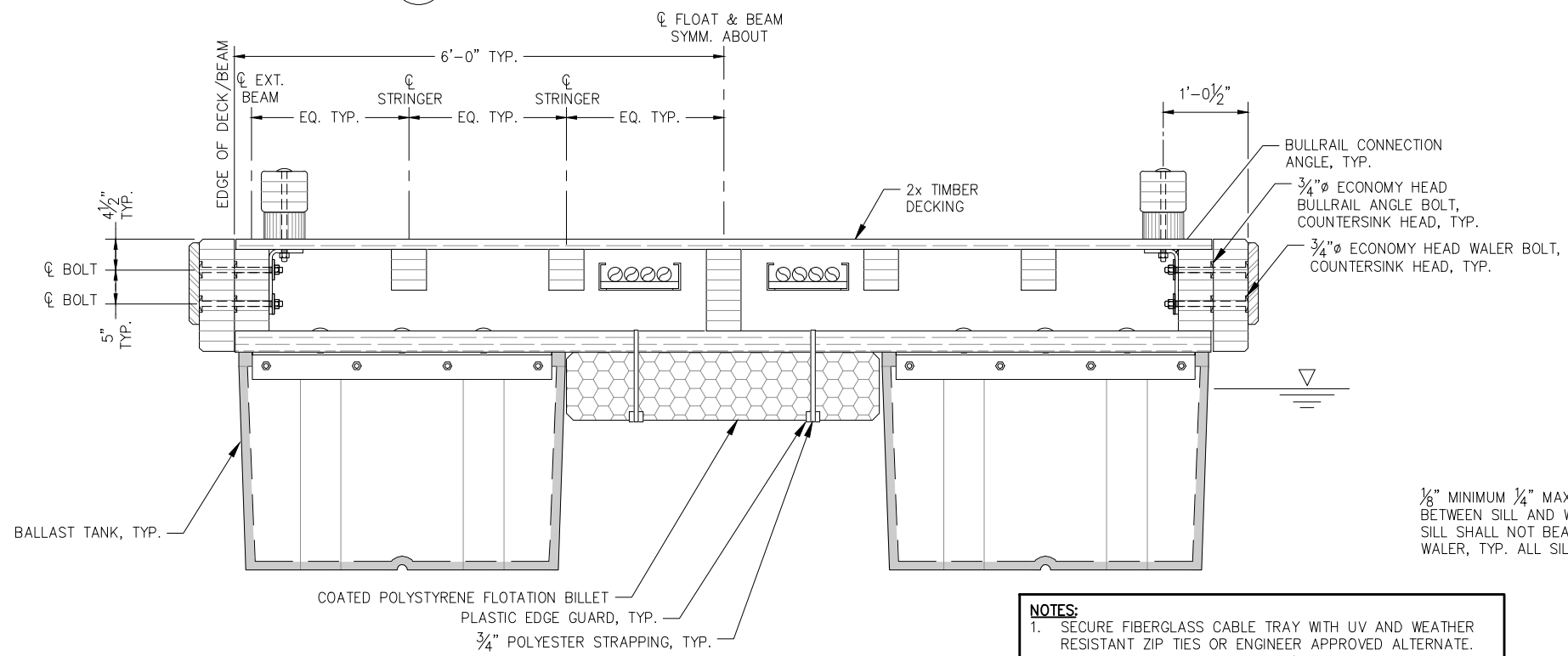
\\Proj\jdata\152037 Douglas Harbor Renovation\G. Drawings\Design\5.18 6x42 Finger Module.dwg. 10/30/2015 1:18:07 PM

\\Proj\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.01-6.03 Typical Float Sections.dwg.10/30/2015 11:18:12 PM



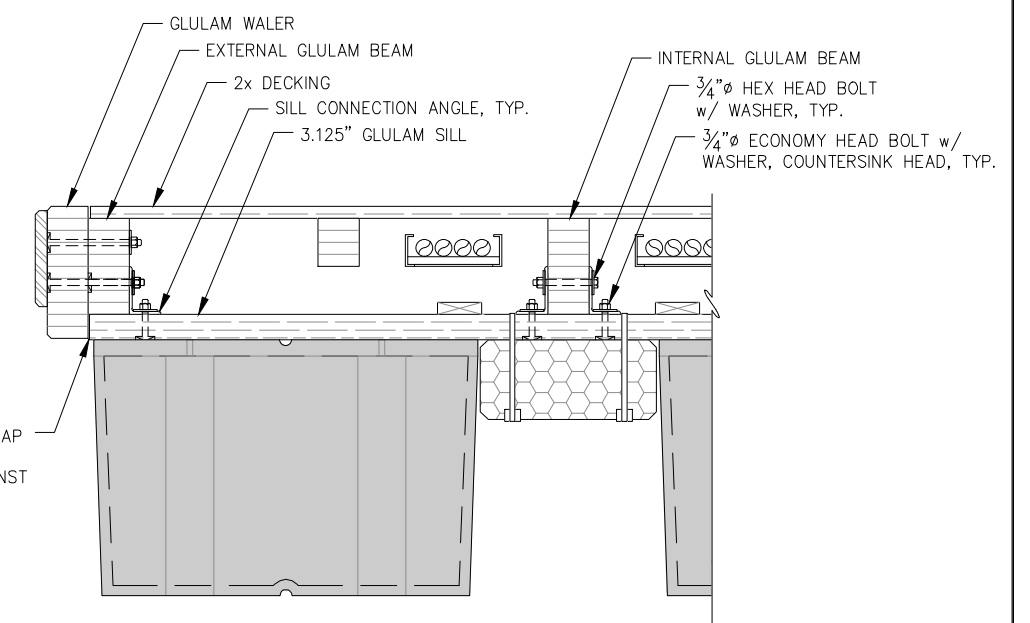
A SECTION AT FLOTATION TUBS - 12' MODULE
NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION B.

NOTES:
• FURNISH CABLE TRAY FULL LENGTH OF FLOAT, FULL STRENGTH SPLICE CABLE TRAY PER MANUFACTURE RECOMMENDATIONS.



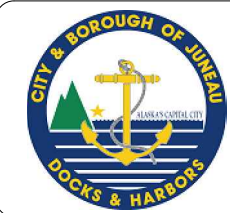
B SECTION AT FOAM BILLET / BALLAST TANK - 12' MODULE
NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION A.

NOTES:
1. SECURE FIBERGLASS CABLE TRAY WITH UV AND WEATHER RESISTANT ZIP TIES OR ENGINEER APPROVED ALTERNATE.
2. FASTEN DECKING TO GLULAM w/ 9 GA. 16d HOT DIP GALVANIZED SPIRAL SHANK NAILS AS SHOWN IN PLAN. PRE-DRILL TIMBERS AS REQUIRED PER A.I.T.C. TO PREVENT SPLITTING.
3. LOCATE CABLE TRAY SUPPORTS 2'-6\"/>



C TYPICAL SECTION AT SILL CONNECTION
NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION A AND B.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE: NTS
DRAWN: MS APPROVED: JLD

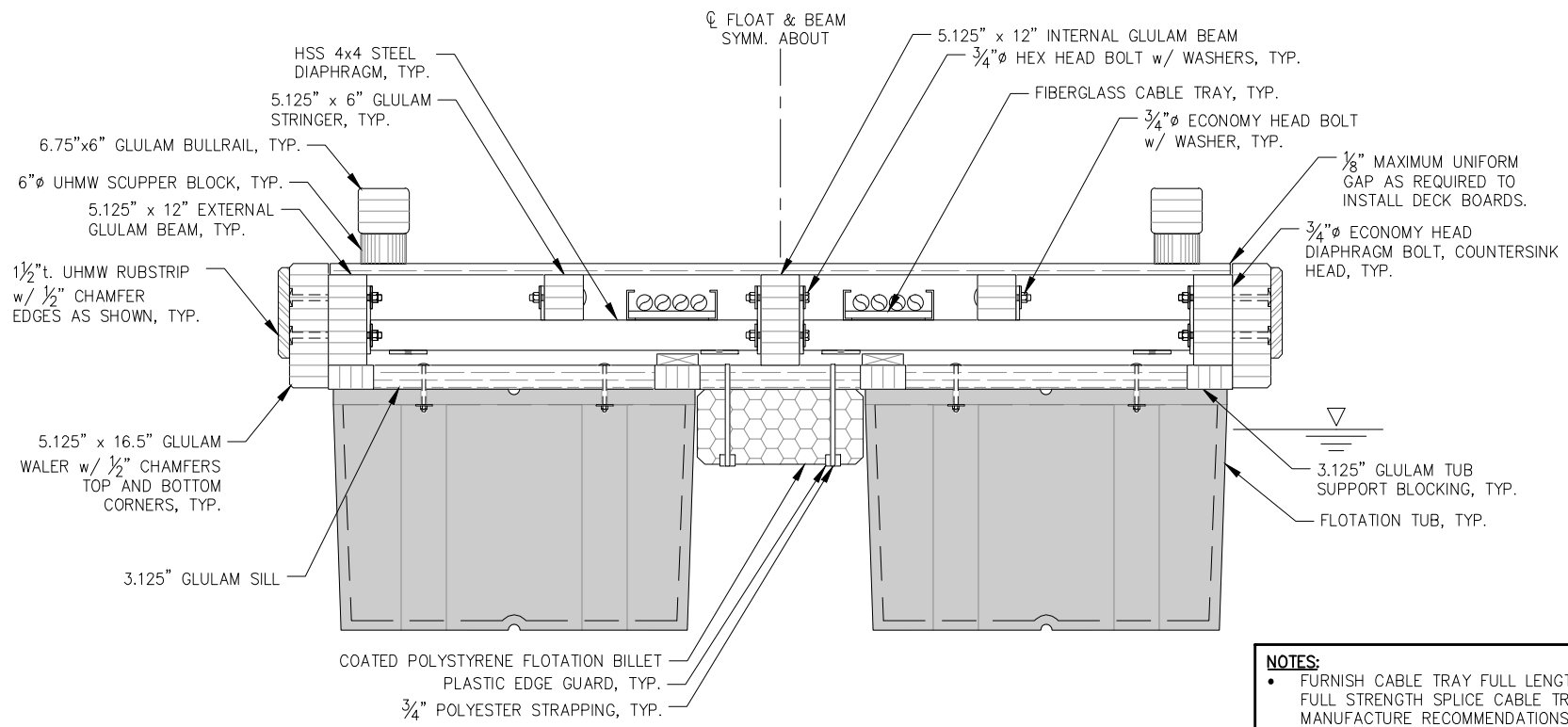
DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

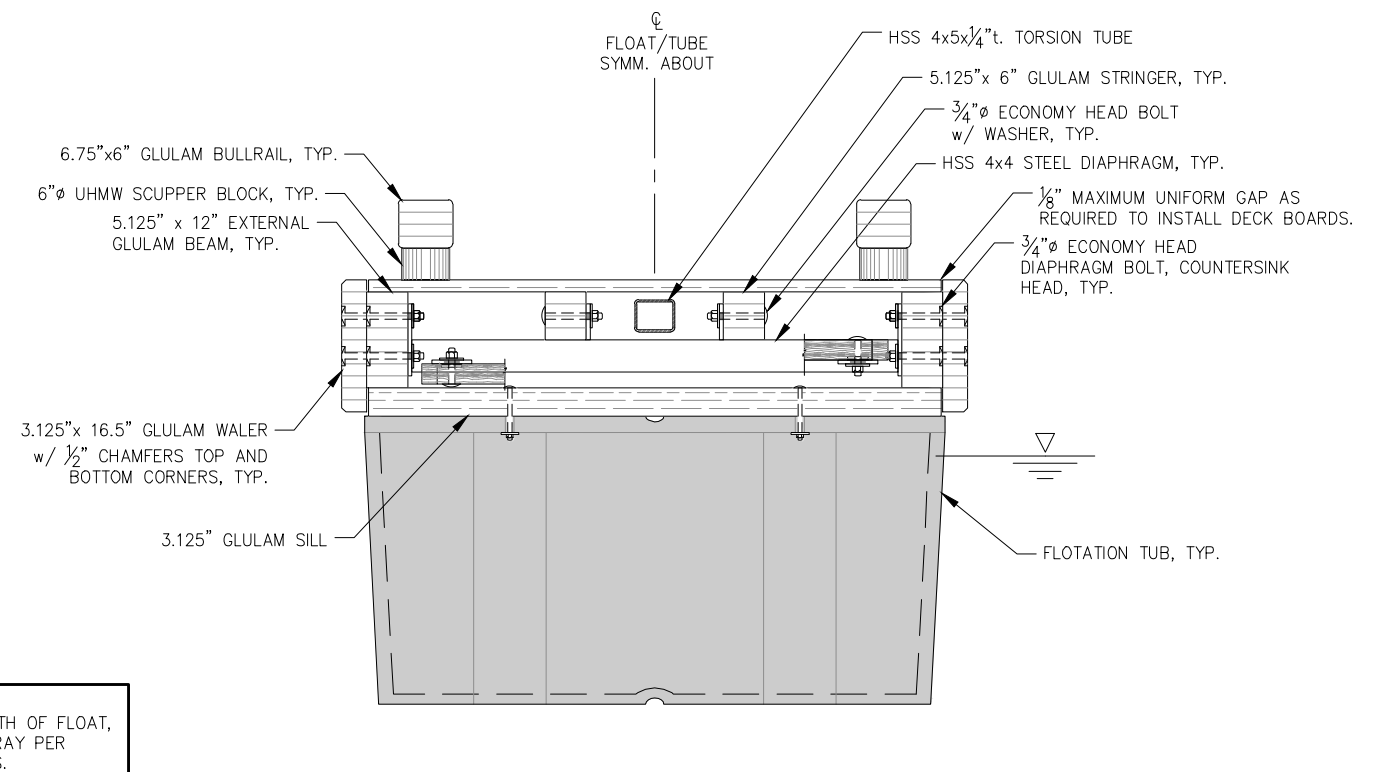
SHEET TITLE:
TYPICAL FLOAT SECTIONS

PND PROJECT NO.: 152037

6.01
SHEET
50 OF 82

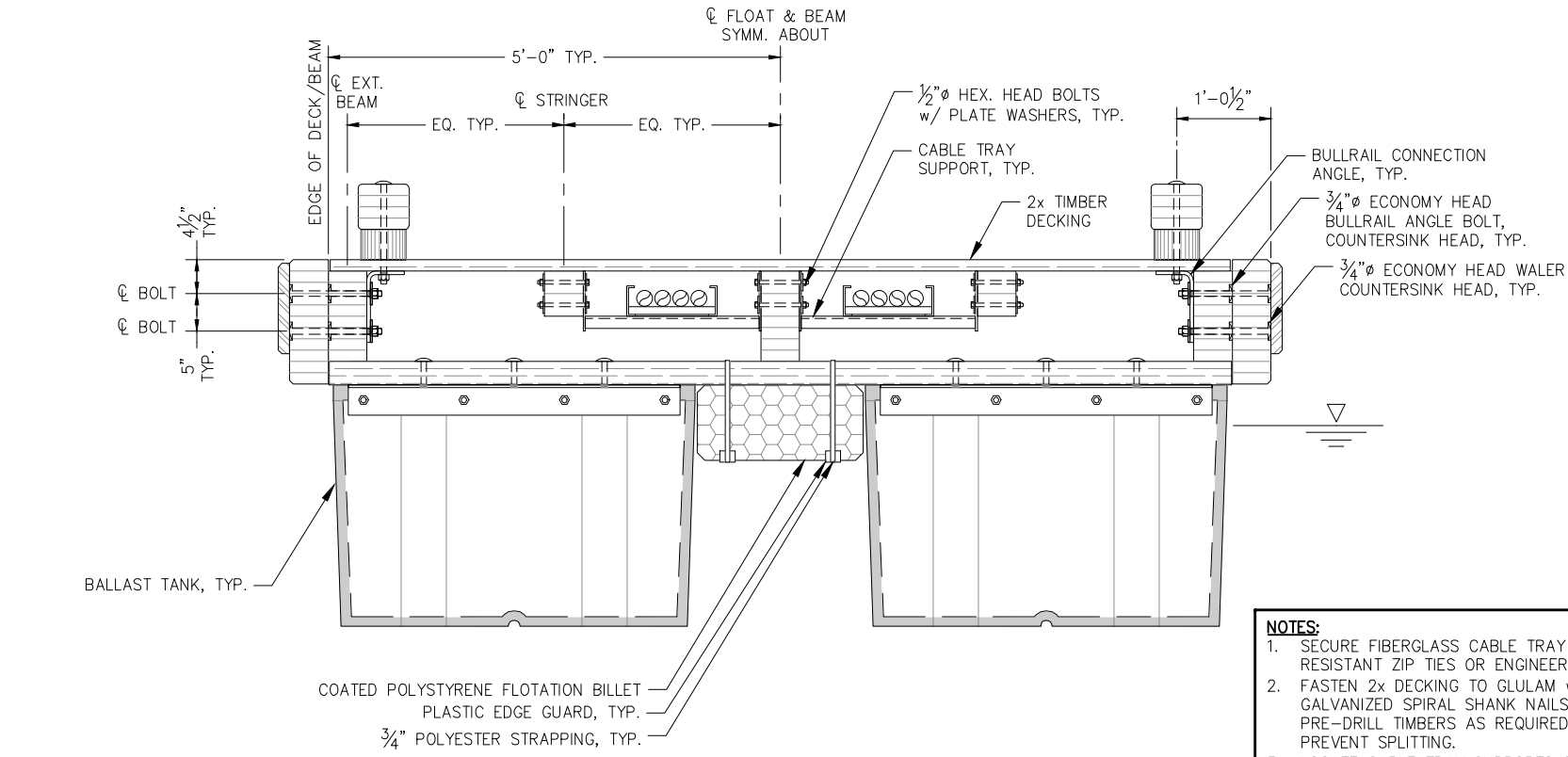


A SECTION AT FLOTATION TUBS - 10' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION B.



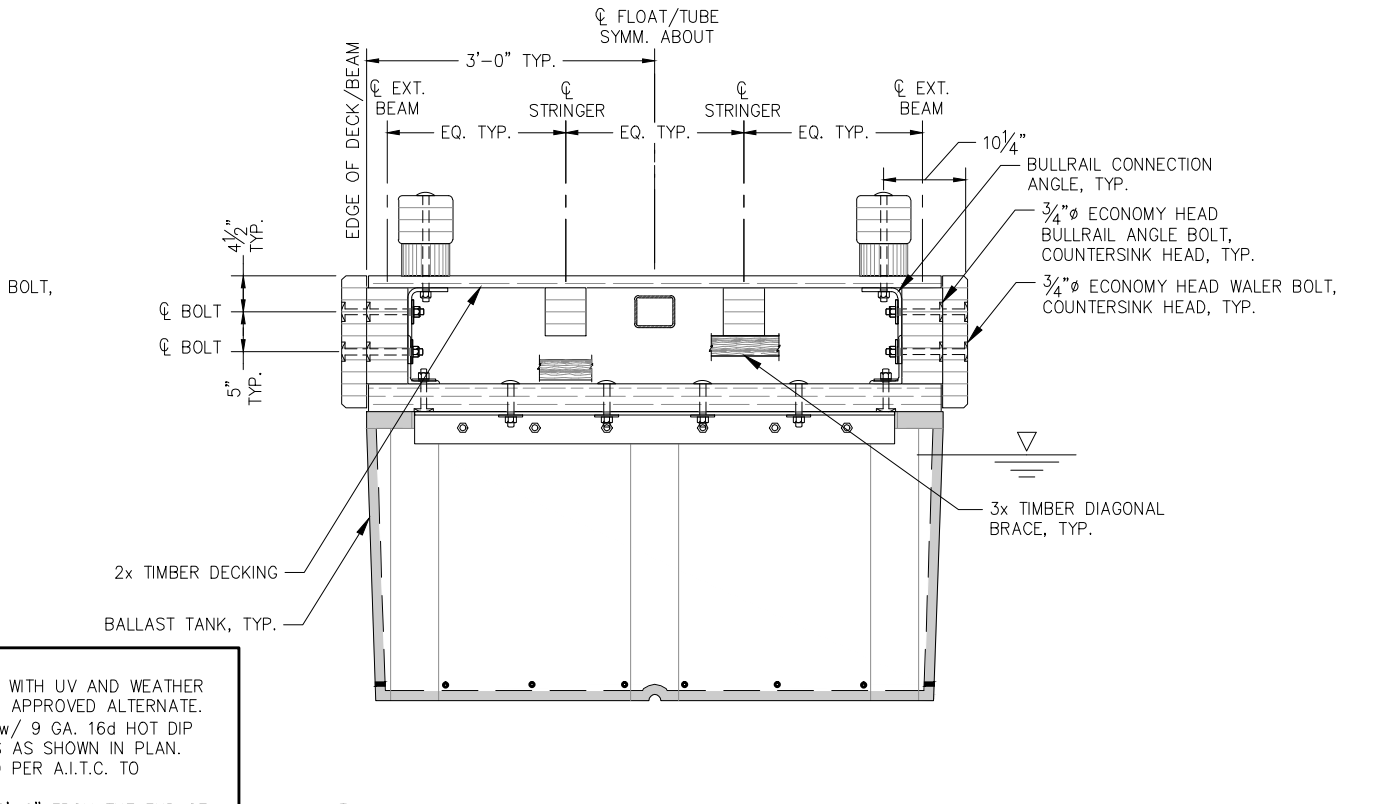
A SECTION AT FLOTATION TUBS - 6' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION B.

NOTES:
 • FURNISH CABLE TRAY FULL LENGTH OF FLOAT, FULL STRENGTH SPLICE CABLE TRAY PER MANUFACTURE RECOMMENDATIONS.



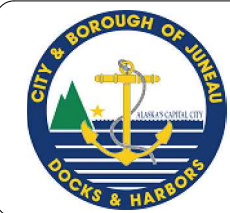
B SECTION AT FOAM BILLET / BALLAST TANK - 10' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION A.

NOTES:
 1. SECURE FIBERGLASS CABLE TRAY WITH UV AND WEATHER RESISTANT ZIP TIES OR ENGINEER APPROVED ALTERNATE.
 2. FASTEN 2x DECKING TO GLULAM w/ 9 GA. 16d HOT DIP GALVANIZED SPIRAL SHANK NAILS AS SHOWN IN PLAN. PRE-DRILL TIMBERS AS REQUIRED PER A.I.T.C. TO PREVENT SPLITTING.
 3. LOCATE CABLE TRAY SUPPORTS 2'-6" FROM THE END OF EACH MODULE UNLESS OTHERWISE NOTED.



B SECTION AT BALLAST TANK - 6' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION A.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE: NTS
 DRAWN: MS APPROVED: JLD

**CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001**

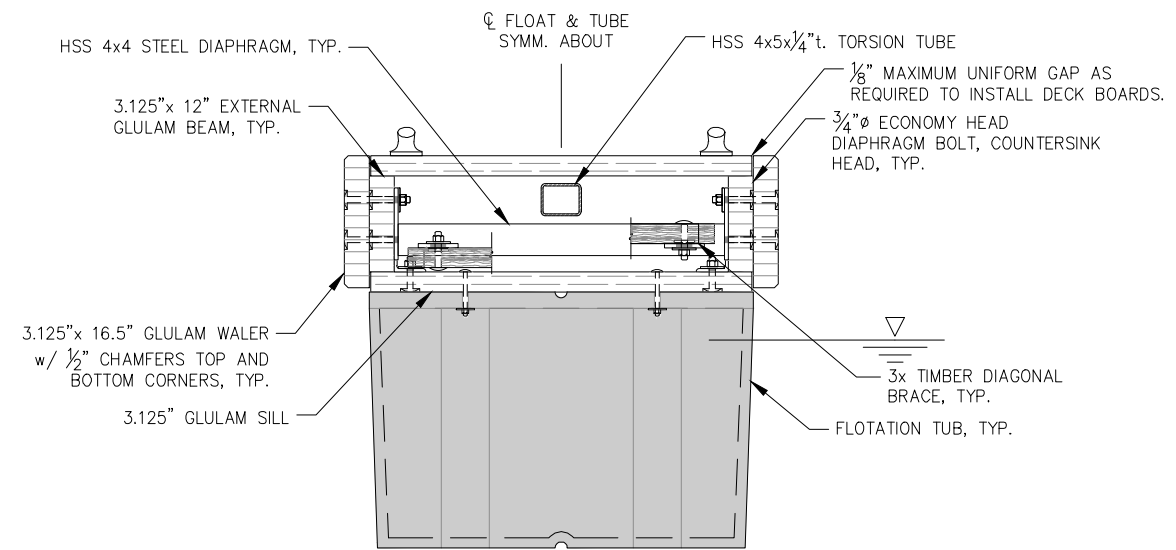
SHEET TITLE:
TYPICAL FLOAT SECTIONS

DATE: 10/27/2015

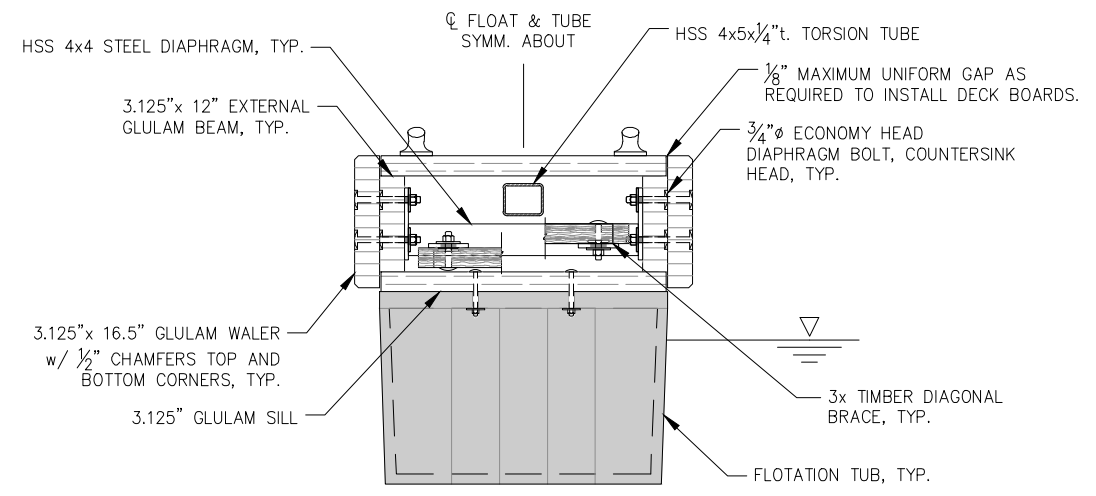
PND PROJECT NO.: 152037

6.02
 SHEET
 51 OF 82

\\Pnfd\data\152037\Drawings\Design\6.01-6.03 Typical Float Sections.dwg, 10/30/2015 11:18:16 PM

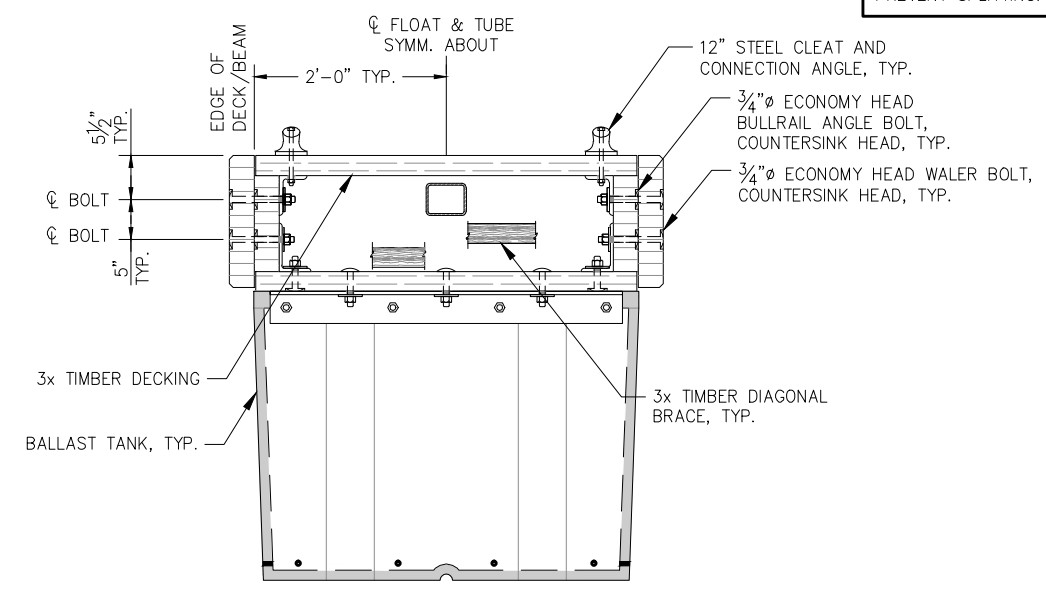


A SECTION AT FLOTATION TUBS - 4' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION B.

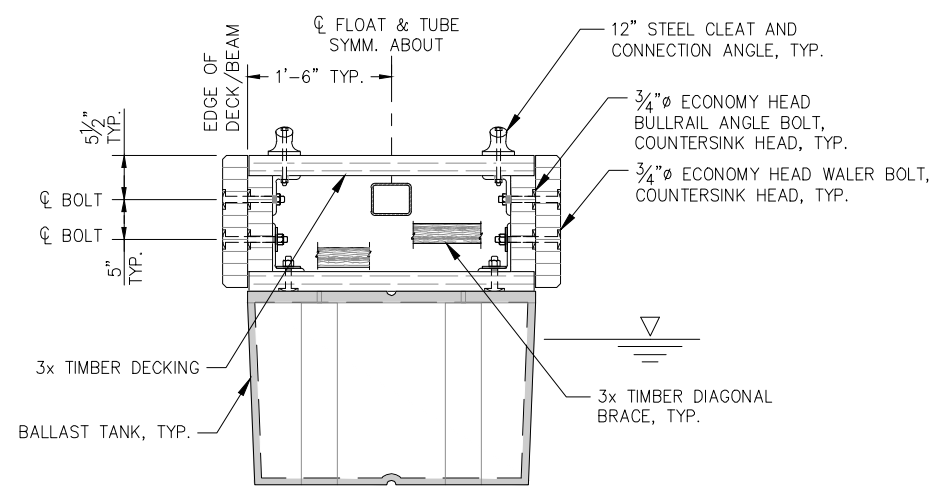


A SECTION AT FLOTATION TUBS - 3' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION B.

NOTE:
 FASTEN 3x DECKING TO GLULAM w/ 8 GA. 30d HOT DIP GALVANIZED SPIRAL SHANK NAILS AS SHOWN IN PLAN. PRE-DRILL TIMBERS AS REQUIRED PER A.I.T.C. TO PREVENT SPLITTING.

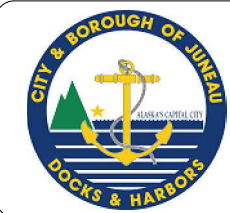


B SECTION AT BALLAST TANK - 4' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION A.



B SECTION AT BALLAST TANK - 3' MODULE
 NOTE: DETAILS NOT SHOWN SIMILAR TO SECTION A.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
 ENGINEERS, INC.

9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE: NTS
 DRAWN: MS APPROVED: JLD

DATE: 10/27/2015

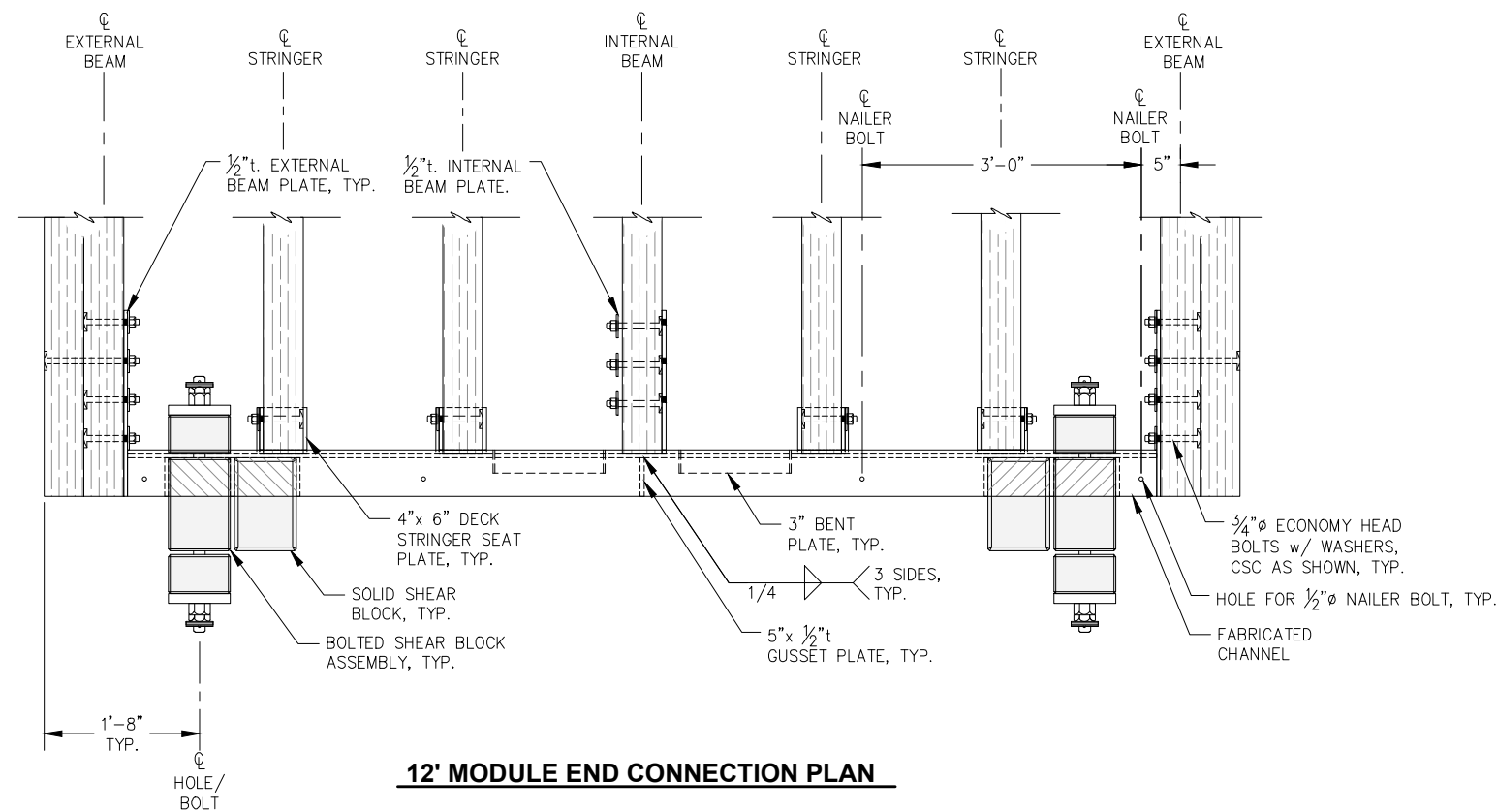
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

SHEET TITLE:
TYPICAL FLOAT SECTIONS

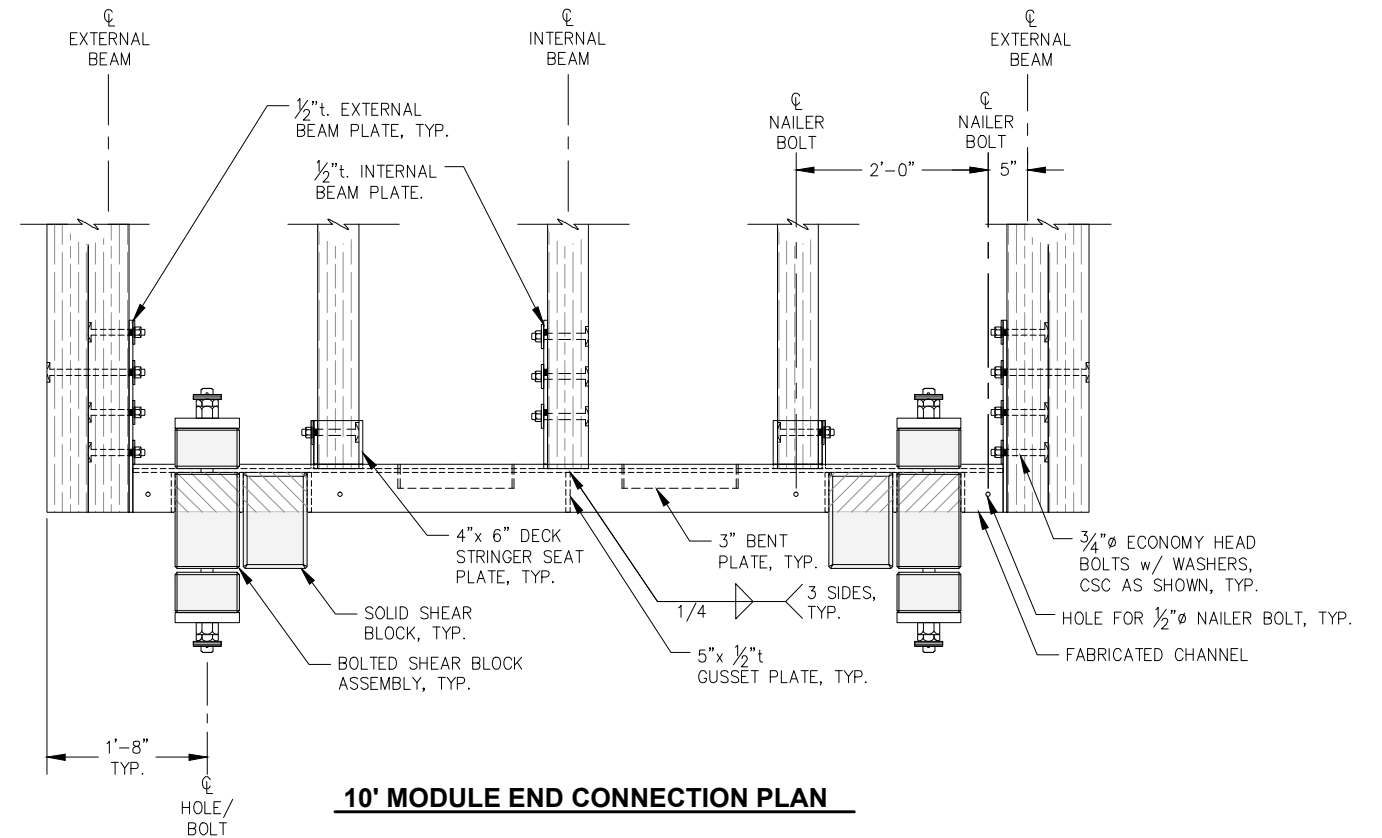
PND PROJECT NO.: 152037

6.03
 SHEET
 52 OF 82

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.01-6.03 Typical Float Sections.dwg, 10/30/2015 11:18:21 PM

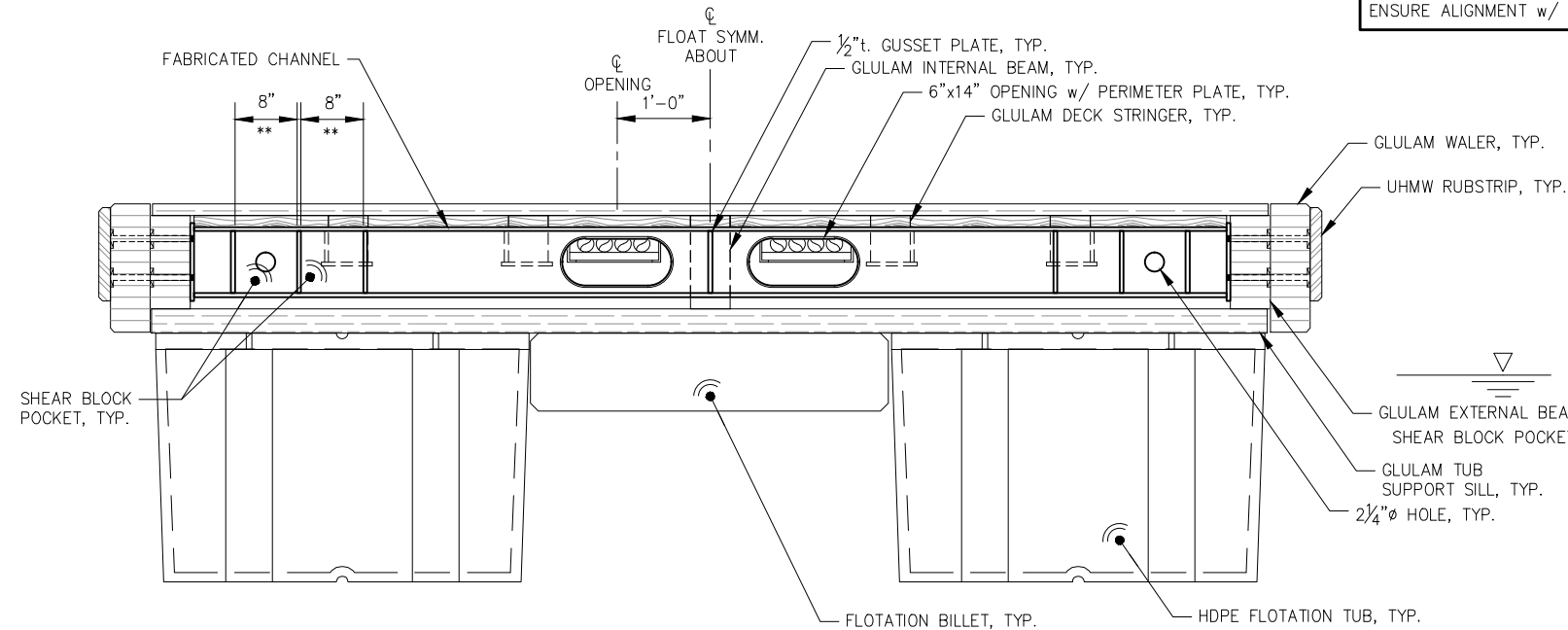


12' MODULE END CONNECTION PLAN

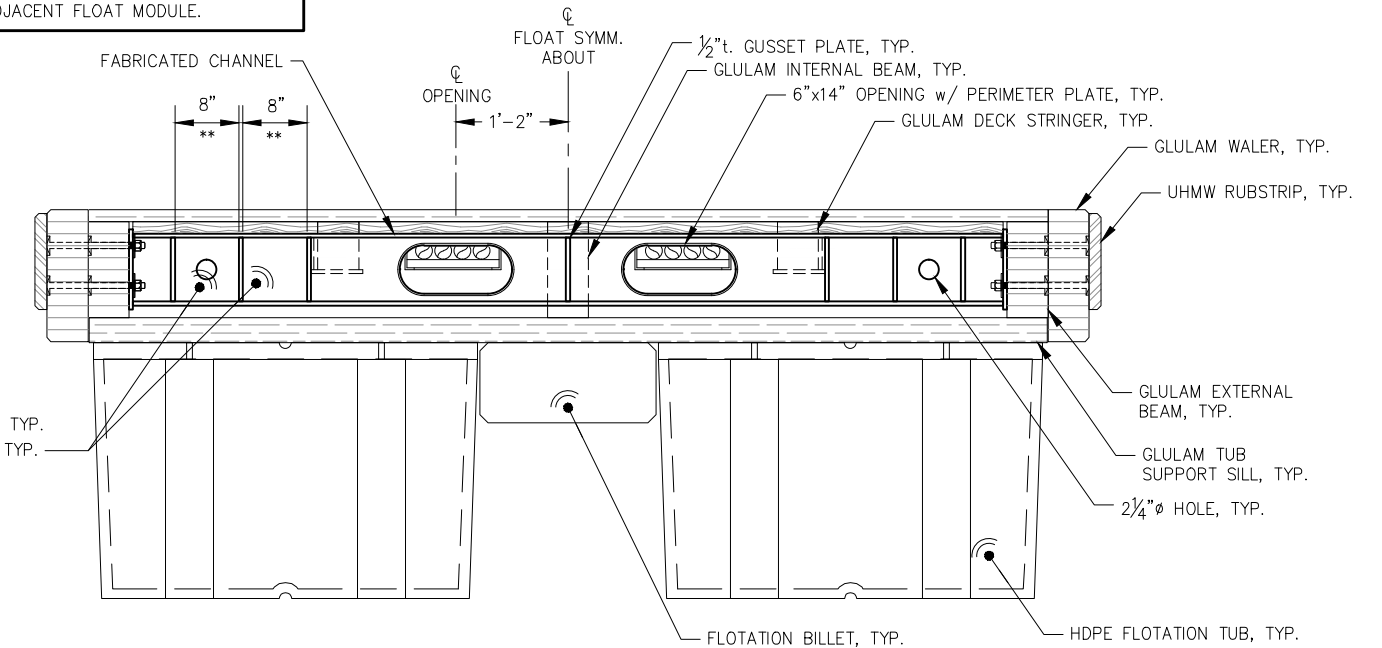


10' MODULE END CONNECTION PLAN

****NOTE:** SHEAR BLOCK POCKETS TO BE 8" x 8". FABRICATOR SHALL UTILIZE JIG TO ACHIEVE CONSISTENT, UNIFORM POCKET SIZE AND SPACING/LOCATION. FABRICATED CHANNEL SHALL HAVE CONSISTENT VERTICAL LOCATION TO ENSURE ALIGNMENT w/ ADJACENT FLOAT MODULE.



12' MODULE END CONNECTION PLAN



10' MODULE END CONNECTION PLAN

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

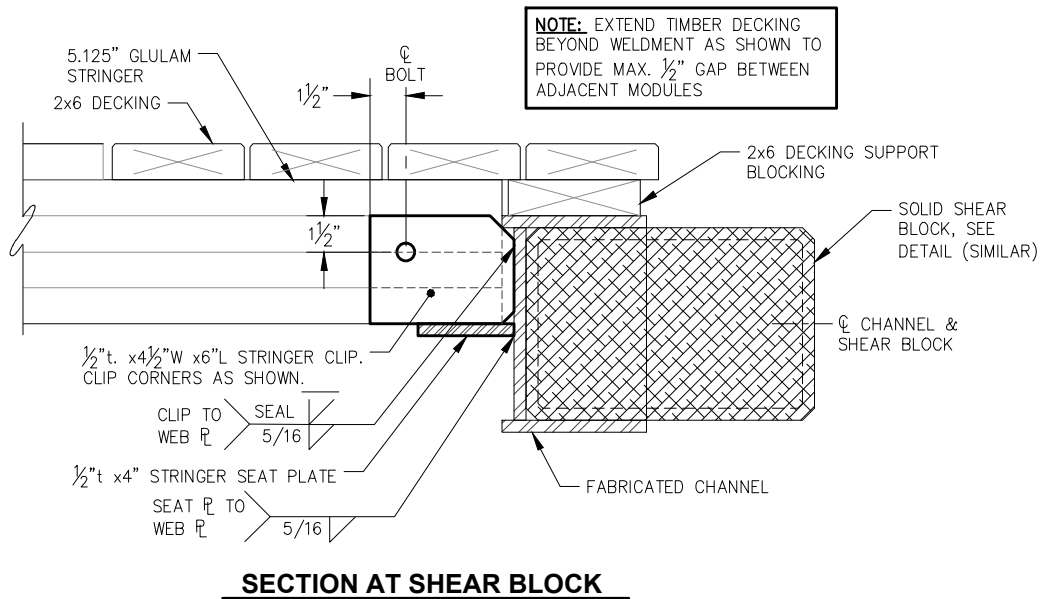
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
MODULE END CONNECTION
DETAILS

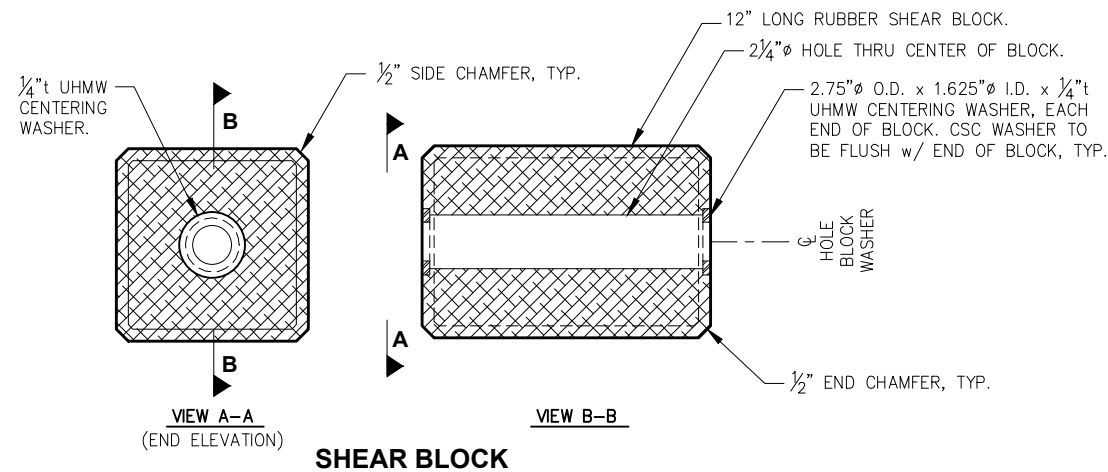
PND PROJECT NO.: 152037

6.04
SHEET
53 OF 82

\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.04-6.06 Shear and Float Details.dwg. 10/30/2015 11:18:28 PM

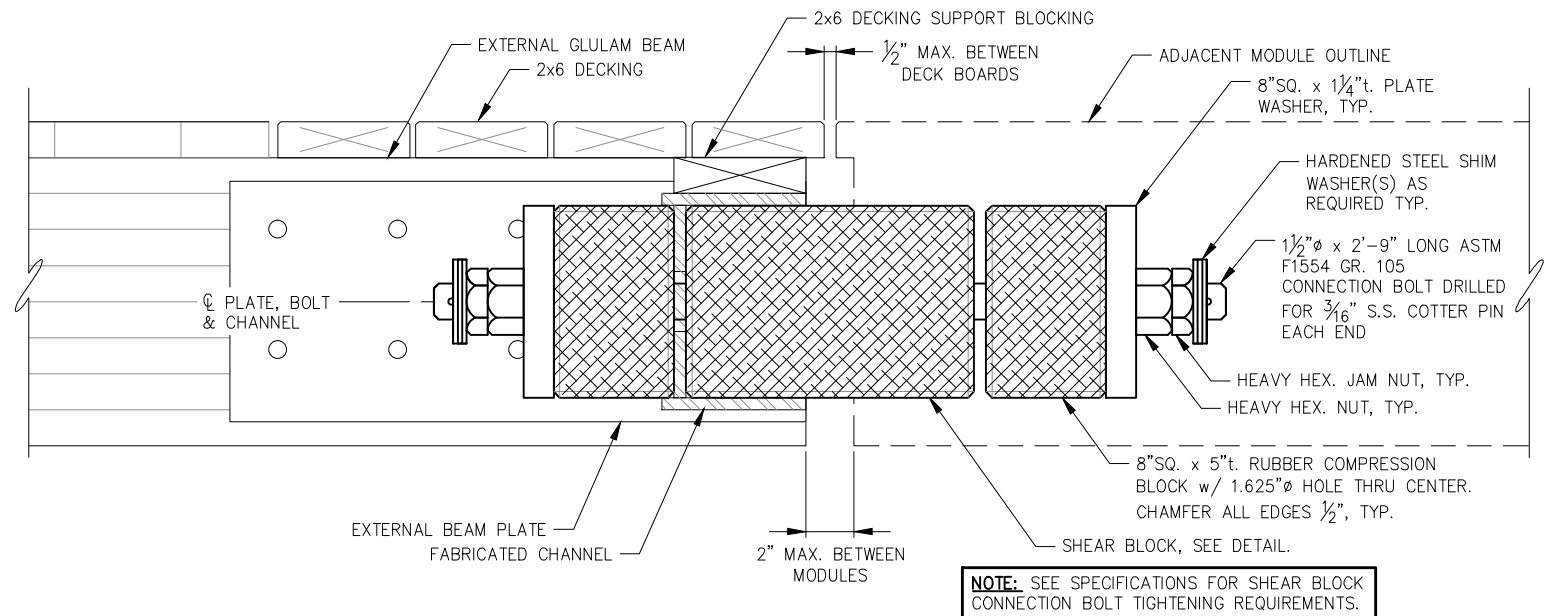


SECTION AT SHEAR BLOCK

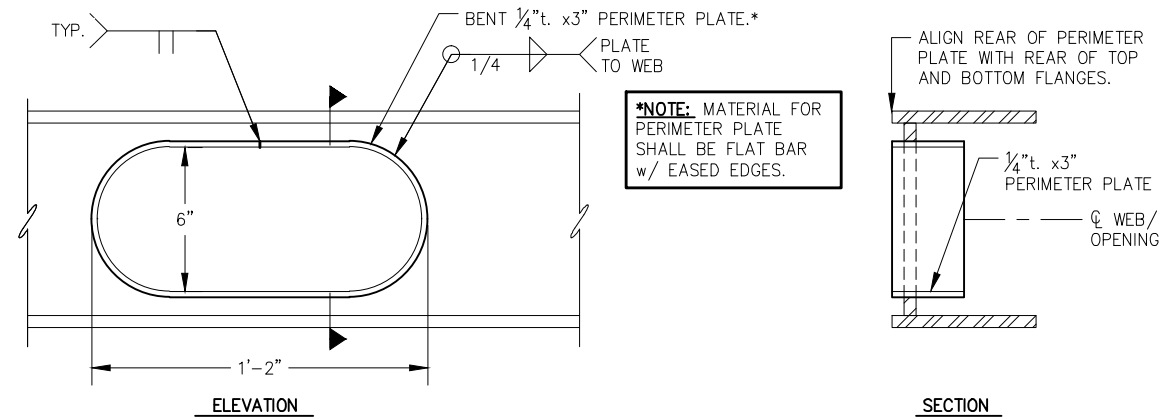


SHEAR BLOCK

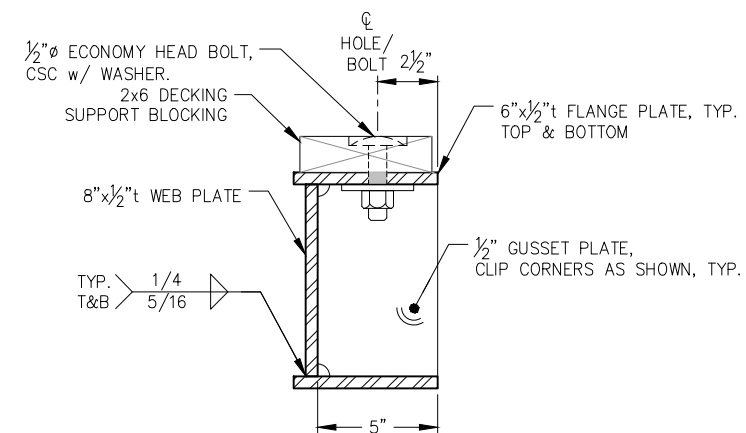
NOTE:
SEE SPECIFICATIONS FOR SHEAR BLOCK FABRICATION AND FIT-UP REQUIREMENTS.



BOLTED SHEAR BLOCK ASSEMBLY



END CONNECTION OPENING w/ PERIMETER PLATE



FABRICATED CHANNEL SECTION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE:

DATE: 10/27/2015

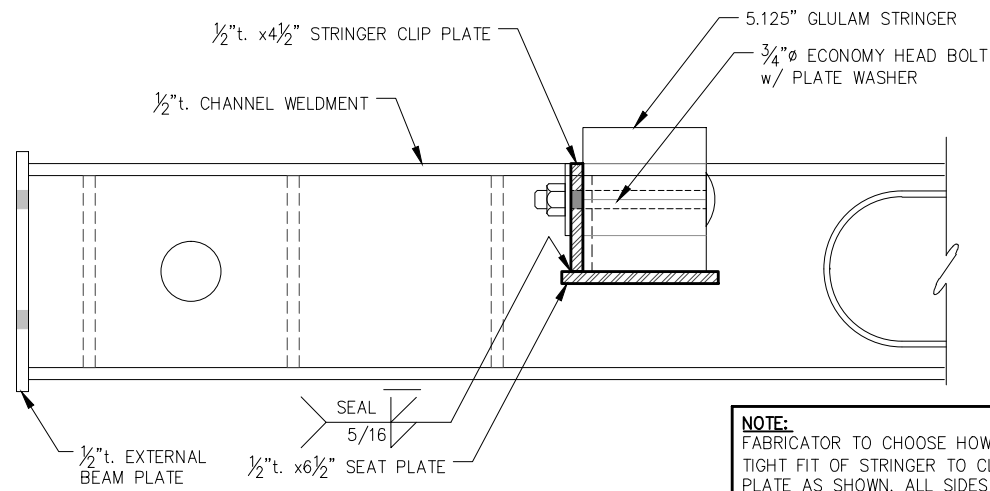
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**MODULE END CONNECTION
DETAILS**

6.05

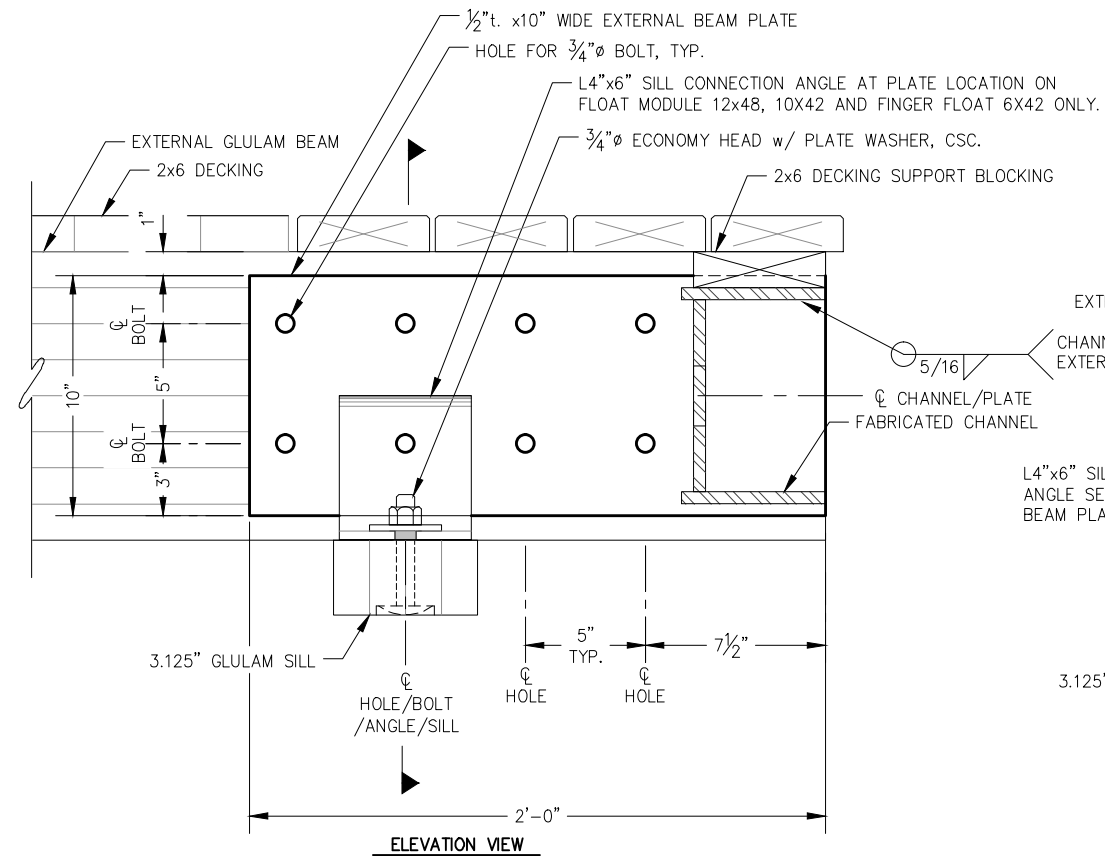
SHEET
54 OF 82

PND PROJECT NO.: 152037



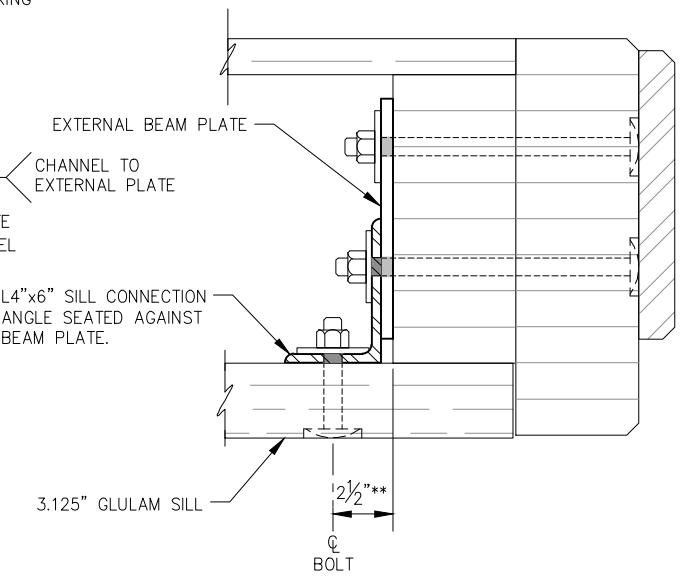
STRINGER SEAT PLATE SECTION

NOTE:
FABRICATOR TO CHOOSE HOW TO ACHIEVE TIGHT FIT OF STRINGER TO CLIP PLATE/SEAT PLATE AS SHOWN. ALL SIDES OF PLATE TO BE SEALED. GRIND INSIDE EDGE FLUSH OR CHAMFER STRINGERS AS REQUIRED.

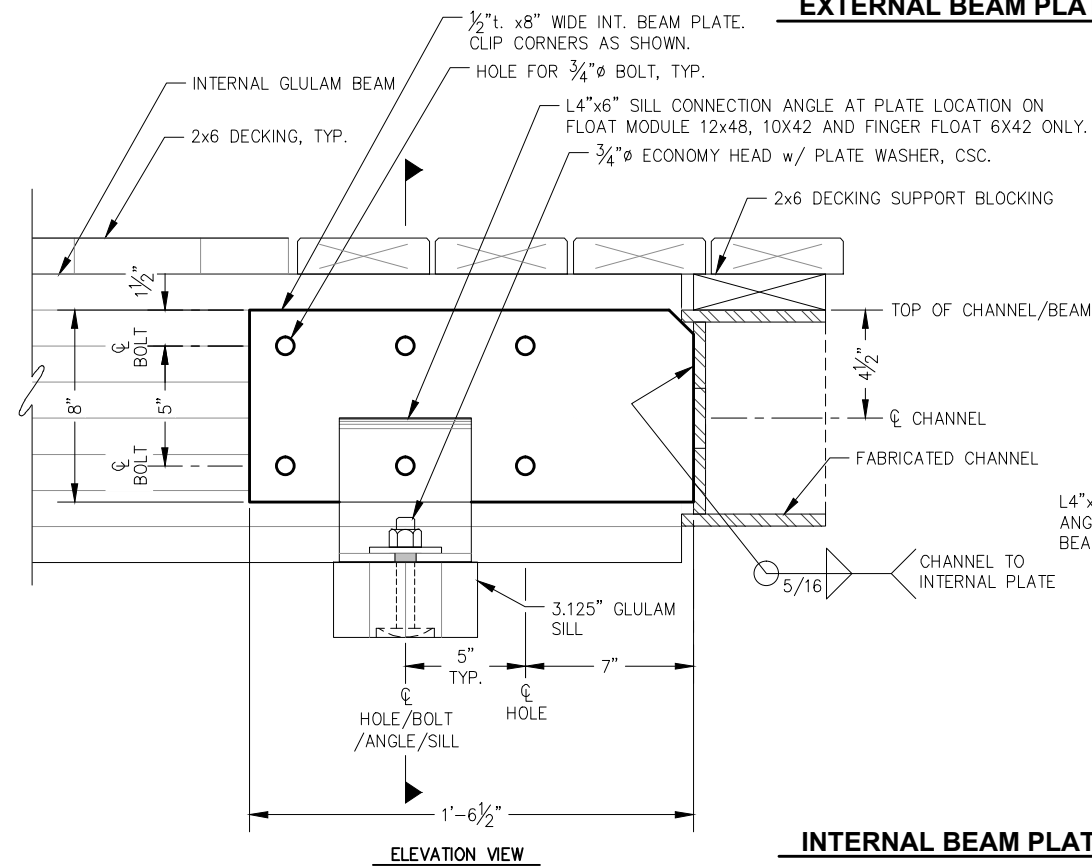


ELEVATION VIEW

EXTERNAL BEAM PLATE

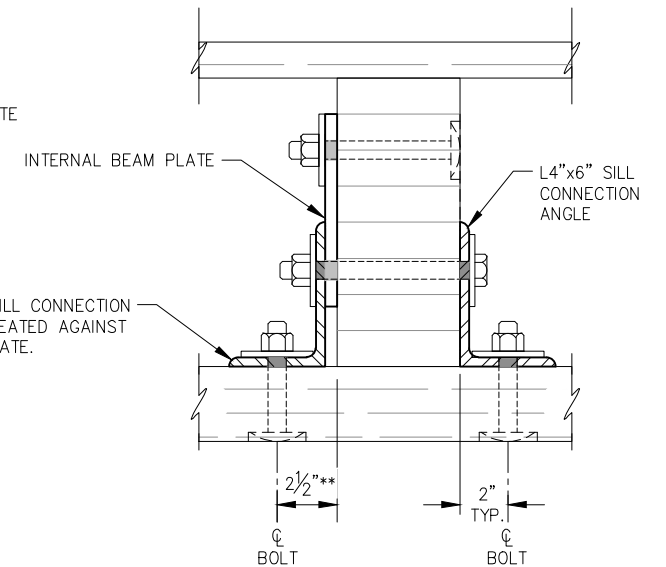


SECTION VIEW



ELEVATION VIEW

INTERNAL BEAM PLATE



SECTION VIEW

****NOTE:**
BOLT HOLE FOR SILL AT END WELDMENT NON-STANDARD.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE:

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

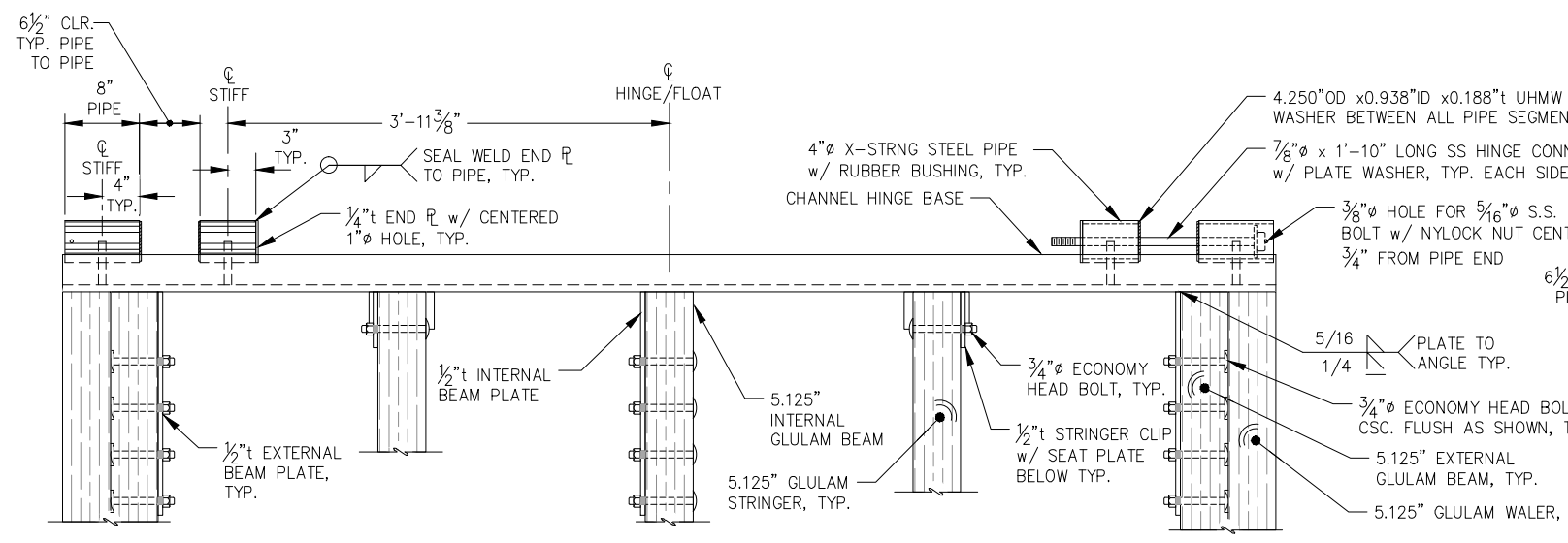
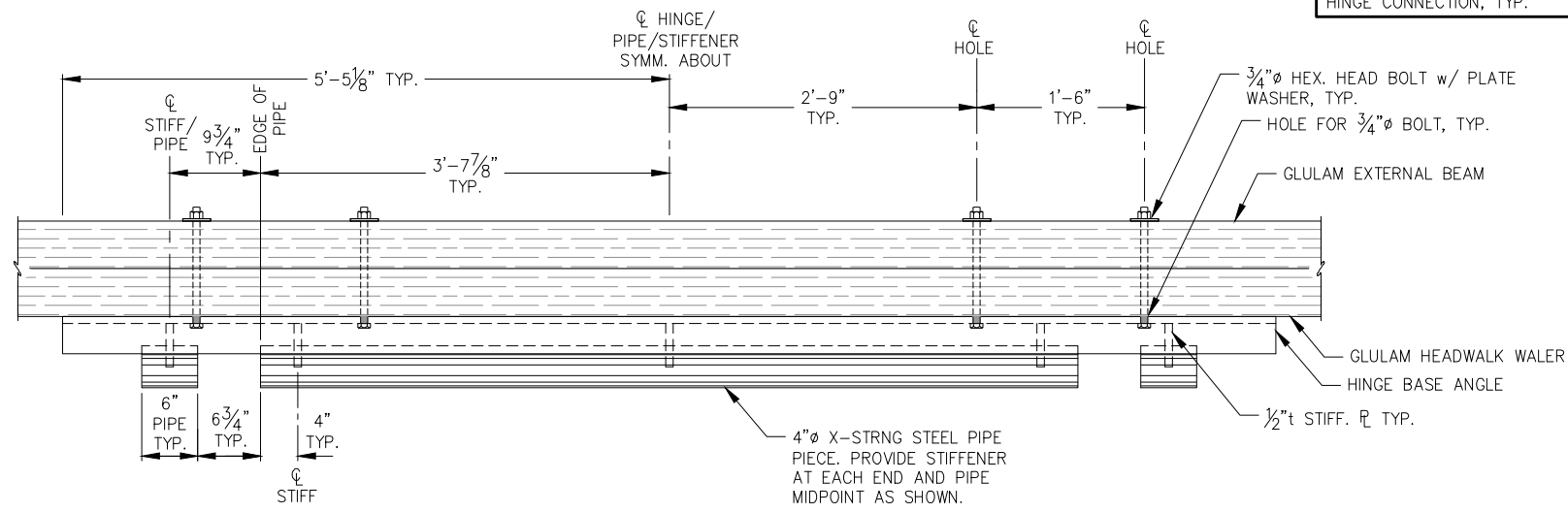
SHEET TITLE:
**MODULE END CONNECTION
DETAILS**

PND PROJECT NO.: 152037

6.06

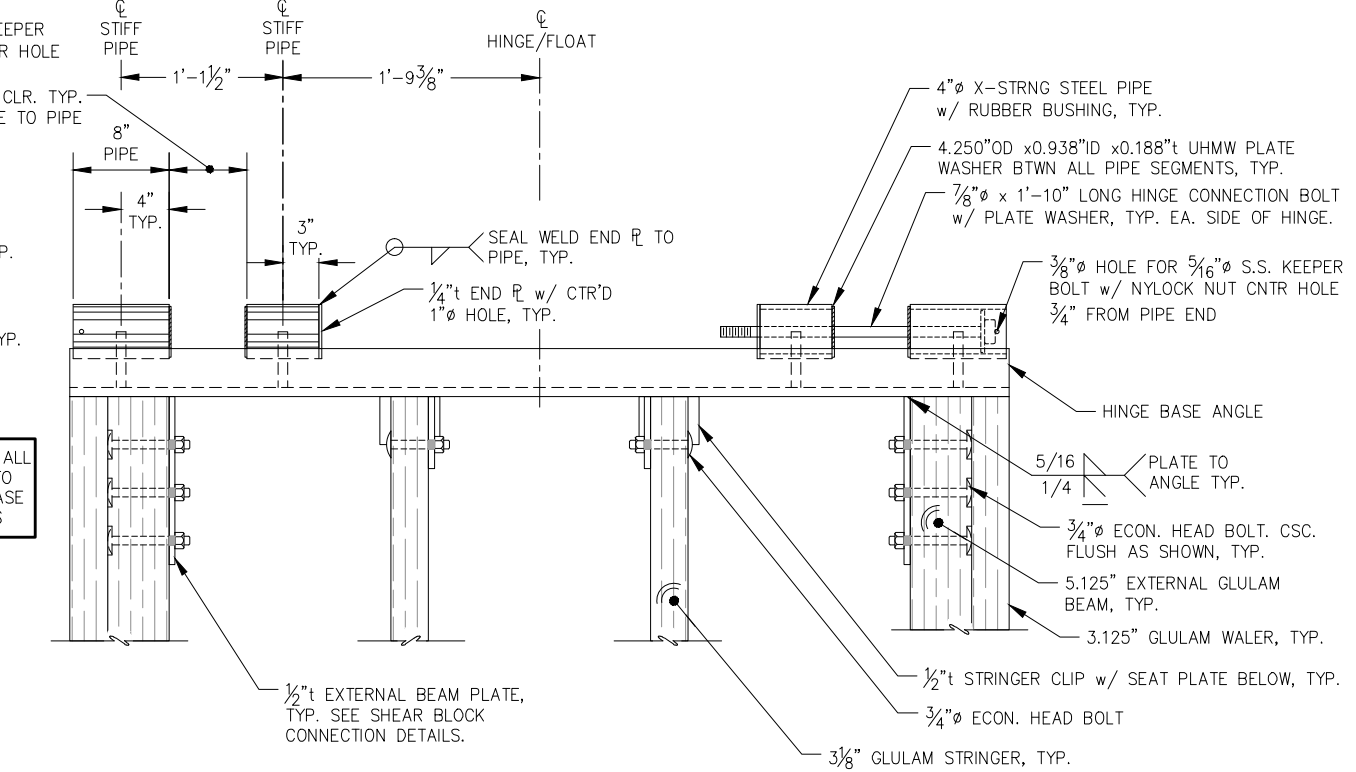
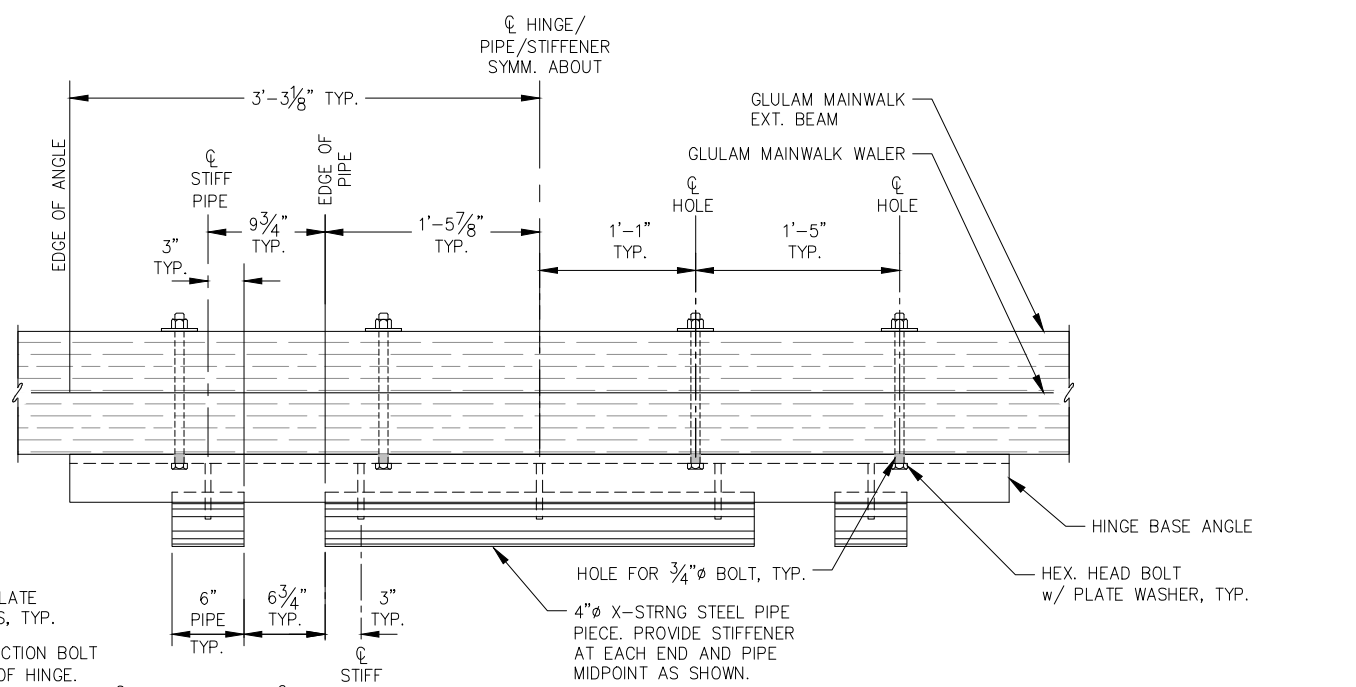
SHEET
55 OF 82

NOTE:
OMIT WALER BOLTS WITHIN LIMITS OF PIANO HINGE CONNECTION, TYP.



10-FT PIANO HINGE

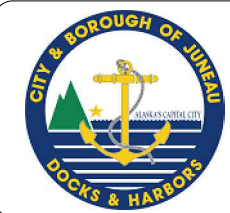
NOTE: APPLY NON-SKID TO ALL HINGE SURFACES EXPOSED TO FOOT TRAFFIC, INCLUDING BASE ANGLES AND PIPE SEGMENTS



6-FT PIANO HINGE

NOTE: DETAILS NOT SHOWN SIMILAR TO 10-FT PIANO HINGE.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

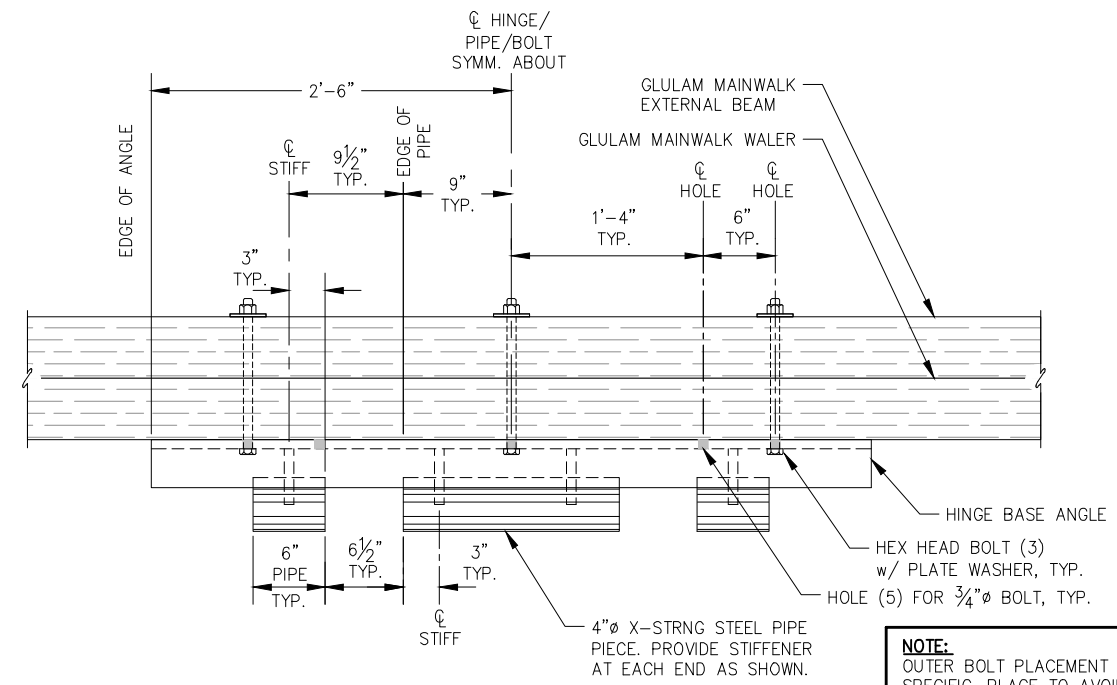
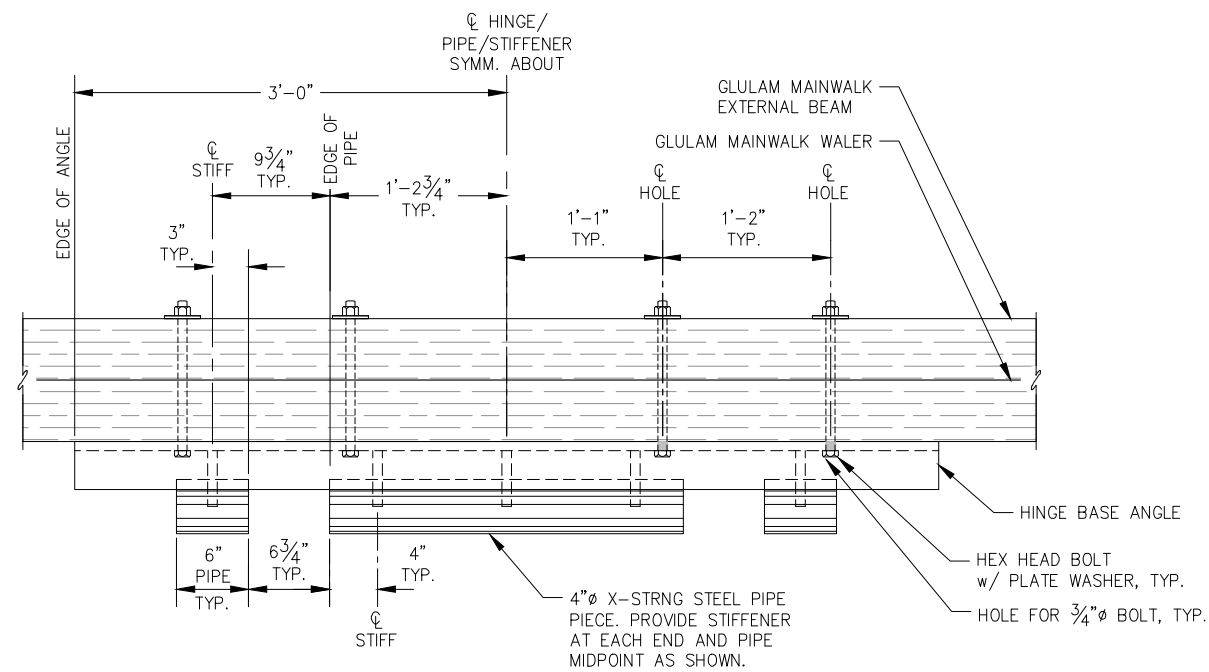
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
PIANO HINGE DETAILS

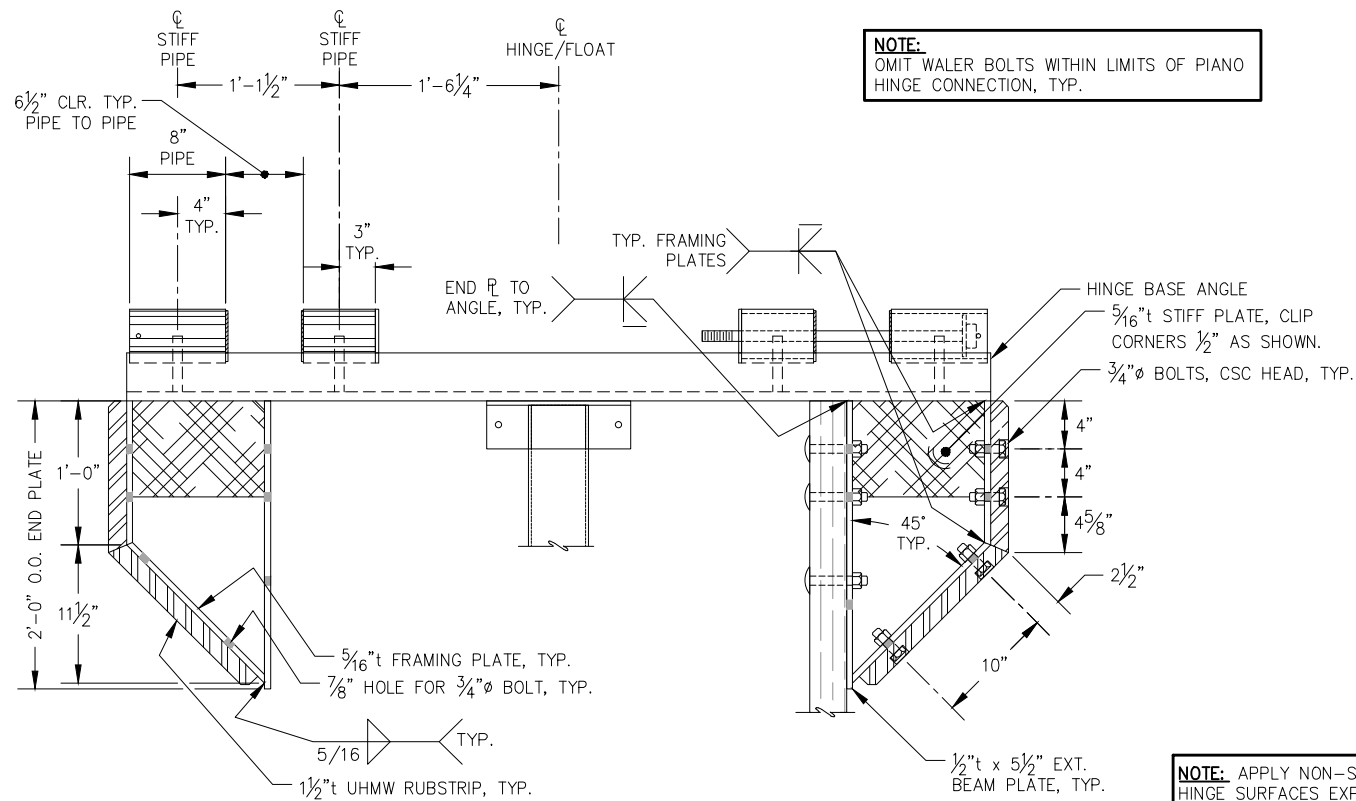
PND PROJECT NO.: 152037

6.07
SHEET
56 OF 82

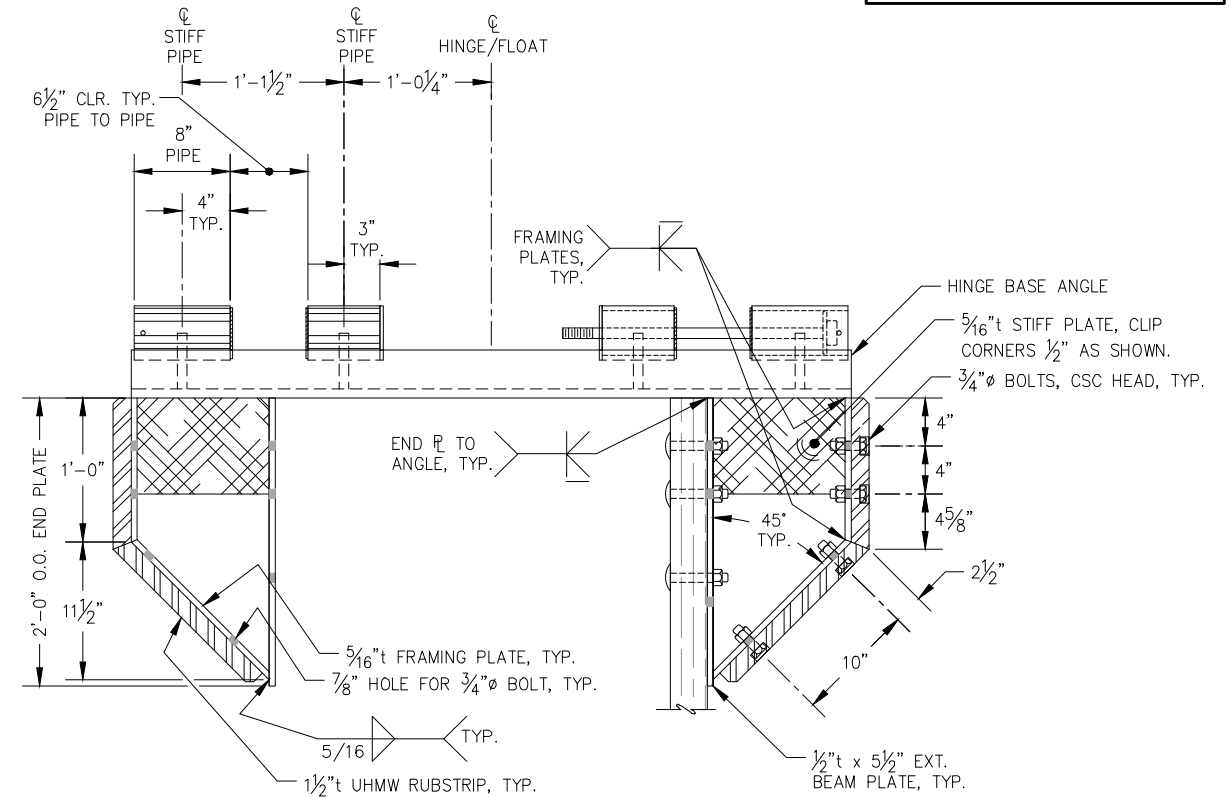
\\Pnfd\data\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.07-6.09 Piano Hinge Details.dwg 10/30/2015 11:18:42 PM



NOTE:
 OUTER BOLT PLACEMENT IS FINGER SPECIFIC. PLACE TO AVOID DIAPHRAGM CONFLICT. SEE DETAILED FLOAT PLAN FOR ϕ OF HINGE LOCATION.



NOTE:
 OMIT WALER BOLTS WITHIN LIMITS OF PIANO HINGE CONNECTION, TYP.



4-FT HINGE WELDMENT

3-FT HINGE WELDMENT

NOTE: APPLY NON-SKID TO ALL HINGE SURFACES EXPOSED TO FOOT TRAFFIC, INCLUDING BASE ANGLES AND PIPE SEGMENTS

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
 ENGINEERS, INC.

9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
 DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

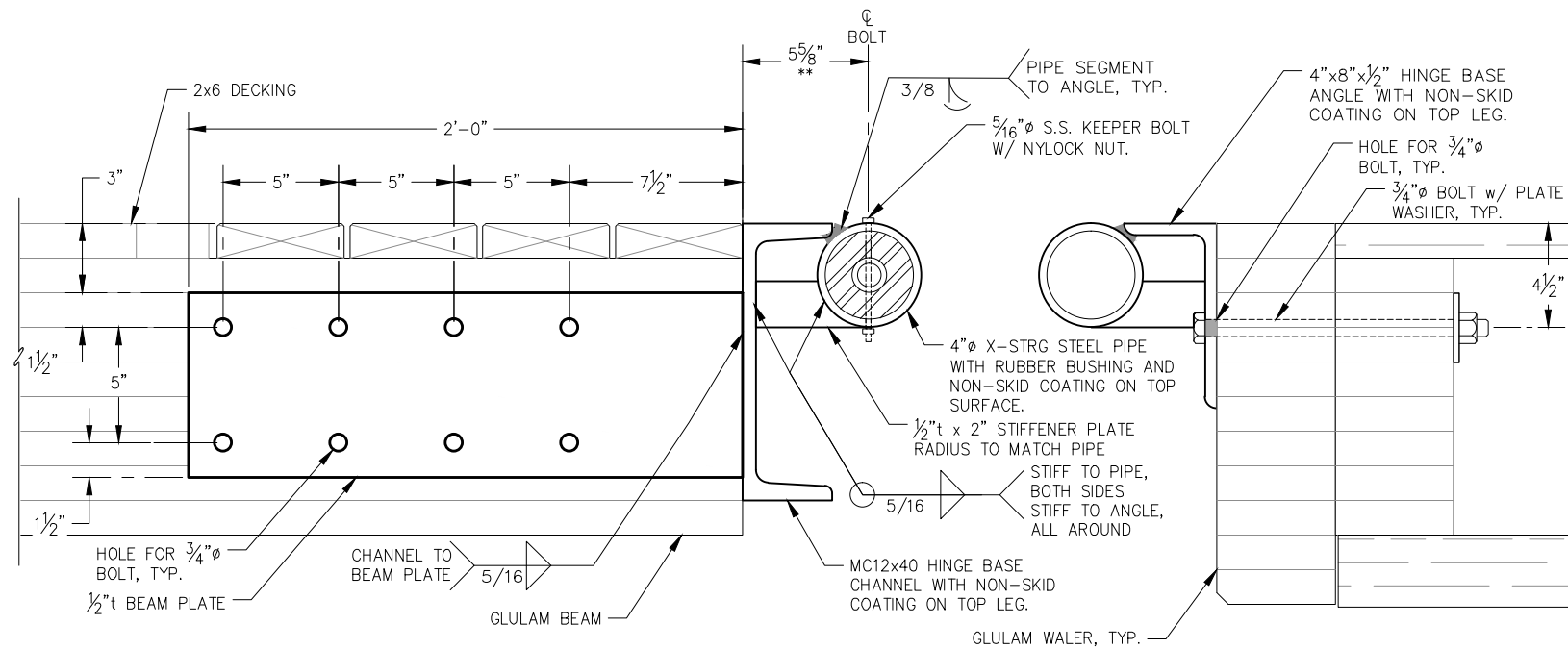
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

SHEET TITLE:
PIANO HINGE DETAILS

6.08
 SHEET
 57 OF 82

PND PROJECT NO.: 152037

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.07-6.09 Piano Hinge Details.dwg 10/30/2015 11:18:46 PM

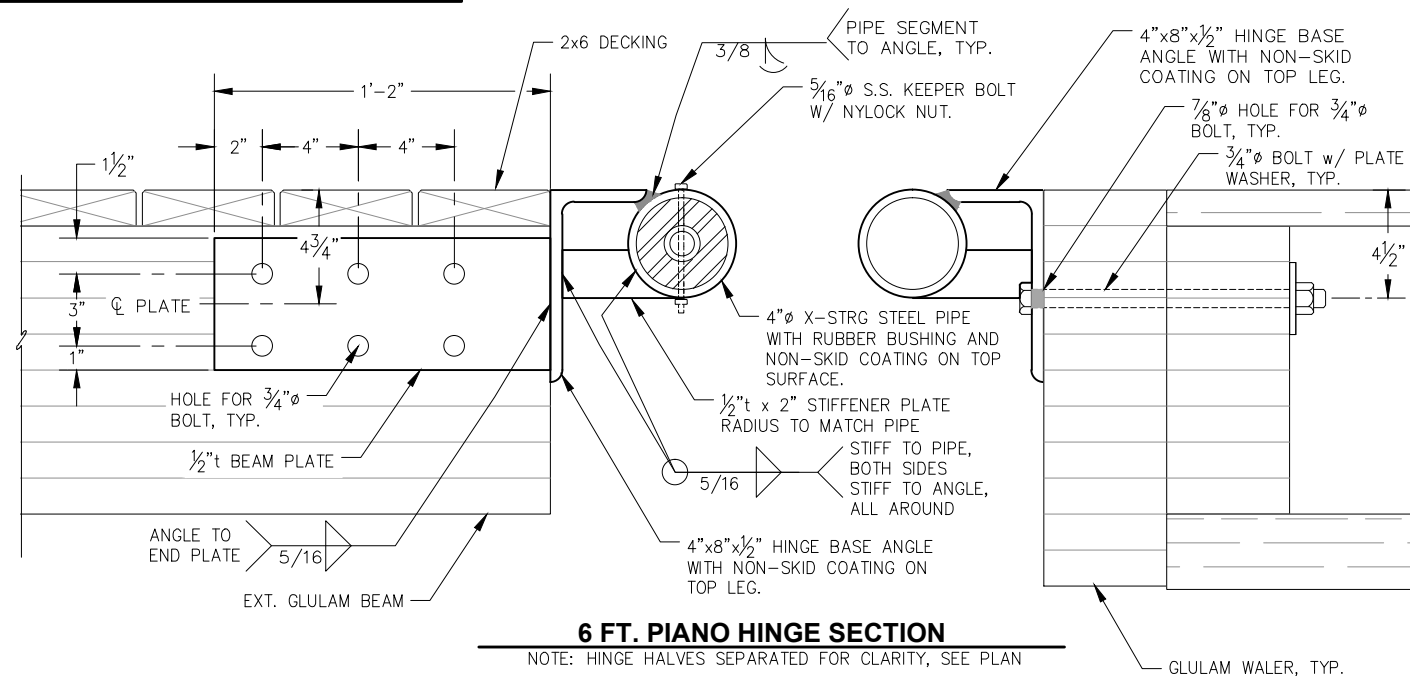


10 FT. PIANO HINGE SECTION

NOTE: HINGE HALVES SEPARATED FOR CLARITY, SEE PLAN

NOTE: OMIT WALER BOLTS WITHIN LIMITS OF PIANO HINGE CONNECTION, TYP.

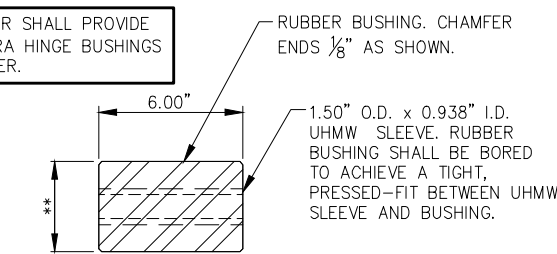
NOTES:
 FABRICATOR TO DRY-FIT HINGE ASSEMBLIES PRIOR TO APPLICATION OF COATINGS TO ENSURE HINGE MOVES FREELY, DOES NOT BIND AND HAS ADEQUATE GAPS BETWEEN PIPE SEGMENTS OF EQUAL SIZE.
 ** DIMENSION ASSUMED TO BE MINIMUM OF 5/8". FABRICATOR SHALL VERIFY DIMENSION REQUIRED FOR TOP OF PIPE SEGMENT TO BE FLUSH WITH TOP OF ANGLE, AND WELDED AS SHOWN. ALSO, PIPE SEGMENT SHALL HAVE ADEQUATE CLEARANCE BETWEEN IT AND THE ANGLE/CHANNEL TOP LEG SUCH THAT WHEN ASSEMBLED, HINGE PIPE SEGMENTS DO NOT RUB AGAINST EDGE OF ANGLE/CHANNEL TOP LEG. (AVOID NON-SKID COATING BEING WORN OFF AFTER INSTALLATION.)



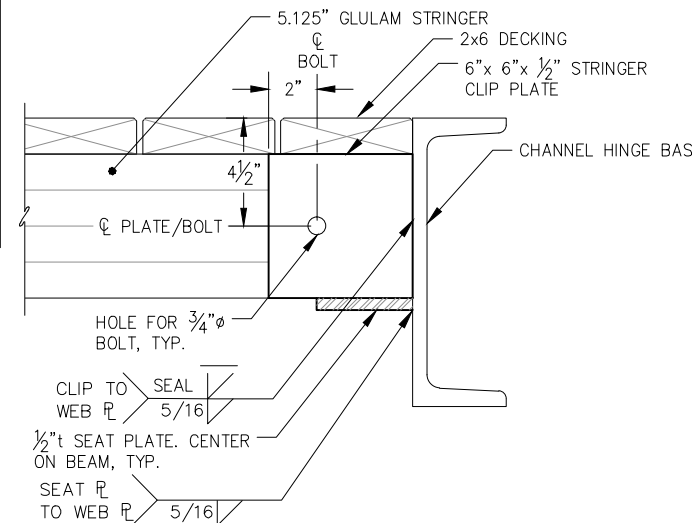
6 FT. PIANO HINGE SECTION

NOTE: HINGE HALVES SEPARATED FOR CLARITY, SEE PLAN

****NOTE:** FABRICATOR SHALL PROVIDE (12) EXTRA HINGE BUSHINGS FOR OWNER.

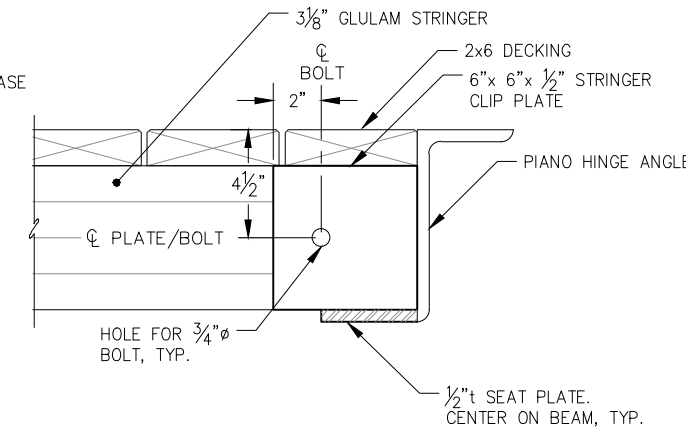


TYPICAL HINGE BUSHING
 (BUSHINGS TYPICAL ALL HINGE PIPE SEGMENTS)



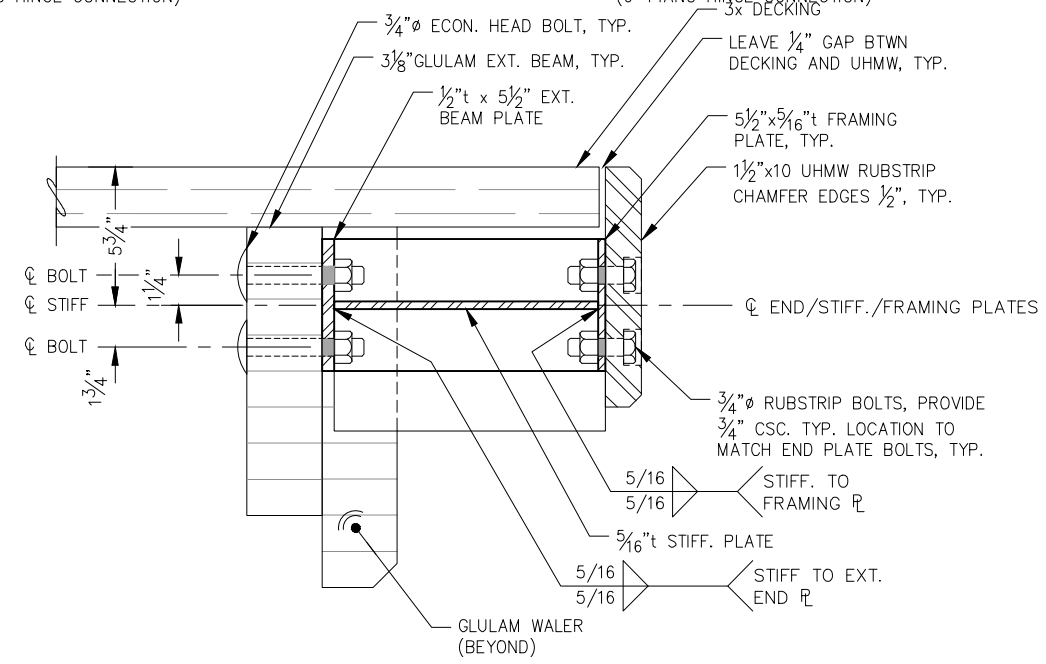
SECTION AT STRINGER CLIP w/ SEAT PLATE

(10' PIANO HINGE CONNECTION)



SECTION AT STRINGER CLIP w/ SEAT PLATE

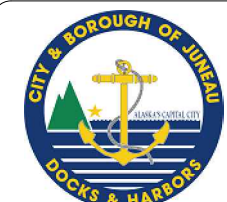
(6' PIANO HINGE CONNECTION)



PARTIAL HINGE SECTION

(3' AND 4' WIDE FINGERS ONLY)

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
 9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
 DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

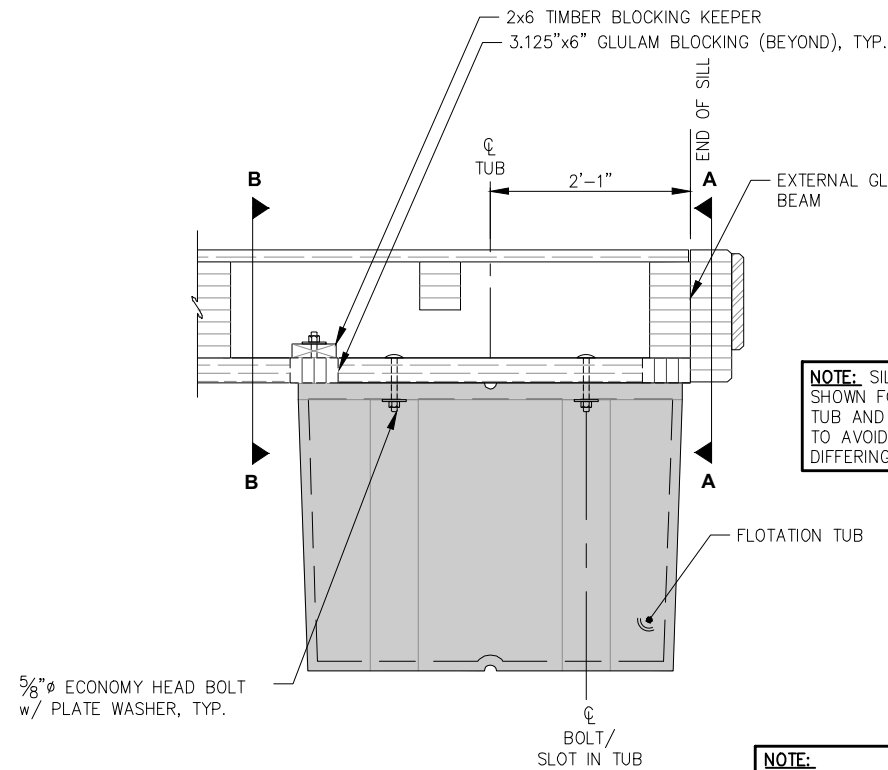
**CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001**

SHEET TITLE:
PIANO HINGE DETAILS

PND PROJECT NO.: 152037

6.09
 SHEET
 58 OF 82

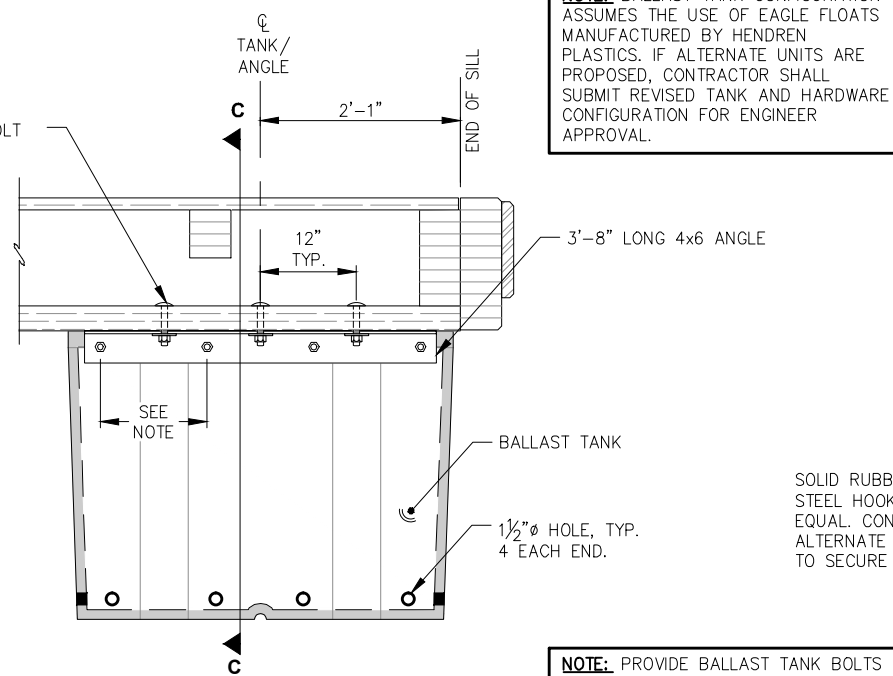
\\Profjndata\d15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.07-6.09 Piano Hinge Details.dwg 10/30/2015 11:05:51 PM



4x4 FLOTATION TUB
(MODULE SECTION VIEW)

NOTE: SILL CONNECTION ANGLES NOT SHOWN FOR CLARITY. COUNTERSINK TUB AND TANK BOLTS AS REQUIRED TO AVOID CONFLICTS DUE TO DIFFERING RIB LOCATIONS.

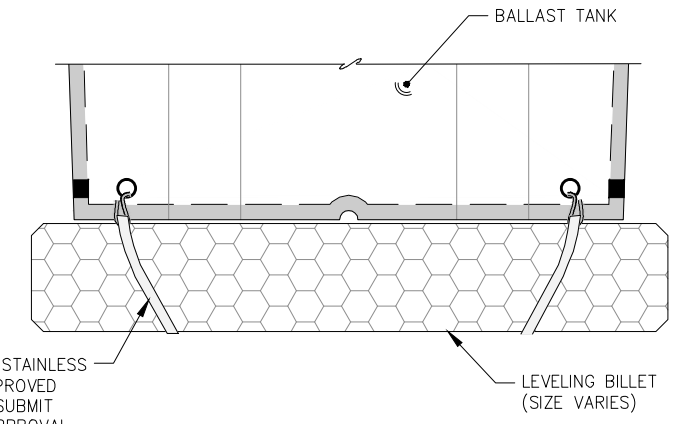
NOTE:
• BALLAST TANK WALL THICKNESS SHALL BE 0.375"
• FLOTATION TANK WALL THICKNESS SHALL BE 0.175"



4x4 BALLAST TANK
(MODULE SECTION VIEW)

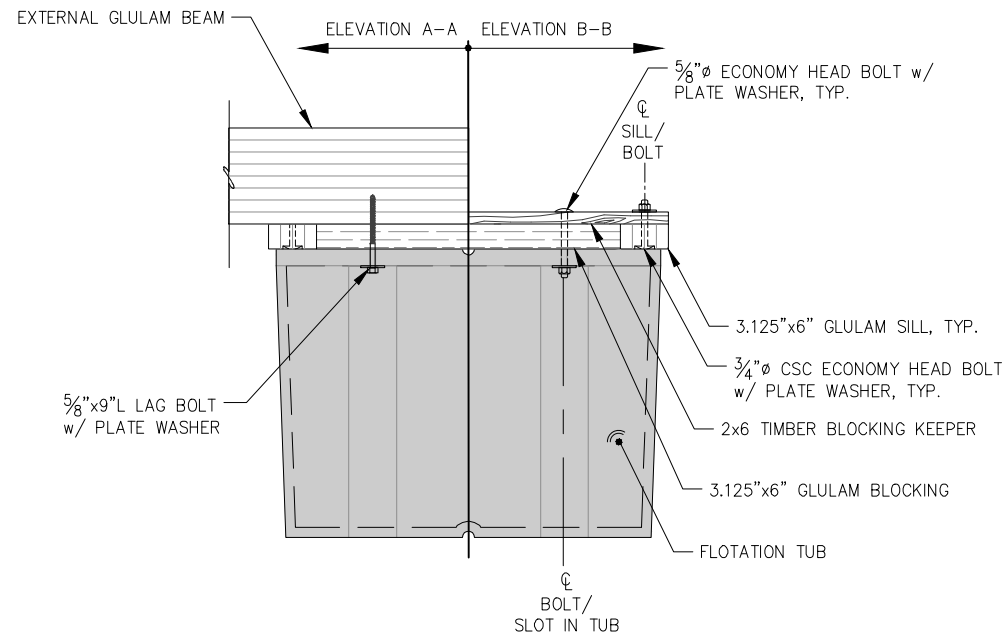
NOTE: BALLAST TANK CONFIGURATION ASSUMES THE USE OF EAGLE FLOATS MANUFACTURED BY HENDREN PLASTICS. IF ALTERNATE UNITS ARE PROPOSED, CONTRACTOR SHALL SUBMIT REVISED TANK AND HARDWARE CONFIGURATION FOR ENGINEER APPROVAL.

NOTE: PROVIDE BALLAST TANK BOLTS IN THE QUANTITY SHOWN, LAYOUT BOLT HOLE LOCATIONS TO AVOID REINFORCING RIBS IN THE BALLAST TANK, BOLTS SHOULD BE EQUALLY SPACED UNLESS LOCATION OF REINFORCING RIBS PREVENTS AN EQUAL LAYOUT.

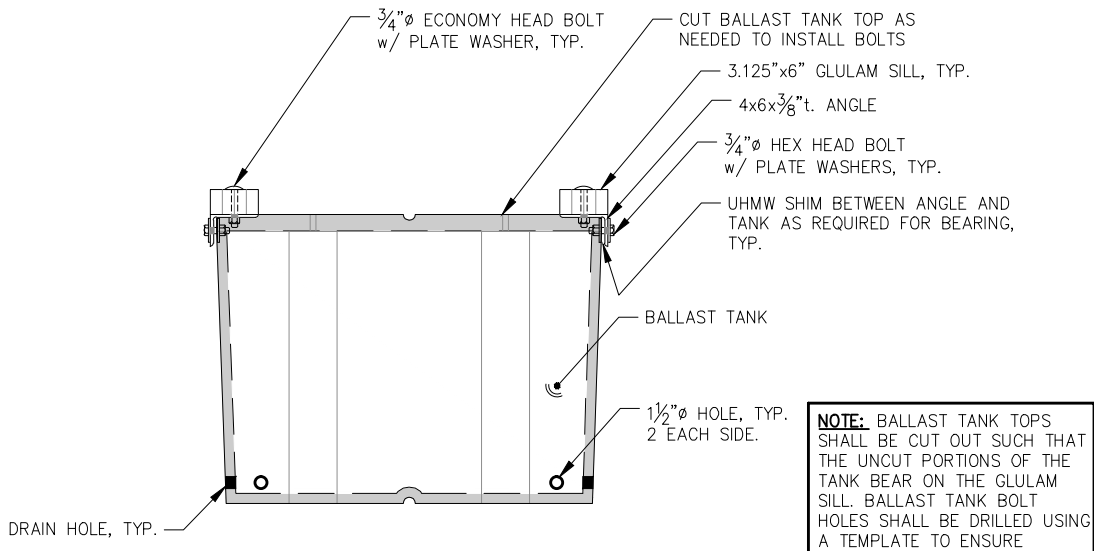


LEVELING BILLET

NOTE: PROVIDE LEVELING BILLETS IN SIZE AND QUANTITY NOTED IN BID SCHEDULE, FIELD INSTALL PER ENGINEER DIRECTION.



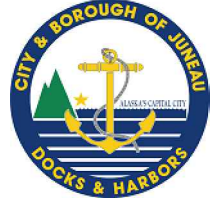
4x4 FLOTATION TUB
(MODULE ELEVATION VIEW)



4x4 BALLAST TANK
(SECTION C-C VIEW)

NOTE: BALLAST TANK TOPS SHALL BE CUT OUT SUCH THAT THE UN-CUT PORTIONS OF THE TANK BEAR ON THE GLULAM SILL. BALLAST TANK BOLT HOLES SHALL BE DRILLED USING A TEMPLATE TO ENSURE ACCURATE FIT UP.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**BALLAST TANK AND
FLOTATION TUB DETAILS**

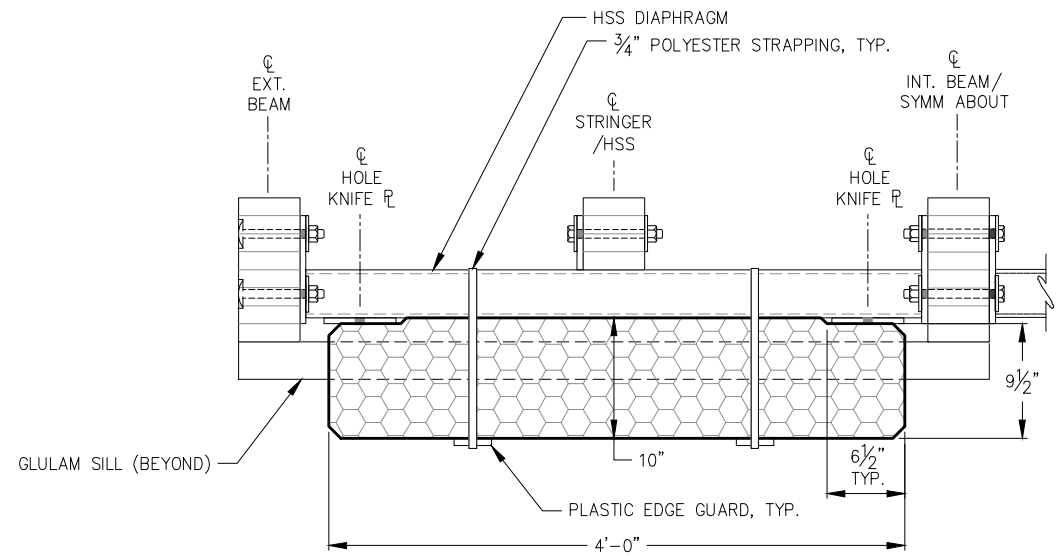
PND PROJECT NO.: 152037

6.10
SHEET
59 OF 82

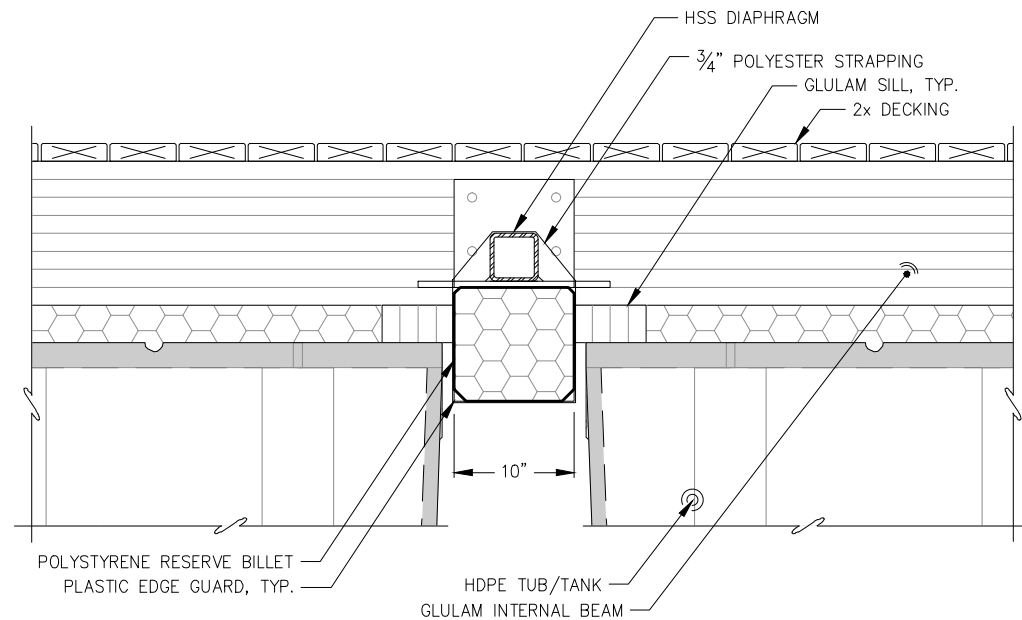
DATE: 10/27/2015

\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.10-6.11 Float and Ballast Details.dwg, 10/30/2015 1:18:57 PM

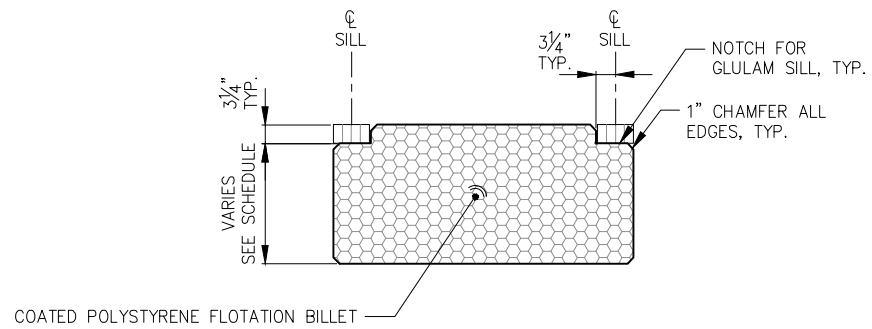
\\P:\projdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.10-6.11 Float and Ballast Details.dwg, 10/30/2015 1:19:01 PM



RESERVE BILLET - SECTION



RESERVE BILLET - PLAN

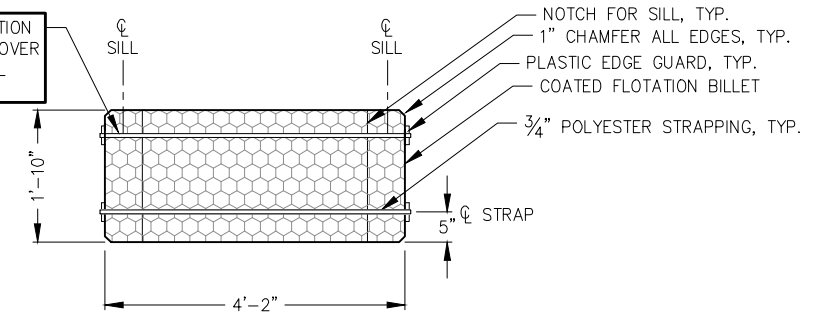


FLOTATION BILLET - SIDE ELEVATION

NOTE: SEE FLOTATION SCHEDULE FOR DEPTH AND WIDTH OF BILLETS.

NOTE: STRAP SHOWN FOR ILLUSTRATION ONLY. STRAPS ARE TO LAY ATOP/ OVER GLULAM SILLS AS SHOWN IN TYPICAL FLOAT SECTIONS.

NOTE: CUT NOTCHES IN POLYSTYRENE FLOTATION BILLET OVERSIZE SUCH THAT THE DIMENSIONS SHOWN ARE ACHIEVED AFTER COATING APPLICATION.



STANDARD FLOTATION BILLET - PLAN

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

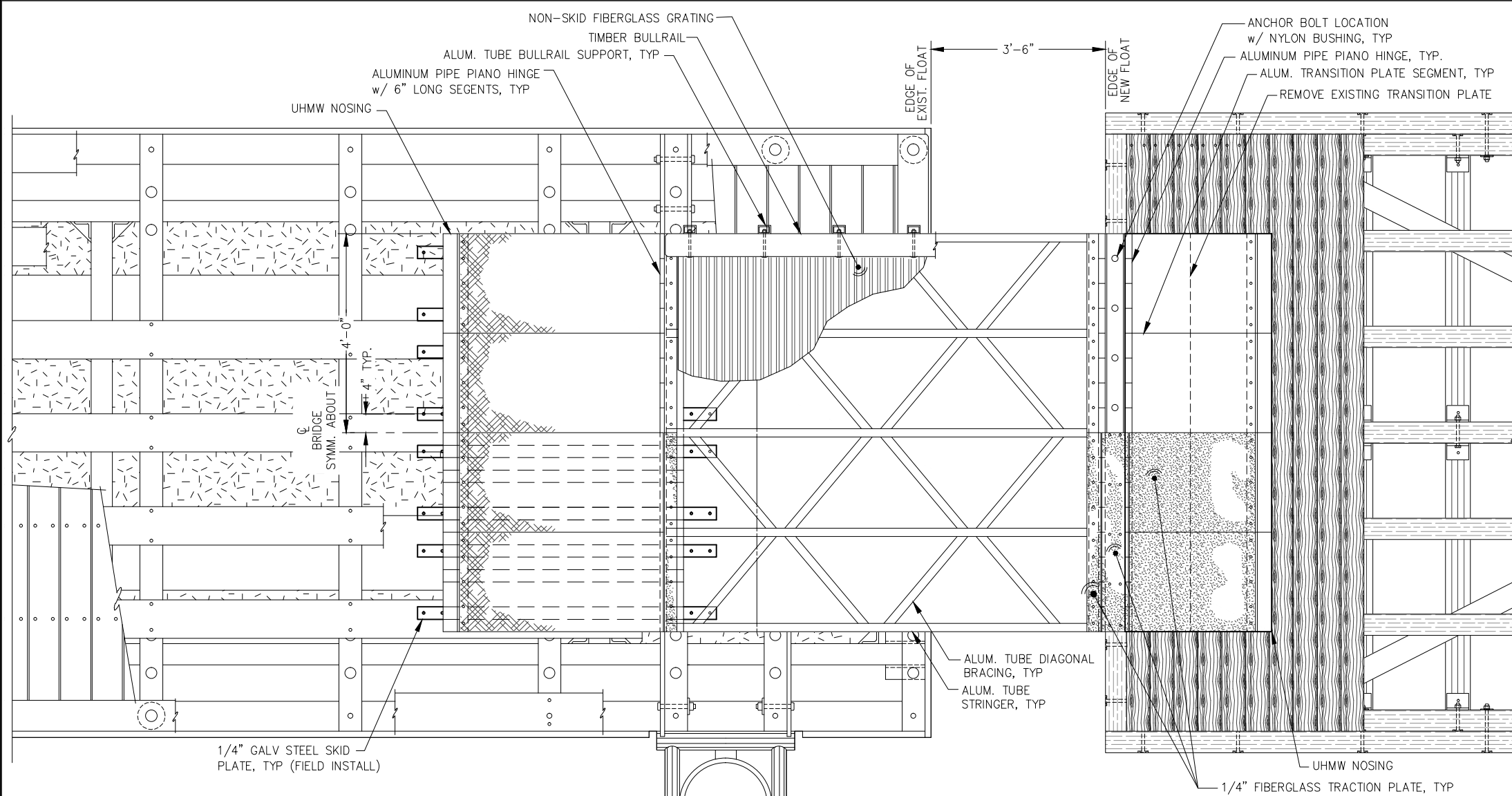
DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

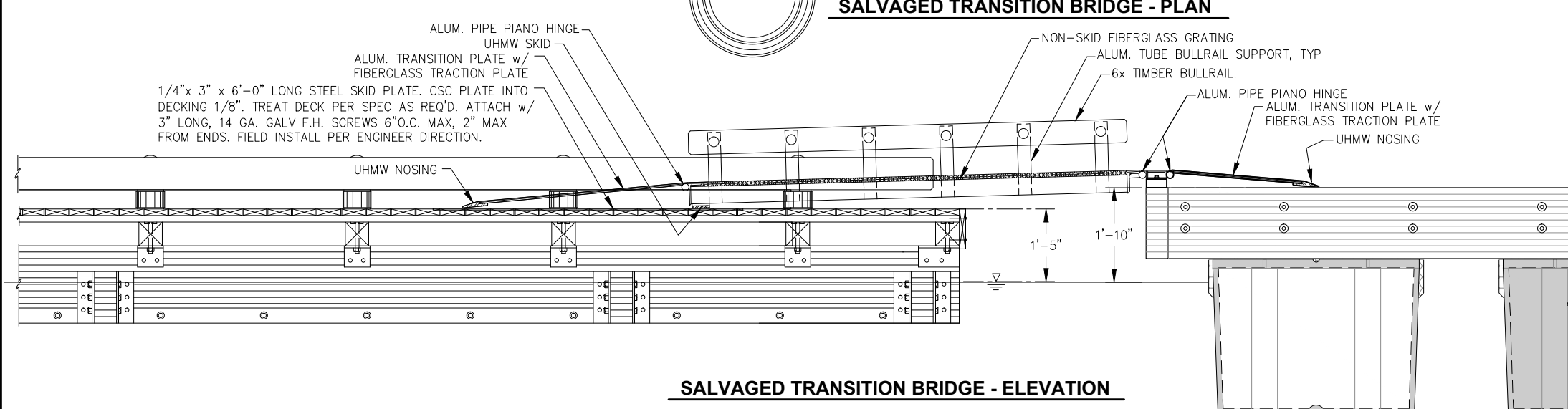
SHEET TITLE:
FLOTATION BILLET DETAILS

PND PROJECT NO.: 152037

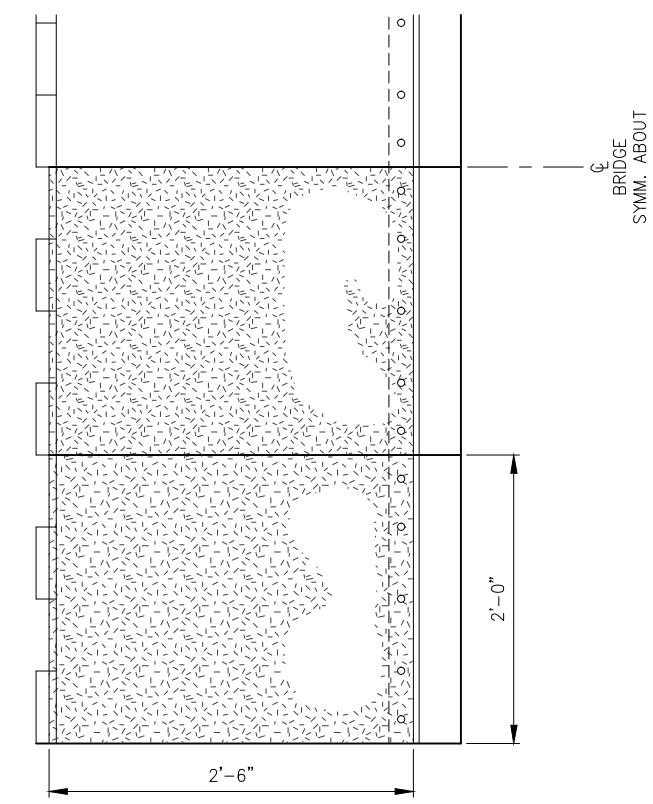
6.11
SHEET
60 OF 82



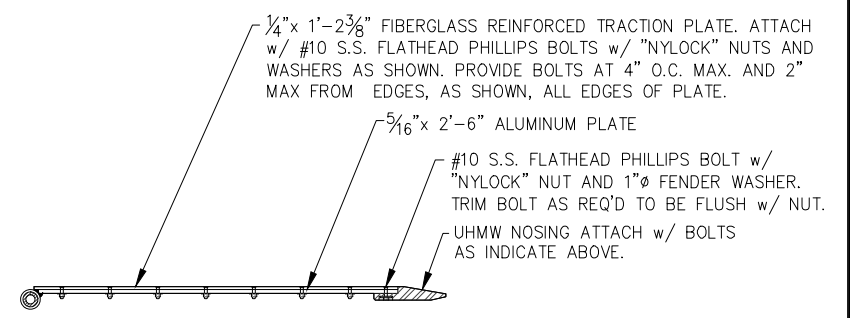
SALVAGED TRANSITION BRIDGE - PLAN



SALVAGED TRANSITION BRIDGE - ELEVATION



TRANSITION PLATE - PLAN



TRANSITION PLATE - ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

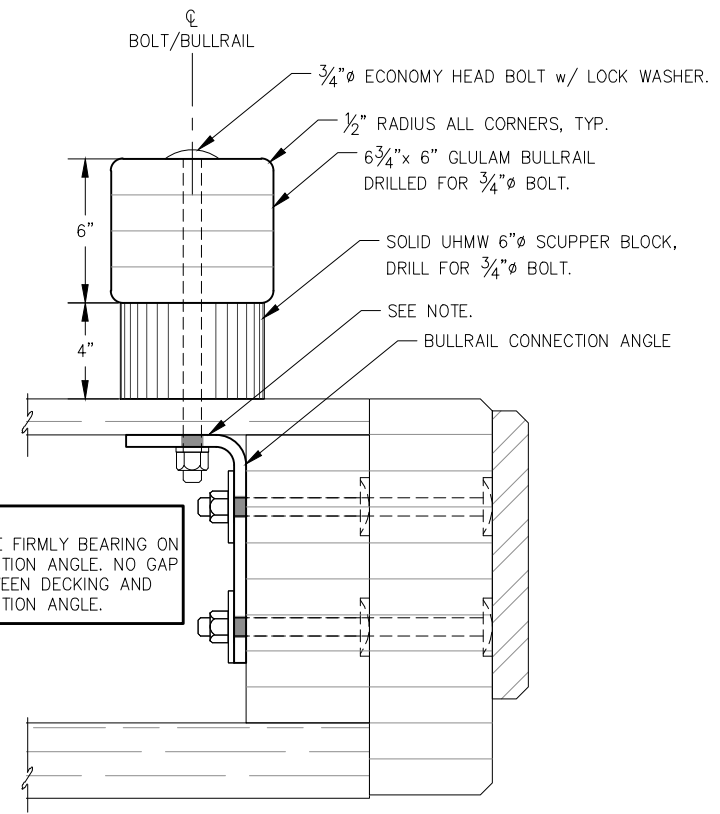
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
TRANSITION BRIDGE DETAILS

PND PROJECT NO.: 152037

6.12
SHEET
61 OF 82

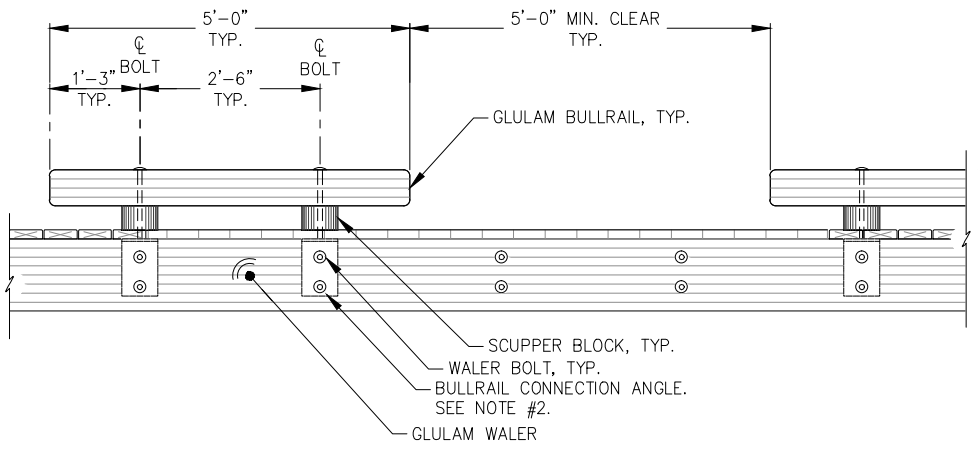
I:\Prof\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.12 Transition Bridge.dwg, 10/30/2015 1:19:07 PM



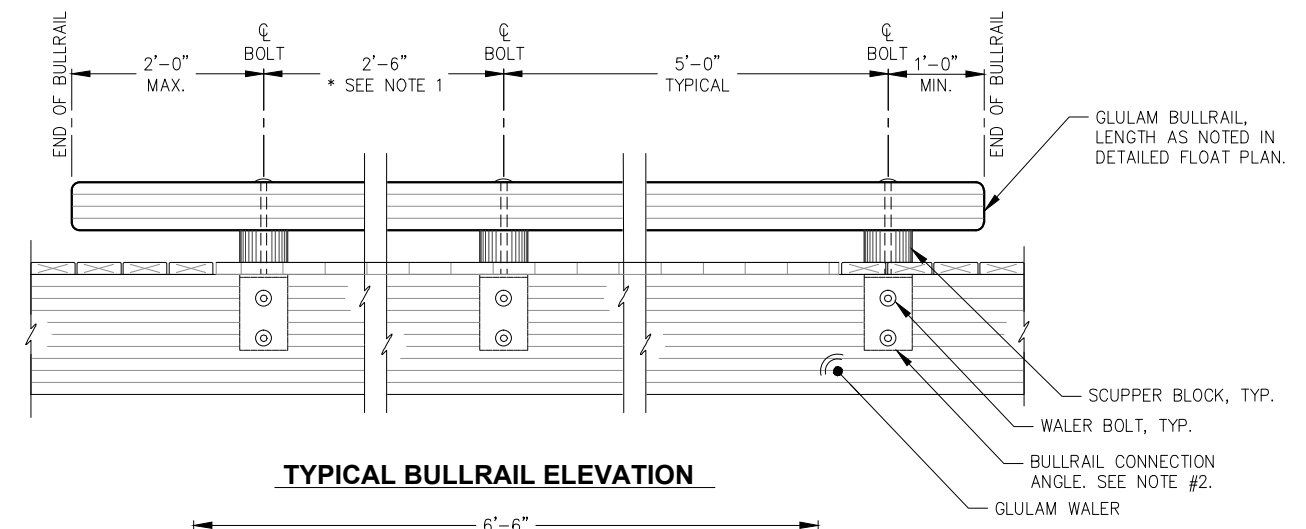
NOTE:
DECKING MUST BE FIRMLY BEARING ON BULLRAIL CONNECTION ANGLE. NO GAP IS ALLOWED BETWEEN DECKING AND BULLRAIL CONNECTION ANGLE.

NOTE:
1. UTILIZE 2'-6" SCUPPER BLOCK SPACING AS REQUIRED ON BULLRAIL LENGTHS THAT CANNOT MEET MINIMUM AND MAXIMUM OVERHANG REQUIREMENTS WITH 5'-0" SPACING.
2. ALIGN BULLRAIL CONNECTION ANGLE WITH WALER BOLT LOCATIONS, TYPICAL, UNLESS NOTED OTHERWISE.
3. NON-STANDARD SCUPPER BLOCK DIMENSIONS ARE SHOWN ON DETAILED FLOAT PLANS.

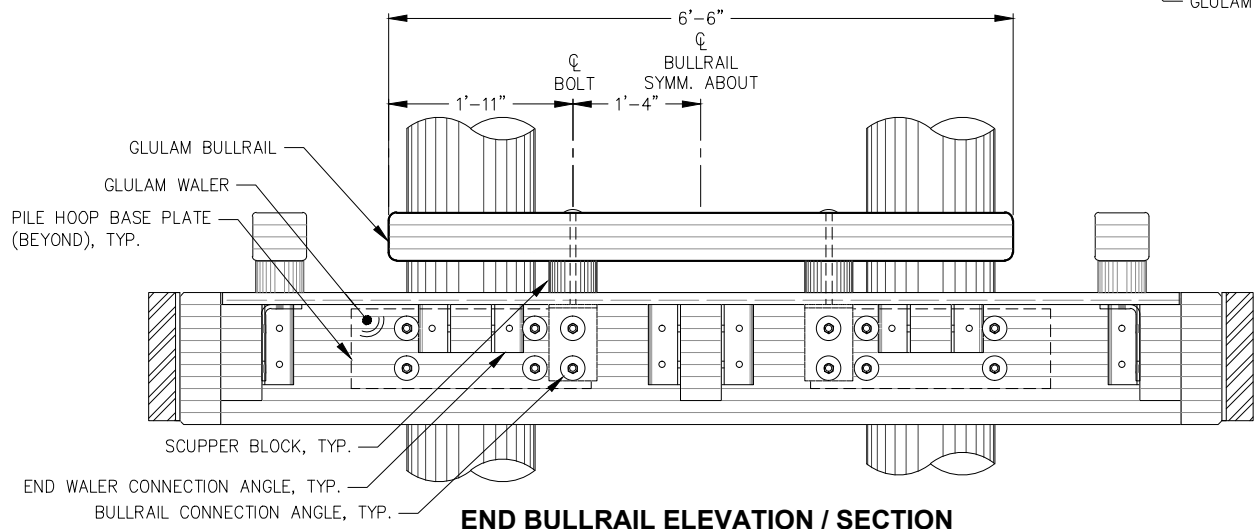
BULLRAIL AND SCUPPER BLOCK



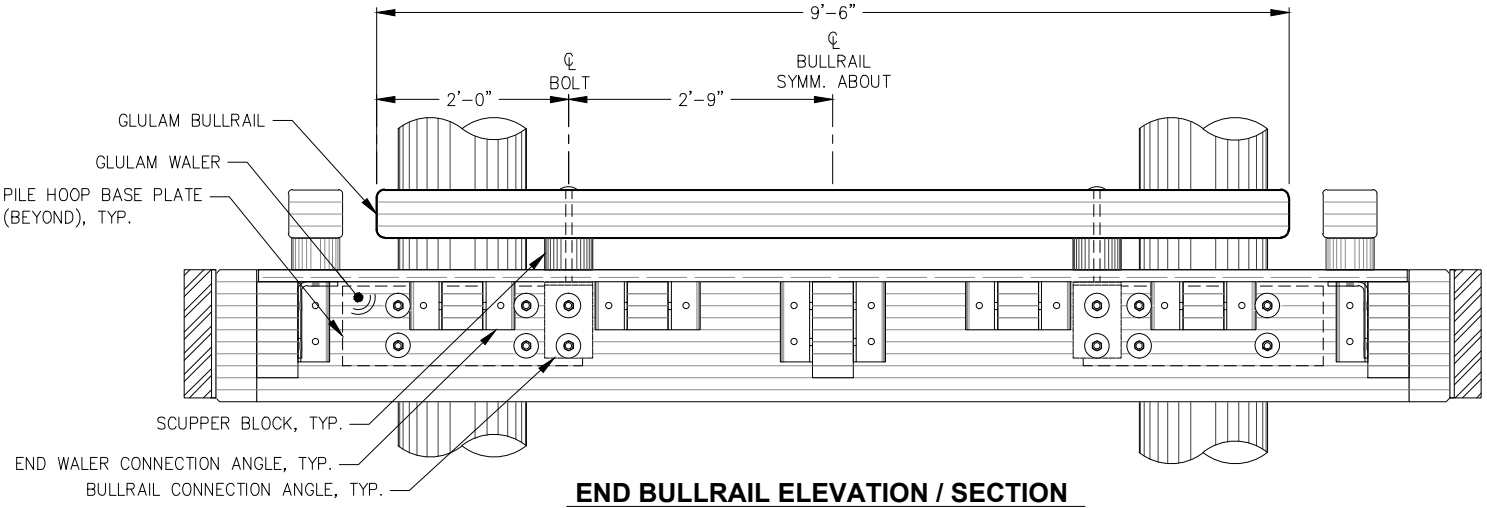
ADA BULLRAIL SEGMENTS
(FIRST 6' FINGER FLOAT AND MODULE C-1)



TYPICAL BULLRAIL ELEVATION

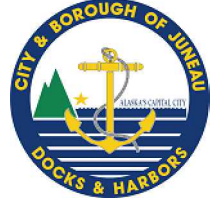


END BULLRAIL ELEVATION / SECTION
(MODULE A-6 AND C-6)



END BULLRAIL ELEVATION / SECTION
(MODULE H-6 AND T-1)

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

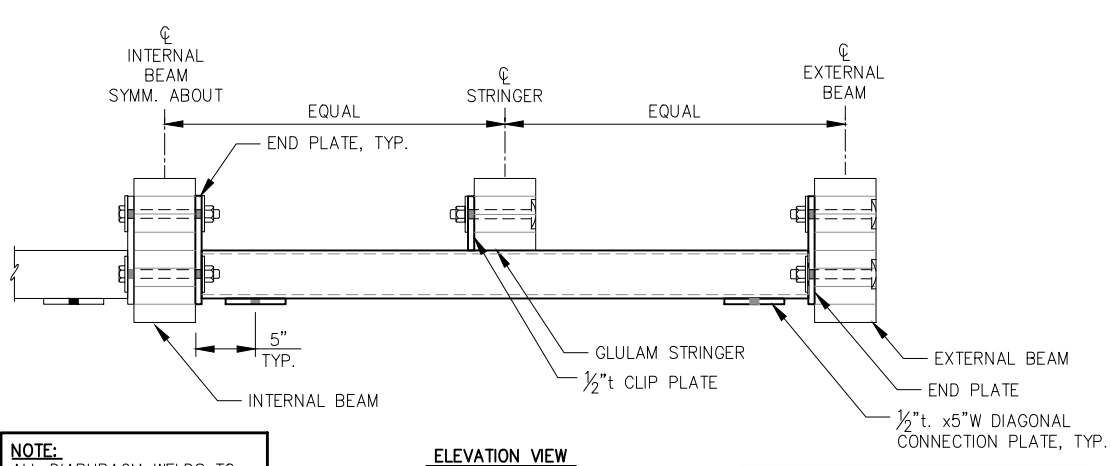
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
BULLRAIL STANDARD DETAILS
PND PROJECT NO.: 152037

6.13
SHEET
62 OF 82

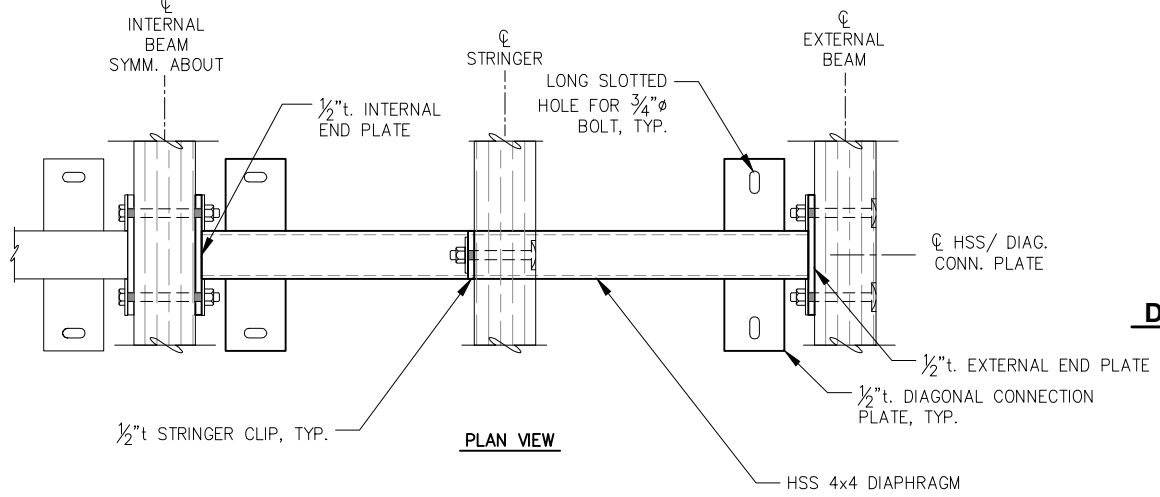
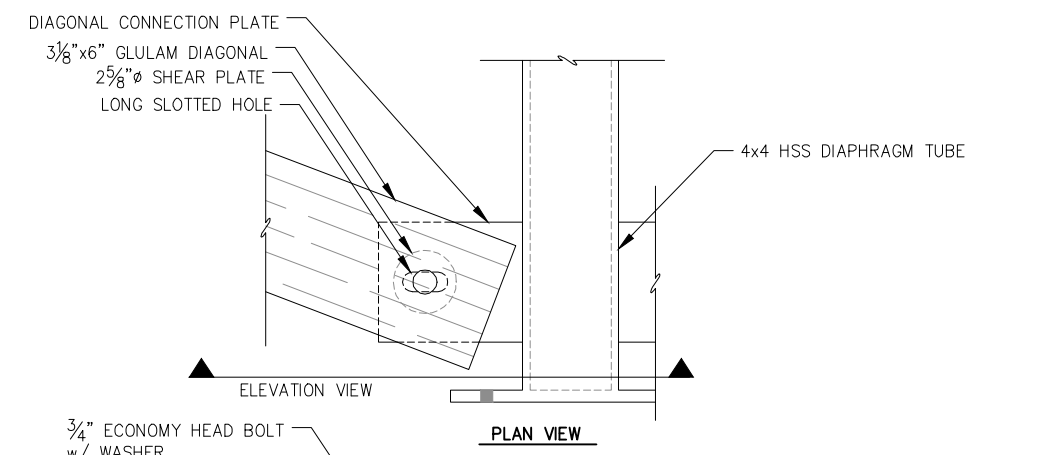
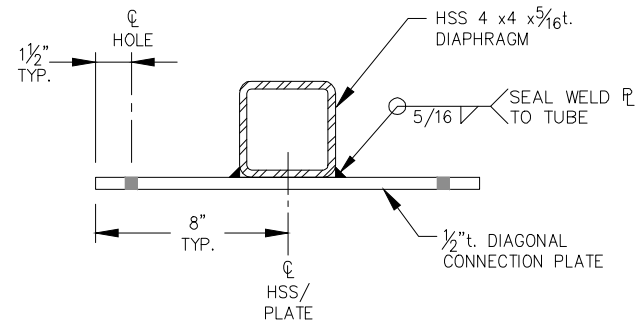
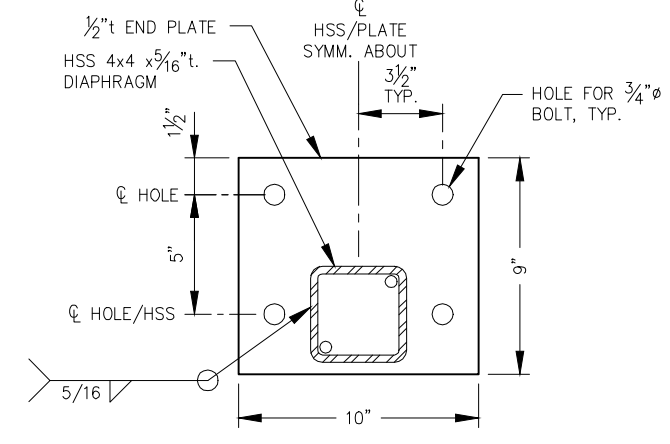
\\pnd\data\152037\152037_Douglas Harbor Renovation\G. Drawings\Design\6.13 Bullrail Details.dwg, 10/30/2015 1:19:12 PM

\\Pnd\jdata\d15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.14-6.17 Diaphragm and Misc. Details.dwg, 10/30/2015 1:19:18 PM



NOTE:
ALL DIAPHRAGM WELDS TO BE 5/16" FILLET ALL AROUND, UNLESS OTHERWISE NOTED.

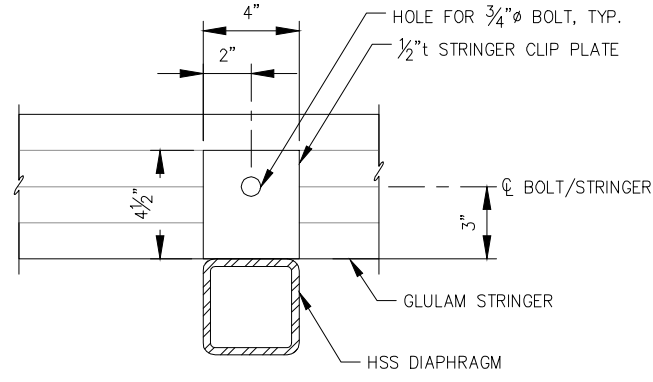
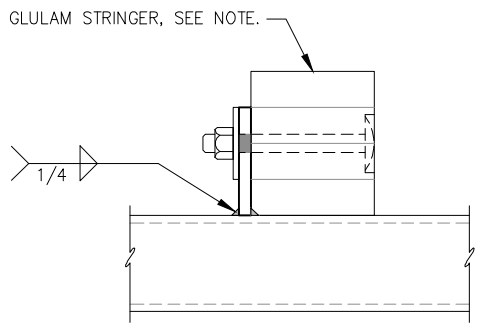
NOTE:
SEE FLOAT SECTIONS FOR DIMENSIONS AND DETAILS NOT SHOWN.



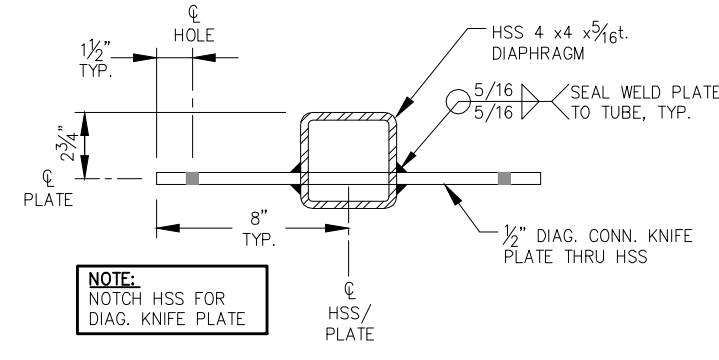
HSS DIAPHRAGM
(SEE FLOAT SECTION FOR DIMENSIONS NOT SHOWN.)

NOTE:
OMIT UPPER WALER BOLTS WITHIN LIMITS OF HSS DIAPHRAGM, TYP.

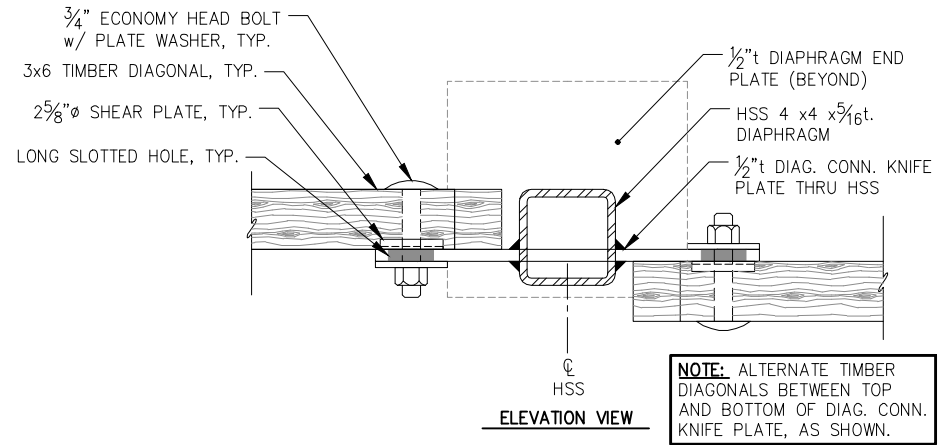
NOTE:
CHAMFER GLULAM STRINGER AT CLIP PLATE WELD SUCH THAT GLULAM SITS FLUSH AGAINST CLIP PLATE AND HSS DIAPHRAGM.



STRINGER CLIP PLATE



NOTE:
NOTCH HSS FOR DIAG. KNIFE PLATE



NOTE:
ALTERNATE TIMBER DIAGONALS BETWEEN TOP AND BOTTOM OF DIAG. CONN. KNIFE PLATE, AS SHOWN.

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

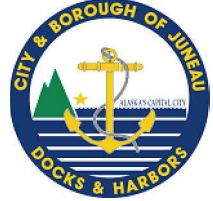
DATE: 10/27/2015

95% DESIGN REVIEW SUBMITTAL

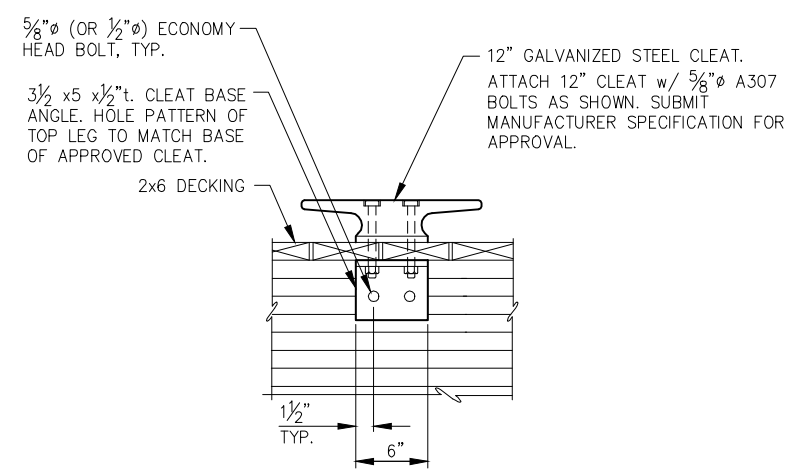
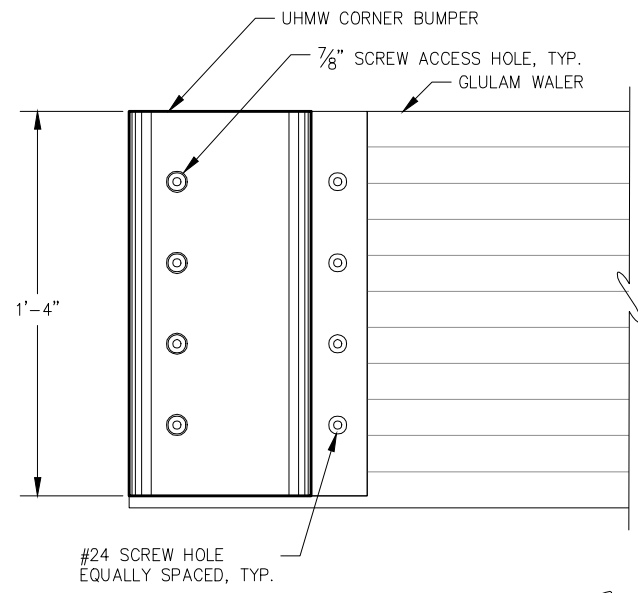
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **MISCELLANEOUS**
FLOAT MODULE DETAILS

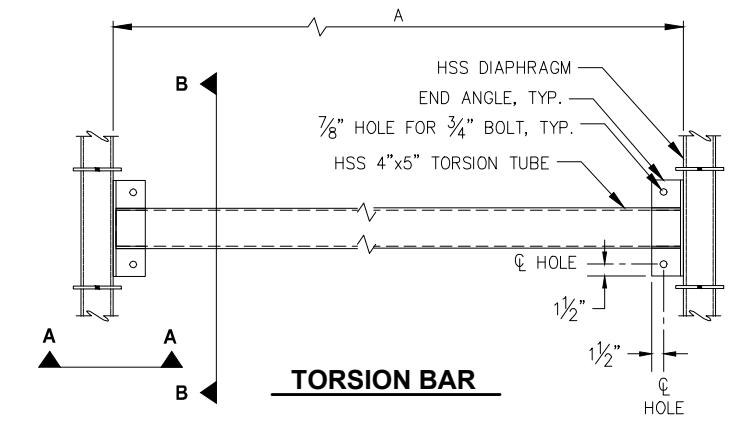
6.14
SHEET
63 OF 82



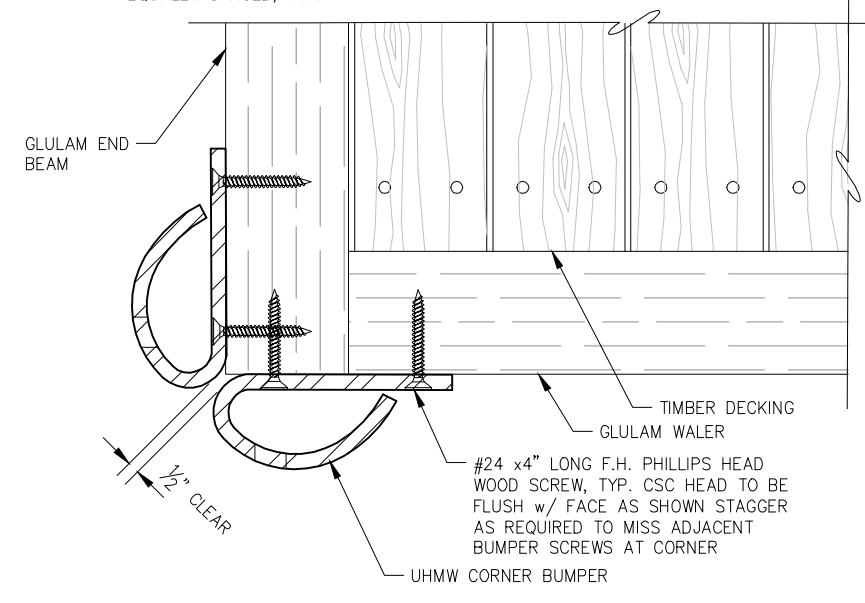
TORSION BAR SCHEDULE	
FLOAT SIZE	A
6'x42'	14'-8" 20'-10"
4'x32'	9'-6" 15'-10"
3'x24'	21'-4"



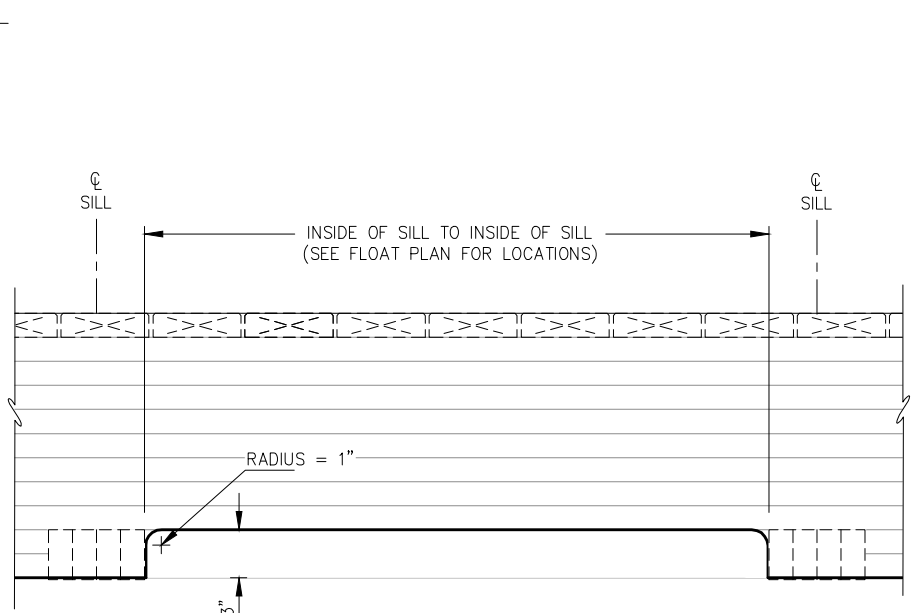
CLEAT BASE/STRINGER CONNECTION



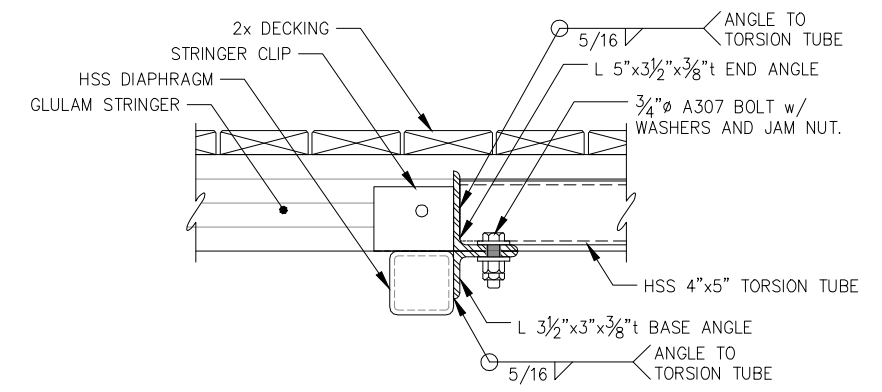
TORSION BAR



CORNER BUMPER DETAIL

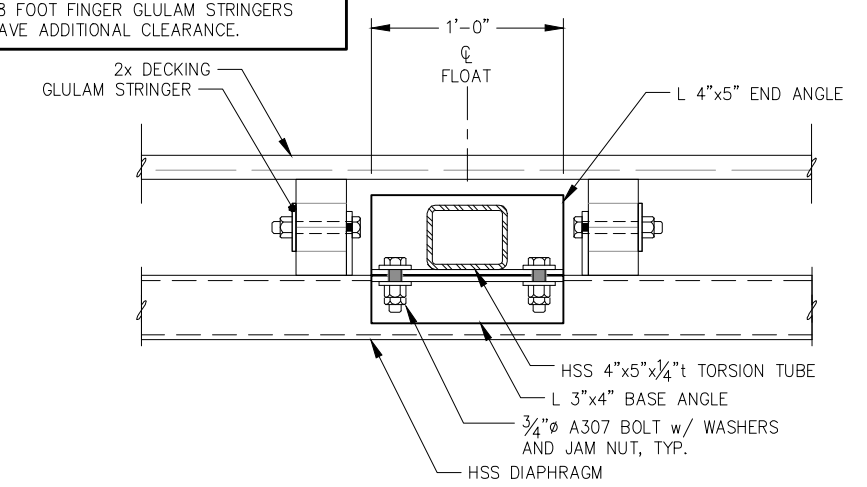


GLULAM WALER MODIFICATION FOR ELECTRICAL CABLE PASSAGE



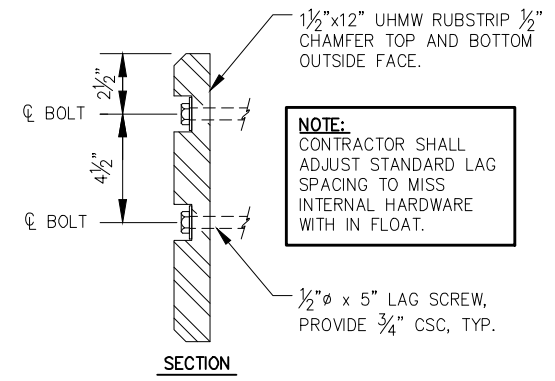
SECTION A-A

NOTE: GLULAM STRINGERS SHOWN IN 32 FOOT FINGER LOCATION. 42 FOOT AND 48 FOOT FINGER GLULAM STRINGERS HAVE ADDITIONAL CLEARANCE.

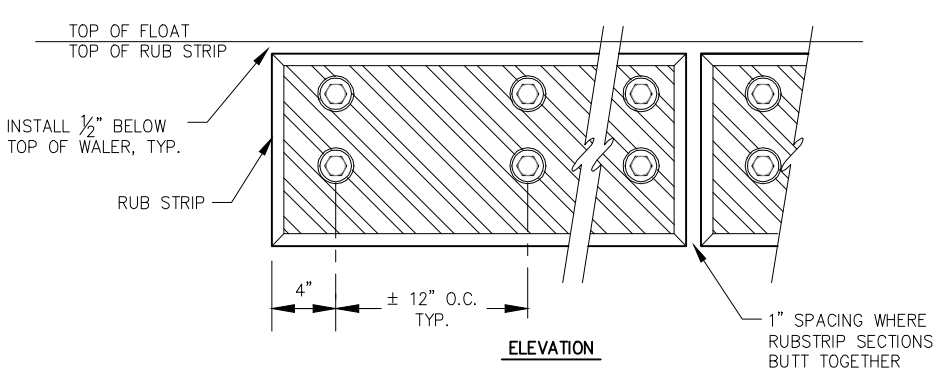


SECTION B-B

RUBSTRIP STANDARDS (U.N.O. ON FLOAT PLAN)		
FINGER SIZE	DIST. FROM HINGE (±)	RUBSTRIP LENGTH
42'	3'-0"	12'-0"
32'	2'-0"	10'-0"
24'	2'-0"	6'-0"

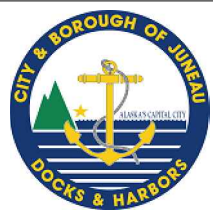


UHMW RUB STRIP DETAIL



ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

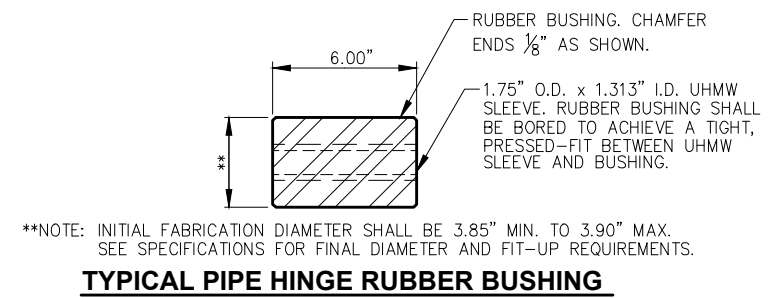
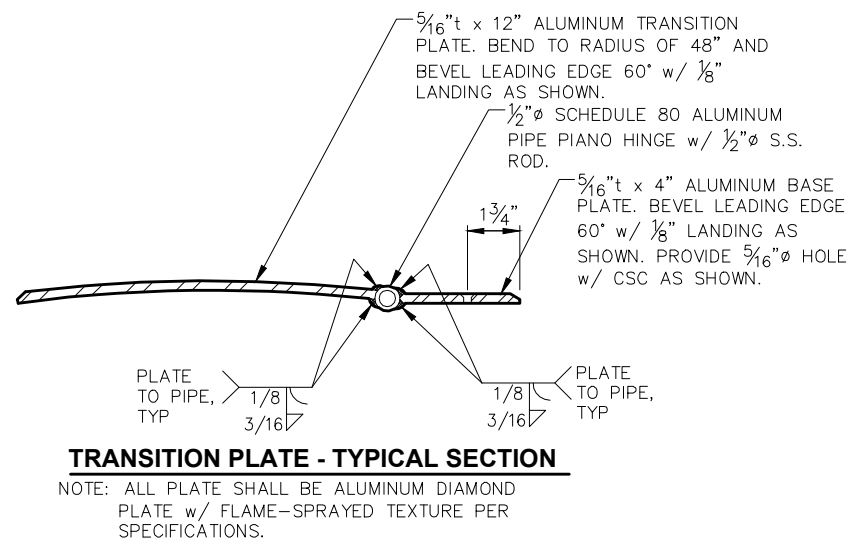
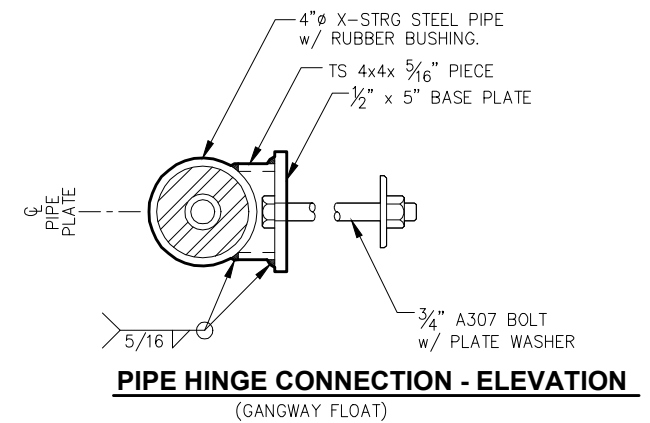
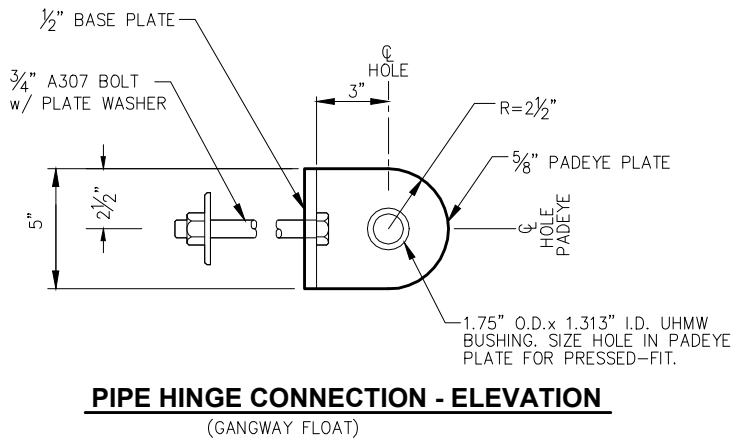
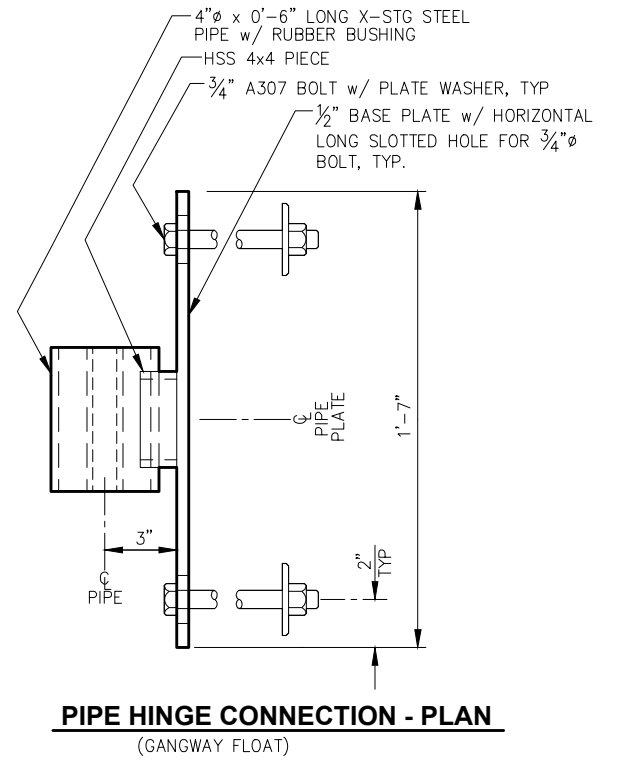
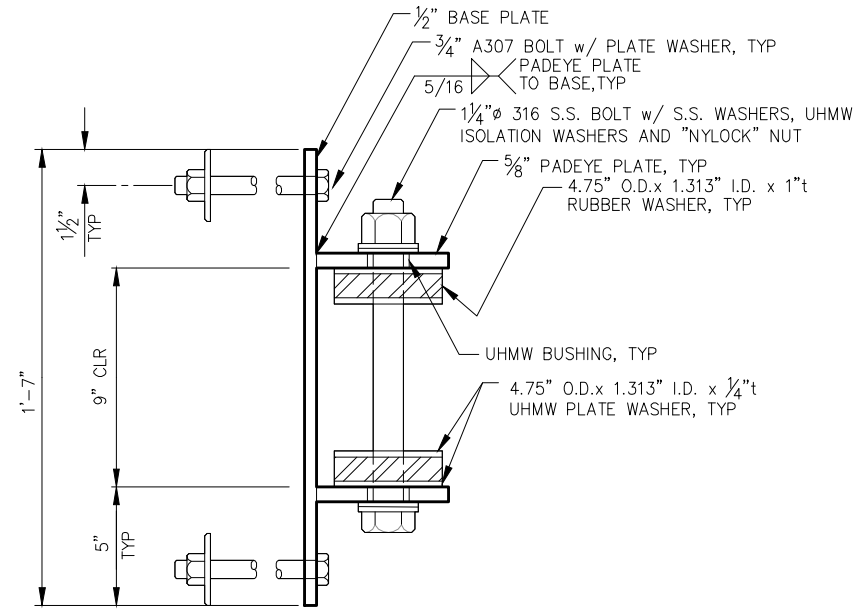
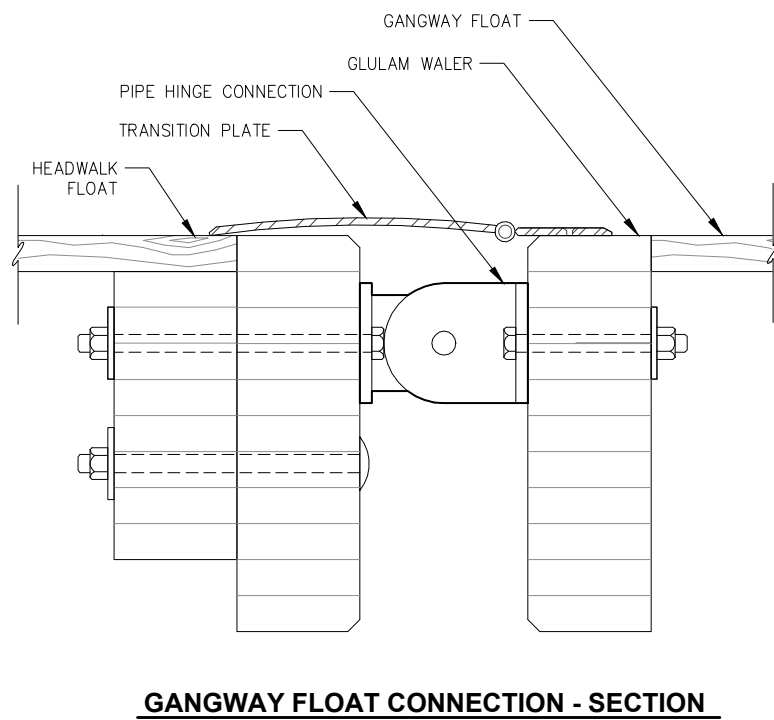
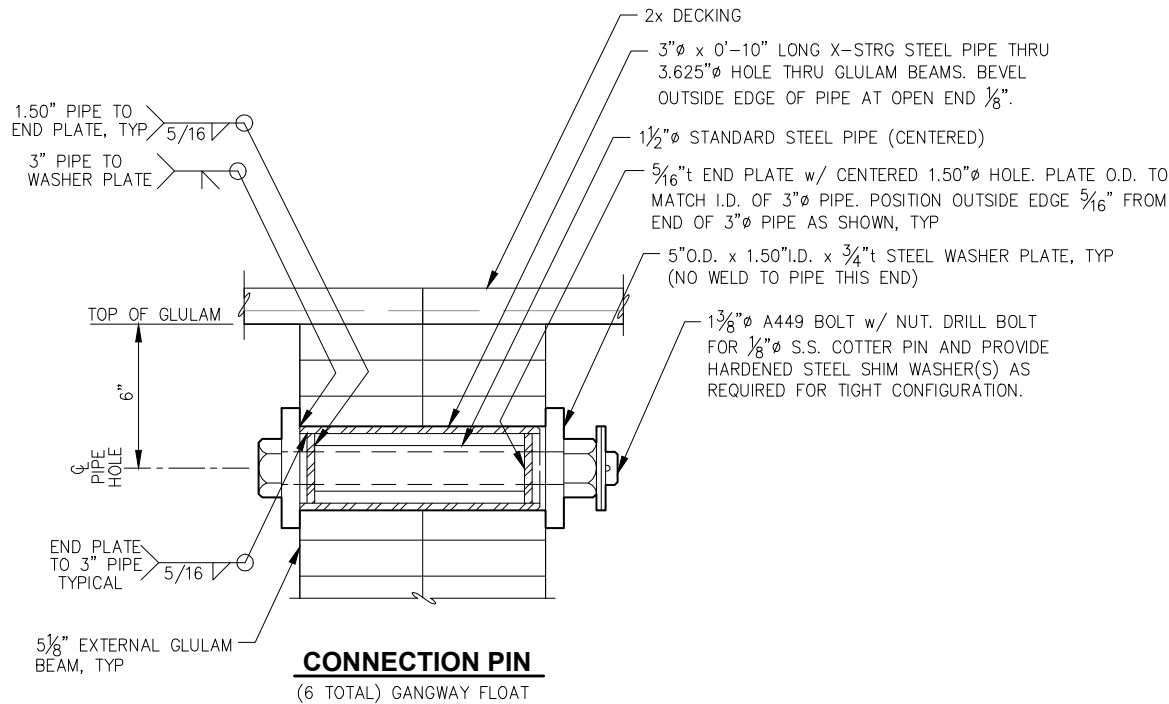
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **MISCELLANEOUS
FLOAT MODULE DETAILS**

PND PROJECT NO.: 152037

6.15
SHEET
64 OF 82

\\Pnd\jdata\d15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.14-6.17 Diaphragm and Misc. Details.dwg, 10/30/2015 1:19:22 PM



95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE:

DATE: 10/27/2015

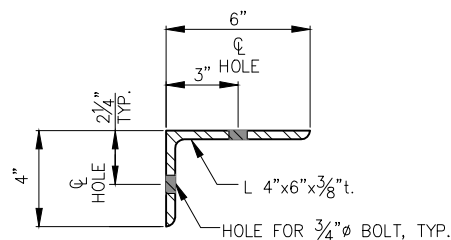
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**MISCELLANEOUS
FLOAT MODULE DETAILS**

6.16

SHEET
65 OF 82

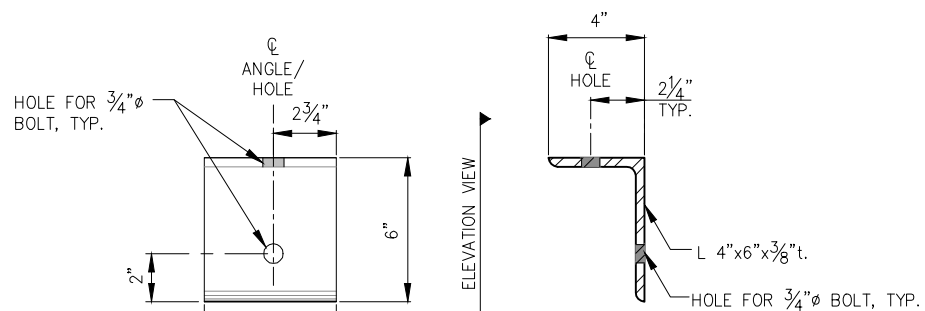
PND PROJECT NO.: 152037



SECTION

BALLAST TANK CONNECTION ANGLE

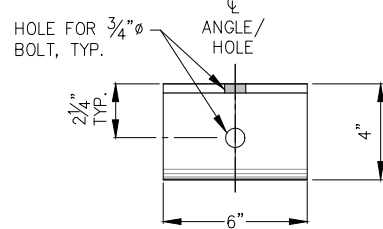
(LENGTH VARIES. SEE BALLAST TANK DETAILS)



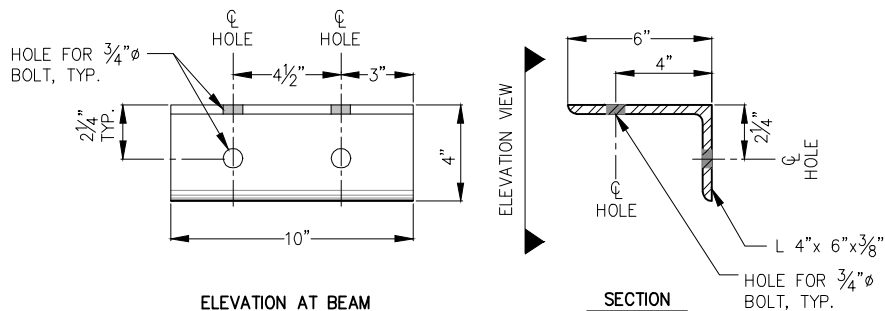
ELEVATION

SECTION

SILL CONNECTION ANGLE



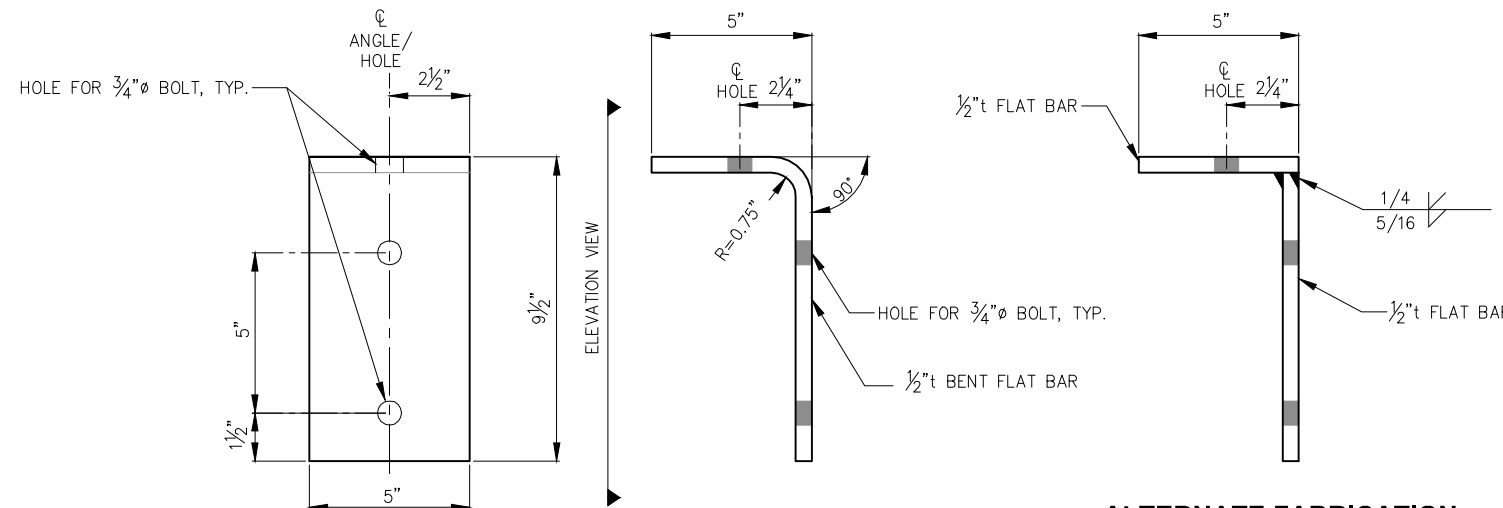
ELEVATION AT STRINGER



ELEVATION AT BEAM

SECTION

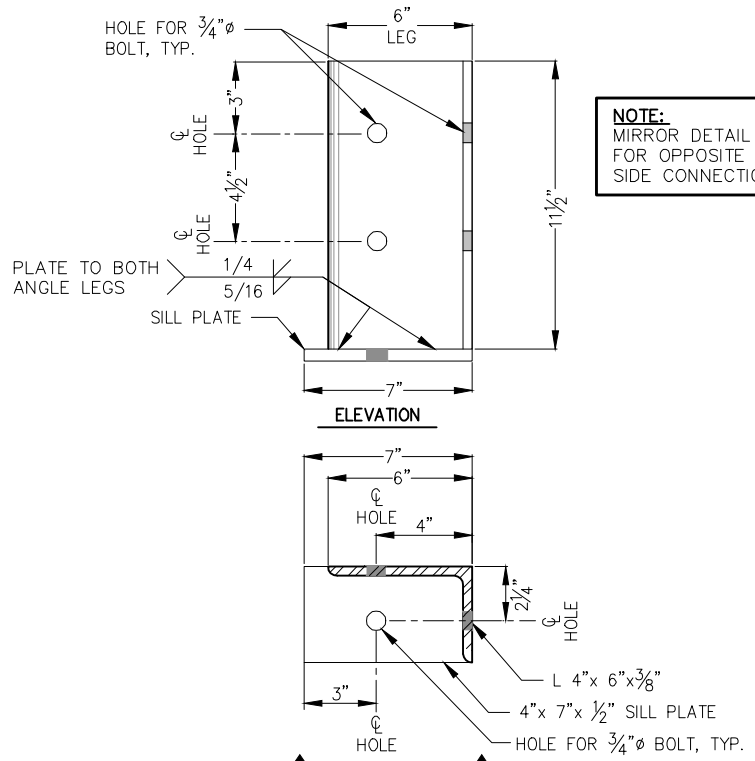
END GLULAM CONNECTION ANGLE



ELEVATION

SECTION

BULLRAIL CONNECTION ANGLE



ELEVATION

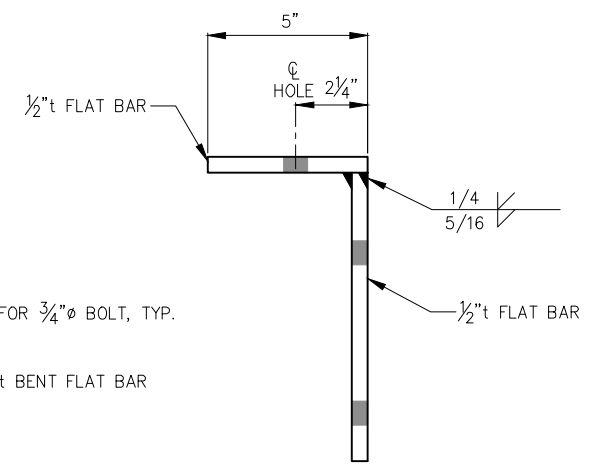
ELEVATION VIEW

SECTION

END GLULAM CONNECTION ANGLE WITH PLATE

(24' FINGER ONLY)

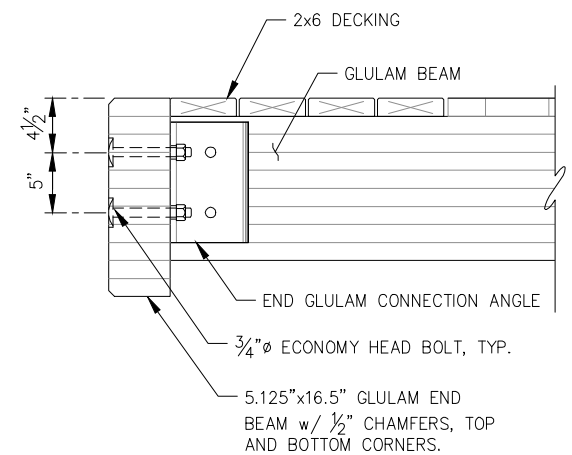
NOTE:
BULLRAIL CONNECTION ANGLE MAY BE
OPTIONALLY FABRICATED IN TWO WELDED PIECES.



ALTERNATE FABRICATION

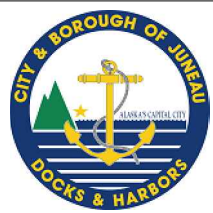
(FOR BULLRAIL CONNECTION ANGLE)

NOTE:
MIRROR DETAIL
FOR OPPOSITE
SIDE CONNECTION



FLOAT END GLULAM SECTION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

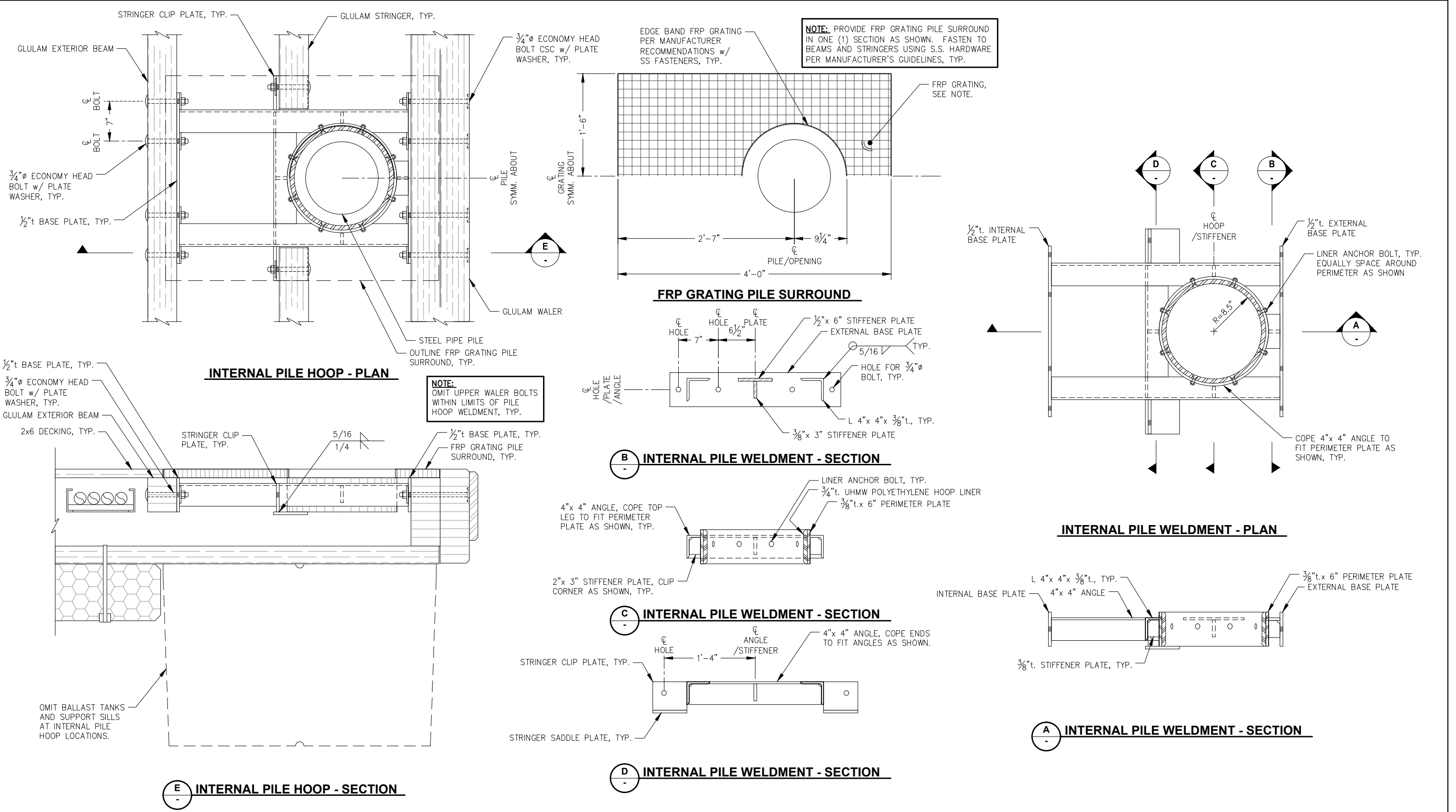
SHEET TITLE: **MISCELLANEOUS**
FLOAT MODULE DETAILS

PND PROJECT NO.: 152037

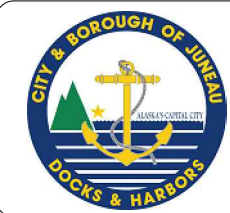
6.17
SHEET
66 OF 82

\\Pnd\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.14-6.17 Diaphragm and Misc. Details.dwg, 10/30/2015 11:31:31 PM

\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.18-6.19 Pile Hoop Details.dwg, 10/30/2015 11:37 PM



95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE:
DRAWN: WRB APPROVED: JLD

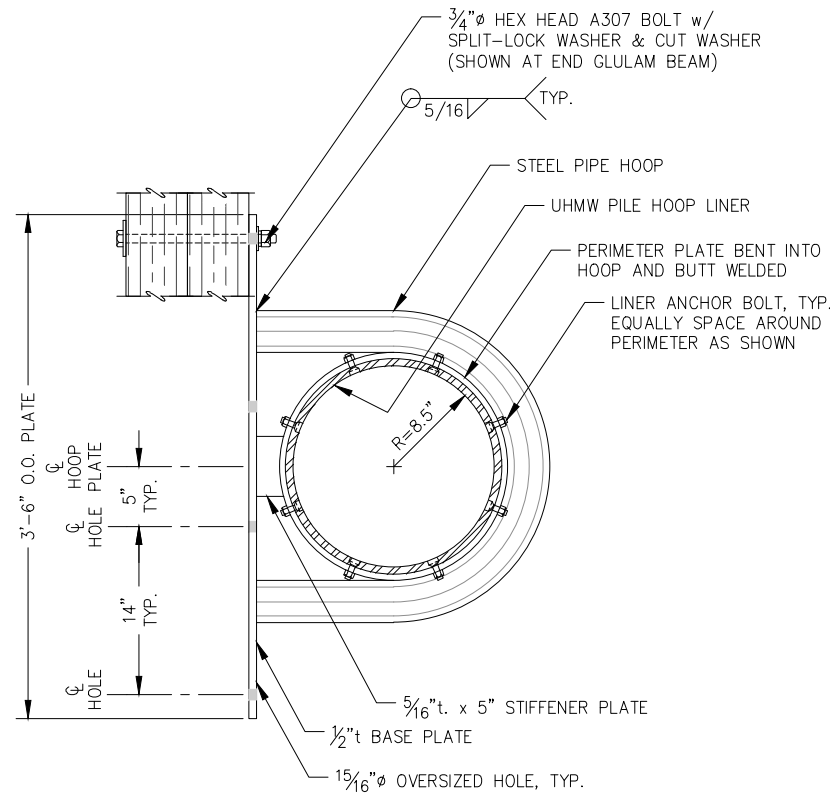
DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
INTERNAL PILE HOOP DETAILS

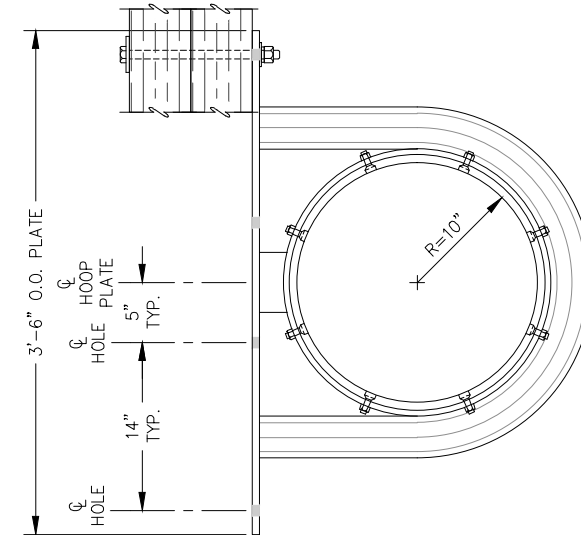
PND PROJECT NO.: 152037

6.18
SHEET
67 OF 82

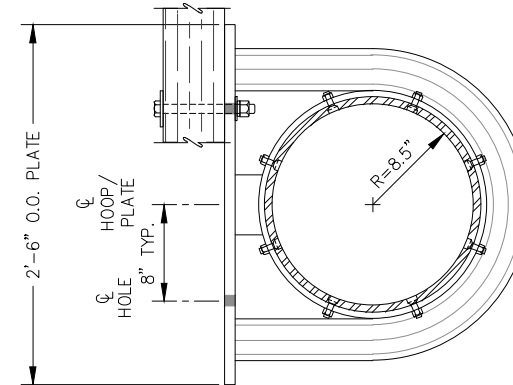


**EXTERNAL 12.75" DIA. PILE HOOP PLAN
TYPE 1**

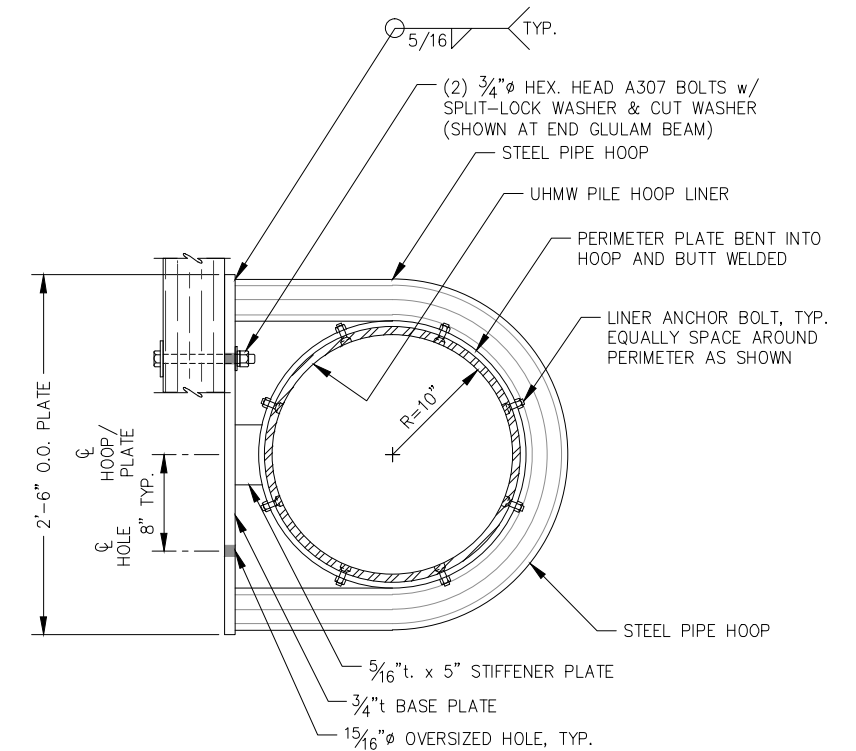
NOTE:
OMIT UPPER WALER BOLTS WITHIN LIMITS OF
PILE HOOP WELDMENT, TYP.



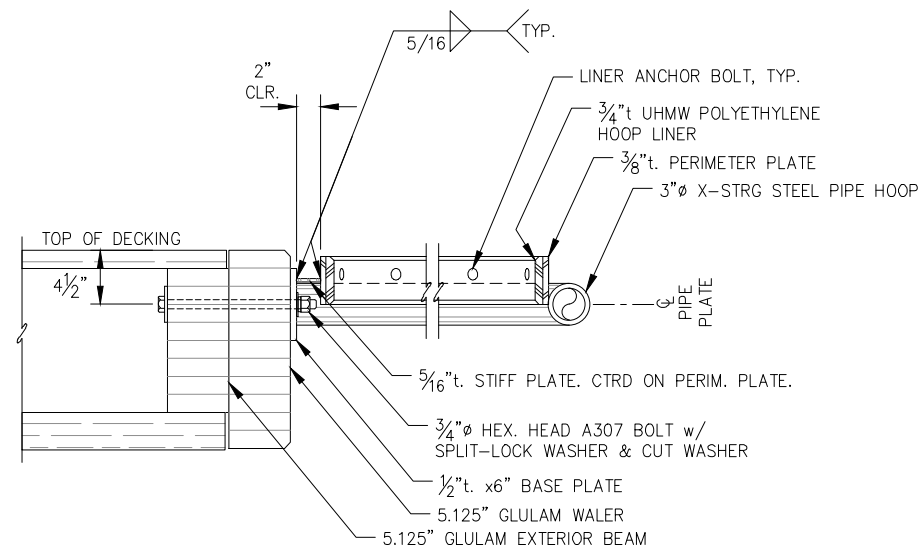
**EXTERNAL 16" DIA. PILE HOOP PLAN
TYPE 1**



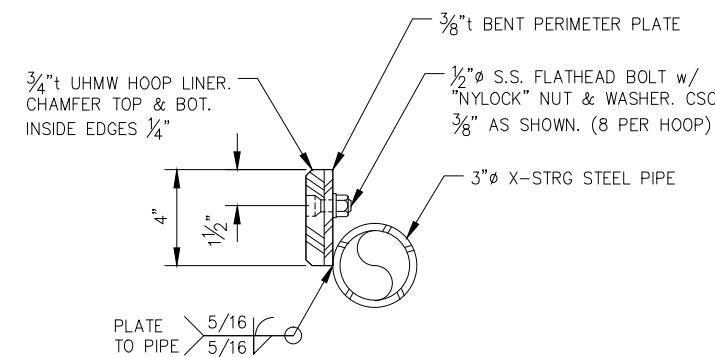
**EXTERNAL 12.75" DIA. PILE HOOP PLAN
TYPE 2**



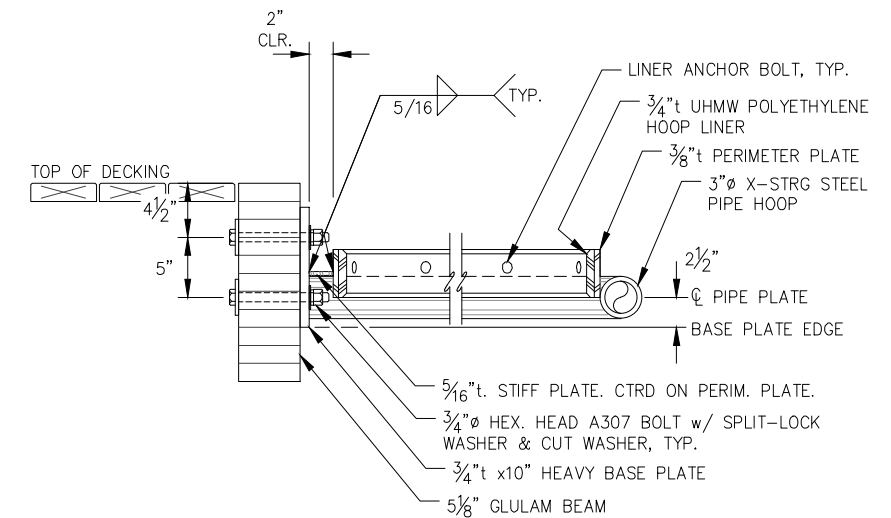
**EXTERNAL 16" DIA. PILE HOOP PLAN
TYPE 2**



**EXTERNAL PILE HOOP ELEVATION - TYPE 1
EDGE OF FLOAT**



TYPICAL HOOP SECTION



**EXTERNAL PILE HOOP ELEVATION - TYPE 2
END OF MAINWALK / FINGER**

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE:

DATE: 10/27/2015

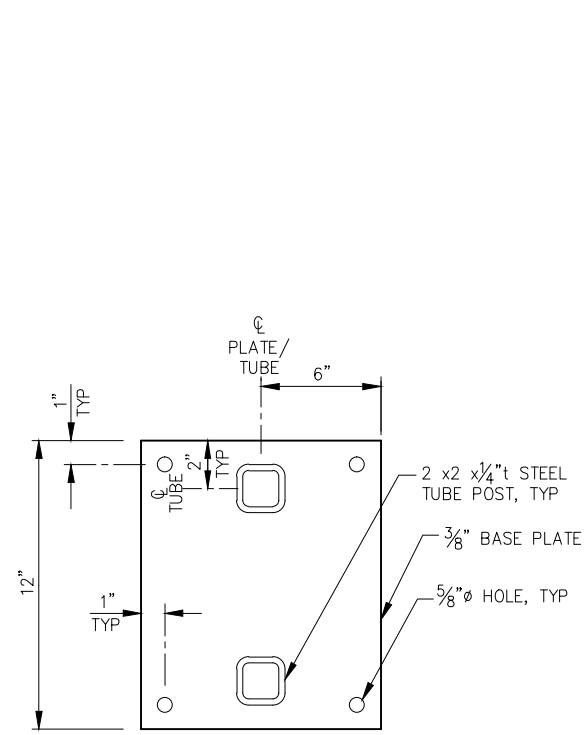
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
EXTERNAL PILE HOOP DETAILS

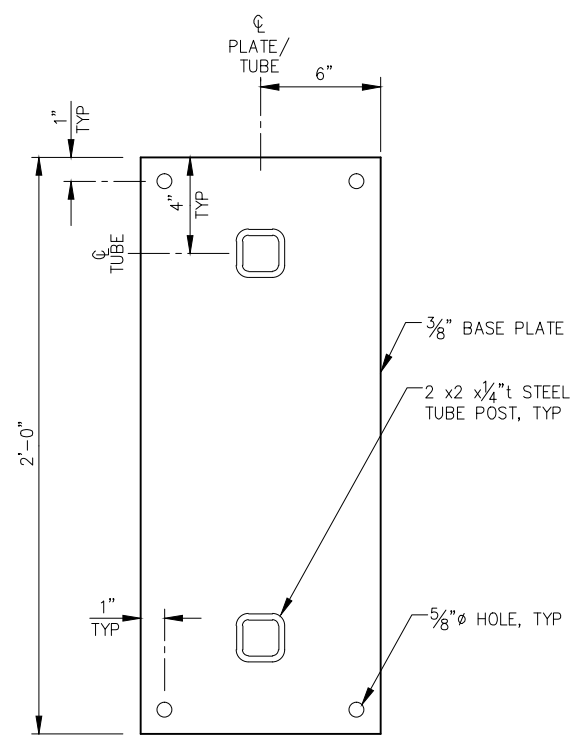
6.19

PND PROJECT NO.: 152037

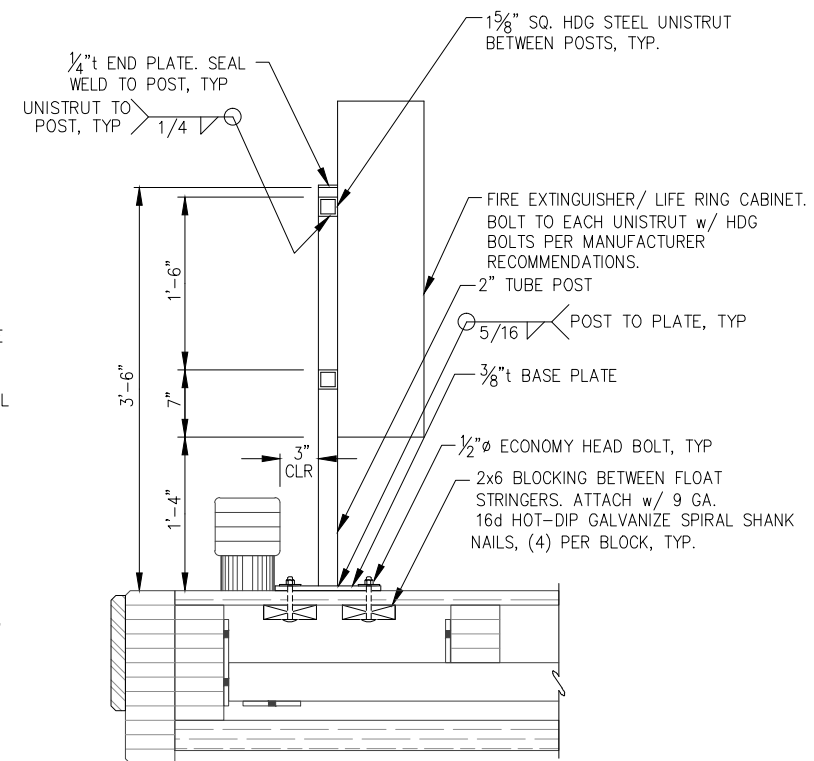
SHEET
68 OF 82



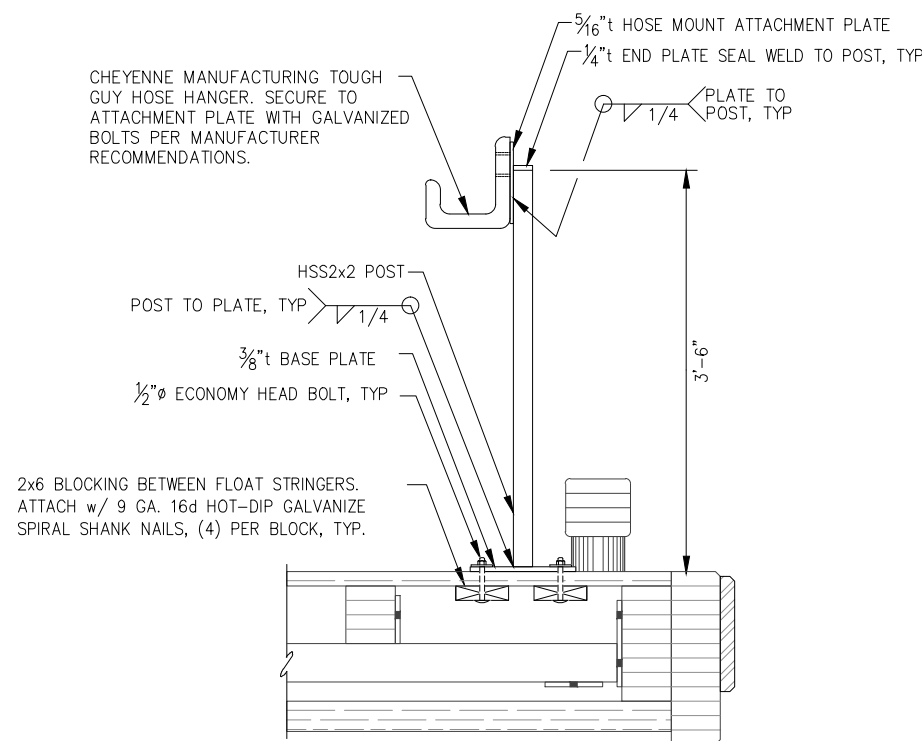
FIRE EXTINGUISHER BASE - PLAN



LIFE RING BASE - PLAN

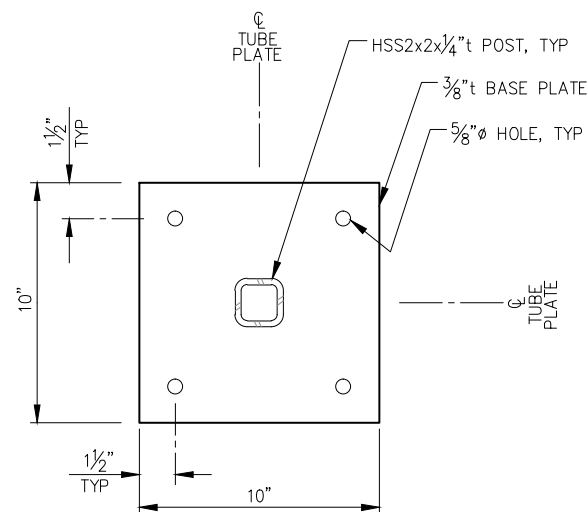


FIRE EXTINGUISHER/ LIFE RING CABINET

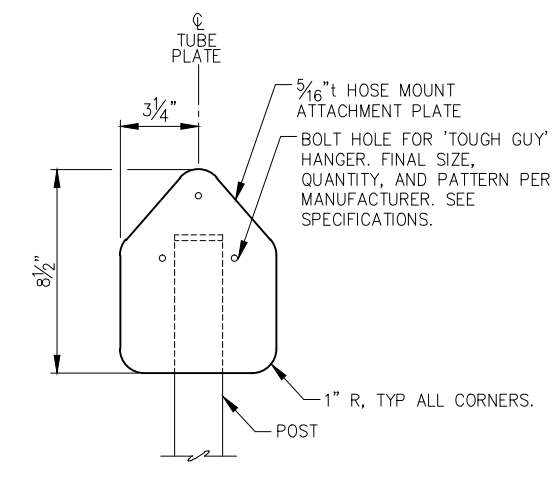


HOSE MOUNT - ELEVATION

NOTE: FINAL LOCATION PER FLOAT PLANS AND ENGINEER DIRECTION.



HOSE MOUNT BASE PLATE - PLAN



HOSE MOUNT ATTACHMENT PLATE - ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

SCALE: NOT TO SCALE

DATE: 10/27/2015

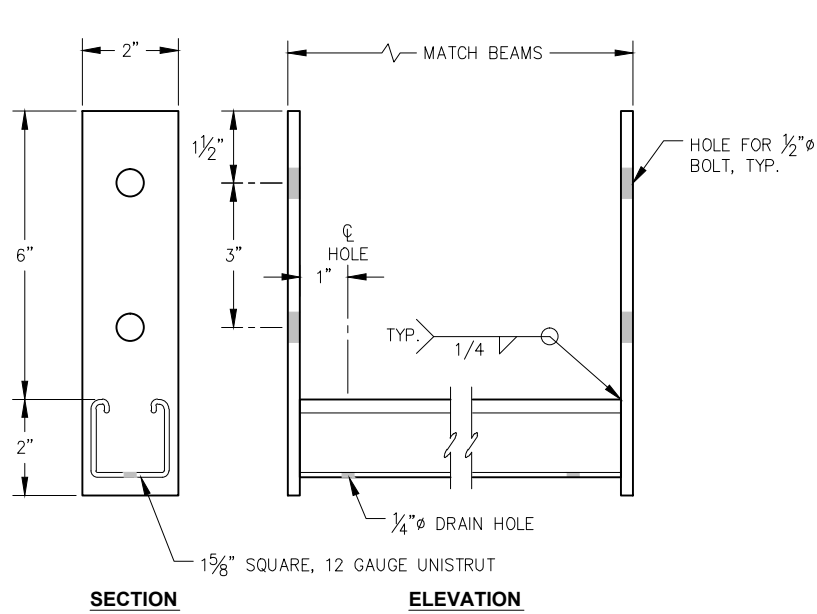
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**FLOAT APPURTENANCE
SUPPORT DETAILS**

PND PROJECT NO.: 152037

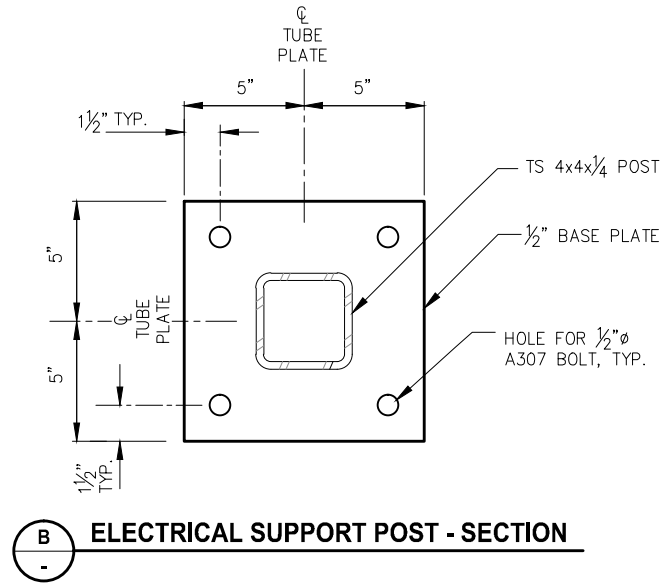
6.20

SHEET
69 OF 82

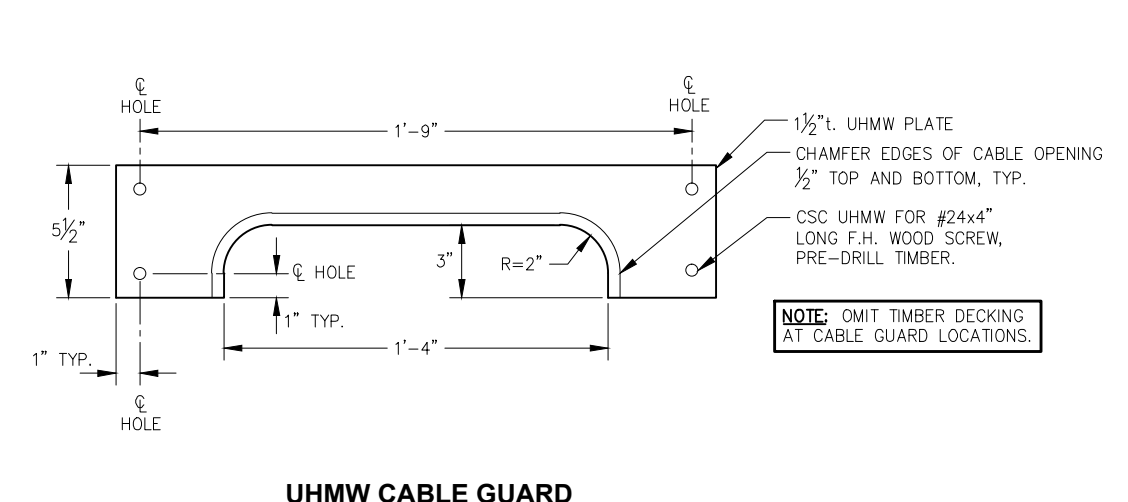


SECTION **ELEVATION**

CABLE TRAY SUPPORT
 (LOCATE 2"-6" FROM THE END OF EACH MODULE UNLESS OTHERWISE NOTED.)

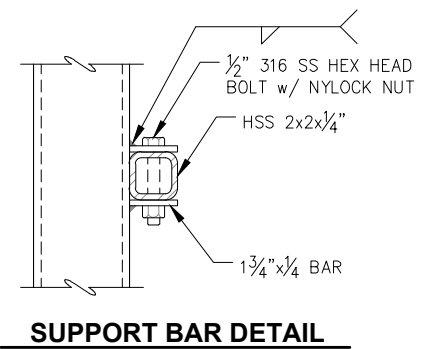


B **ELECTRICAL SUPPORT POST - SECTION**

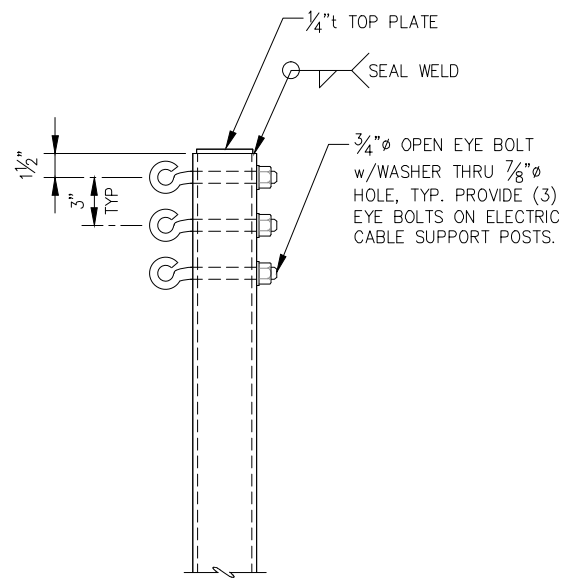


UHMW CABLE GUARD

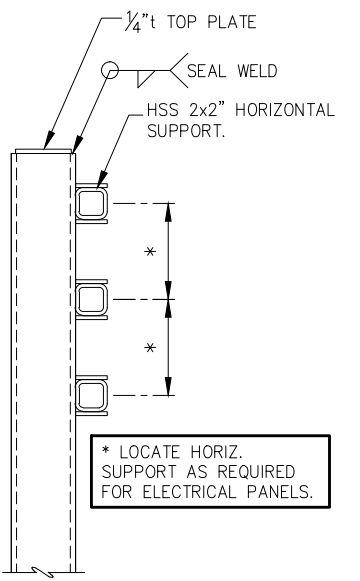
NOTE: OMIT TIMBER DECKING AT CABLE GUARD LOCATIONS.



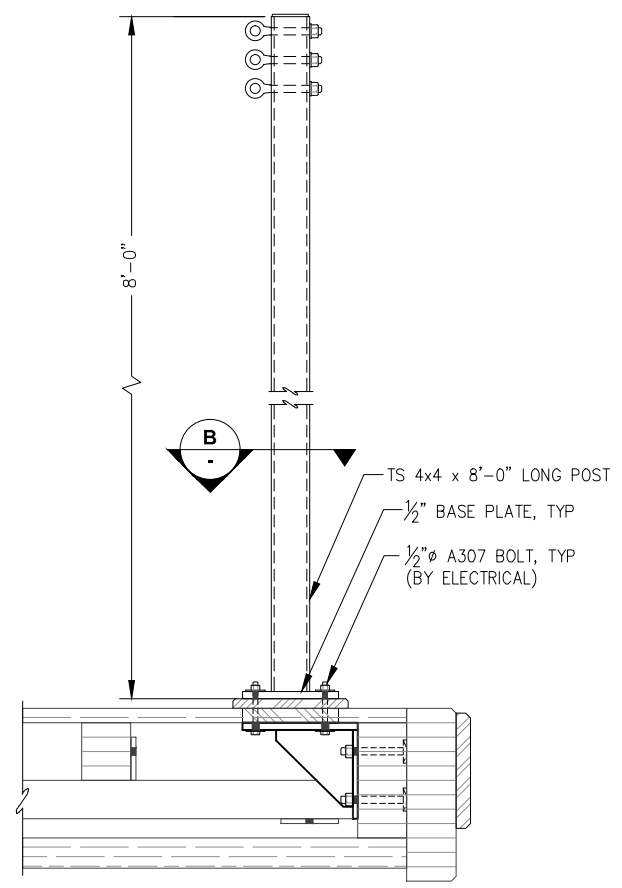
SUPPORT BAR DETAIL



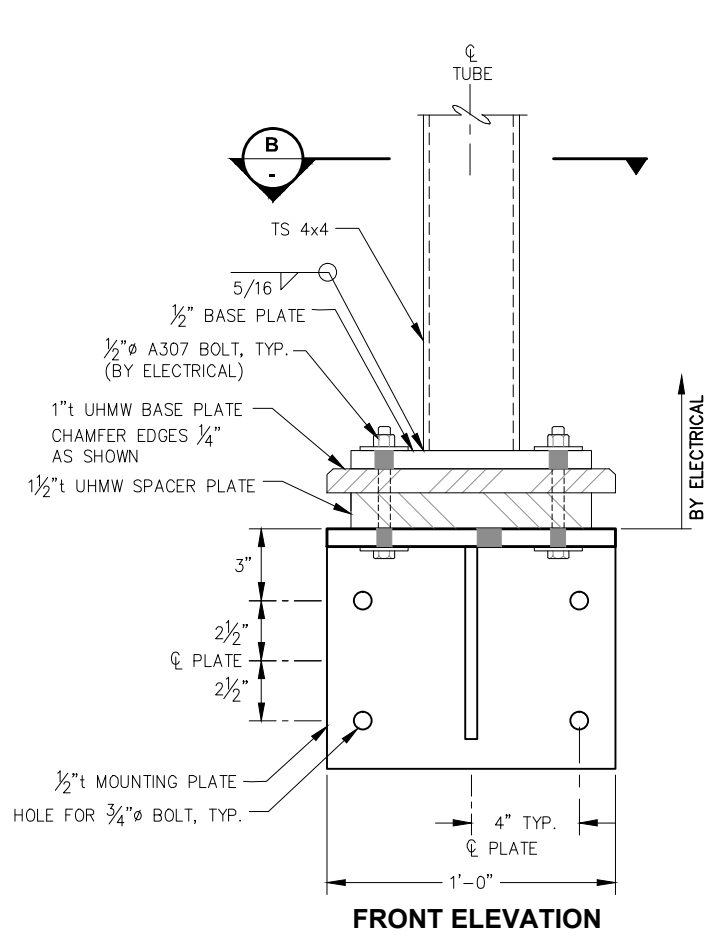
ELECT. CABLE SUPPORT POST
 (DECK CONNECTION VARIES)



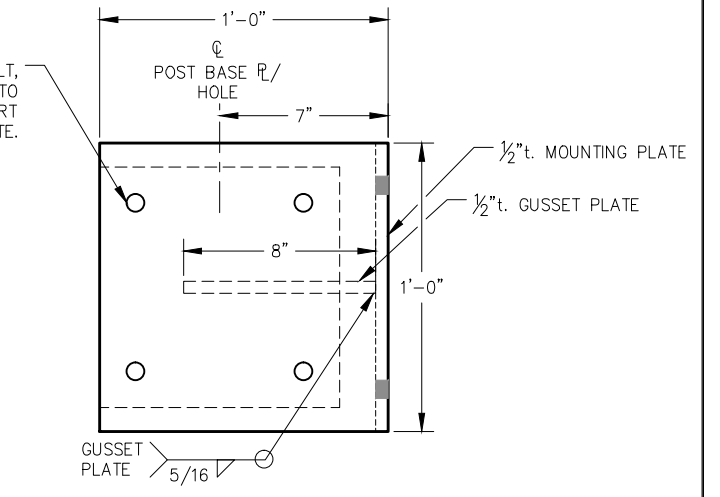
ELECT. PANEL SUPPORT POST
 (DECK CONNECTION VARIES)



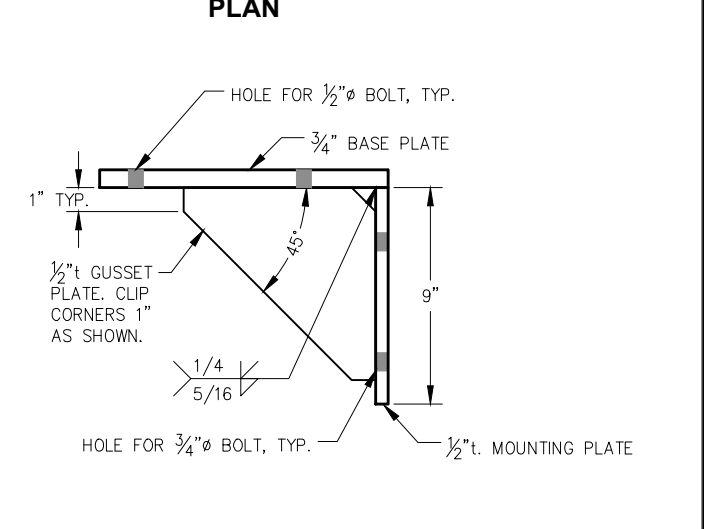
A **ELECTRICAL SUPPORT POST ELEVATION**



FRONT ELEVATION



PLAN



SIDE ELEVATION

ELECTRICAL SUPPORT POST BASE BRACKET

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE: NOT TO SCALE
 DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

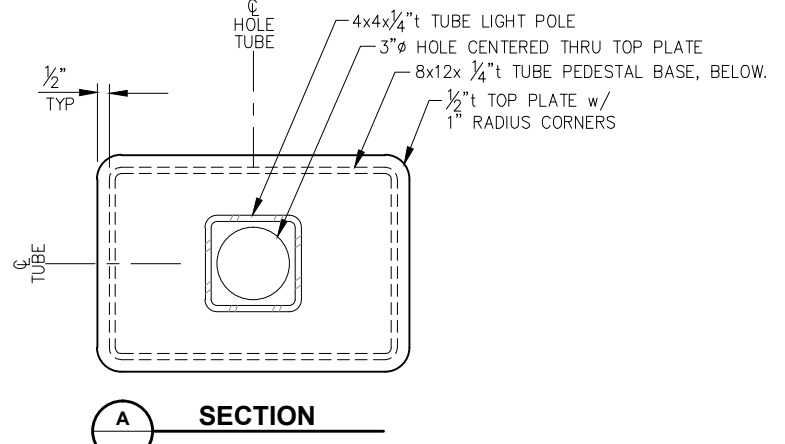
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
ELECTRICAL SUPPORT POST
DETAILS

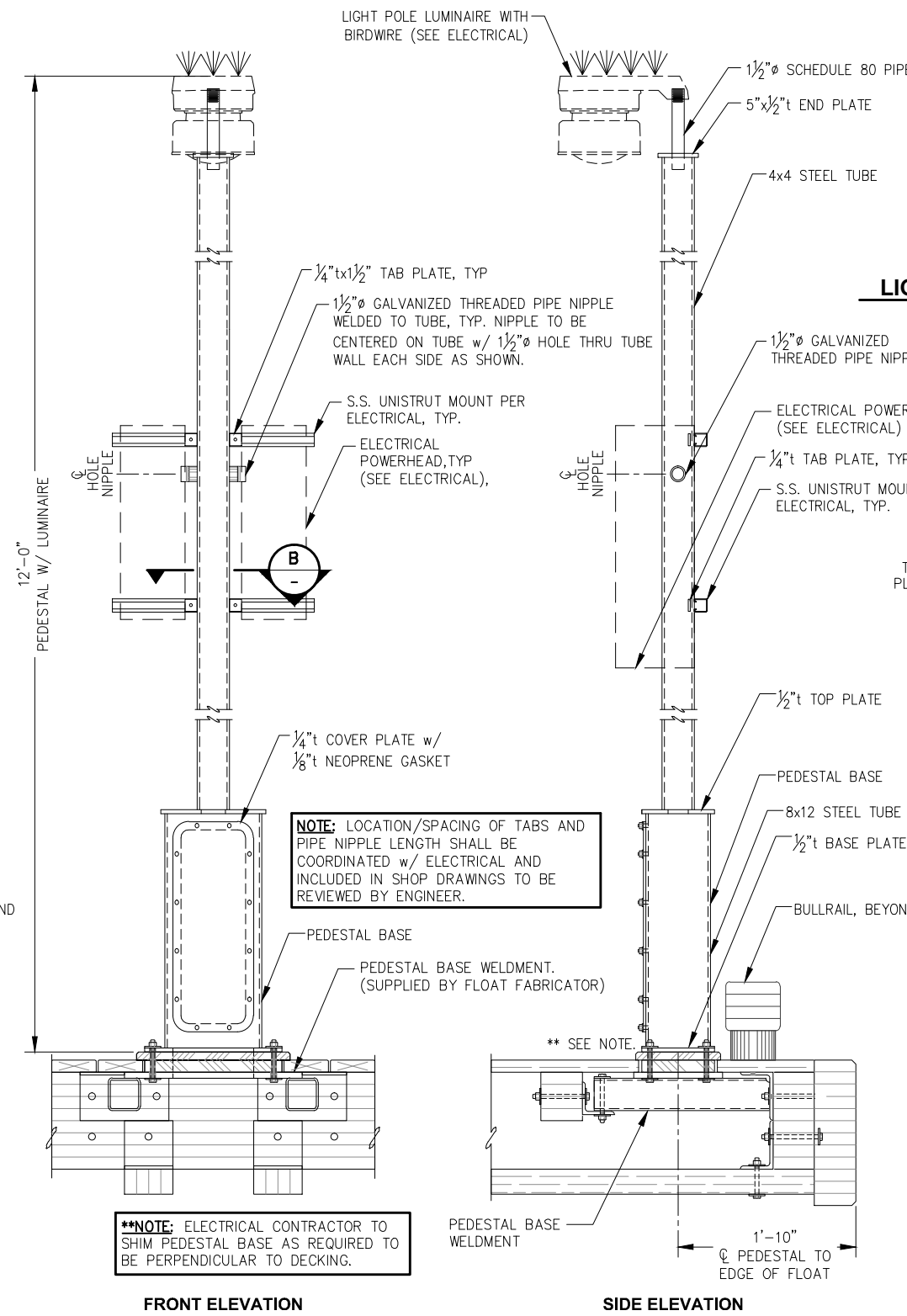
PND PROJECT NO.: 152037

6.21
 SHEET
70 OF 82

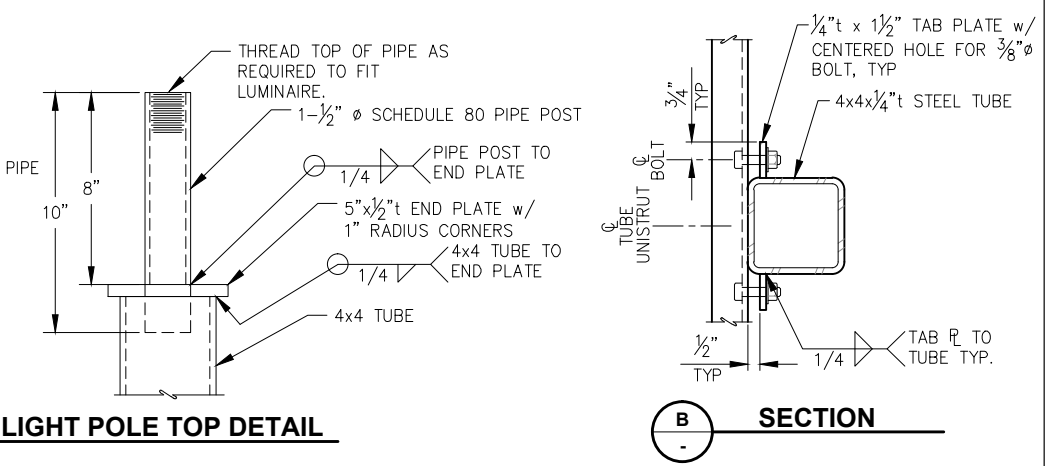
\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.20-6.23 Equipment Support Details.dwg, 10/30/2015, 1:19:51 PM



A SECTION

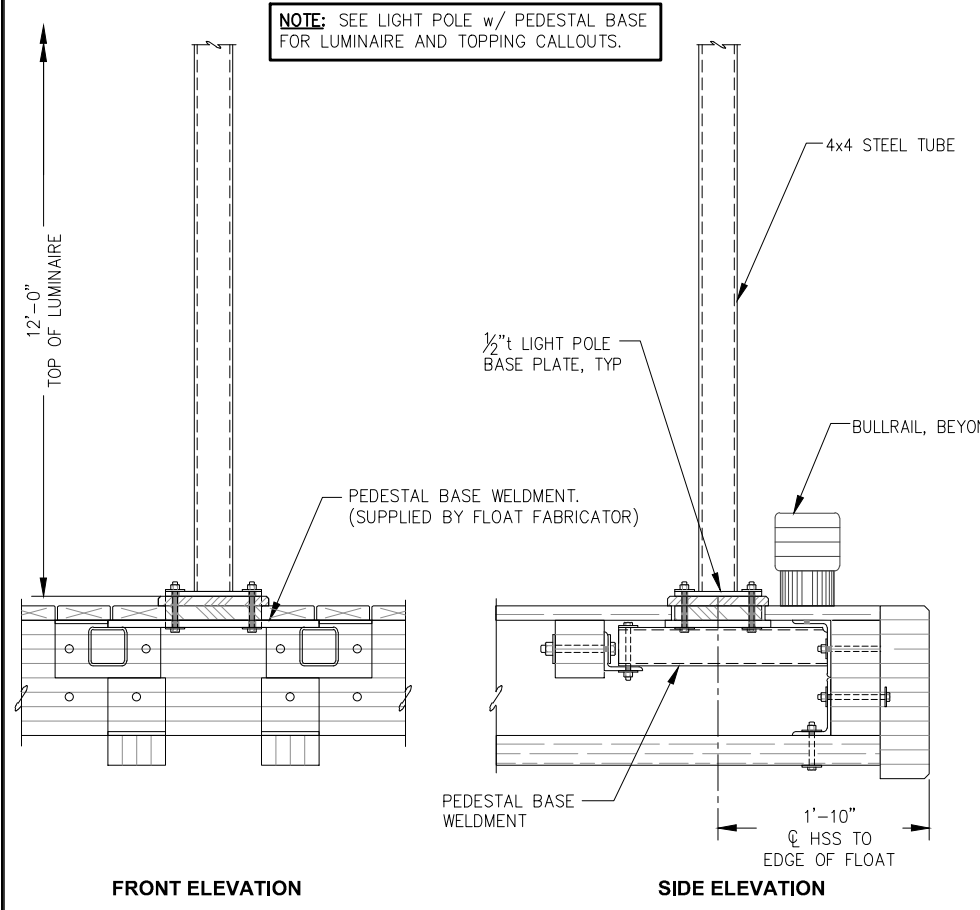


FRONT ELEVATION
SIDE ELEVATION
LIGHT POLE WITH PEDESTAL BASE

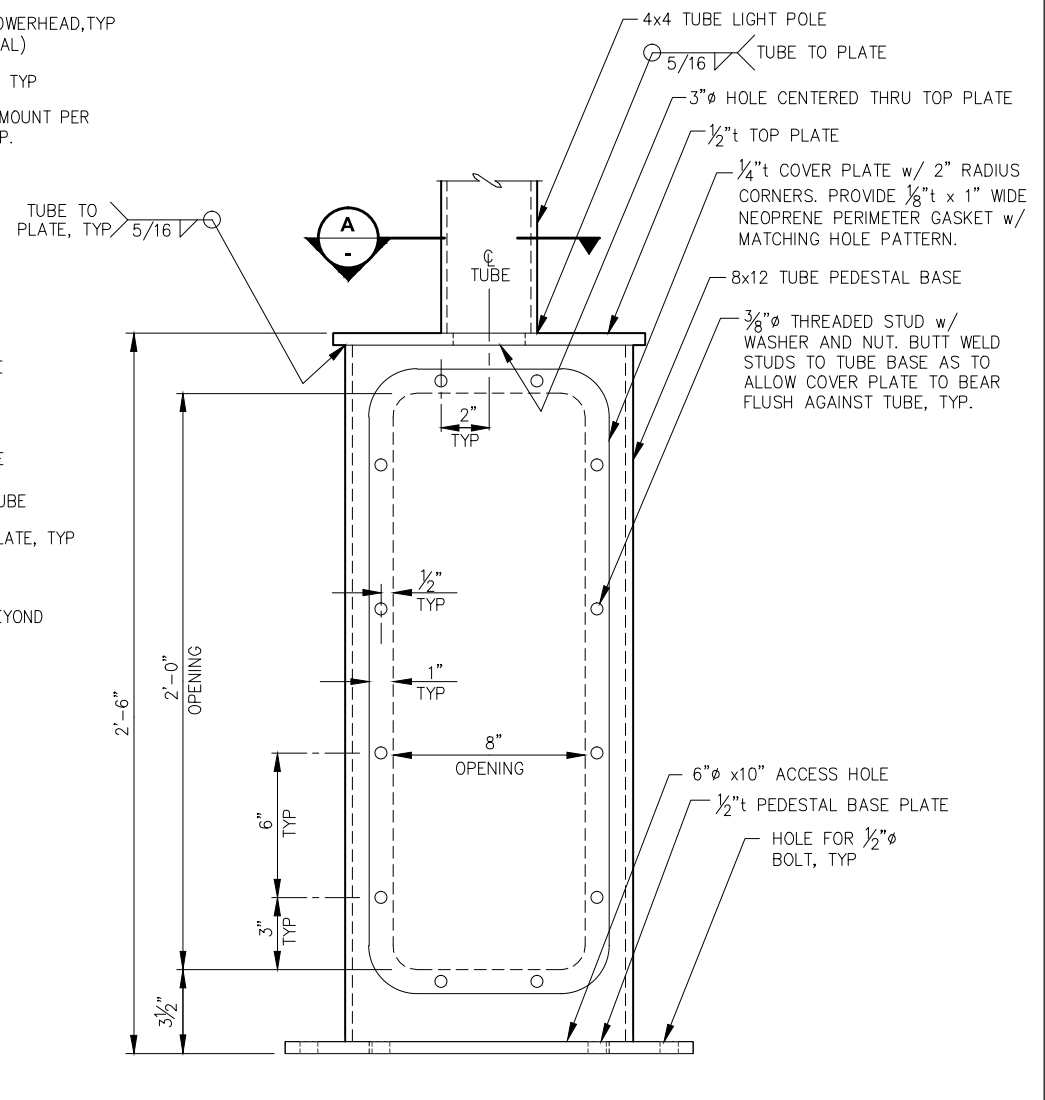


LIGHT POLE TOP DETAIL

B SECTION



FRONT ELEVATION
SIDE ELEVATION
LIGHT POLE WITHOUT PEDESTAL BASE



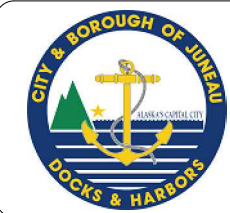
PEDESTAL DETAIL

NOTE: SEE LIGHT POLE w/ PEDESTAL BASE FOR LUMINAIRE AND TOPPING CALLOUTS.

NOTE: LOCATION/SPACING OF TABS AND PIPE NIPPLE LENGTH SHALL BE COORDINATED w/ ELECTRICAL AND INCLUDED IN SHOP DRAWINGS TO BE REVIEWED BY ENGINEER.

****NOTE:** ELECTRICAL CONTRACTOR TO SHIM PEDESTAL BASE AS REQUIRED TO BE PERPENDICULAR TO DECKING.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD SCALE: NOT TO SCALE
DRAWN: WRB APPROVED: JLD

DATE: 10/27/2015

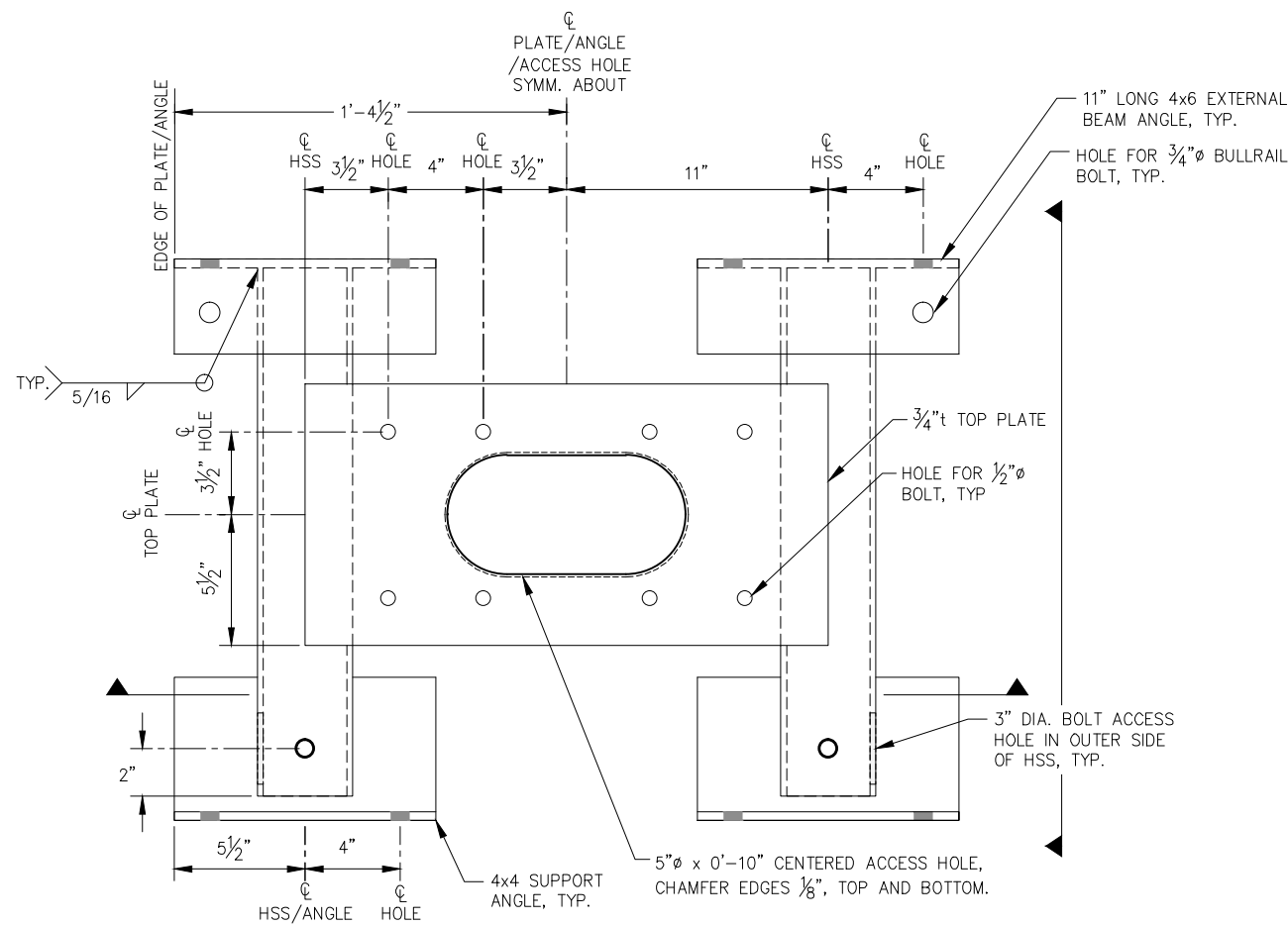
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
LIGHT POLE AND ELECTRICAL SUPPORT DETAILS

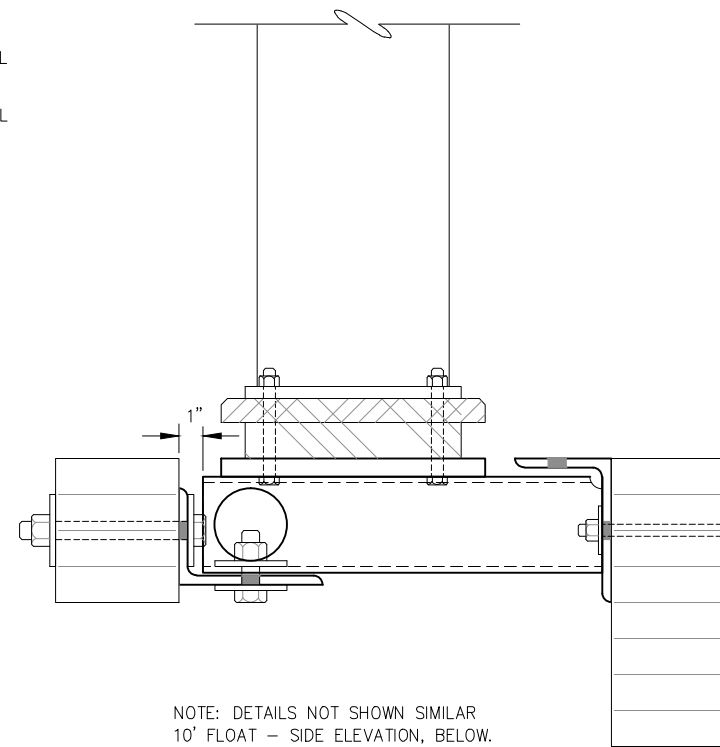
PND PROJECT NO.: 152037

6.22
SHEET
71 OF 82

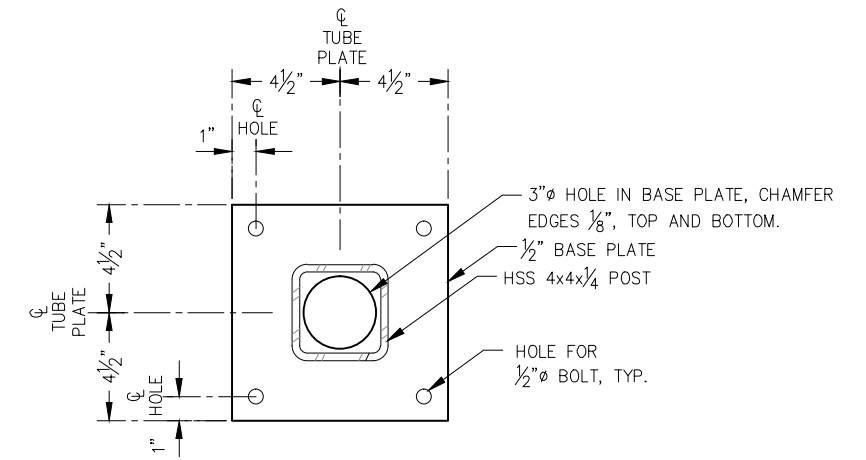
\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\6.20-6.23 Equipment Support Details.dwg, 10/30/2015 1:19:56 PM



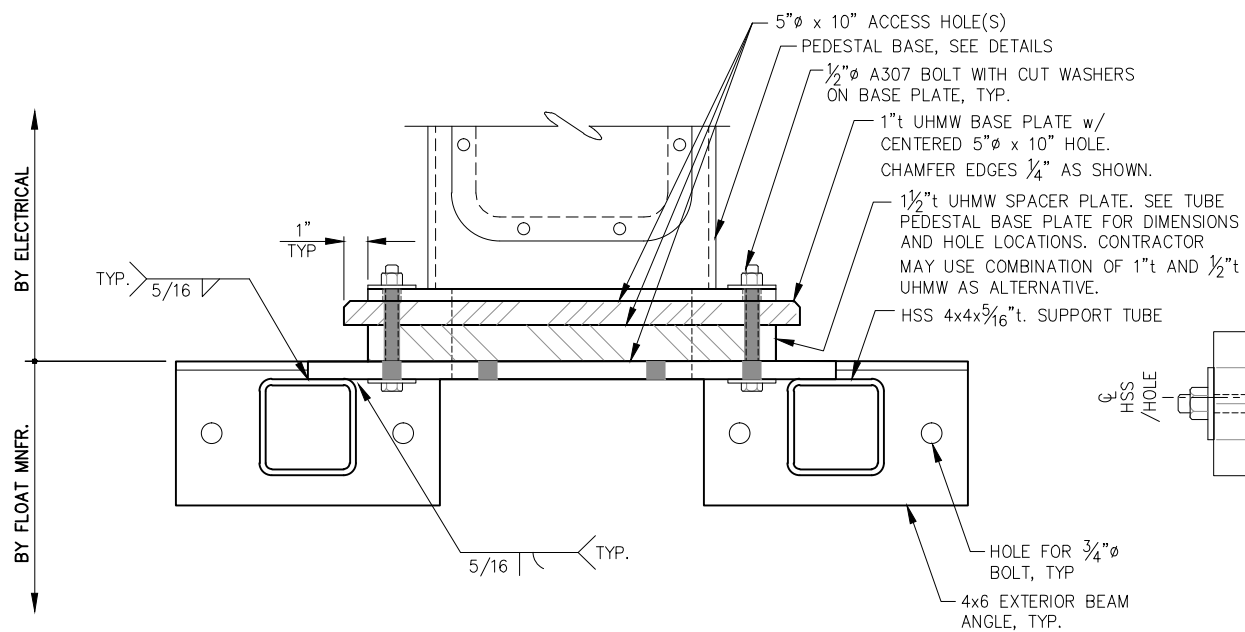
ELECTRICAL PEDESTAL BASE WELDMENT - PLAN



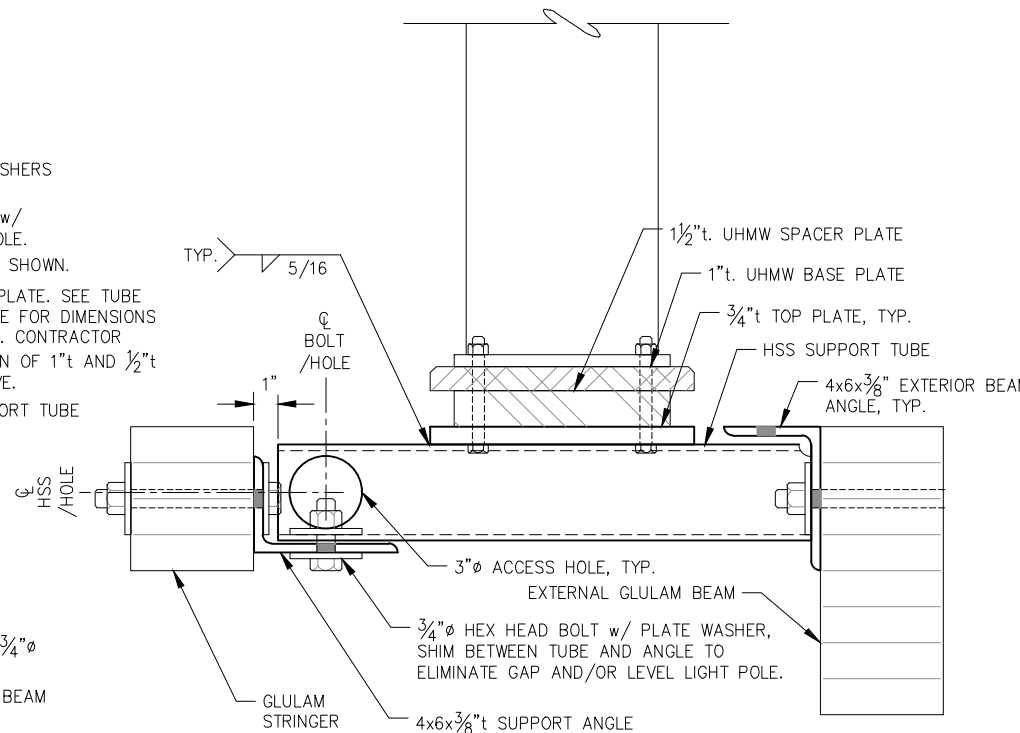
**ELECTRICAL PEDESTAL BASE WELDMENT
12' FLOAT - SIDE ELEVATION**



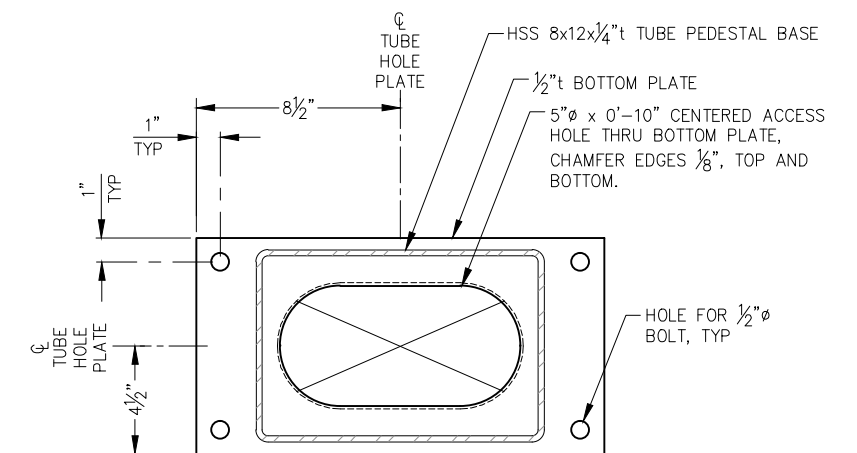
LIGHT POLE BASE PLATE



**ELECTRICAL PEDESTAL BASE WELDMENT
FRONT ELEVATION**



**ELECTRICAL PEDESTAL BASE WELDMENT
10' FLOAT - SIDE ELEVATION**



TUBE PEDESTAL BASE PLATE

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MS CHECKED: JLD
DRAWN: WRB APPROVED: JLD

SCALE:
NOT TO SCALE

DATE: 10/27/2015

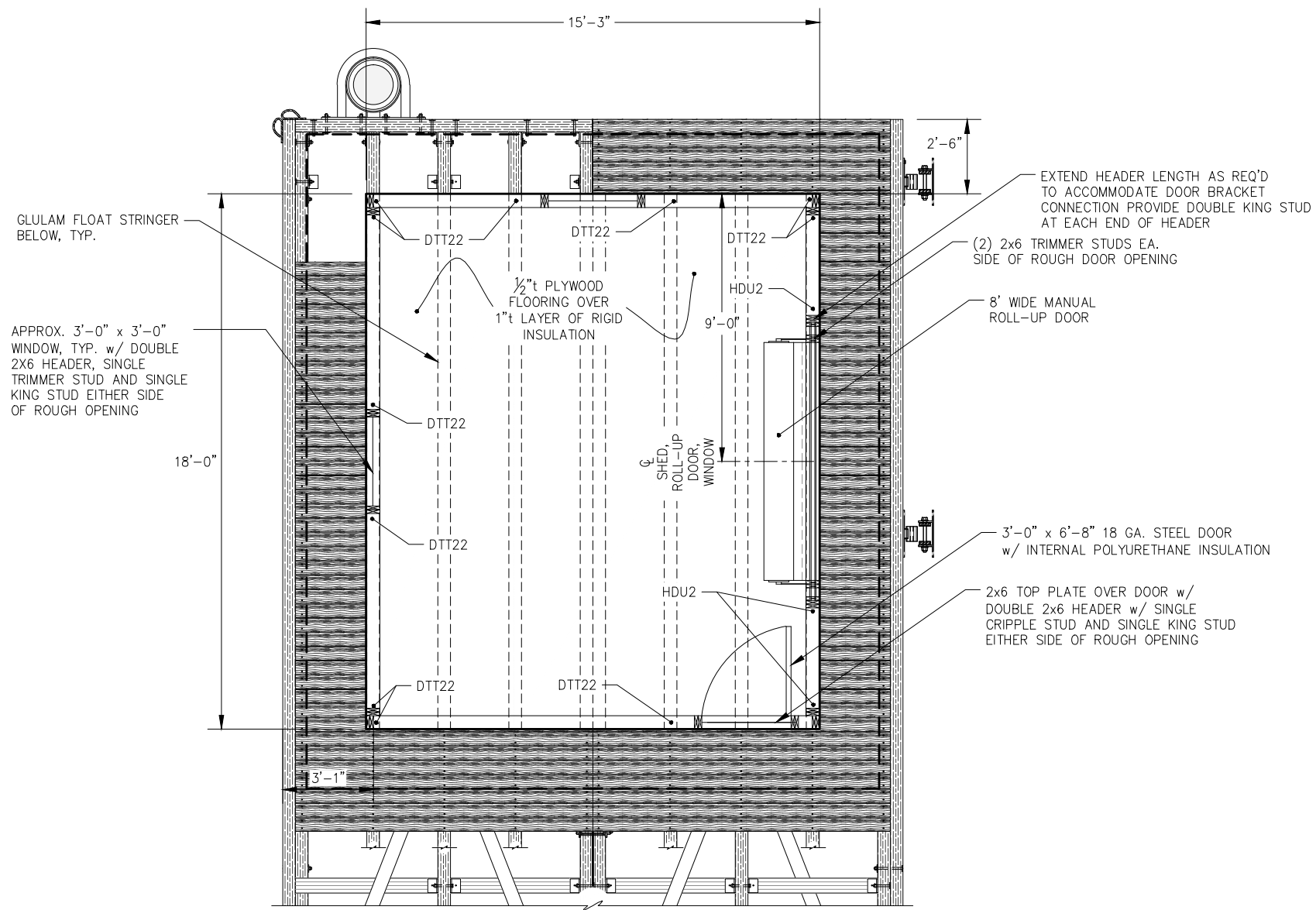
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**ELECTRICAL PEDESTAL BASE
WELDMENT DETAILS**

PND PROJECT NO.: 152037

6.23

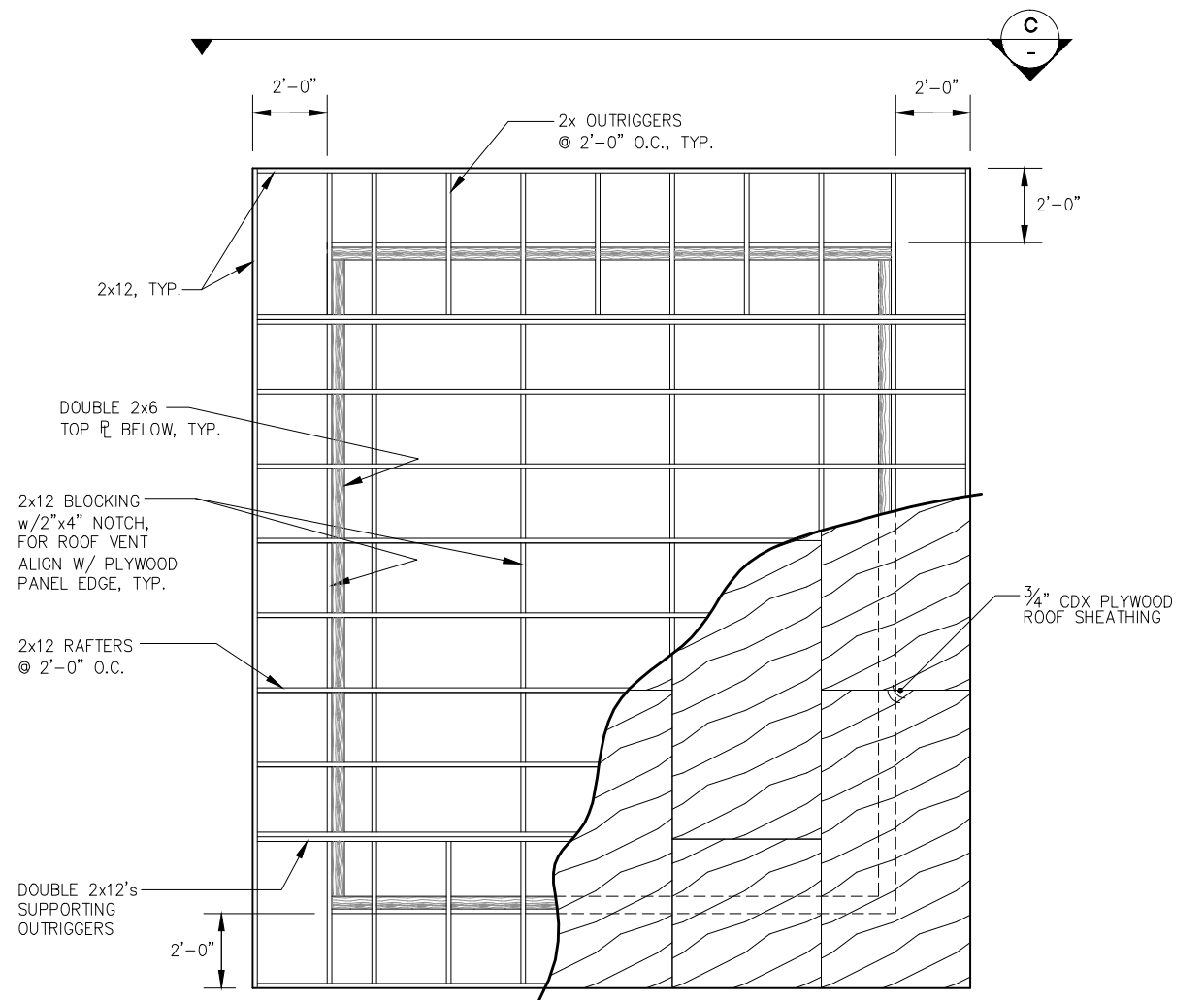
SHEET
72 OF 82



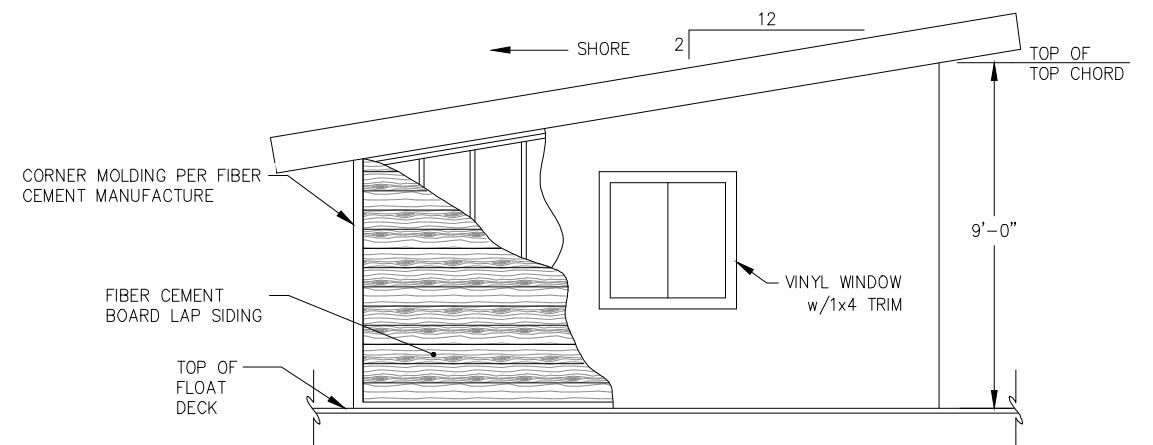
FLOOR PLAN

NOTES:

- EDGE NAIL ALL ROOFING & WALL SHEATHING @ 6" O.C., IN FIELD NAIL @ 12" O.C. w/10d HOT-DIP GALVANIZED COMMON NAILS. BLOCKING REQUIRED @ ALL PANEL EDGES.
- ALL FRAMING NAILS TO BE 16d HOT-DIP GALVANIZED COMMON NAILS.
- INTERIOR WALLS AND CEILING SHALL BE PAINTED w/100% ACRYLIC PAINT. SEE SPECS FOR PAINT DETAILS AND COLOR.
- ALL FLASHING SHALL BE SIMILAR MATERIAL AND GAGE AS METAL ROOFING.



ROOF FRAMING PLAN



C SIDE ELEVATION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD
DRAWN: LRG APPROVED: JLD

SCALE: NTS

DATE: 10/27/2015

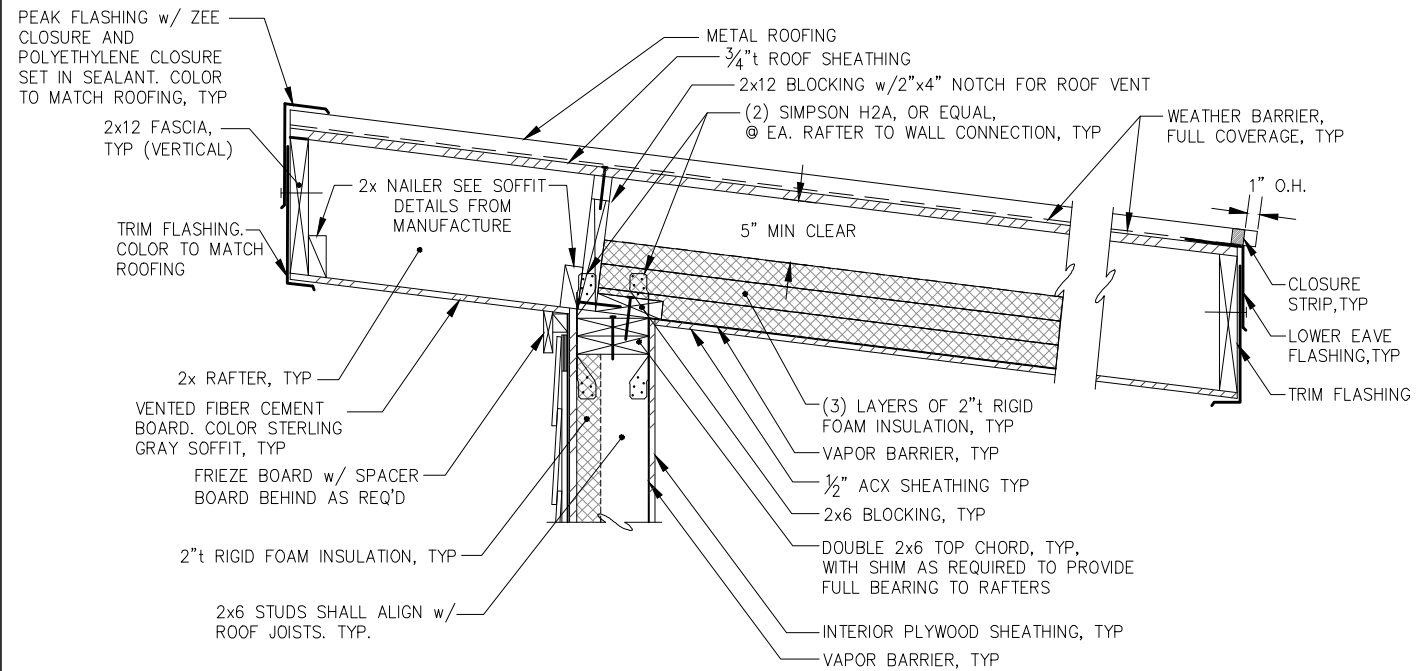
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE: **UTILITY BUILDING
PLANS AND ELEVATION**

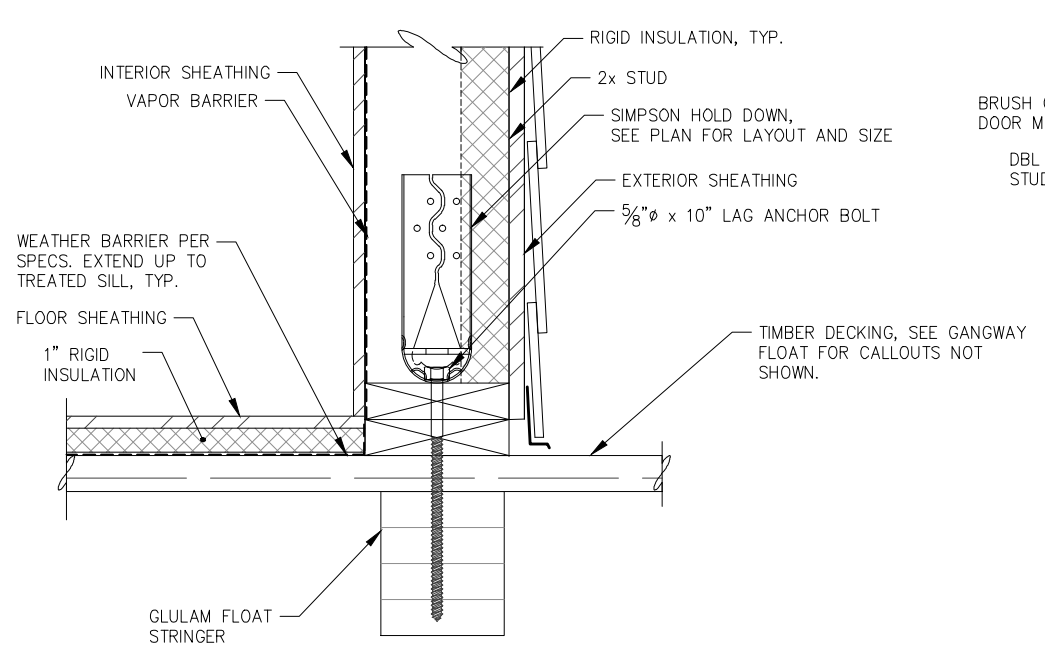
PND PROJECT NO.: 152037

7.01

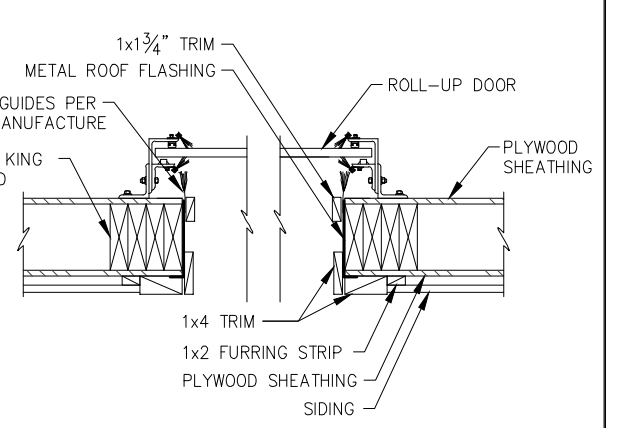
SHEET
73 OF 82



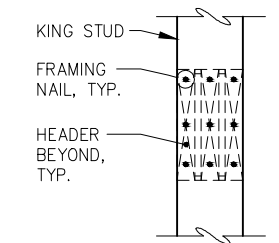
TYPICAL EAVE SECTION



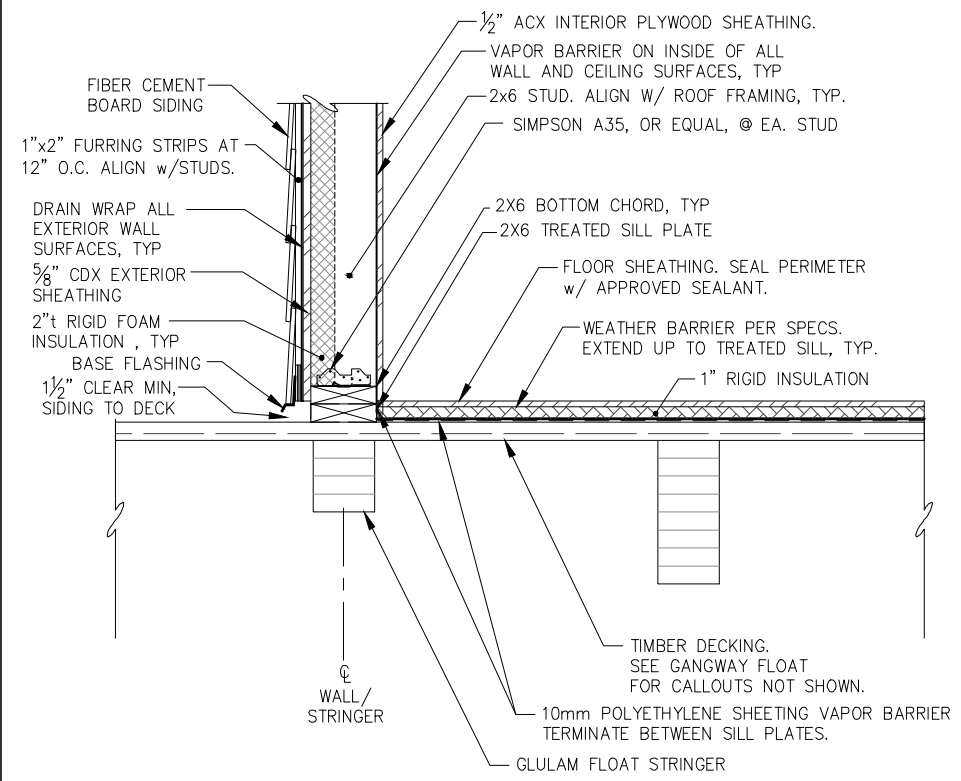
HOLD DOWN SECTION



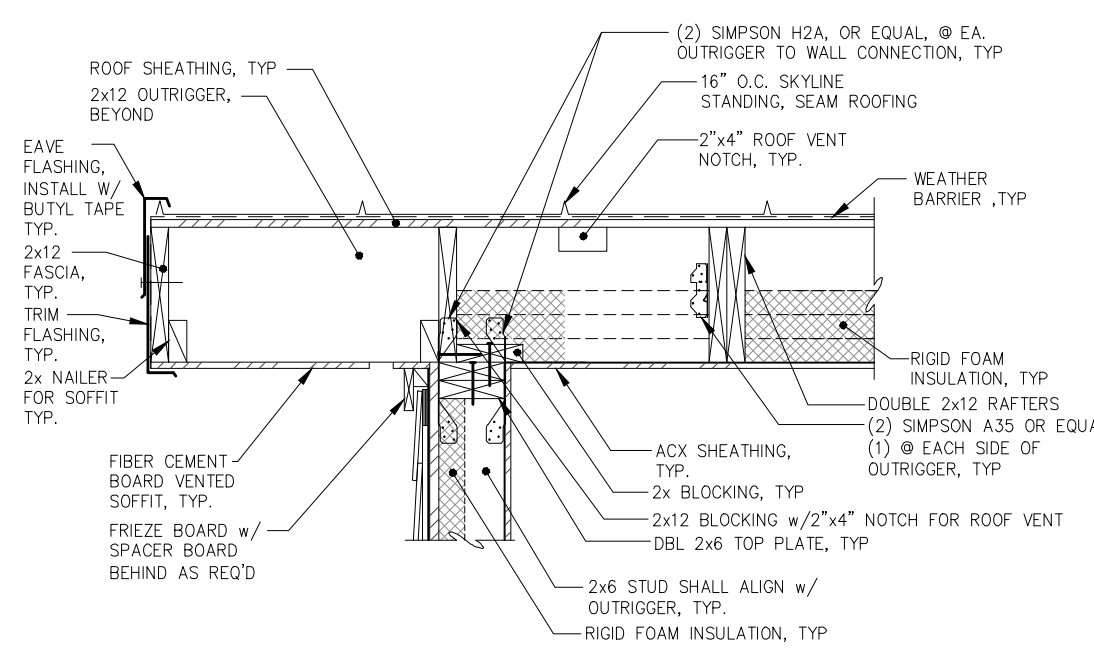
ROLL-UP DOOR JAMB DETAIL



HEADER ATTACHMENT DETAIL

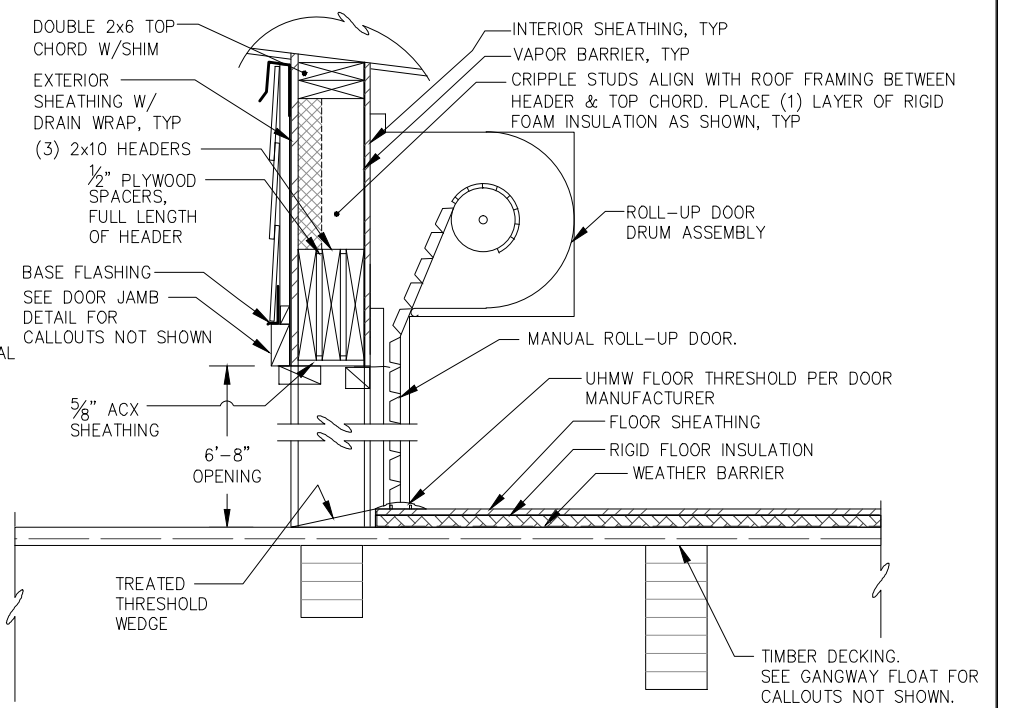


TYPICAL BASE SECTION



TYPICAL SIDEWALL SECTION

NOTE: SEE TYPICAL EAVE SECTION FOR DETAILS NOT CALLED OUT



ROLL-UP DOOR HEADER SECTION

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: MDS CHECKED: JLD SCALE: NTS
DRAWN: LRG APPROVED: JLD

DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

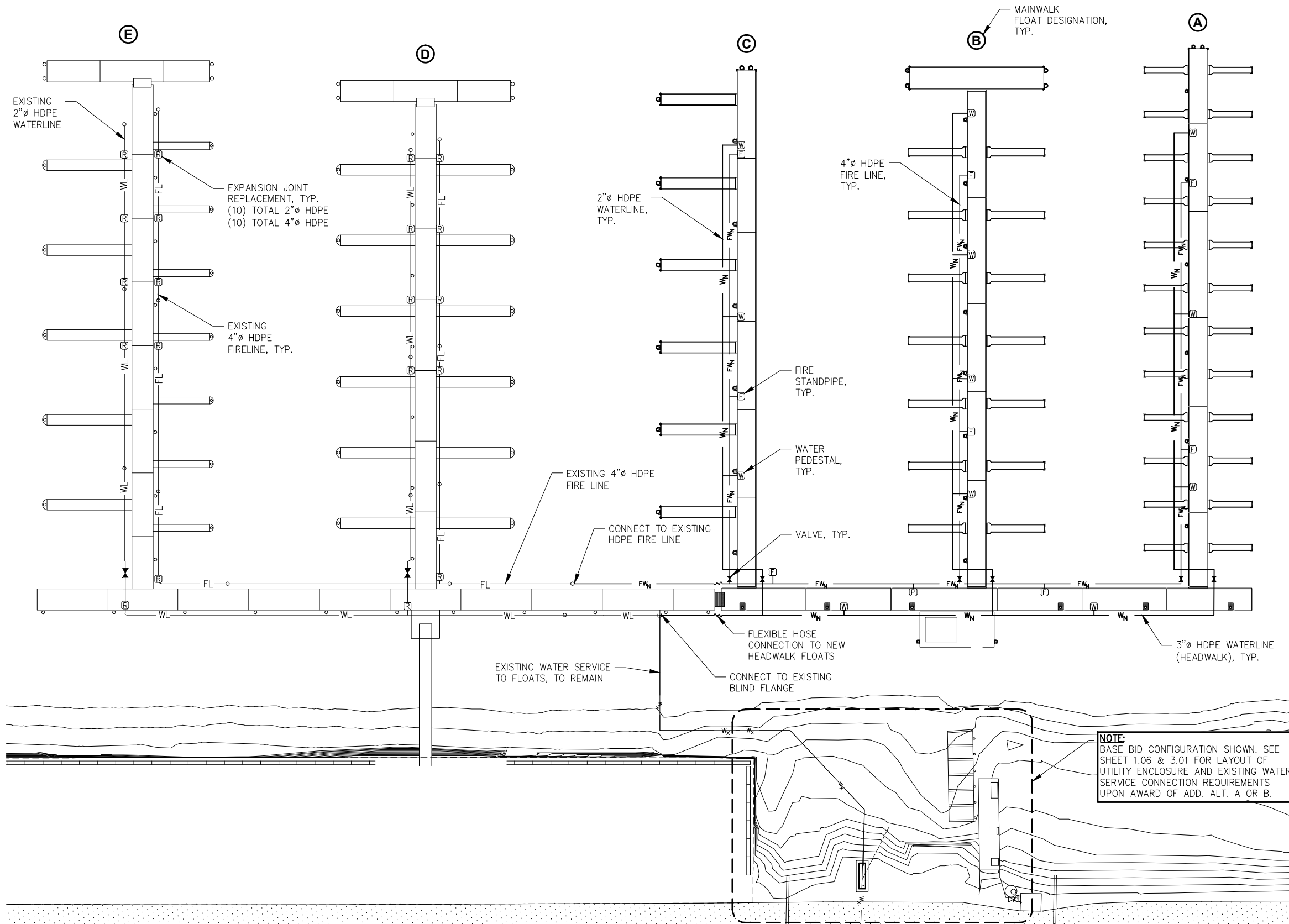
SHEET TITLE: **UTILITY BUILDING DETAILS**

PND PROJECT NO.: 152037

7.02
SHEET 74 OF 82

\\Profjndata\d15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\7.01-7.02 UTILITY BUILDING.dwg. 10/30/2015 1:20:11 PM

\\Proj\jdata\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\8.01 Water and fire system schematic site plan.dwg, 10/30/2015 1:20:23 PM



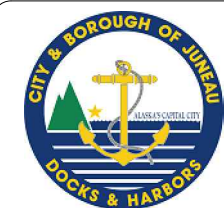
LEGEND & ESTIMATE OF MATERIAL QUANTITIES		
SYMBOL	DESCRIPTION	QUANTITY
◀▶	VALVE	SEE DETAILS
⊞	WATER PEDESTAL	12
⊞	FIRE STANDPIPE	8
⊞	FIRE LINE PUMPOUT	1
FW	4" FIRE LINE	1060 LF
WN	WATERLINE (SIZE VARIES)	1100 LF
Wx	EXISTING WATER MAIN	N/A
EXP.	EXPANSION LOOP	
⊞	EXPANSION JOINT REPLACEMENT	10

GENERAL UTILITY NOTES:

1. WATER AND FIRE SYSTEM APPURTENANCES SHOWN APPROXIMATE. LOCATE UTILITIES ACCORDING TO FLOAT DRAWINGS AND PER ENGINEER DIRECTION.
2. QUANTITIES ARE ESTIMATED FOR REFERENCE PURPOSES ONLY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO MATERIAL ORDER.
3. NOT ALL FITTINGS AND VARIOUS PLUMBING APPURTENANCES ARE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL USE INDUSTRY STANDARD PRACTICES TO ACHIEVE ALL CONNECTIONS AND TRANSITIONS NOT SPECIFIED CONSISTENT WITH LOCAL, STATE AND FEDERAL REGULATIONS, AND PER ENGINEER DIRECTION.

NOTE:
 BASE BID CONFIGURATION SHOWN. SEE SHEET 1.06 & 3.01 FOR LAYOUT OF UTILITY ENCLOSURE AND EXISTING WATER SERVICE CONNECTION REQUIREMENTS UPON AWARD OF ADD. ALT. A OR B.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
 9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: BMI CHECKED: JLD SCALE: SCALE IN FEET
 DRAWN: LRG APPROVED: JLD 0 30 60 FT.

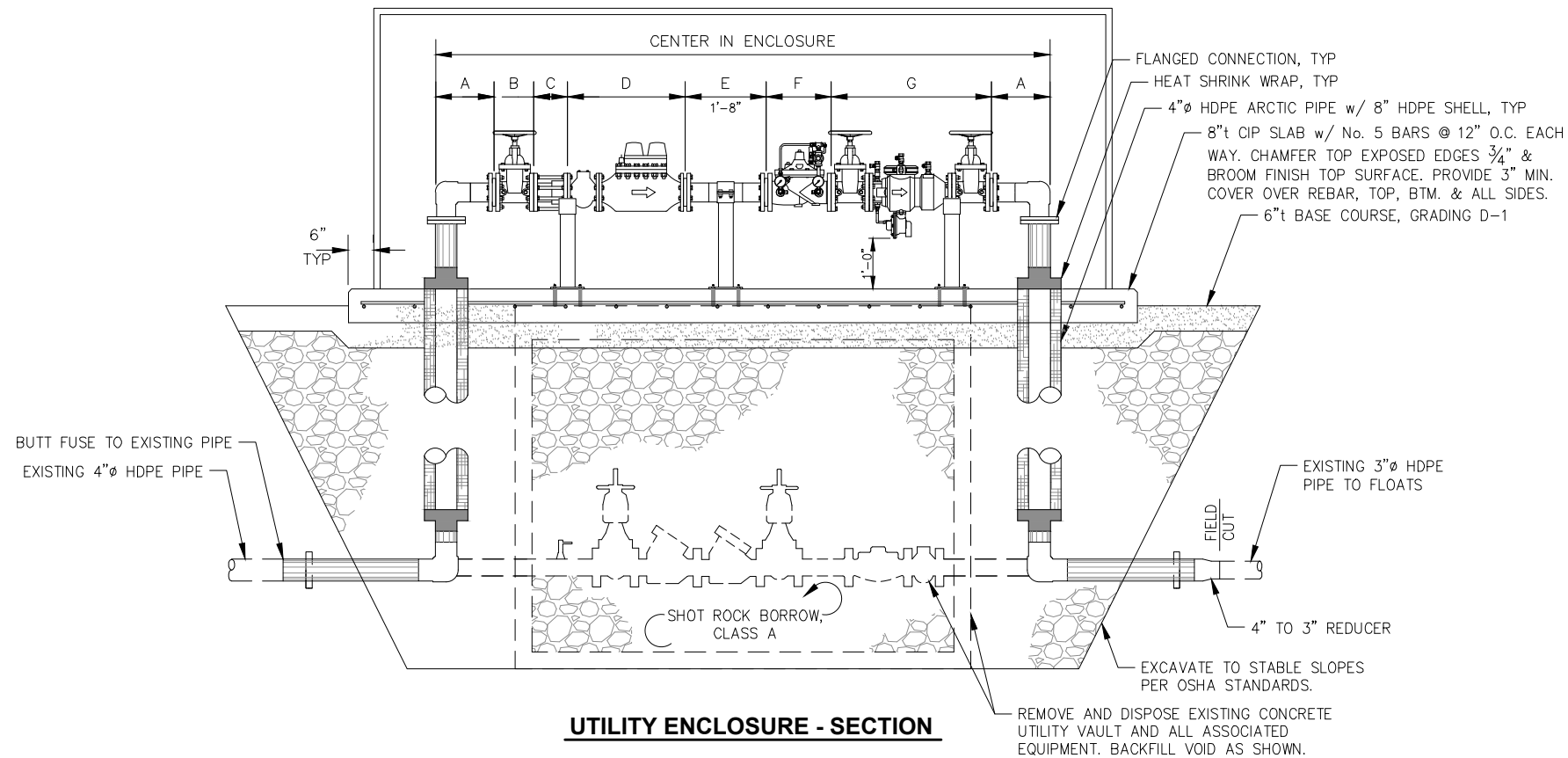
DATE: 10/27/2015

**CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001**

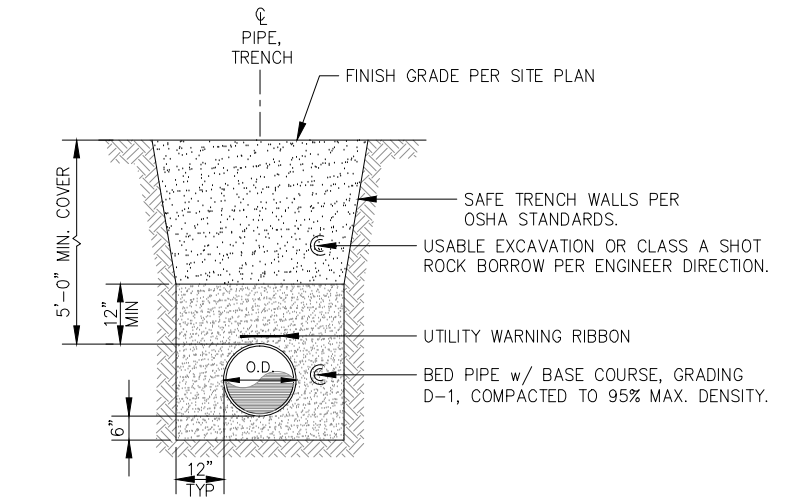
SHEET TITLE:
**WATER AND FIRE SYSTEM
 SCHEMATIC SITE PLAN**
 PND PROJECT NO.: 152037

8.01
 SHEET
 75 OF 82

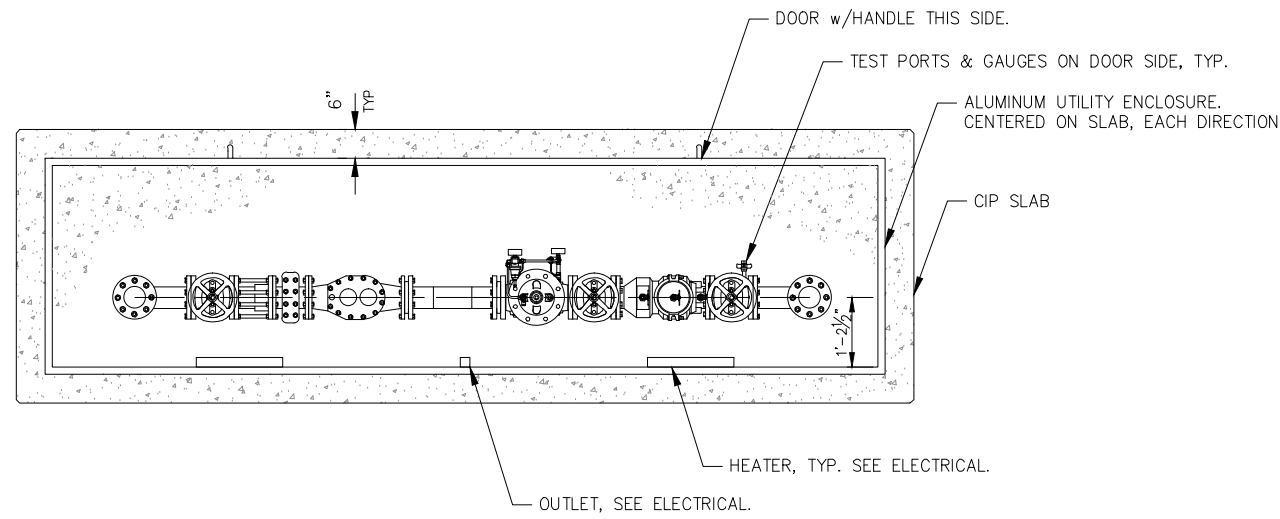
NOTE:
SEE SPECIFICATIONS
FOR COMPONENT
REQUIREMENTS



UTILITY ENCLOSURE - SECTION



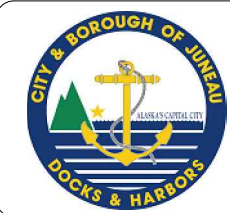
PIPE TRENCH - TYPICAL SECTION



UTILITY ENCLOSURE - PLAN

DESIGNATION	COMPONENT DESCRIPTION
A	4" HDPE 90° ELBOW w/ FLANGE ADAPTERS & HDG BACKUP RING
B	4" NRS GATE VALVE
C	4" DISMANTLING JOINT, SET TO 8" ±
D	4" METER w/ STRAINER
E	4" HDPE PIPE SPOOL
F	4" AUTOMATIC CONTROL VALVE
G	4" REDUCED PRESSURE ZONE ASSY. BACKFLOW PREVENTOR

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: BMI CHECKED: JLD SCALE: NTS
DRAWN: BMI APPROVED: JLD

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

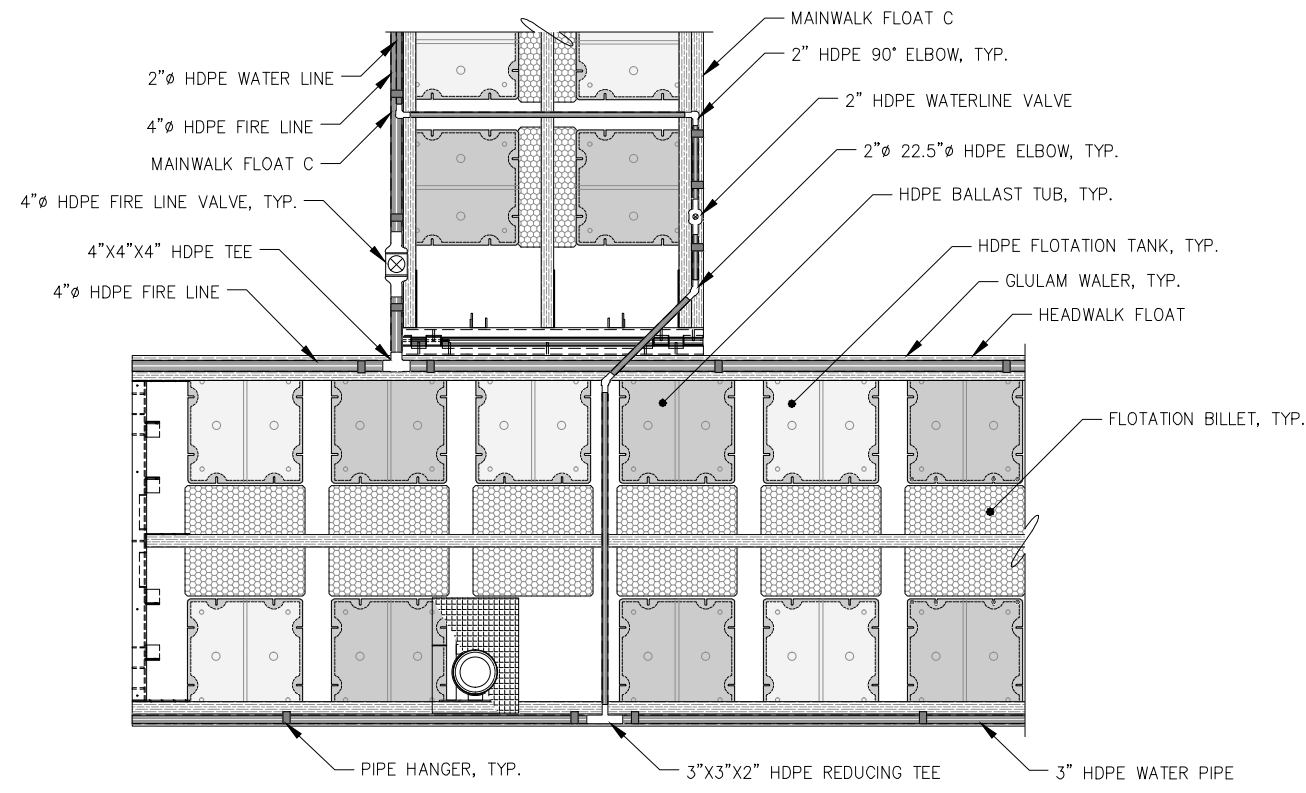
SHEET TITLE:
**UTILITY SYSTEMS UPLANDS
DETAILS**

DATE: 10/27/2015

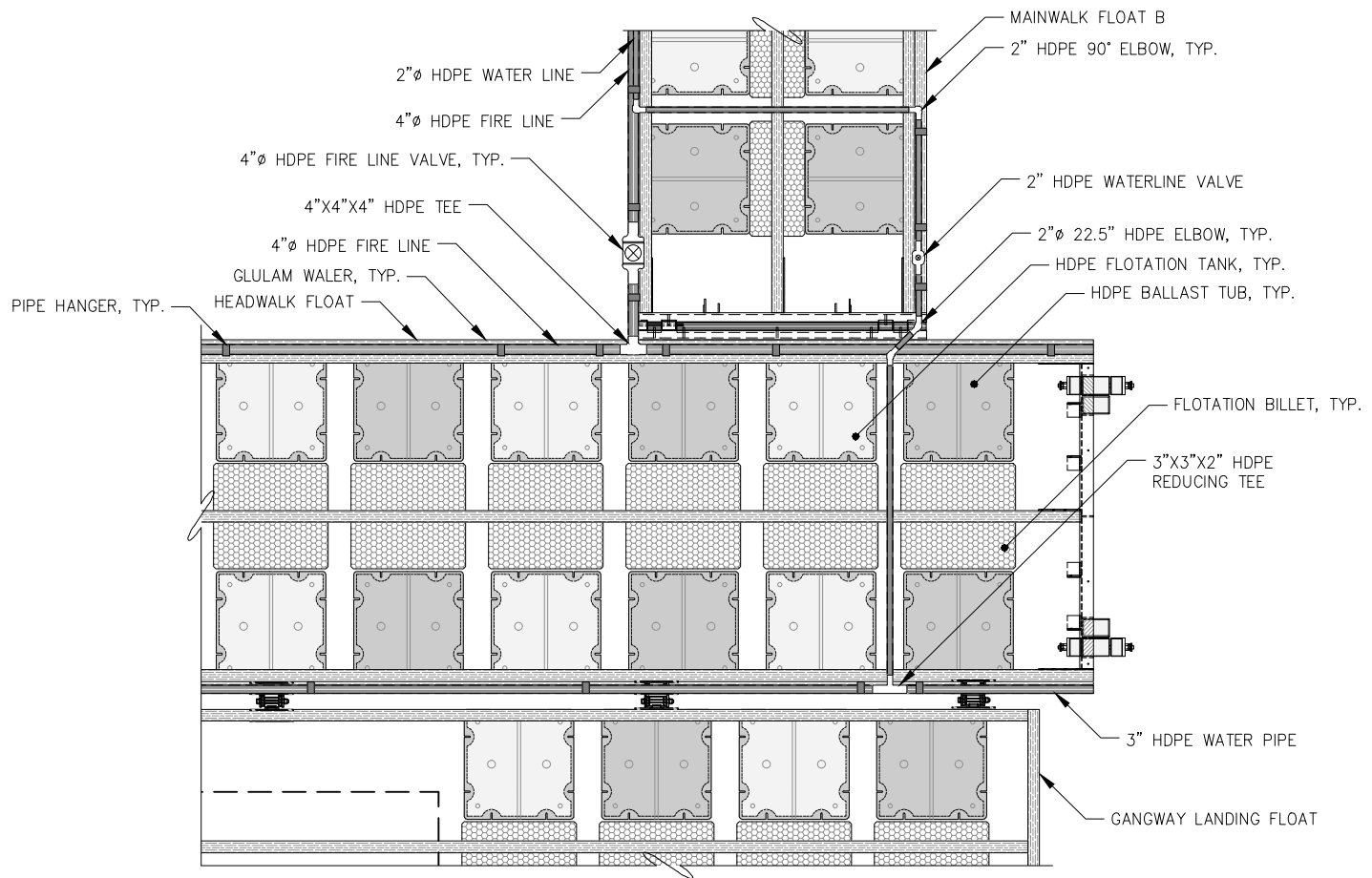
PND PROJECT NO.: 152037

8.02
SHEET
76 OF 82

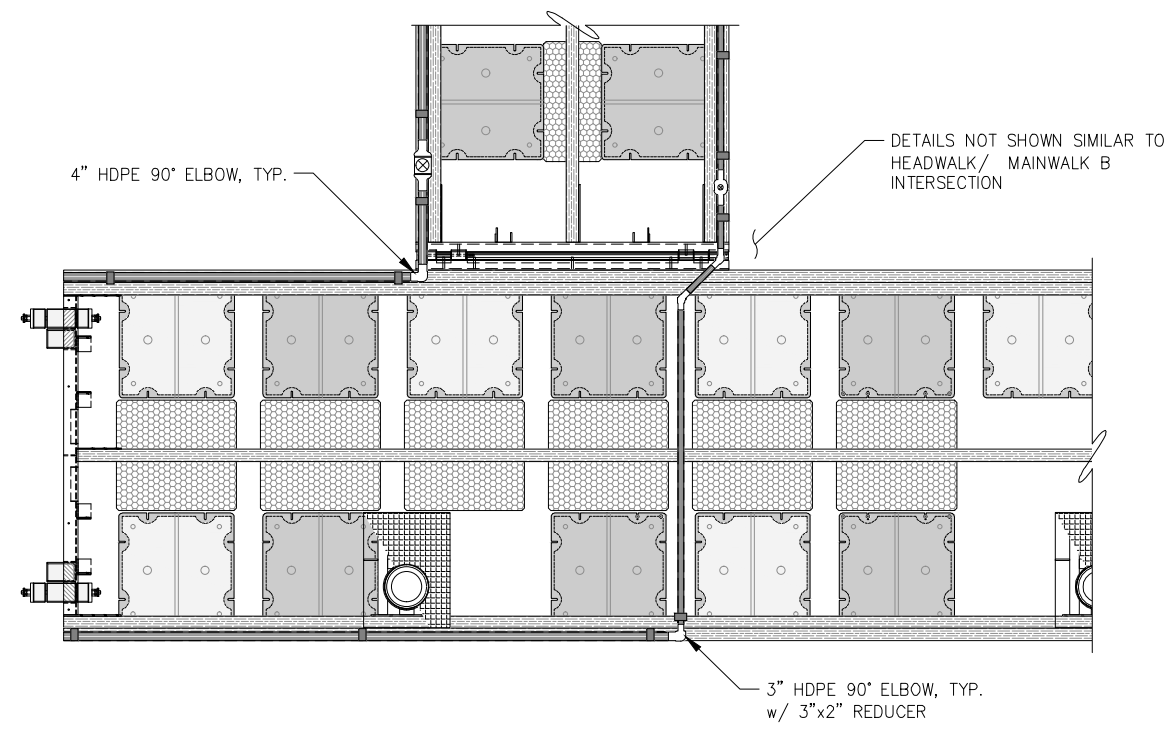
I:\Proj\juneau\152037 Douglas Harbor Renovation\G. Drawings\Design\8.02 Utility Systems Upland Details.dwg, 10/30/2015 1:20:30 PM



HEADWALK / MAINWALK C INTERSECTION - PLAN



HEADWALK / MAINWALK B INTERSECTION - PLAN



HEADWALK / MAINWALK A INTERSECTION - PLAN

NOTE: NOT ALL FLOAT COMPONENTS SHOWN FOR CLARITY. UTILITIES SHOWN ON TOP OF FLOATS FOR CLARITY.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P | N | D
ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: BMI CHECKED: JLD SCALE:
DRAWN: KLL APPROVED: JLD

DATE: 10/27/2015

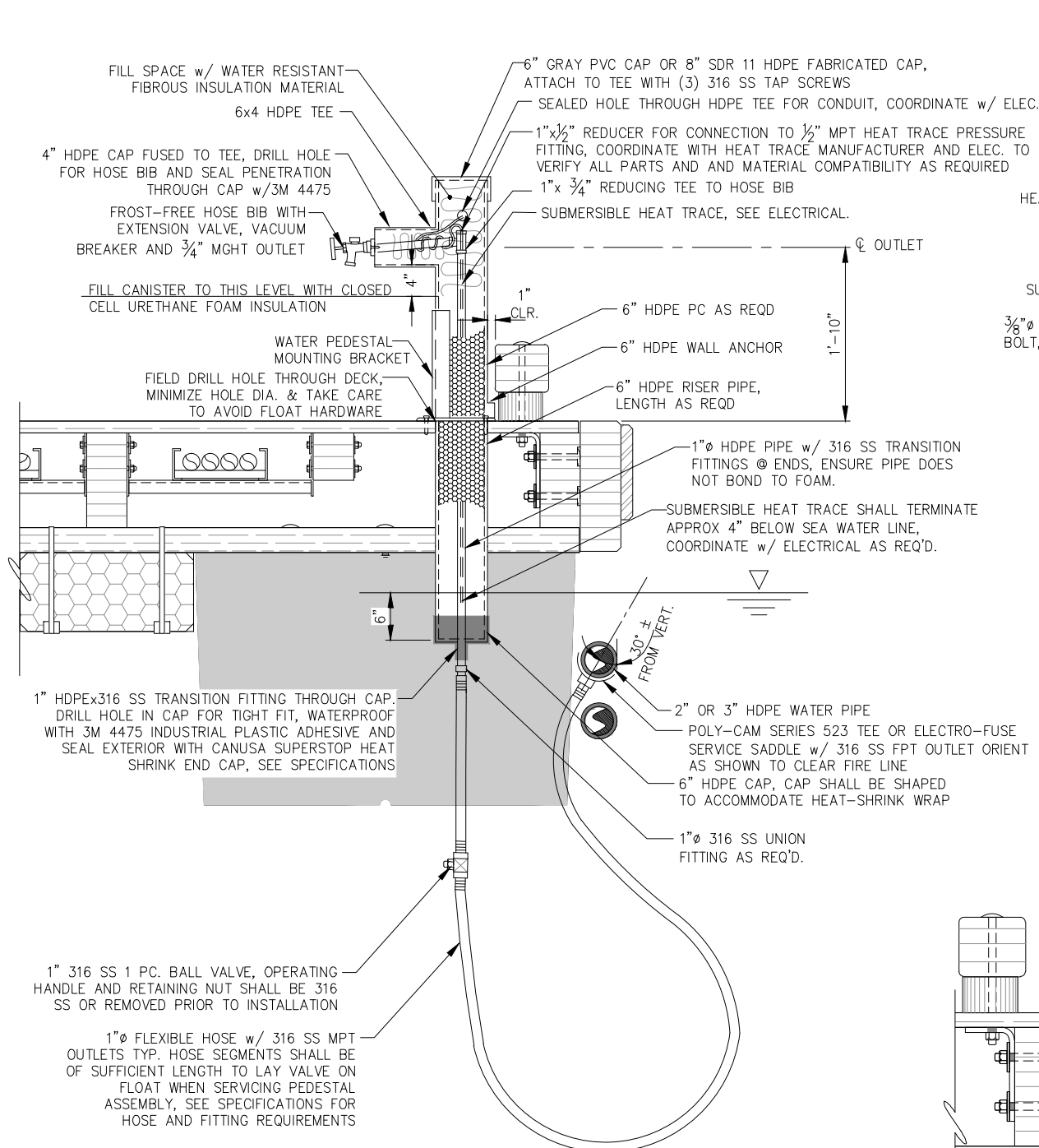
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
FLOAT MOUNTED UTILITY ROUTING DETAILS

PND PROJECT NO.: 152037

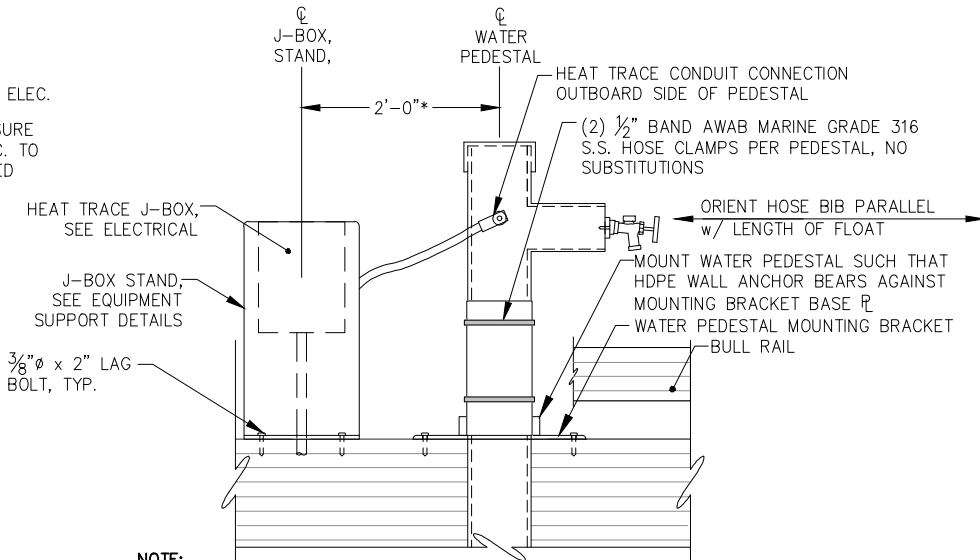
8.03
SHEET
77 OF 82

\\Pnd\jdata\dl15XXX\152037 Douglas Harbor Renovation\G Drawings\Design\8.03 Utility Connections Headwalk.dwg, 10/30/2015 1:20:40 PM



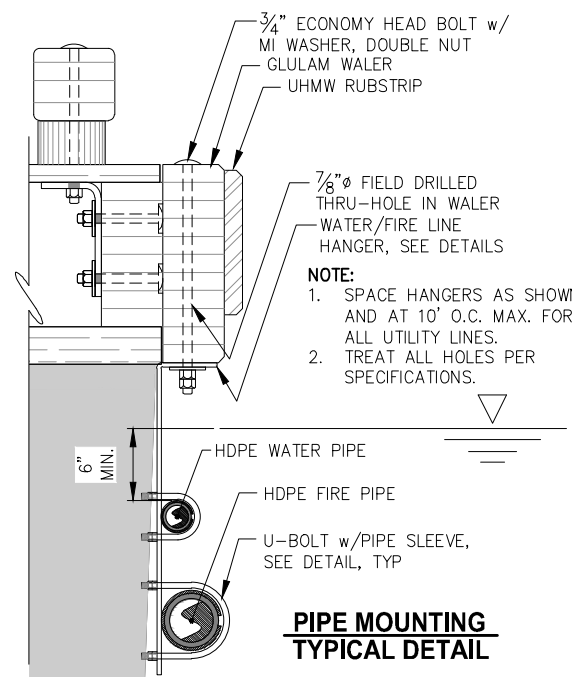
WATER PEDESTAL TYPICAL DETAIL

- NOTE:**
- HOSE BIB SHOWN IN PROFILE FOR ILLUSTRATIVE PURPOSES ONLY, ORIENT HOSE BIB PARALLEL WITH BULLRAIL.
 - HANGER AND CONNECTION HARDWARE NOT SHOWN FOR CLARITY.
 - ALL SUBMERGED STEEL HARDWARE SHALL BE CONSTRUCTED OF 316 SS, UNO.
 - PRESSURE TESTS SHALL BE COMPLETED AFTER HEAT TRACE HAS BEEN INSTALLED, VERIFY 150 PSI MIN HEAT TRACE PRESSURE FITTING w/ ELECTRIC.
 - LOCATE PEDESTALS PER FLOAT PLAN.



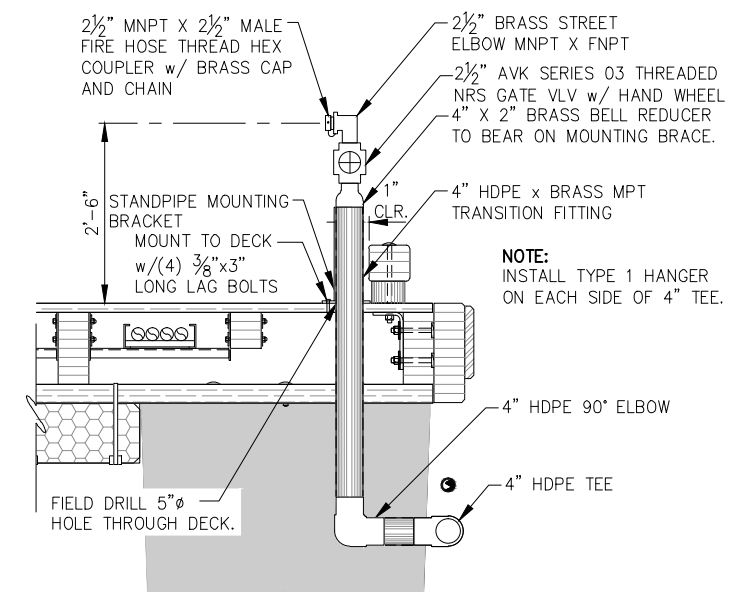
WATER PEDESTAL MOUNTING TYPICAL DETAIL

- NOTE:**
- TRIM WALL ANCHOR BEARING RING TO FLUSH WITH PIPE AROUND MOUNTING BRACKET VERT. \varnothing .
 - 1"x1" SEMI-RING MAY BE WELDED TO RISER PIPE IN LIEU OF HDPE WALL ANCHOR, SUBMIT WELDING METHOD FOR ENGINEER APPROVAL.
 - EF FLEX RESTRAINT MAY BE USED FOR BEARING IN LIEU OF WALL ANCHOR.
 - TRIM JOINT BEADS AS REQ'D.
 - *DISTANCE MAY VARY, LOCATE J-BOX TO SIDE AWAY FROM NEAREST STALL UNLESS OTHERWISE RESTRICTED AND PER ENGINEER DIRECTION

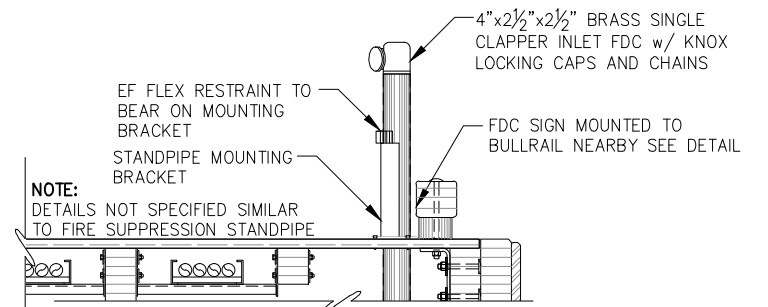


PIPE MOUNTING TYPICAL DETAIL

- NOTE:**
- SPACE HANGERS AS SHOWN AND AT 10' O.C. MAX. FOR ALL UTILITY LINES.
 - TREAT ALL HOLES PER SPECIFICATIONS.

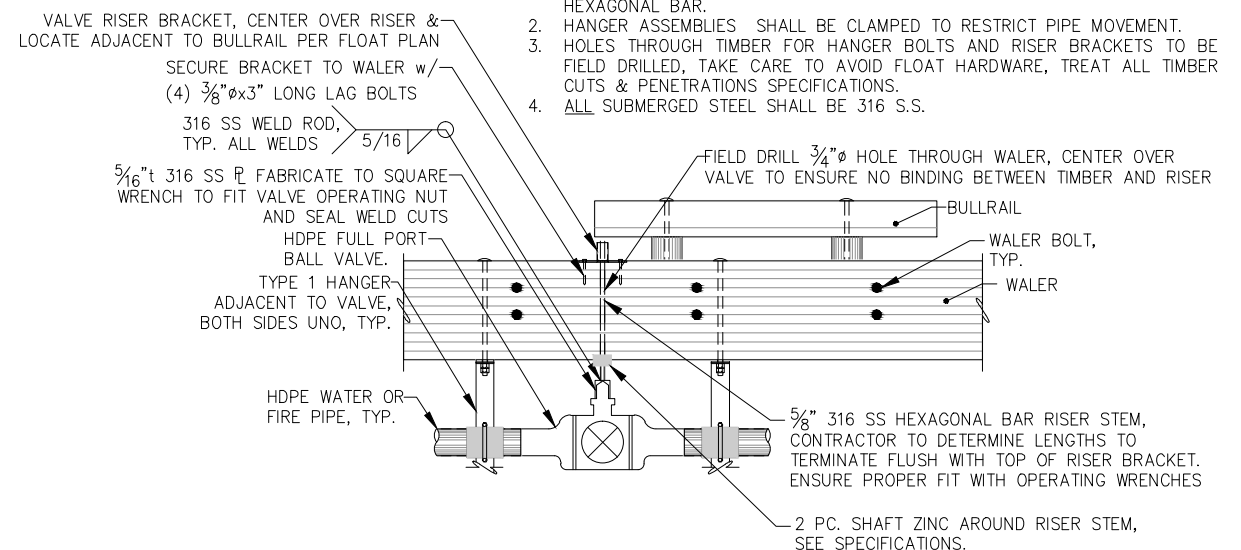


FIRE SUPPRESSION STANDPIPE TYPICAL DETAIL



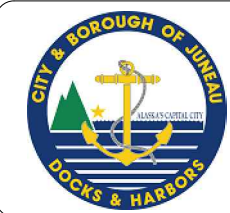
A 8.06 FIRE SUPPRESSION SYSTEM INLET DETAIL

- NOTE:**
- VALVES SHALL BE OPERATED WITH A TEE-HANDLE SOCKET WRENCH OF ADEQUATE LENGTH TO TURN THE HANDLE ABOVE THE BULLRAIL, PROVIDE (2) SNAP-ON, OR EQUAL TEE HANDLE SOCKET WRENCHES TO OWNER AND (2) TO THE CBJ FIRE DEPARTMENT, (4) TOTAL REQ'D. VERIFY FIT UP w/ 5/8" HEXAGONAL BAR.
 - HANGER ASSEMBLIES SHALL BE CLAMPED TO RESTRICT PIPE MOVEMENT.
 - HOLES THROUGH TIMBER FOR HANGER BOLTS AND RISER BRACKETS TO BE FIELD DRILLED, TAKE CARE TO AVOID FLOAT HARDWARE, TREAT ALL TIMBER CUTS & PENETRATIONS SPECIFICATIONS.
 - ALL SUBMERGED STEEL SHALL BE 316 S.S.



VALVE AND OPERATION RISER ASSY. DETAIL

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: TCB CHECKED: JLD SCALE: NTS
DRAWN: TCB APPROVED: JLD

DATE: 10/27/2015

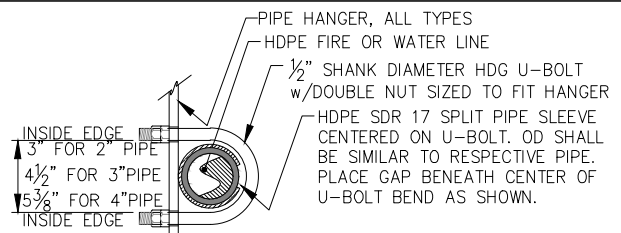
**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**FLOAT MOUNTED UTILITY
DETAILS**

PND PROJECT NO.: 152037

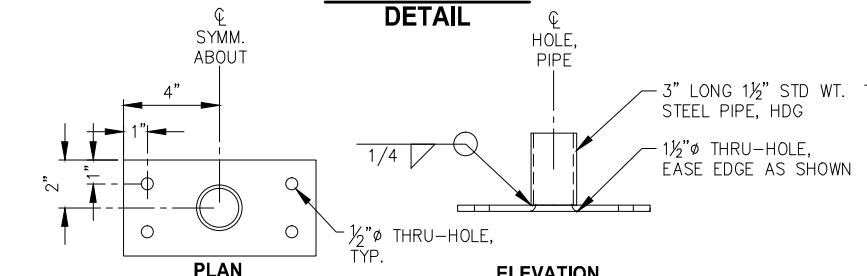
8.04
SHEET
78 OF 82

\\Proj\jdata\152037\Drawings\Design\8.04 Float Mounted Utility Routing Details.dwg, 10/30/2015 12:05:21 PM

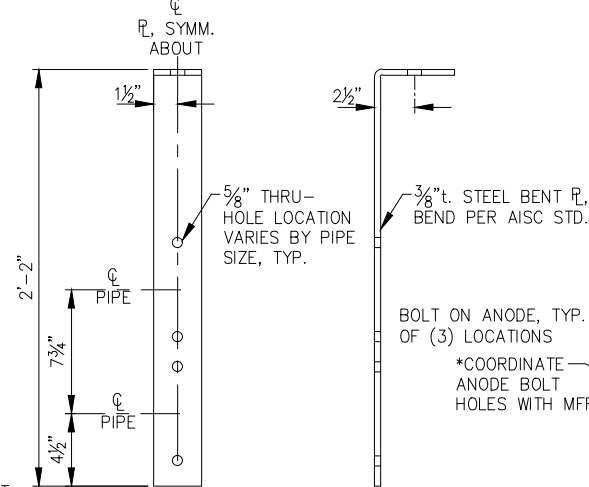


- NOTE:**
1. PIPE SHALL BE CLAMPED SUCH THAT SLEEVE IS SECURED, BUT PIPE IS ALLOWED TO SLIDE LONGITUDINALLY UNLESS OTHERWISE NOTED.
 2. PIPE SLEEVE SHALL BE 6" LONG FOR TYPE 1 HANGERS AND 12" LONG FOR TYPE 2 HANGERS.
 3. HANGER SHOWN OR CALLED OUT AS ADJACENT TO FITTINGS SHALL PROVIDE 6" CLEARANCE BETWEEN SLEEVE AND PIPE WELD.

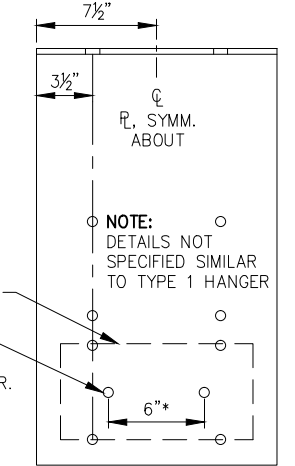
PIPE MOUNTING DETAIL



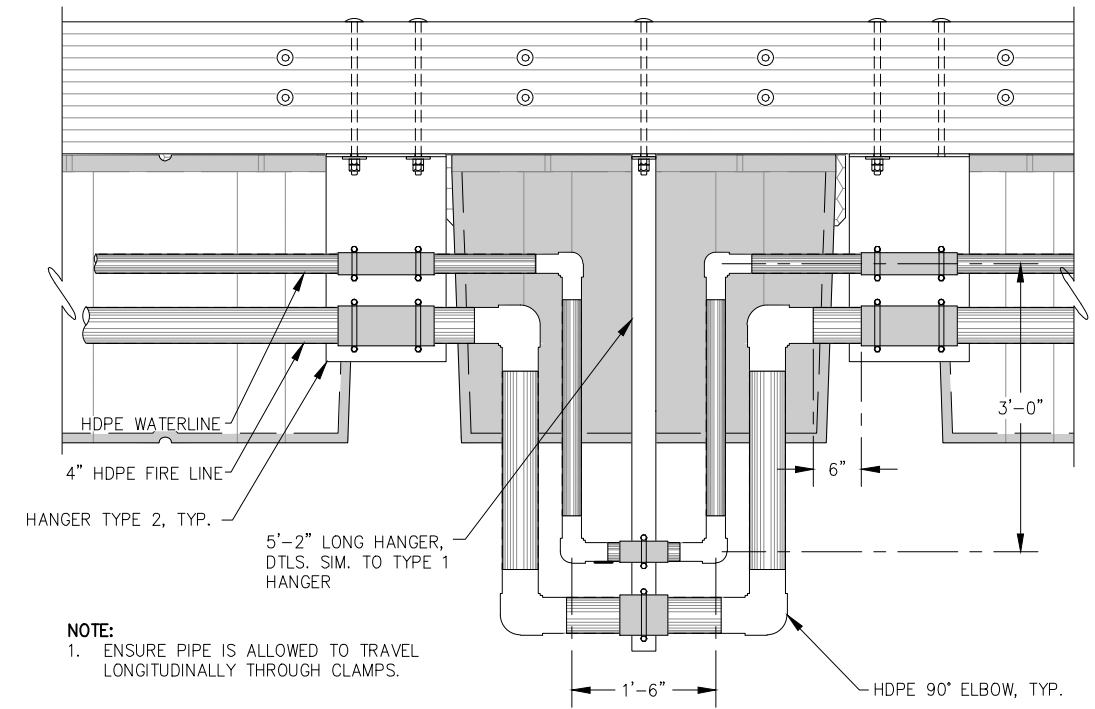
VALVE RISER BRACKET DETAIL



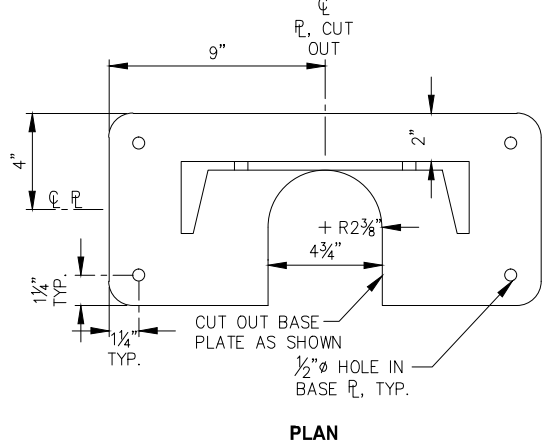
TYPE 1 PIPE HANGER DETAIL



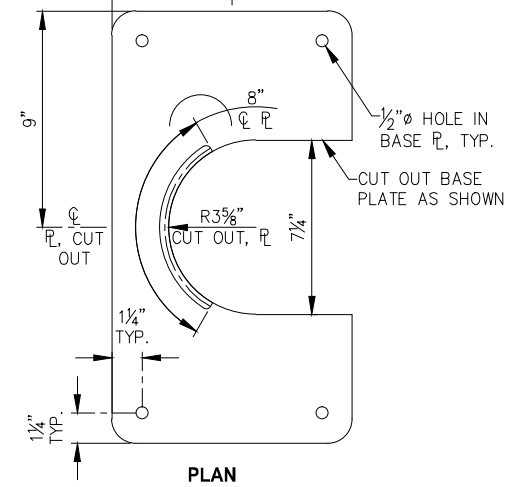
TYPE 2 PIPE HANGER DETAIL



EXPANSION LOOP TYPICAL DETAIL

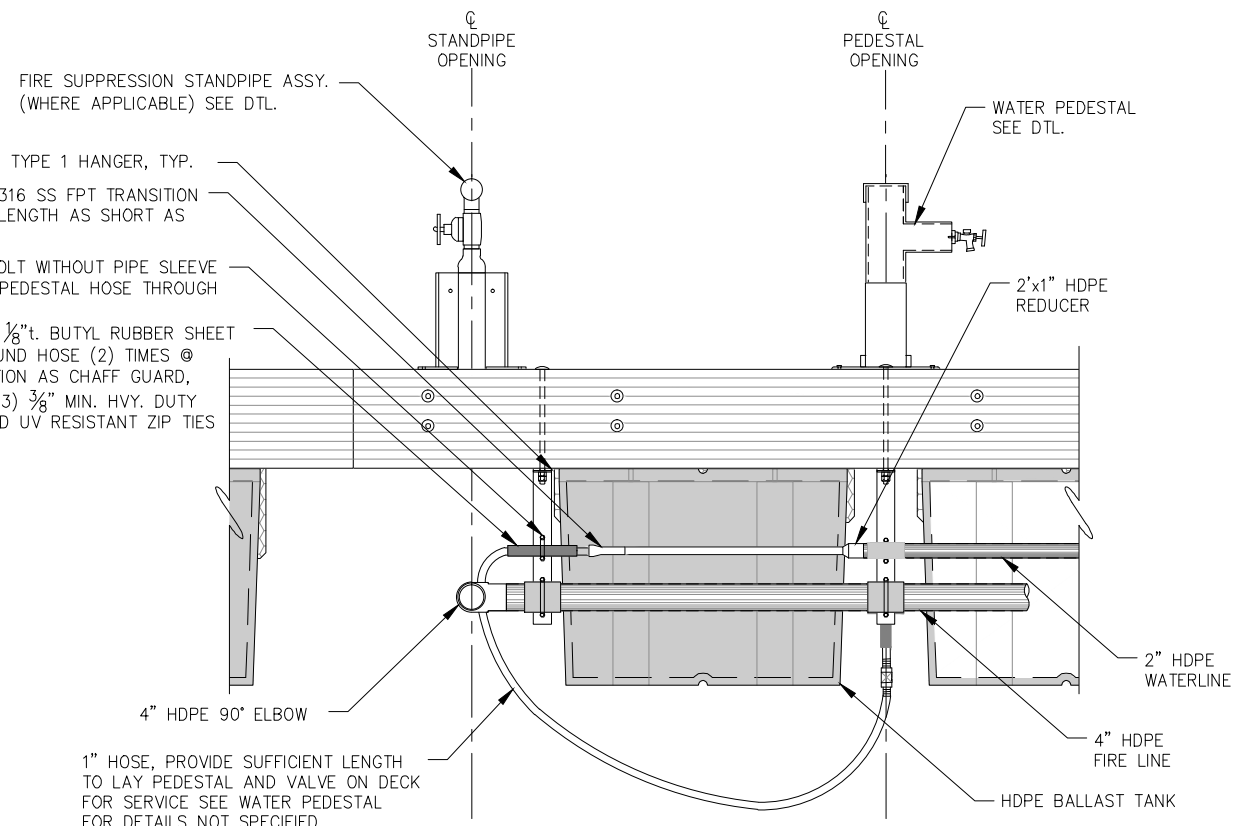


STANDPIPE MOUNTING BRACKET DETAIL

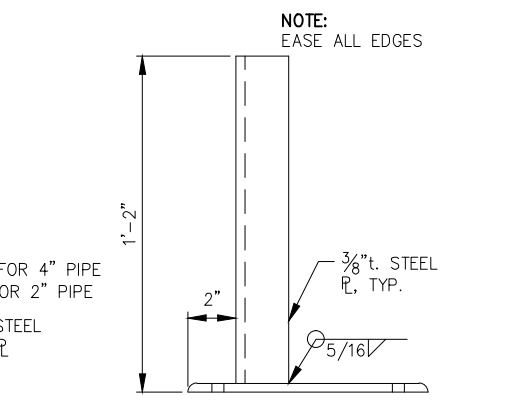
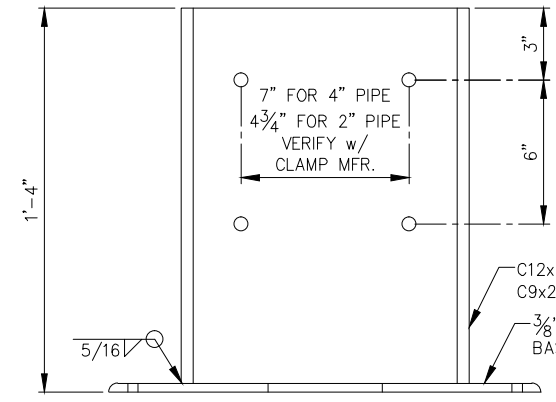


WATER PEDESTAL MOUNTING BRACKET DETAIL

- NOTE:**
EASE ALL EDGES
- 1" HOSE, PROVIDE SUFFICIENT LENGTH TO LAY PEDESTAL AND VALVE ON DECK FOR SERVICE SEE WATER PEDESTAL FOR DETAILS NOT SPECIFIED



END OF MAINWALK WATERLINE TYPICAL DETAIL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: TCB CHECKED: JLD SCALE: NTS
DRAWN: TCB APPROVED: JLD

95% DESIGN REVIEW SUBMITTAL

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

SHEET TITLE:
**FLOAT MOUNTED UTILITY
DETAILS**

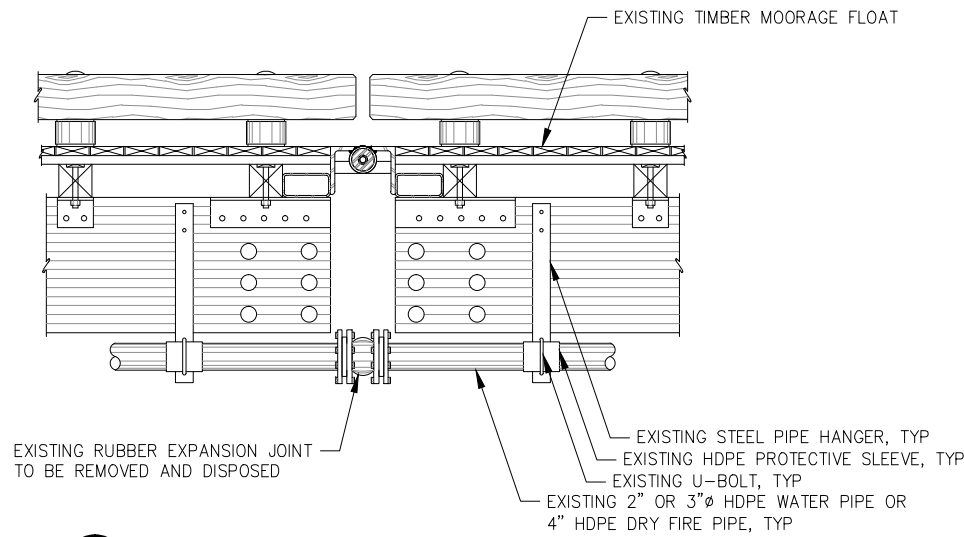
DATE: 10/27/2015

PND PROJECT NO.: 152037

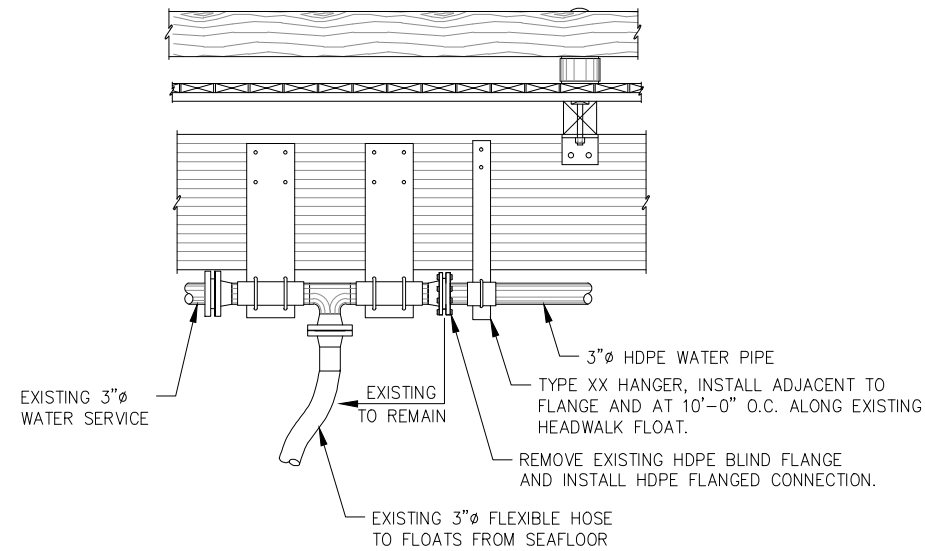
8.05
SHEET
79 OF 82

\\Pnfd\data\dl15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\8.05 Float Mounted Utility Details.dwg. 10/30/2015 1:20:59 PM

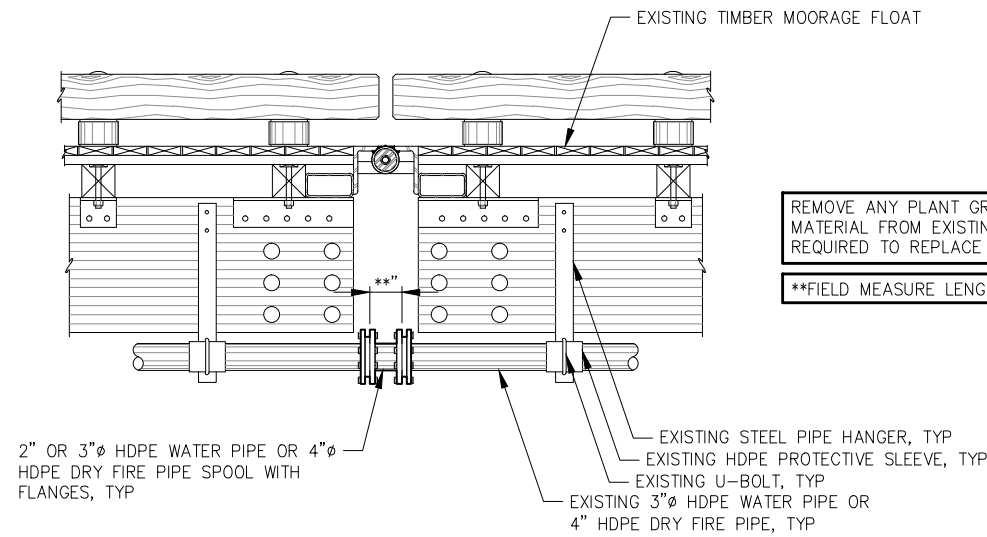
\\Pnfd\data\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\8.06 Float Mounted Utility Details.dwg, 10/30/2015 1:21:02 PM



A EXISTING RUBBER EXPANSION JOINT ELEVATION



C CONNECTION TO EXISTING WATER SERVICE



B RUBBER EXPANSION JOINT REPLACEMENT ELEVATION

REMOVE ANY PLANT GROWTH OR DELETERIOUS MATERIAL FROM EXISTING WATER OR FIRE PIPE AS REQUIRED TO REPLACE RUBBER EXPANSION JOINTS.

**FIELD MEASURE LENGTH AS REQ'D TO FIT.

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: BMI CHECKED: JLD SCALE: NTS
DRAWN: — APPROVED: JLD

DATE: 10/27/2015

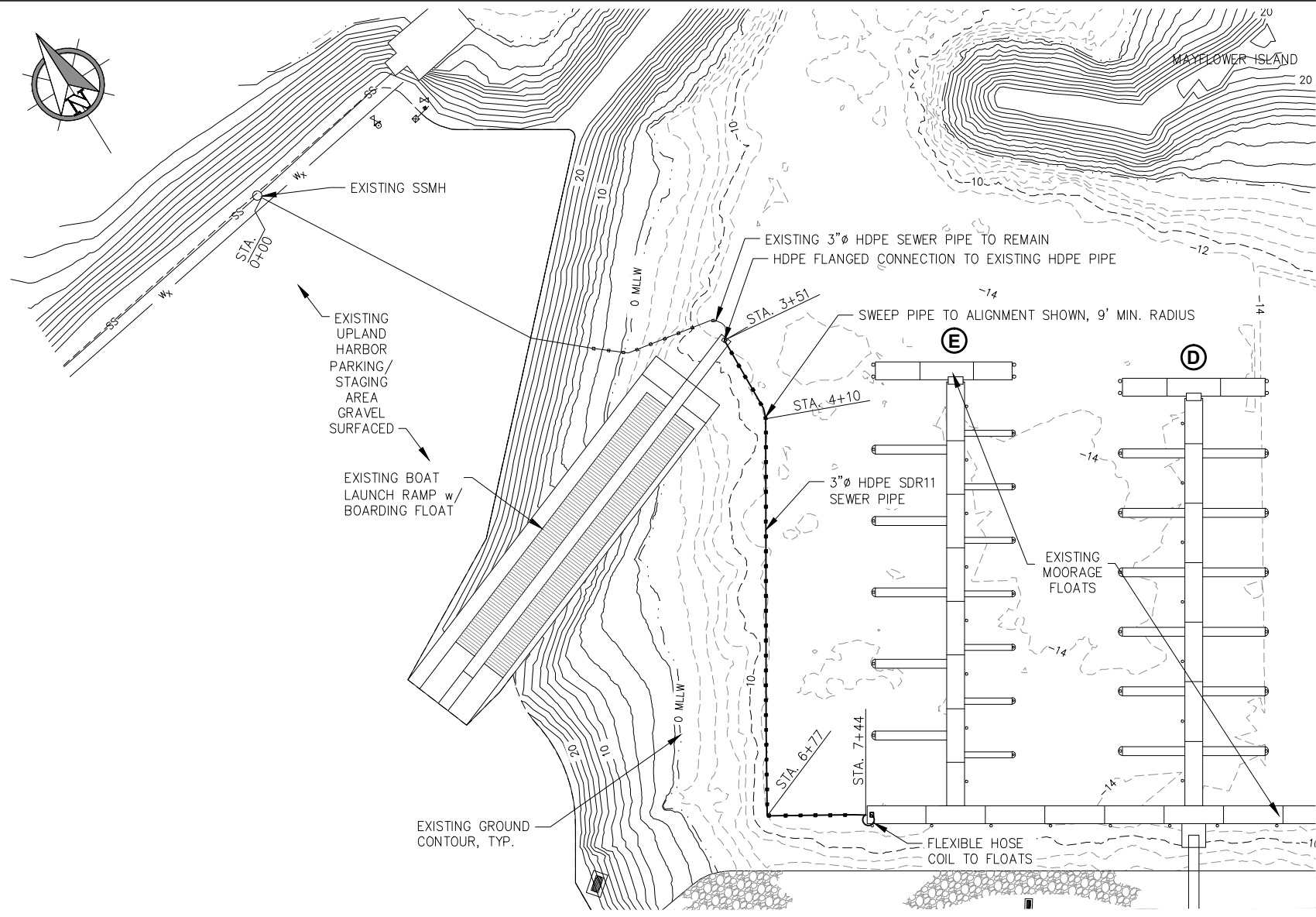
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
FLOAT MOUNTED UTILITY
DETAILS

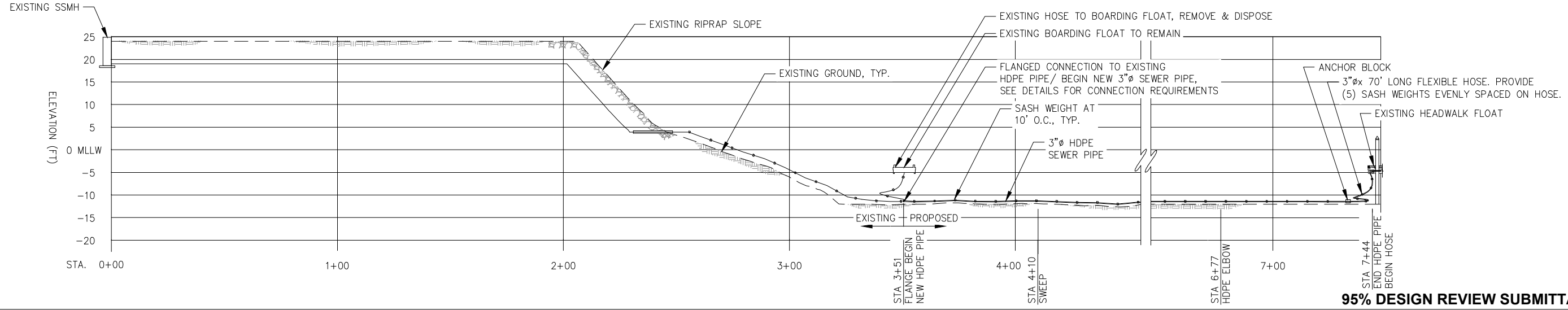
PND PROJECT NO.: 152037

8.06
SHEET
80 OF 82

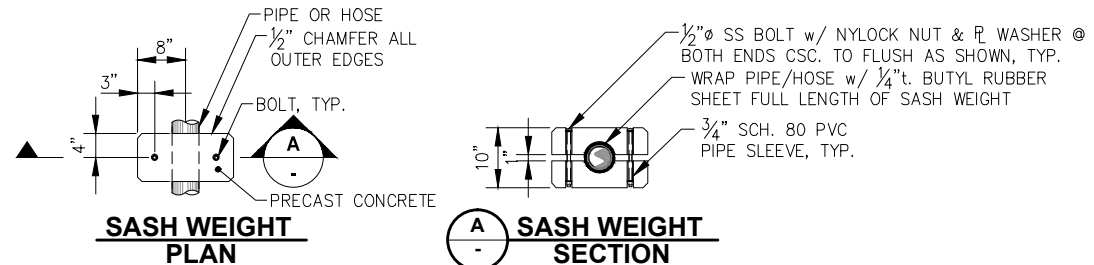
\\Pnfd\ata\d\15XXX\152037 Douglas Harbor Renovation\G. Drawings\Design\8.07 Sewer Pumpout Relocation Plan & Profile.dwg, 10/30/2015 1:21:12 PM



SEWER RELOCATE - PLAN

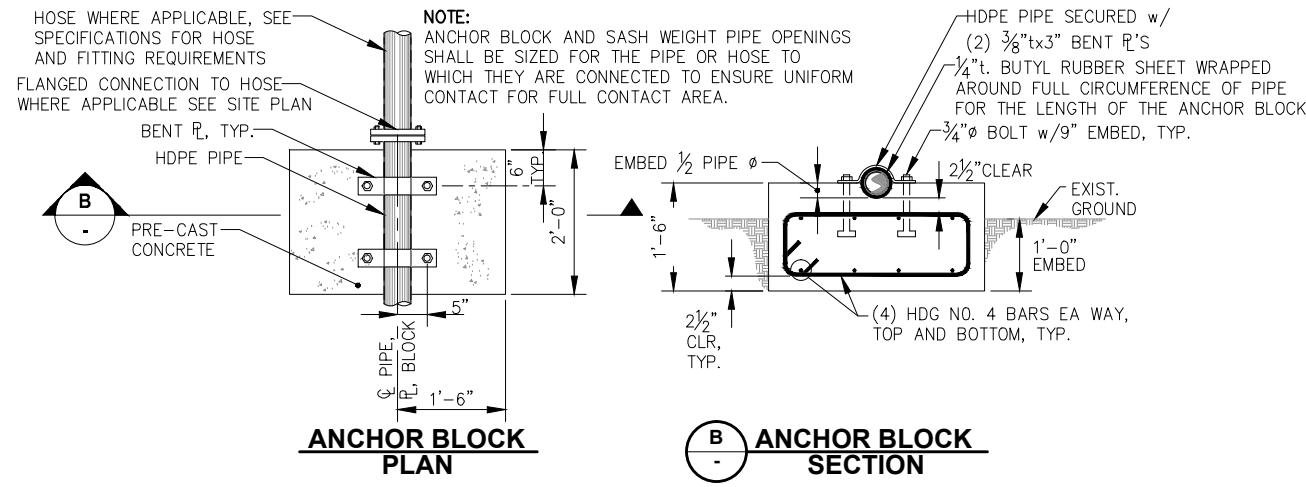


95% DESIGN REVIEW SUBMITTAL



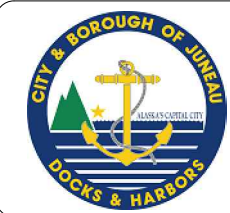
SASH WEIGHT PLAN

SASH WEIGHT SECTION



ANCHOR BLOCK PLAN

ANCHOR BLOCK SECTION



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: BMI CHECKED: JLD SCALE: SCALE IN FEET
DRAWN: KLL APPROVED: JLD 0 50 100 FT.

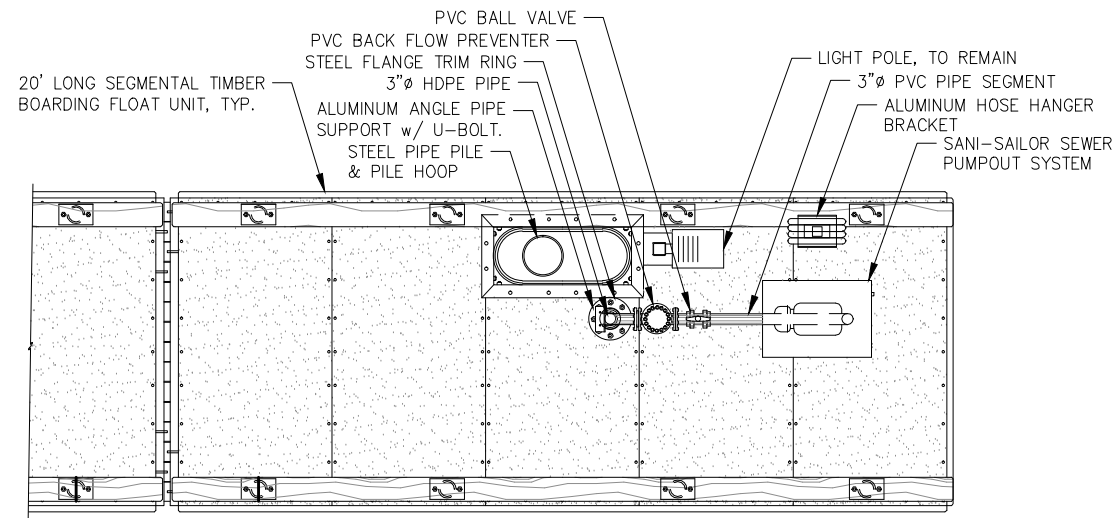
DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

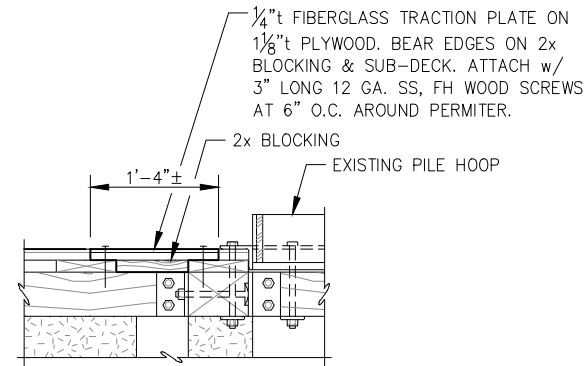
SHEET TITLE:
WASTEWATER PUMPOUT SYSTEM

PND PROJECT NO.: 152037

8.07
SHEET
81 OF 82

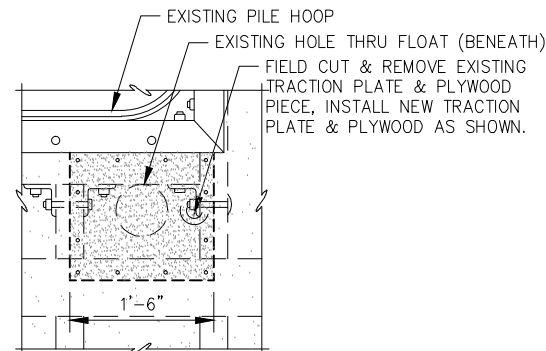


EXISTING SEWER PUMPOUT SYSTEM - PLAN

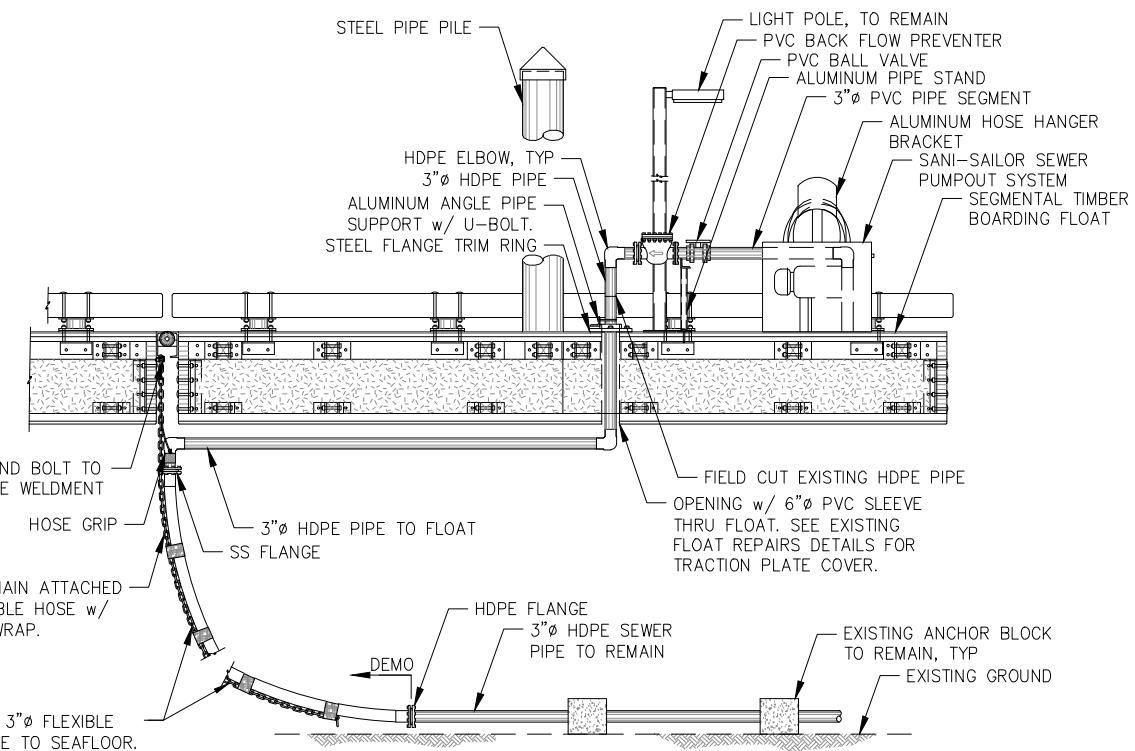


SECTION

EXISTING FLOAT REPAIRS

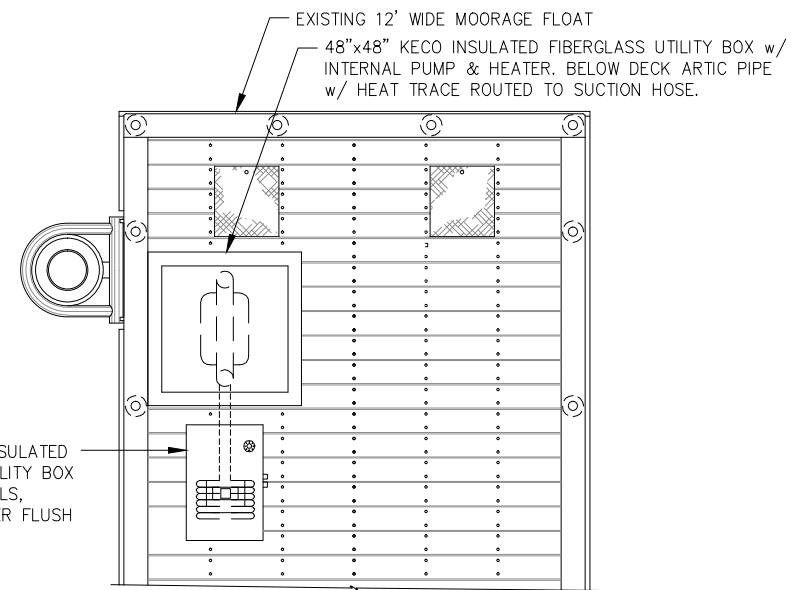


PLAN



A EXISTING SEWER PUMPOUT SYSTEM

- EXISTING PUMPOUT DEMO & FLOAT REPAIR WORK PLAN SUMMARY:**
1. REMOVE AND DISPOSE THE EXISTING FLOAT MOUNTED SEWER PUMPOUT, PVC BALL VALVE, PVC BACK FLOW PREVENTOR, HDPE AND PVC PIPE & FITTINGS, ALUMINUM PIPE STAND & ANGLE SUPPORT BRACKET. SALVAGE EXISTING ALUMINUM HOSE HANGER BRACKET.
 2. REMOVE AND DISPOSE 3"Ø HDPE SEWER PIPE & FITTINGS AND 3"Ø SEWER HOSE, CHAIN & ASSOCIATED ITEMS AS SHOWN.
 3. PROVIDE NEW PLYWOOD & TRACTION PLATE COVER OVER EXISTING 6"Ø PENETRATION THRU BOARDING FLOAT.



WASTEWATER PUMPOUT SYSTEM - PLAN

95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: BMI CHECKED: JLD
DRAWN: BMI APPROVED: JLD

SCALE:

DATE: 10/27/2015

CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**WASTEWATER PUMPOUT
SYSTEM DETAILS**

8.08

SHEET
82 OF 82

PND PROJECT NO.: 152037

LEGEND

ABBREVIATIONS:

- GFR GROUND FAULT RELAY
- MDP MAIN DISTRIBUTION PANEL
- SWBD SWITCHBOARD

SHEET NOTE SYMBOLS:

- (E) EXISTING TO REMAIN
- (N) NEW
- (R) RELOCATE EXISTING
- (X) REMOVE EXISTING

SERVICE EQUIPMENT:

- MAIN DISTRIBUTION PANEL

POWER

- DUPLEX 30A SHORE-TIE PEDESTALS
- DUPLEX 30A SHORE-TIE PEDESTAL WITH LUMINAIRE
- DUPLEX 30A/50A SHORE-TIE PEDESTALS
- DUPLEX 30A/50A SHORE-TIE PEDESTALS WITH LUMINAIRE
- JUNCTION BOX
- EQUIPMENT CONNECTION

SERVICE EQUIPMENT

- HANDHOLE

LIGHTING

- EXTERIOR POLE MOUNTED LUMINAIRE
- SURFACE OR SUSPENDED LINEAR LUMINAIRE

LIGHTING CONTROLS

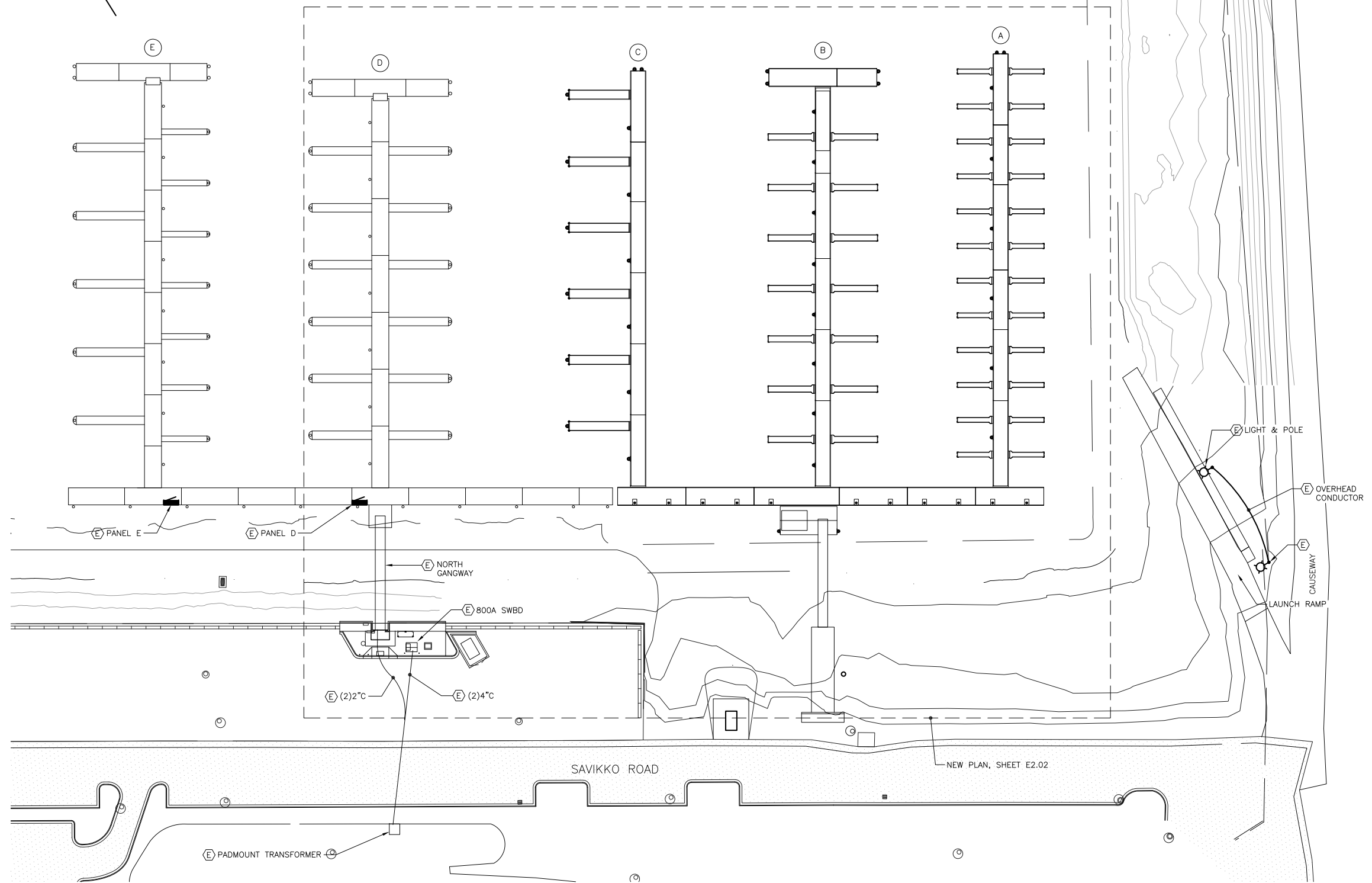
- PHOTOELECTRIC CELL

DIAGRAM SYMBOLS

- CIRCUIT BREAKER
- CONTACT
- GROUND BUS
- GROUND ROD
- METER
- RELAY
- SHUNT TRIP
- TRANSFORMER

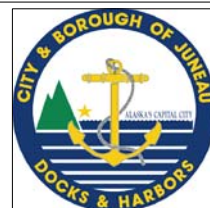
CONDUIT & CONDUCTORS:

- HOME RUN
- CONDUIT: 1/2" UON.
- UNGROUNDED CONDUCTORS (#12 AWG)
- NEUTRAL: #10 WITH DOT #12 OTHERWISE
- GROUND CONDUCTOR
- CONDUCTORS NOT SHOWN WHERE ONLY #12 NEUTRAL AND UNGROUNDED CONDUCTOR ARE REQUIRED
- CONDUIT IN FLOOR OR UNDERGROUND
- FLEXIBLE CONDUIT



1 SITE PLAN

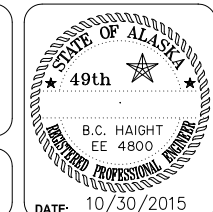
95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com



CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

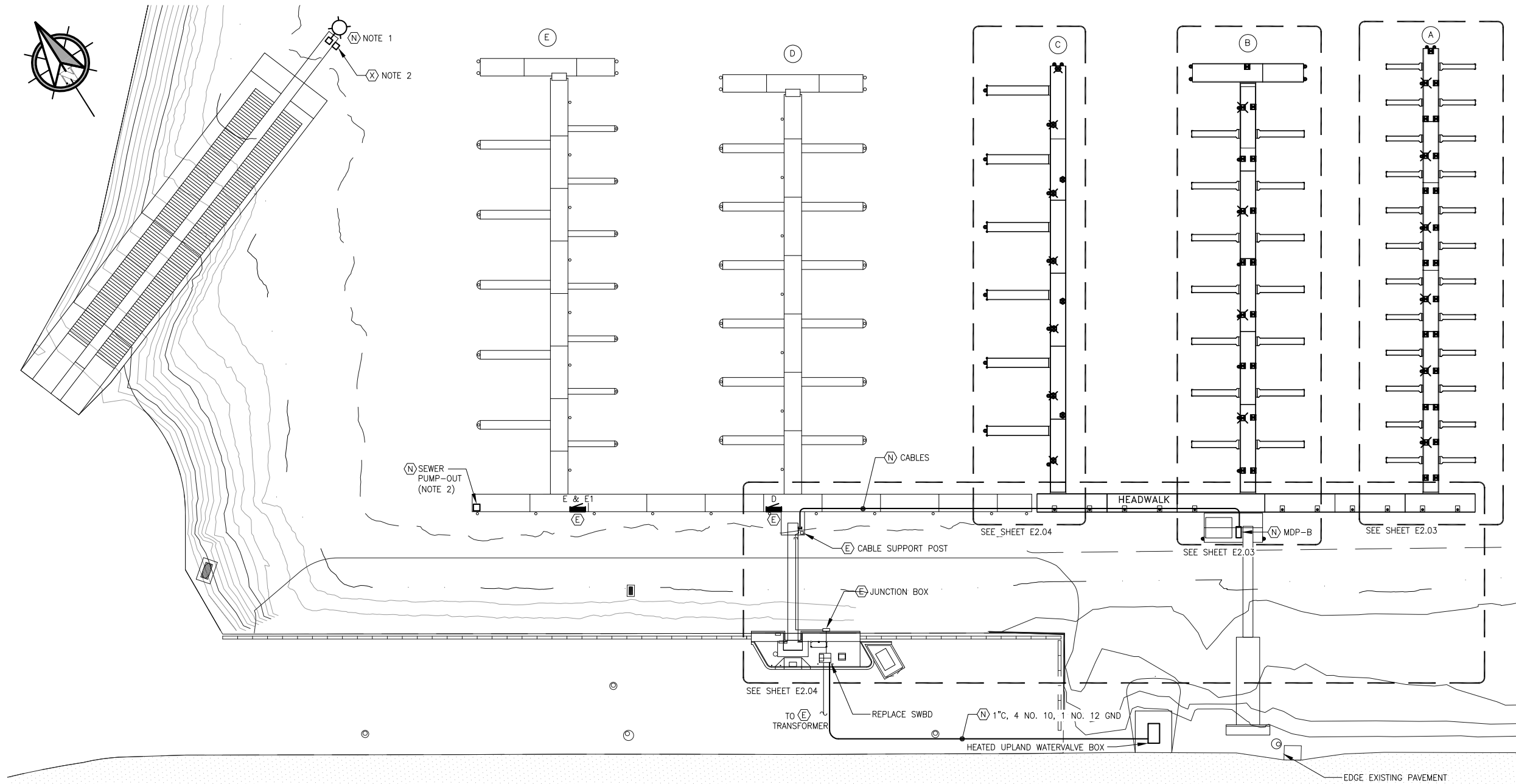
SHEET TITLE: **SITE PLAN**

DESIGN: NJP CHECKED: BCH SCALE: **SCALE IN FEET**
DRAWN: REJ APPROVED: BCH 0 40 80 FT.

PND PROJECT NO.: 152037 61E2.01.DWG

E2.01
SHEET **1** OF **18**

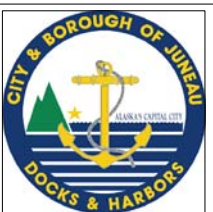
Oct 27, 2015 4:18pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E2.01.dwg (Layout1.tlb)



① NEW PLAN - POWER

- NOTES:
1. REMOVE EXISTING LIGHT POLE AND FIXTURE. RECONFIGURE AND CONNECT EXISTING CABLE INTO THE NEW LIGHT POLE.
 2. REMOVE EXISTING PUMP OUT AND CIRCUIT. PROVIDE NEW CIRCUITS FROM THE EXISTING PANEL E FOR THE NEW PUMP AND HEATERS.

95% DESIGN REVIEW SUBMITTAL



HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

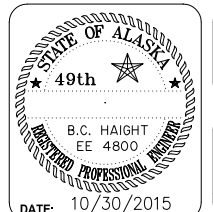
REVISIONS						
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.	

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE: SCALE IN FEET
0 20 40FT



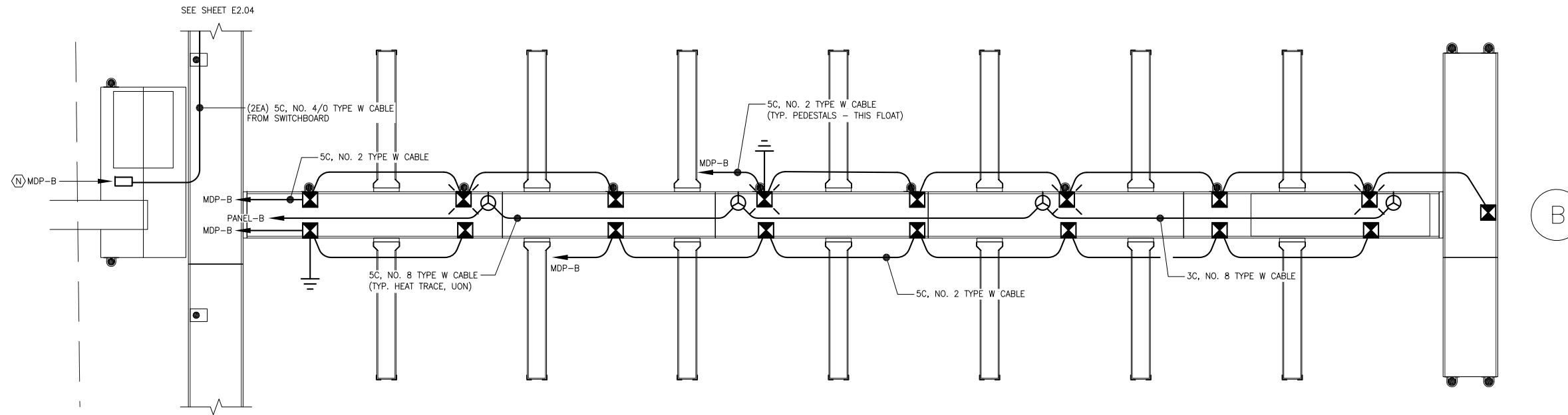
CITY & BOROUGH OF JUNEAU, ALASKA DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: **NEW PLAN - POWER**

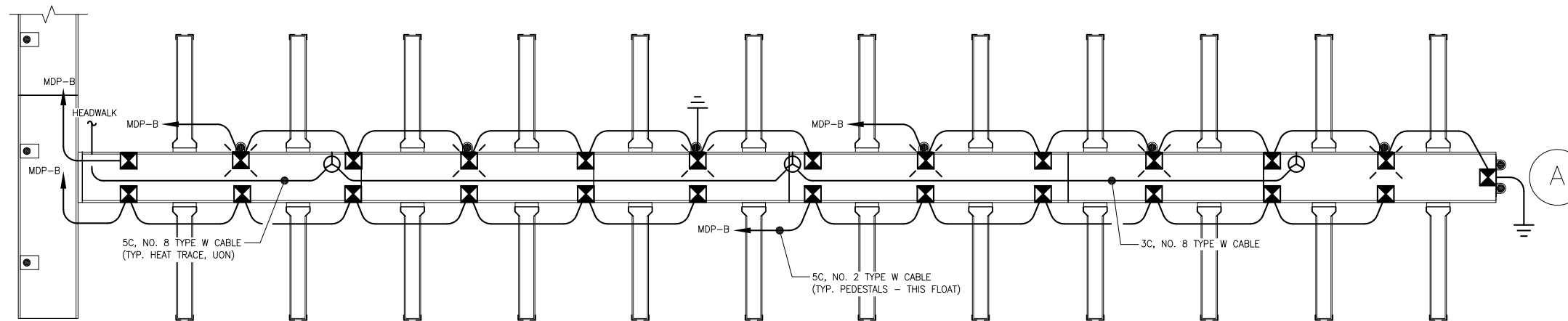
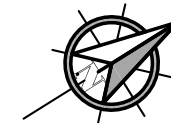
PND PROJECT NO.: 152037 E2.02.DWG

E2.02
SHEET 2 OF 18

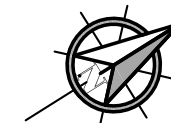
Oct 27, 2015 4:26pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats Drawings\Working\E2.02.dwg (Layout1.tub)



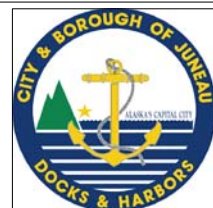
② B FLOAT ENLARGED PLAN - POWER



① A FLOAT ENLARGED PLAN - POWER



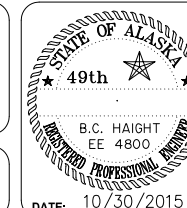
95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com



CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**ENLARGED A & B FLOAT PLANS
- POWER**

E2.03
SHEET
3 OF 18

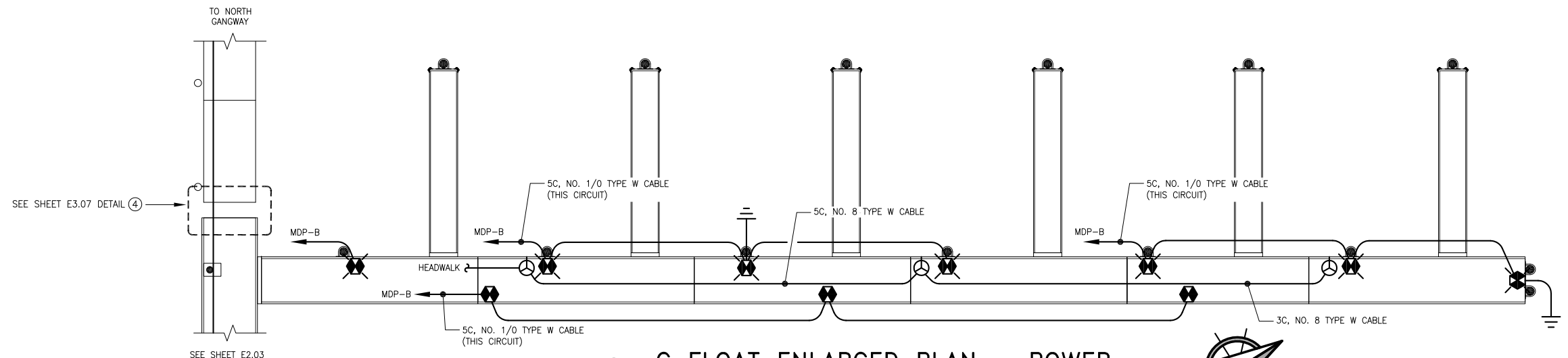
DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE:
SCALE IN FEET
0 15 30FT

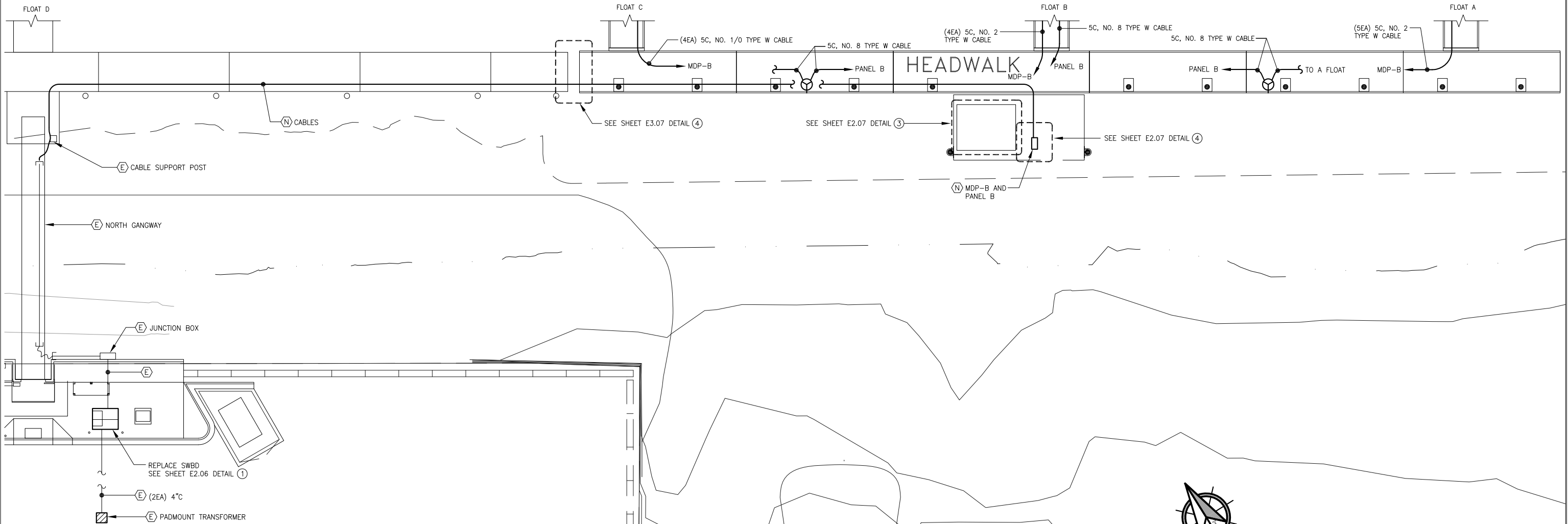
DATE: 10/30/2015

PND PROJECT NO.: 152037

E2.03.DWG

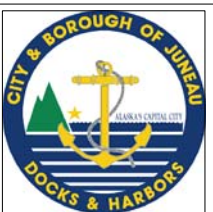


1 C FLOAT ENLARGED PLAN - POWER



2 HEADWALK FLOAT ENLARGED PLAN - POWER (BASE BID)

Oct 27, 2015 4:32pm
 F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E2.04.dwg (Layout1.tub)



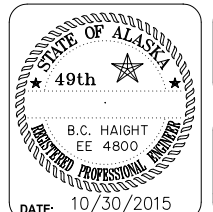
REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE: SCALE IN FEET
0 15 30FT



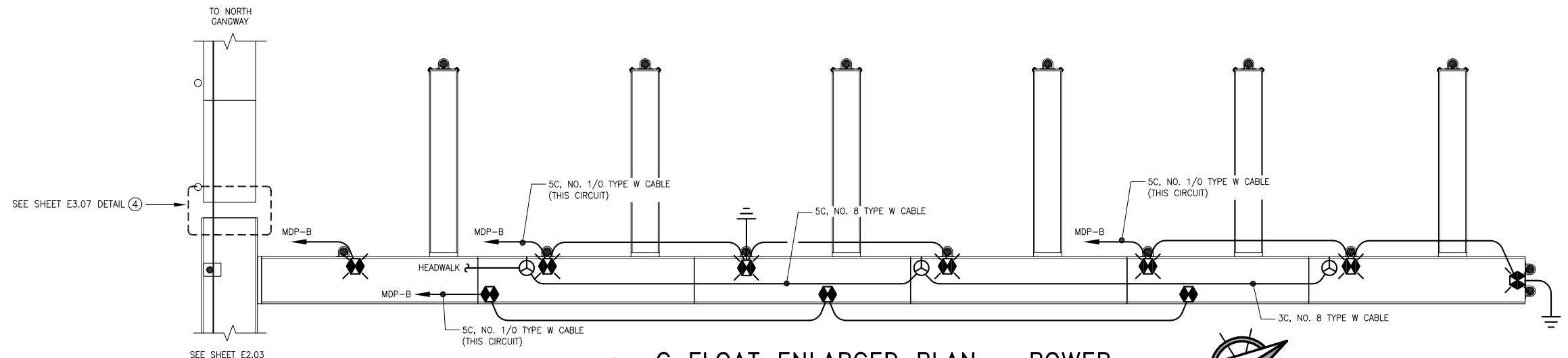
95% DESIGN REVIEW SUBMITTAL

**CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001**

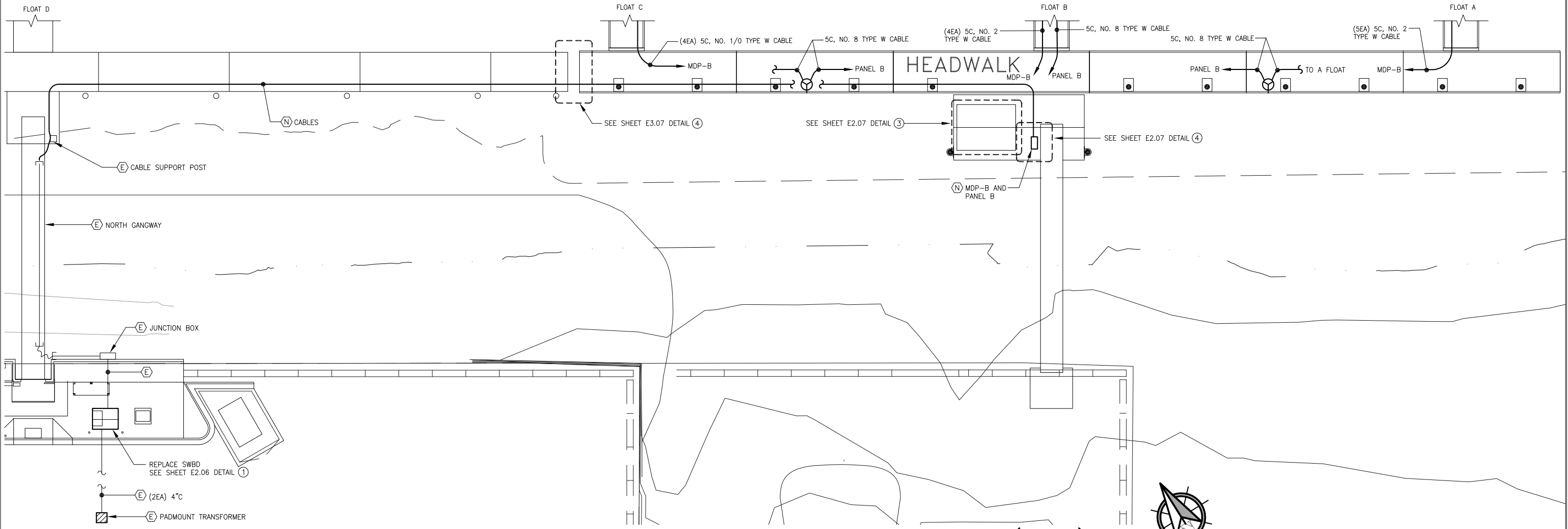
SHEET TITLE:
**ENLARGED HEADWALK & C
FLOAT PLANS - POWER**

PND PROJECT NO.: 152037 E2.04.DWG

E2.04
SHEET 4 OF 18

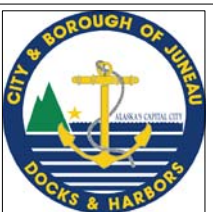


1 C FLOAT ENLARGED PLAN - POWER



2 HEADWALK FLOAT ENLARGED PLAN - POWER (ALT A)

Oct 27, 2015 1:52pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E2.04A.dwg (Layout1 tab)



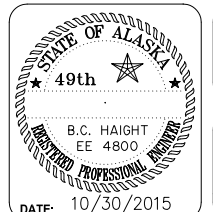
HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE: SCALE IN FEET
0 15 30FT



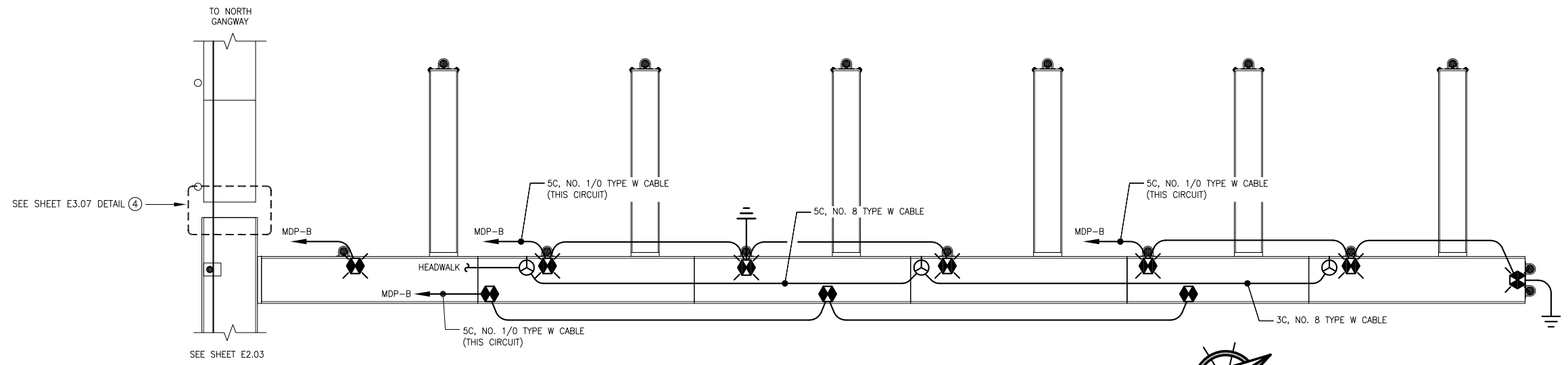
95% DESIGN REVIEW SUBMITTAL

CITY & BOROUGH OF JUNEAU, ALASKA DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

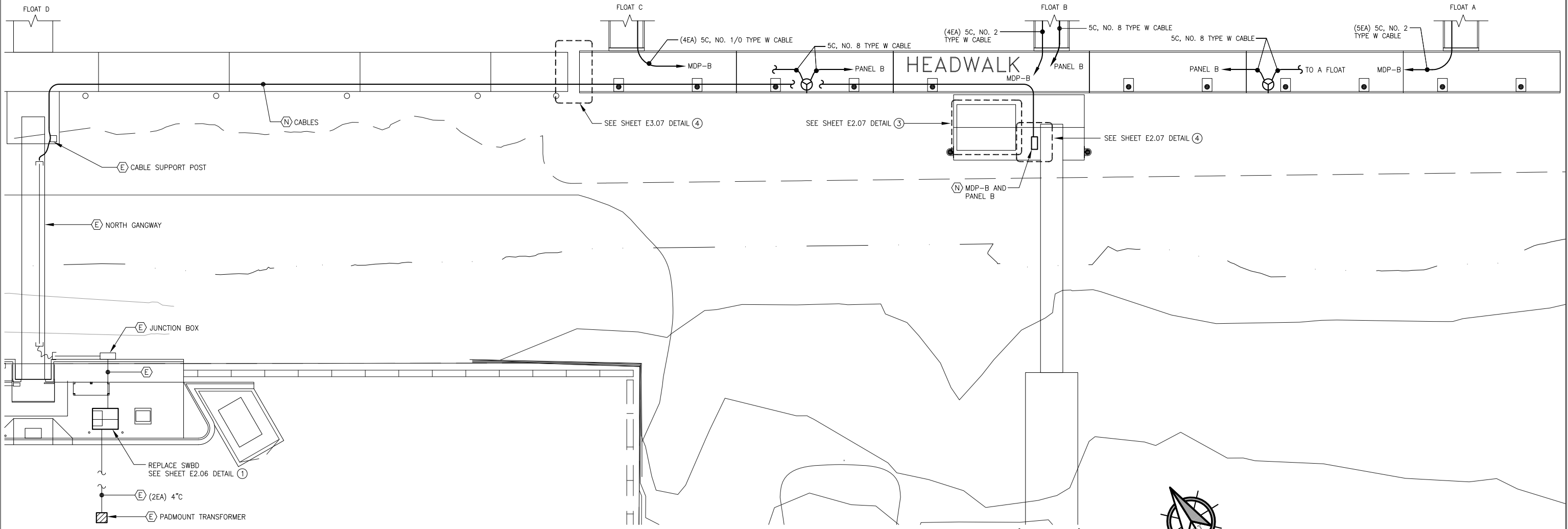
SHEET TITLE:
ENLARGED HEADWALK & C FLOAT PLANS - POWER (ALT A)

PND PROJECT NO.: 152037 E2.04A.DWG

E2.04A
SHEET 5 OF 18

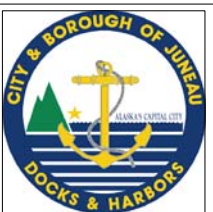


① C FLOAT ENLARGED PLAN - POWER



② HEADWALK FLOAT ENLARGED PLAN - POWER (ALT B)

95% DESIGN REVIEW SUBMITTAL

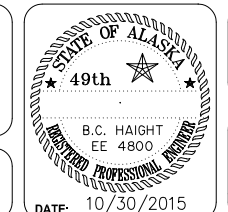


HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com



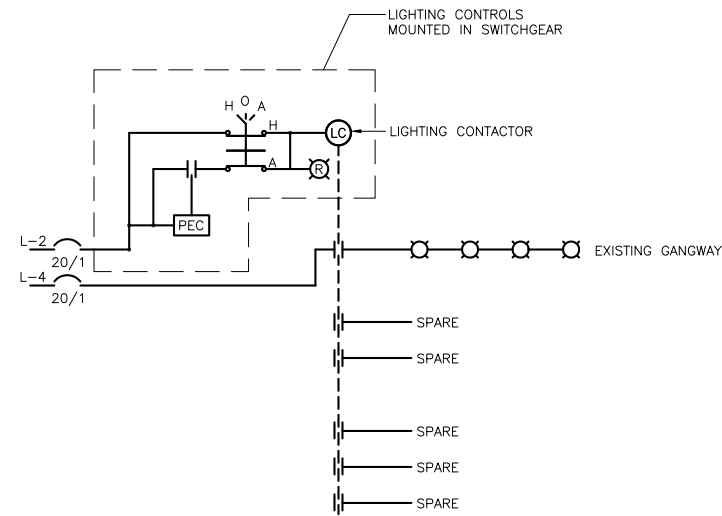
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
**ENLARGED HEADWALK & C
FLOAT PLANS - POWER (ALT B)**
PND PROJECT NO.: 152037 E2.04B.DWG

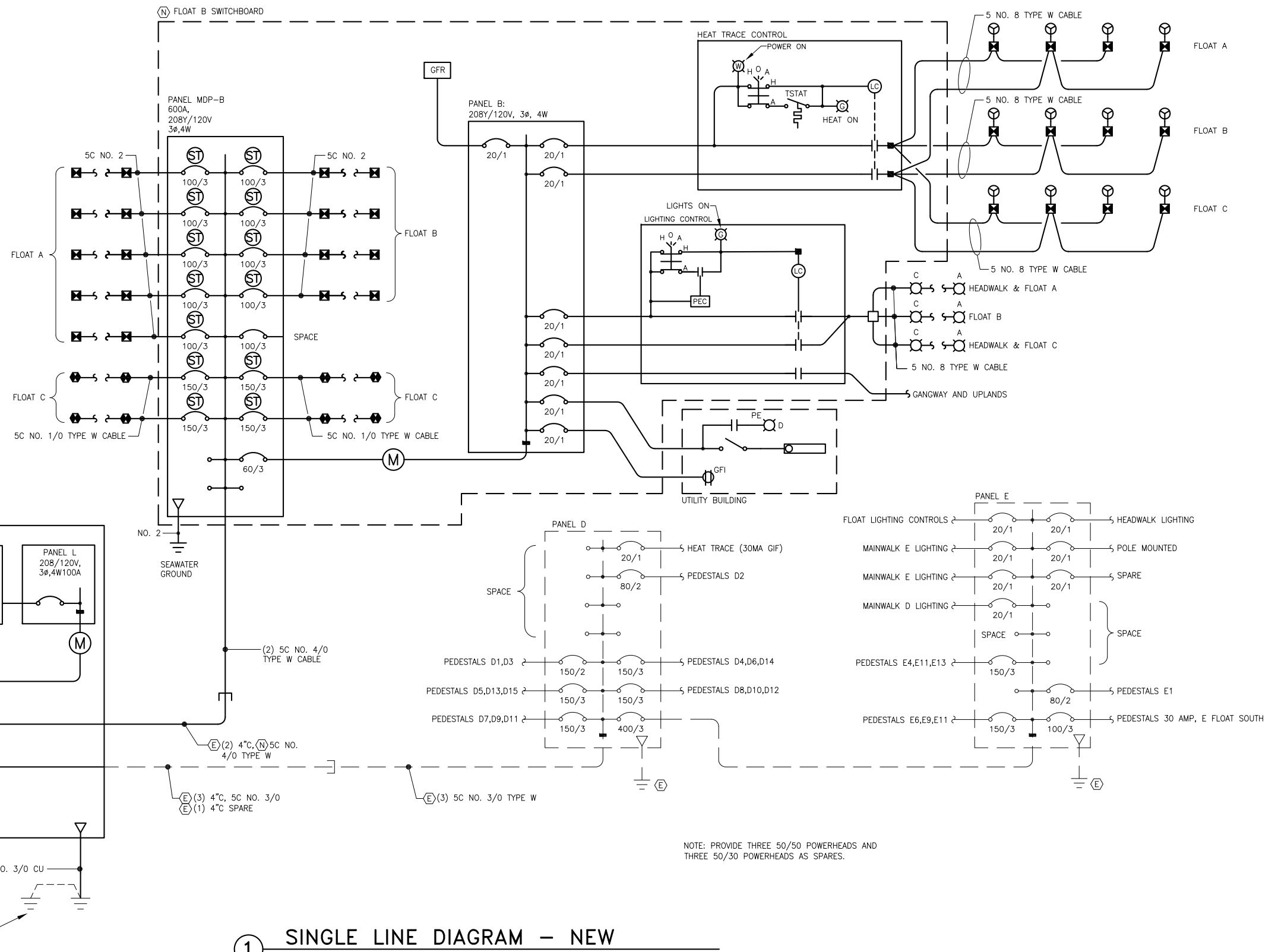
E2.04B
SHEET
6 OF 18

DESIGN: NJP CHECKED: BCH SCALE: SCALE IN FEET
DRAWN: REJ APPROVED: BCH 0 15 30FT

Oct 27, 2015 4:34pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E2.04B.dwg (Layout1 tab)



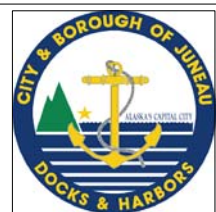
2 SCHEMATIC - UPLANDS LIGHTING



1 SINGLE LINE DIAGRAM - NEW

NOTE: PROVIDE THREE 50/50 POWERHEADS AND THREE 50/30 POWERHEADS AS SPARES.

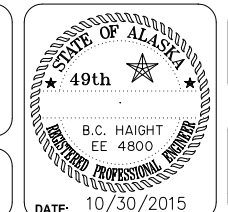
95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



DESIGN: NJP CHECKED: BCH SCALE:
 DRAWN: REJ APPROVED: BCH



CITY & BOROUGH OF JUNEAU, ALASKA
 DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

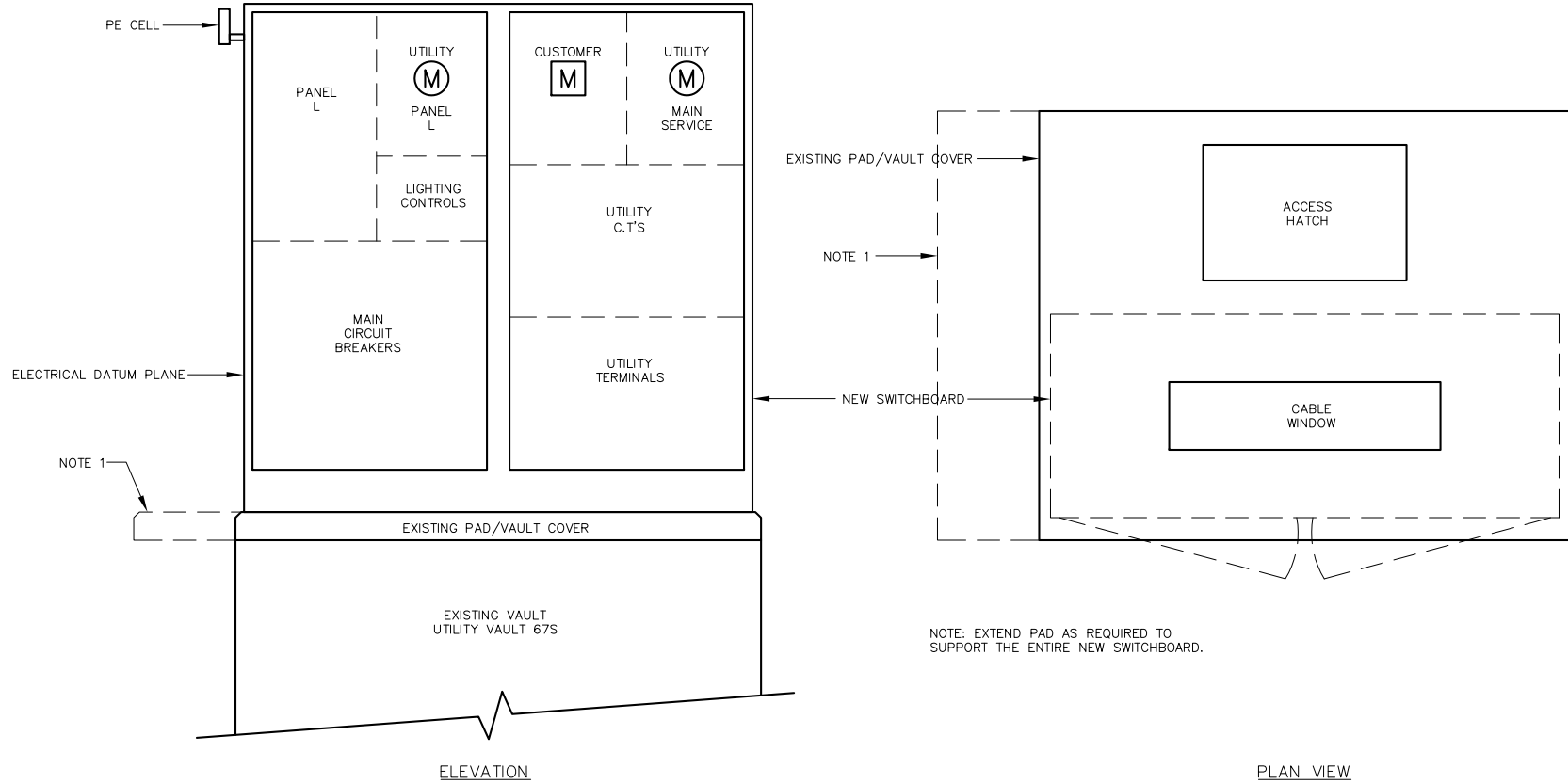
SHEET TITLE: SINGLE LINE DIAGRAMS
 SHEET NO. 7 OF 18
 PND PROJECT NO.: 152037 E2.05.DWG

Oct 27, 2015 4:35pm
 F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E2.05.dwg (Layout1.tub)

ELECTRICAL DATUM PLANE
SHORE & FIXED DOCKS: 16.3 FEET ABOVE MLLW
FLOATING DOCKS: 2.5 FEET ABOVE WATER LEVEL
 (REFERENCE: Gangway Approach Dock at Switchboard = 25.30 Feet)
 National Electrical Code (2011): 555.2

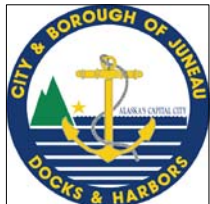
C_K_T NO		SIZE		VOLTS/PHASE			MAIN		LOCATION	MOUNT	
		100 AMPS	208Y/120V, 3 PH				LUGS ONLY	SWITCHBOARD	FLUSH		
DESCRIPTION		BREAKER AMP/ POLE	KVA			BREAKER AMP/ POLE	DESCRIPTION				
		CKT	AØ	BØ	CØ	CKT					
1	PARKING-FUTURE	--	0.0	0.5		0.5	20/1	LIGHTING CONTROLS			2
3	--	--	0.0		0.5	0.5	20/1	GANGWAY LIGHTING			4
5	PARKING-FUTURE	--	0.0			0.0	20/1*	HOT BOX HEATERS			6
7	--	--	0.0	0.0		0.0	20/1*	HOT BOX HEATERS			8
9	PARKING-FUTURE	--	0.0		0.2	0.2	20/1	SWITCH GEAR ENCLOSURE HEATERS			10
11	--	--	0.0			0.0		SPACE			12
13	SPACE	--	0.0	0.0		0.0		SPACE			14
15	SPACE		0.0		0.0	0.0		SPACE			16
17	SPACE		0.0		0.0	0.0		SPACE			18
19	SPACE		0.0	0.0		0.0		SPACE			20
21	SPACE		0.0		0.0	0.0		SPACE			22
23	SPACE		0.0			0.0		SPACE			24
BALANCED CONNECTED LOAD = 1.2 KVA / 03 AMPS			0.5	0.7	0.0	BALANCED DEMAND LOAD = 0.0 KVA / 00 AMPS					
MAXIMUM CONNECTED LOAD = 1.2 KVA / 06 AMPS						MAXIMUM DEMAND LOAD = 0.0 KVA / 00 AMPS					

* GFI 30mA



1 DETAILS - NEW SWITCHBOARD
NO SCALE

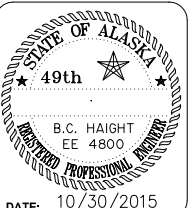
95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
 9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: NJP CHECKED: BCH SCALE:
 DRAWN: REJ APPROVED: BCH



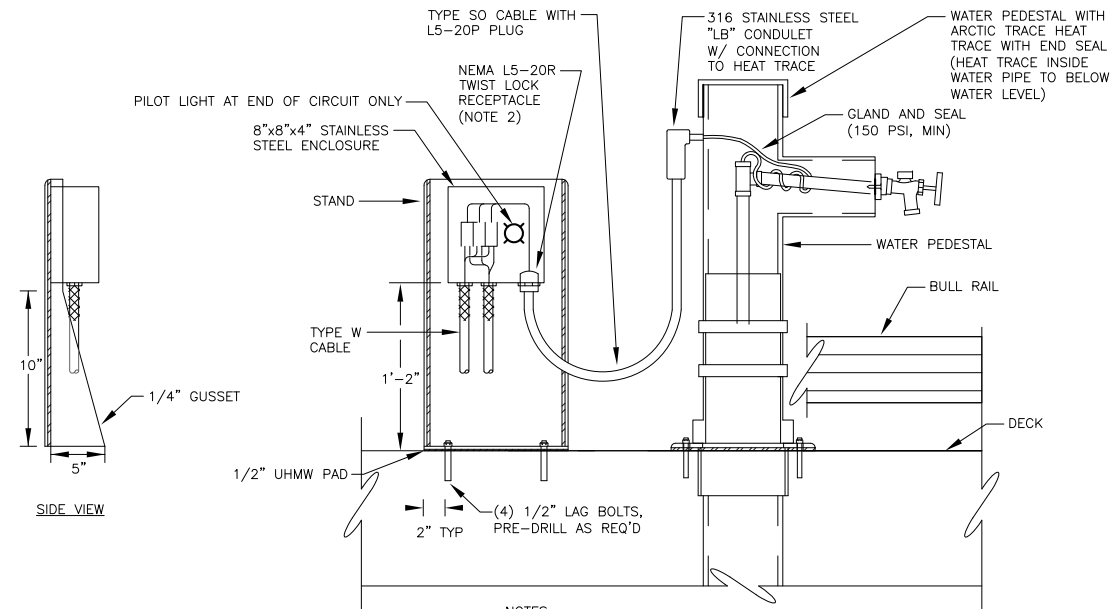
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

SHEET TITLE: **ELECTRICAL DETAILS**

PND PROJECT NO.: 152037 E2.06.DWG

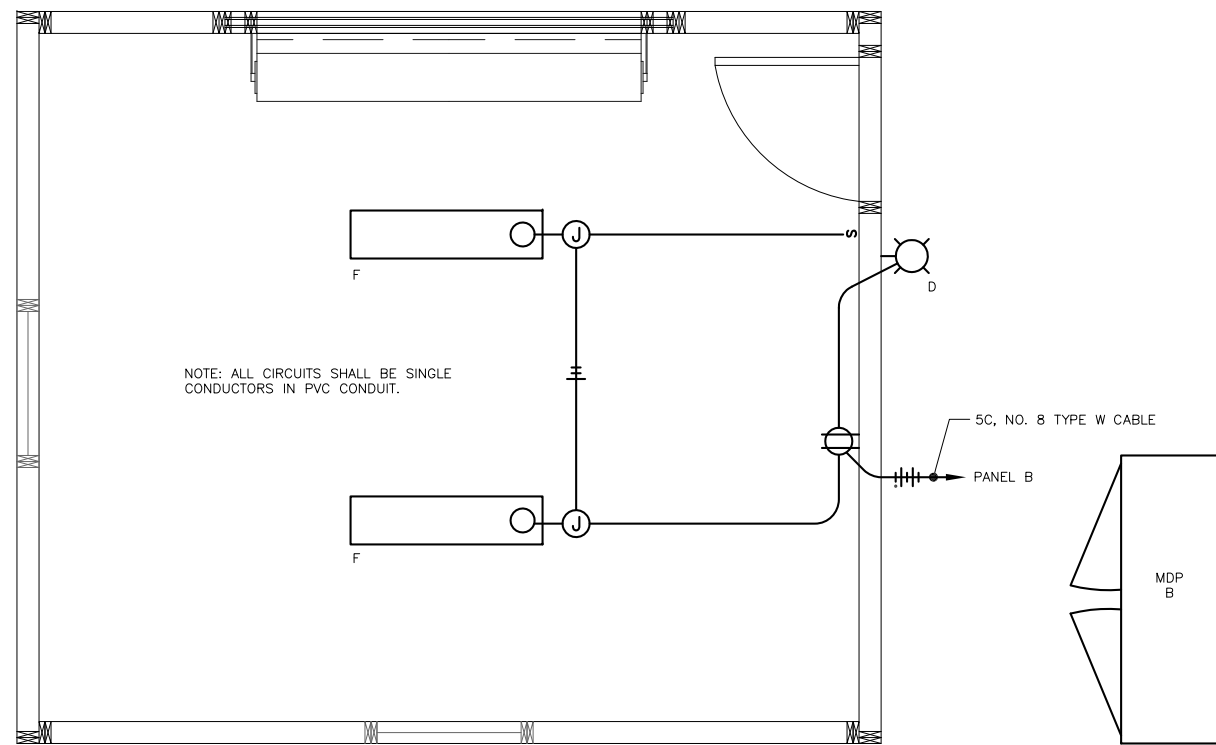
E2.06
SHEET 8 OF 18

Oct 27, 2015 1:57pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E2.06.dwg (Layout1.tub)

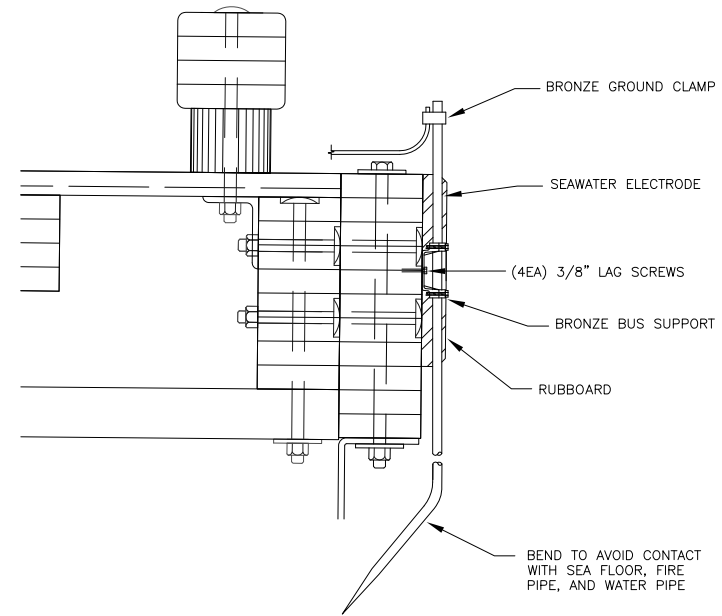


- NOTES:
1. PROVIDE STAND, ENCLOSURE WITH COMPONENTS, CABLE, HEAT TRACE, AND GLAND/SEAL AS ONE PACKAGE.
 2. PROVIDE BOLT ON BRACKET TO HOLD PLUG IN PLACE.

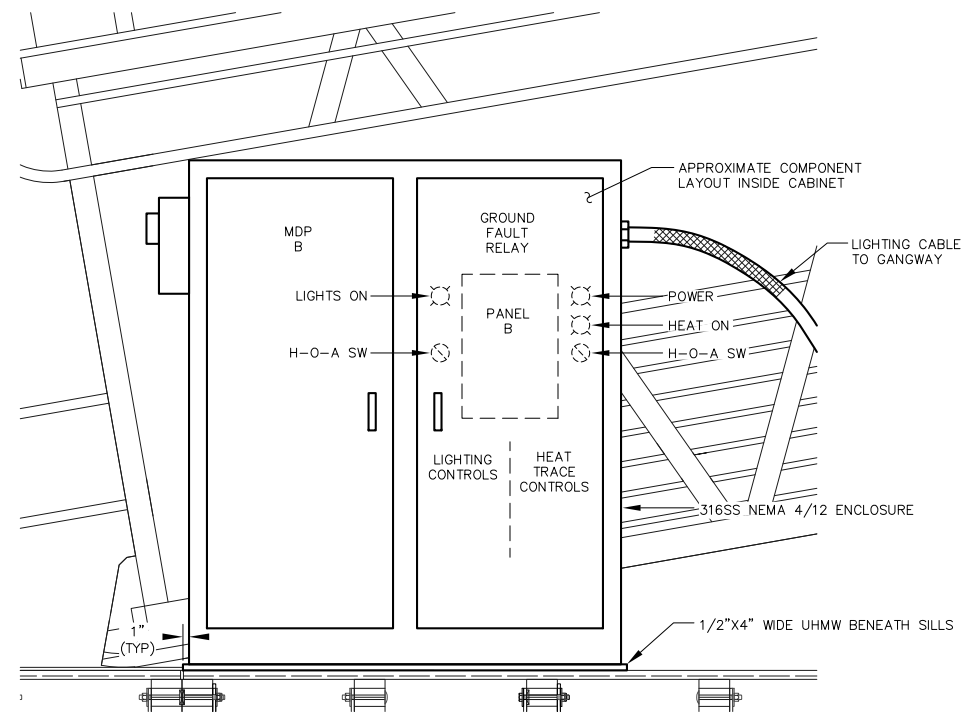
① **DETAIL – HEAT TRACE J-BOX STAND (TYP)** NO SCALE



③ **DETAIL – UTILITY BUILDING** NO SCALE

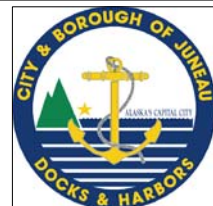


② **DETAIL – FLOAT MOUNTED SEAWATER ELECTRODE (TYP)** NO SCALE



④ **DETAIL – MDP-B** NO SCALE

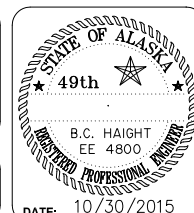
95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com



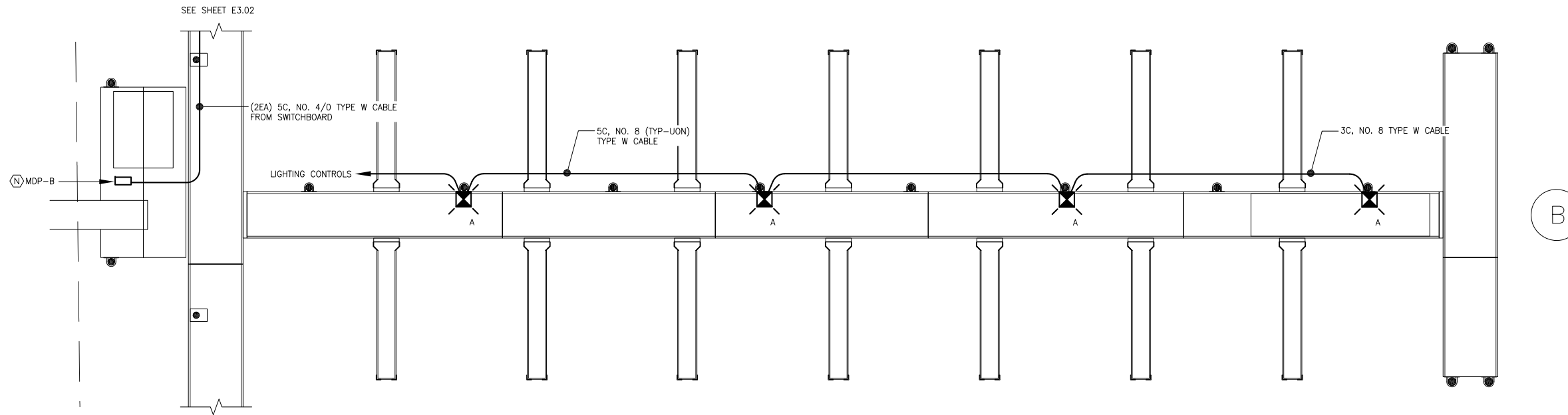
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
ELECTRICAL DETAILS

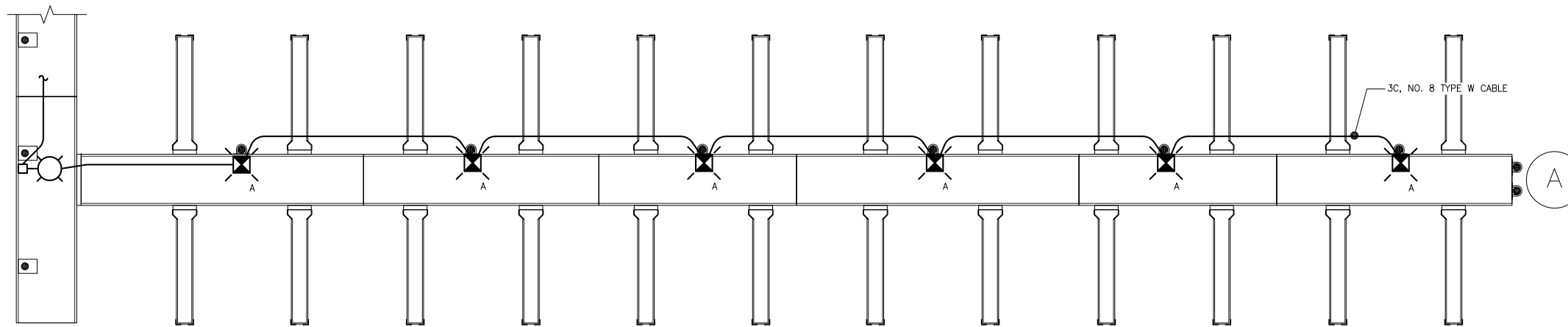
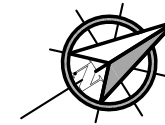
E2.07
SHEET
9 OF 18

PND PROJECT NO.: 152037

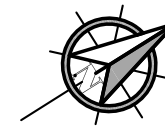
E2.07.DWG



② B FLOAT ENLARGED PLAN – LIGHTING

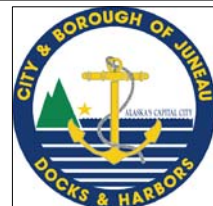


① A FLOAT ENLARGED PLAN – LIGHTING



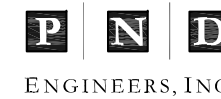
NOTE: ALTERNATE LUMINAIRE PHASE CONNECTIONS.

95% DESIGN REVIEW SUBMITTAL

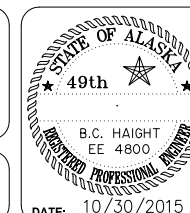


HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com



CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

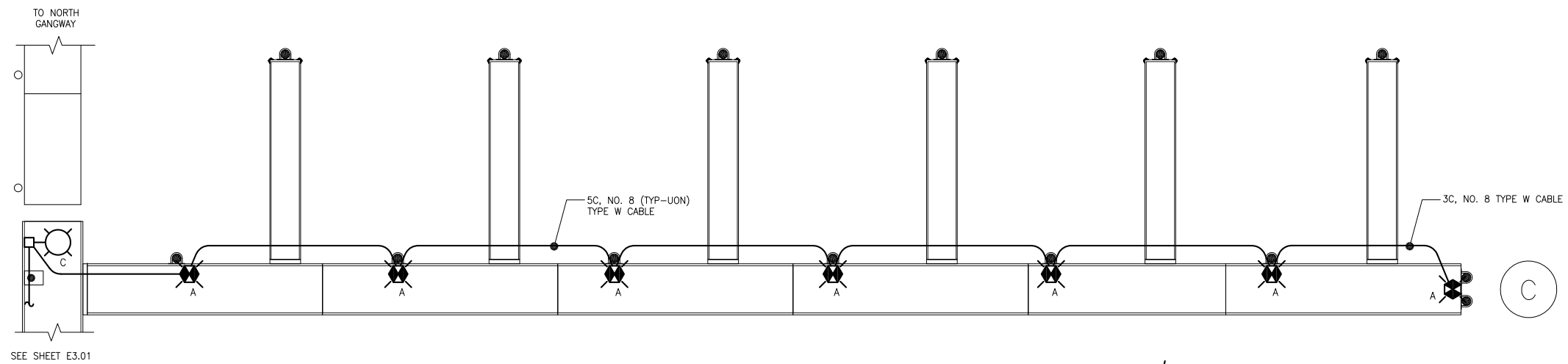
SHEET TITLE:
ENLARGED A & B FLOAT PLANS - LIGHTING

E3.01
SHEET 10 OF 18

DESIGN: NJP CHECKED: BCH SCALE: SCALE IN FEET
DRAWN: REJ APPROVED: BCH 0 15 30FT

PND PROJECT NO.: 152037 E3.01.DWG

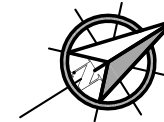
Oct 27, 2015 4:35pm
 F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E3.02.dwg (Layout1.tub)



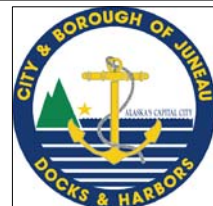
SEE SHEET E3.01

NOTE: ALTERNATE LUMINAIRE PHASE CONNECTIONS.

① C FLOAT ENLARGED PLAN – LIGHTING



95% DESIGN REVIEW SUBMITTAL



HAIGHT & ASSOCIATES
 CONSULTING ELECTRICAL ENGINEERS
 526 Main Street, Juneau, AK 99801
 (907) 586-9788

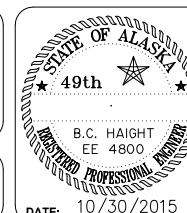
REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: NJP CHECKED: BCH
 DRAWN: REJ APPROVED: BCH

SCALE: SCALE IN FEET
 0 15 30FT

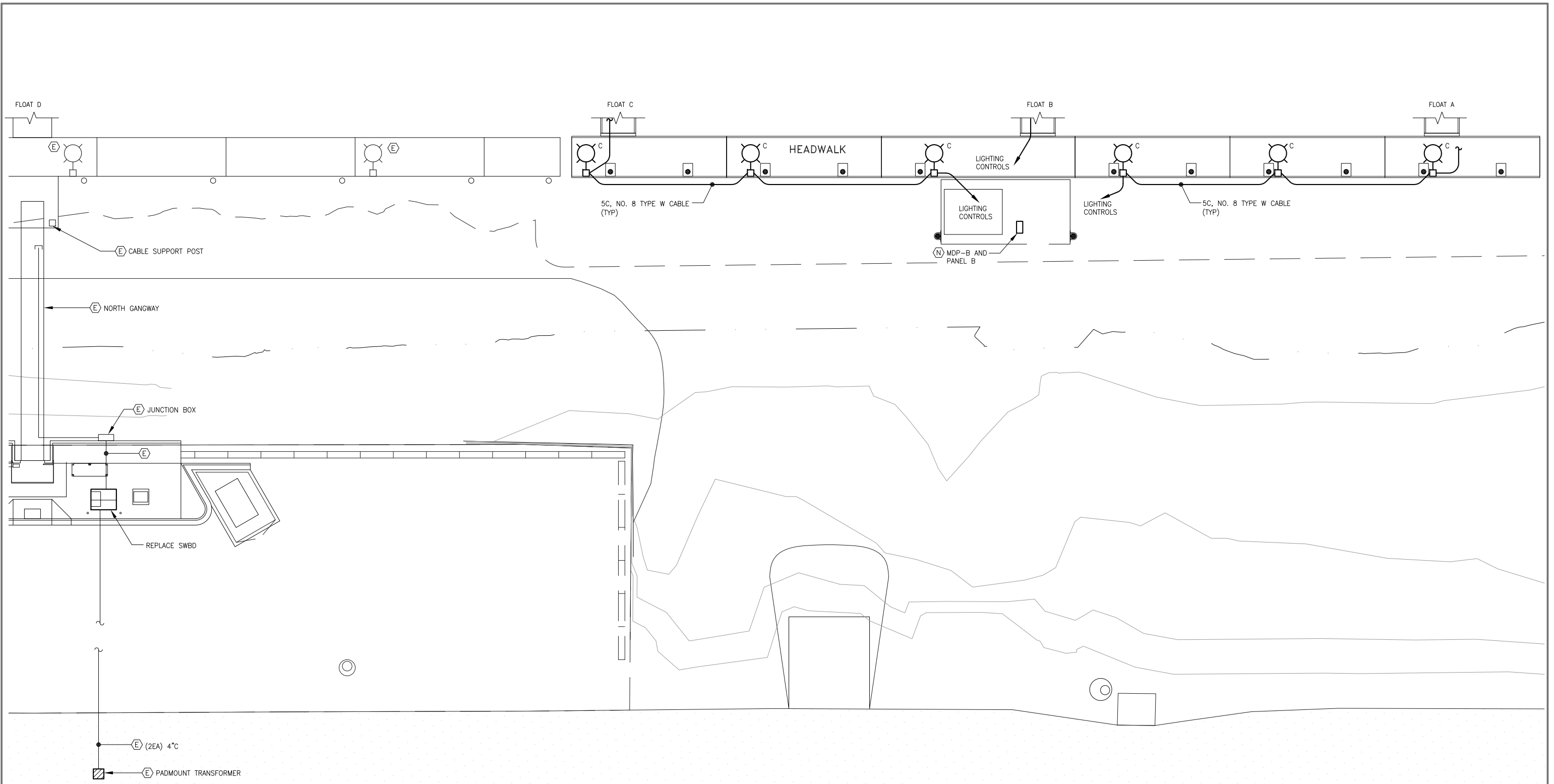


CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

SHEET TITLE:
ENLARGED C FLOAT PLAN
- LIGHTING

PND PROJECT NO.: 152037 E3.02.DWG

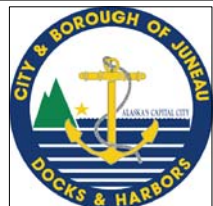
E3.02
 SHEET
11 OF 18



1 HEADWALK FLOAT ENLARGED PLAN - LIGHTING (BASE BID)



95% DESIGN REVIEW SUBMITTAL



HAIGHT & ASSOCIATES
 CONSULTING ELECTRICAL ENGINEERS
 526 Main Street, Juneau, AK 99801
 (907) 586-9788

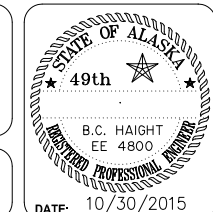
REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
 Juneau, Alaska 99801
 Phone: 907-586-2093
 Fax: 907-586-2099
 www.pndengineers.com

DESIGN: NJP CHECKED: BCH
 DRAWN: REJ APPROVED: BCH

SCALE: SCALE IN FEET
 0 15 30FT

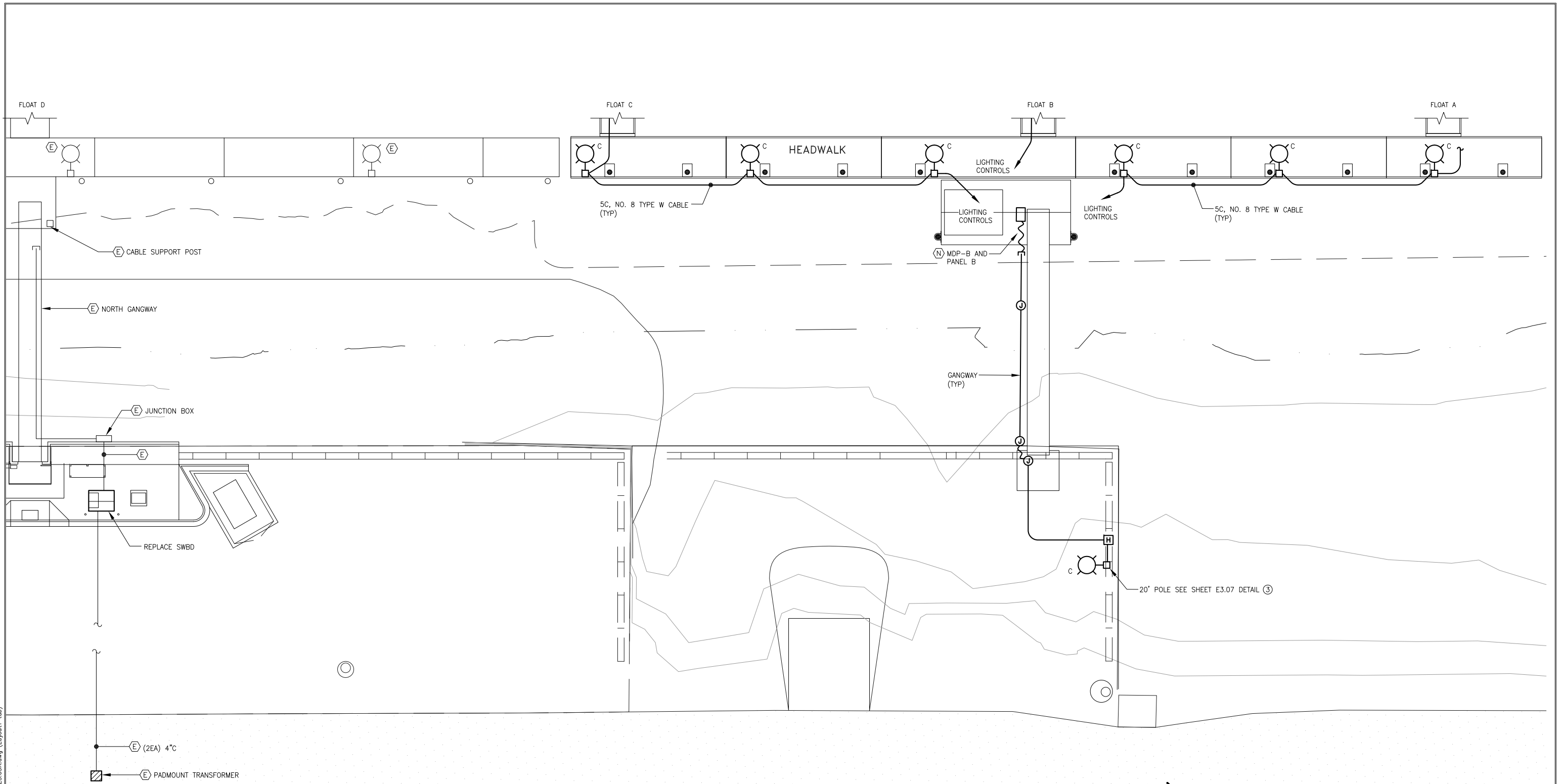


CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
 CBJ PROJECT - DH16-001

SHEET TITLE:
ENLARGED HEADWALK FLOAT PLAN - LIGHTING (BASE BID)
 PND PROJECT NO.: 152037 E3.03.DWG

E3.03
 SHEET 12 OF 18

Oct 27, 2015 4:35pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E3.03.dwg (Layout1.tub)

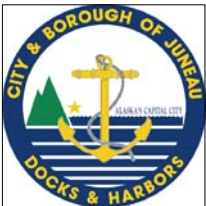


1

HEADWALK FLOAT ENLARGED PLAN - LIGHTING (ALT A)



95% DESIGN REVIEW SUBMITTAL



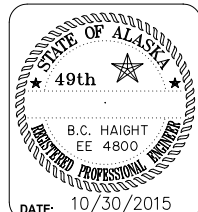
HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE: SCALE IN FEET
0 15 30FT



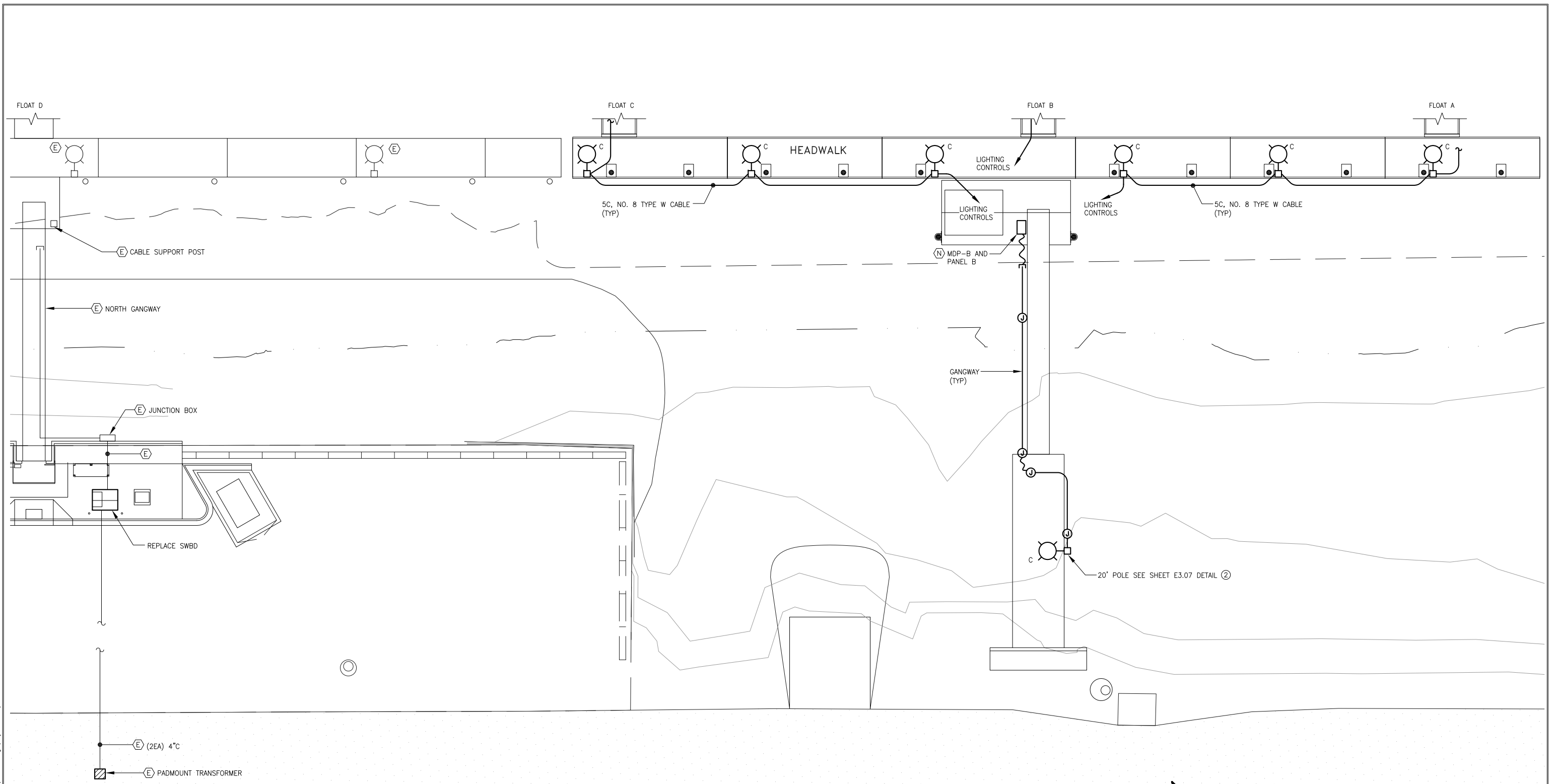
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
ENLARGED HEADWALK FLOAT PLAN - LIGHTING (ALT A)

PND PROJECT NO.: 152037 E3.03A.DWG

E3.03A
SHEET 13 OF 18

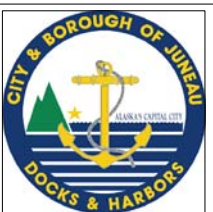
Oct 27, 2015 4:35pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats Drawings\Working\E3.03A.dwg (Layout1 tab)



1 HEADWALK FLOAT ENLARGED PLAN - LIGHTING (ALT B)



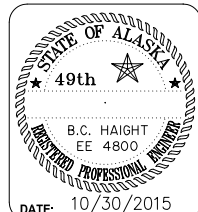
95% DESIGN REVIEW SUBMITTAL



HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

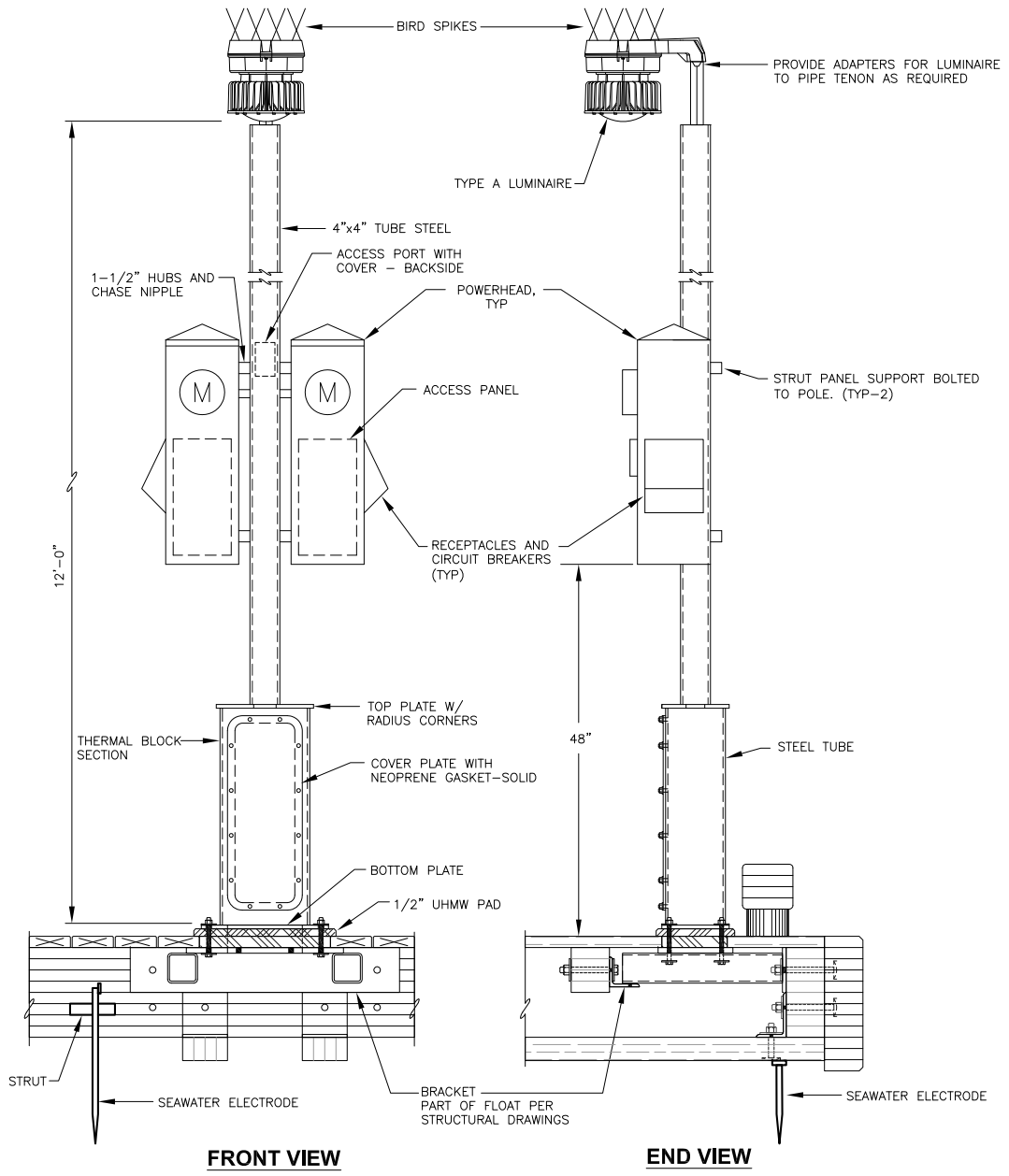


CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

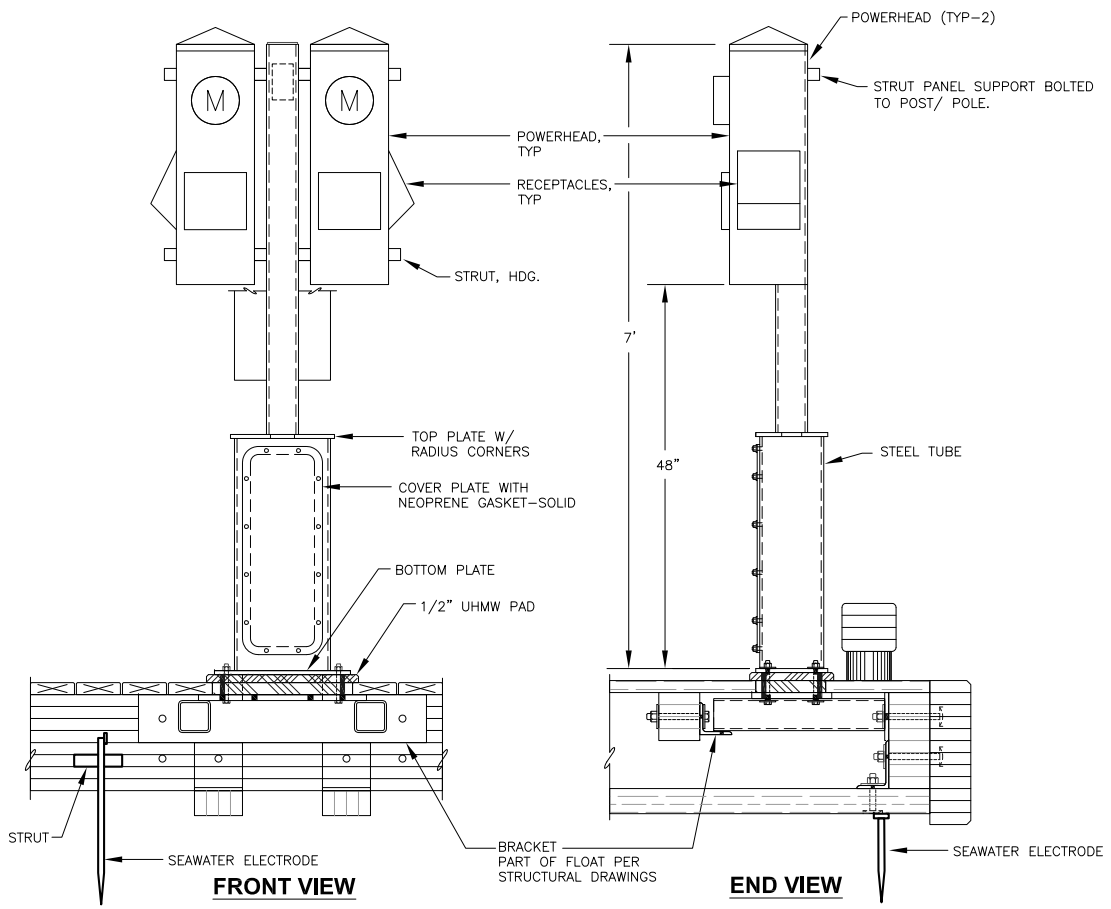
DESIGN: NJP CHECKED: BCH SCALE: SCALE IN FEET
DRAWN: REJ APPROVED: BCH 0 15 30FT

SHEET TITLE:
ENLARGED HEADWALK FLOAT PLAN - LIGHTING (ALT B)
PND PROJECT NO.: 152037 E3.03B.DWG
E3.03B
SHEET 14 OF 18

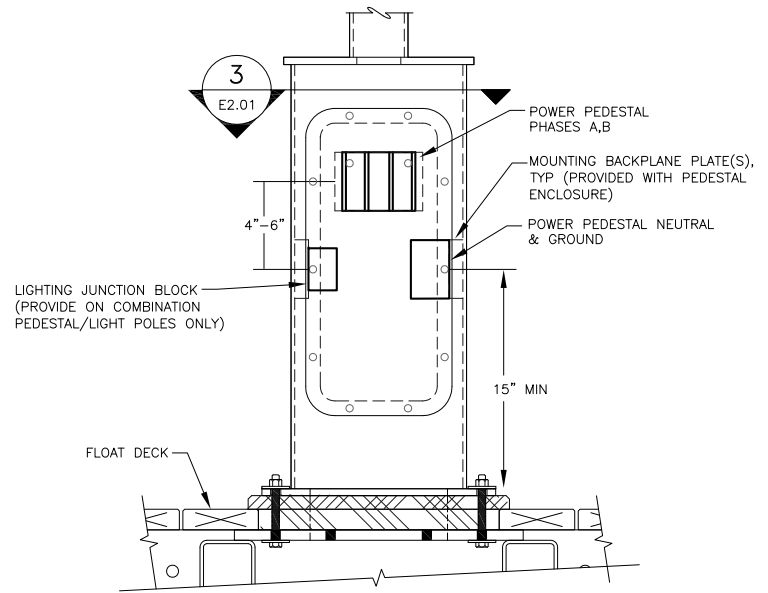
Oct 27, 2015 4:35pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E3.03B.dwg (Layout1 tab)



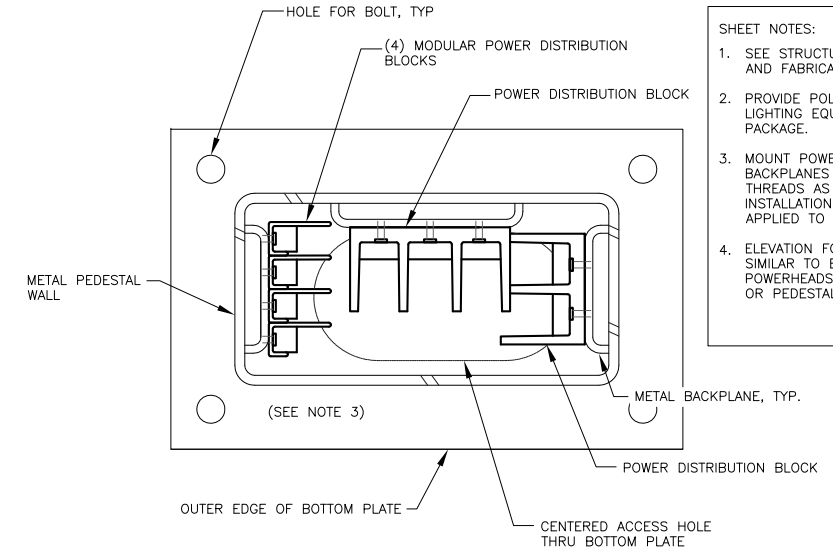
1 ELEVATION - PEDESTALS WITH LUMINAIRES
NO SCALE



4 ELEVATION - PEDESTAL BASE AND POWER HEADS
NO SCALE



2 DETAIL - PEDESTAL BASE
NO SCALE



3 DETAIL - PEDESTAL BASE - TOP VIEW
NO SCALE

- SHEET NOTES:**
- SEE STRUCTURAL FOR PEDESTAL MOUNTING AND FABRICATION DETAILS.
 - PROVIDE POLES WITH THE ELECTRICAL AND LIGHTING EQUIPMENT AS A COMPLETE PACKAGE.
 - MOUNT POWER DISTRIBUTION BLOCK TO BACKPLANES PROVIDED IN PEDESTAL CHASE THREADS AS REQUIRED DURING FIELD INSTALLATION. WATERPROOF GREASE SHALL BE APPLIED TO ALL CHASED THREADS.
 - ELEVATION FOR LIGHT ONLY POLES TO BE SIMILAR TO ELEVATION 1 EXCEPT WITH NO POWERHEADS, OR STRUT PANEL SUPPORTS, OR PEDESTAL BASE SECTION.

Oct. 27, 2015 4:32pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats Drawings\Working\E3.04.dwg (1.12 tab)

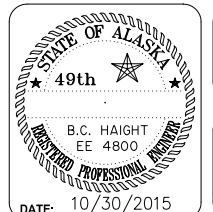


REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH SCALE:
DRAWN: REJ APPROVED: BCH



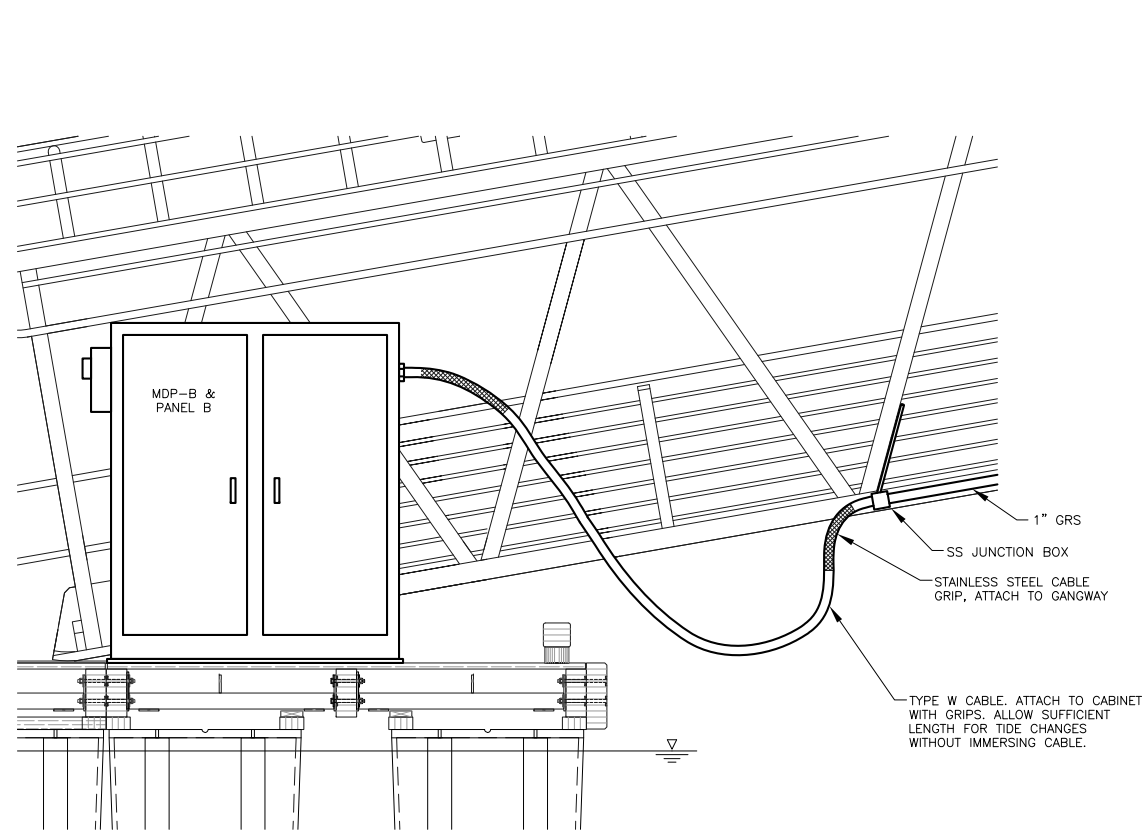
95% DESIGN REVIEW SUBMITTAL

CITY & BOROUGH OF JUNEAU, ALASKA DOUGLAS HARBOR RENOVATION CBJ PROJECT - DH16-001

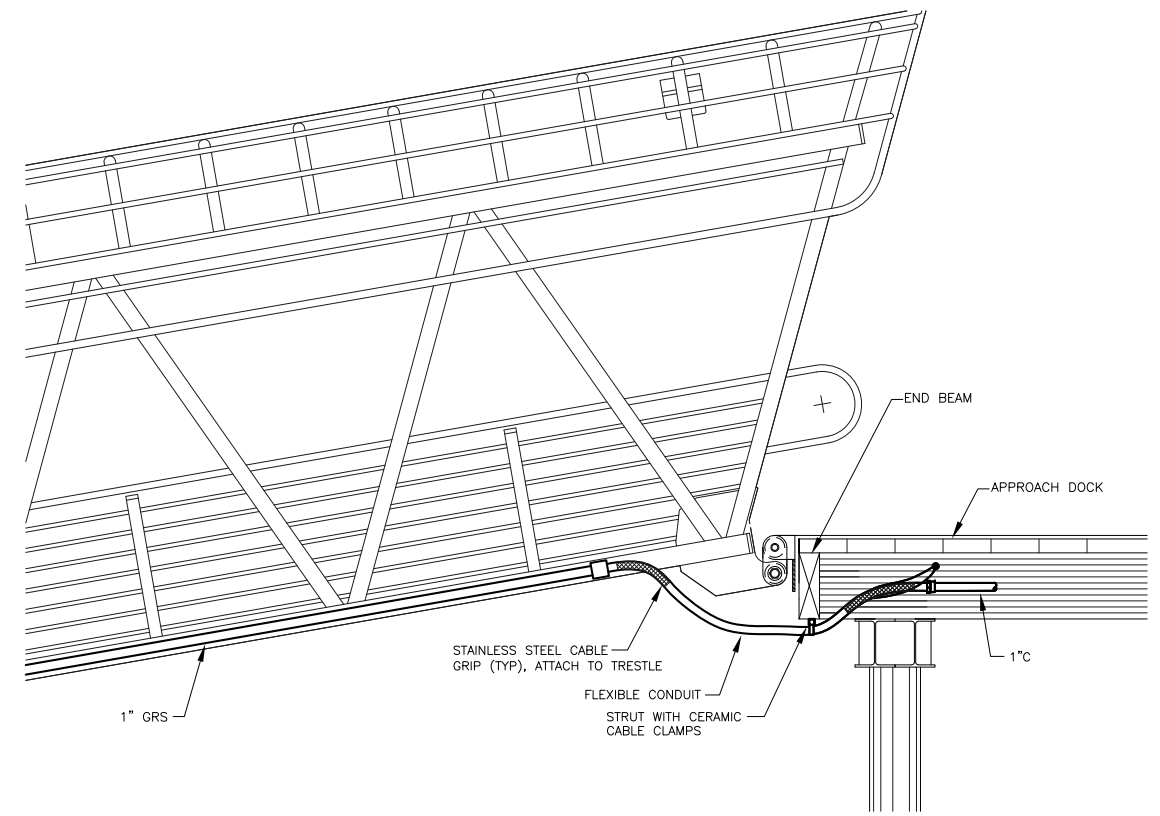
SHEET TITLE:
PEDESTAL DETAILS

PND PROJECT NO.: 152037 E3.04.DWG

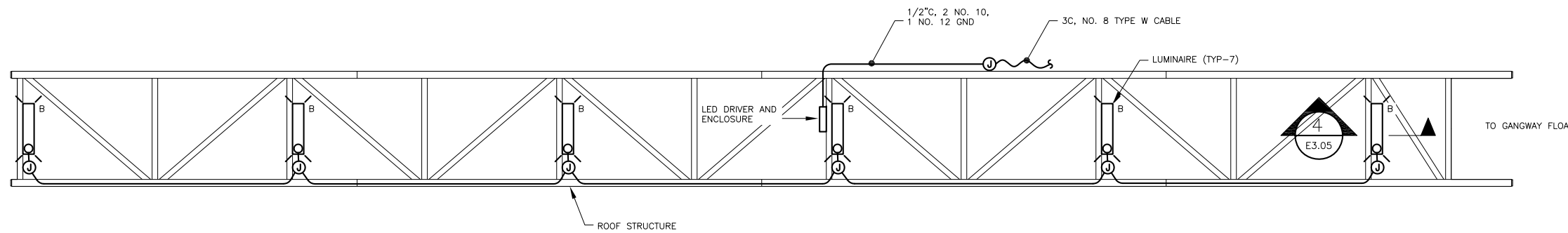
E3.04
SHEET 15 OF 18



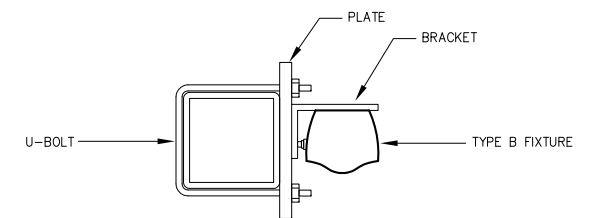
1 DETAIL - LOWER GANGWAY
NO SCALE



2 DETAIL - UPPER GANGWAY
NO SCALE



3 DETAIL - GANGWAY LIGHTING (ALT A & ALT B)
NO SCALE

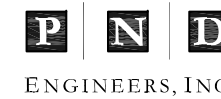


4 DETAIL - SECTION
NO SCALE

Oct. 27, 2015 4:32pm F:\Projects\137 PND\110 Douglas Harbor ABC Floats\Drawings\Working\E3.05.dwg (1.12 tab)



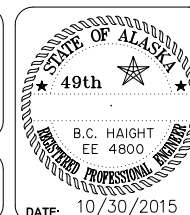
REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE:



95% DESIGN REVIEW SUBMITTAL

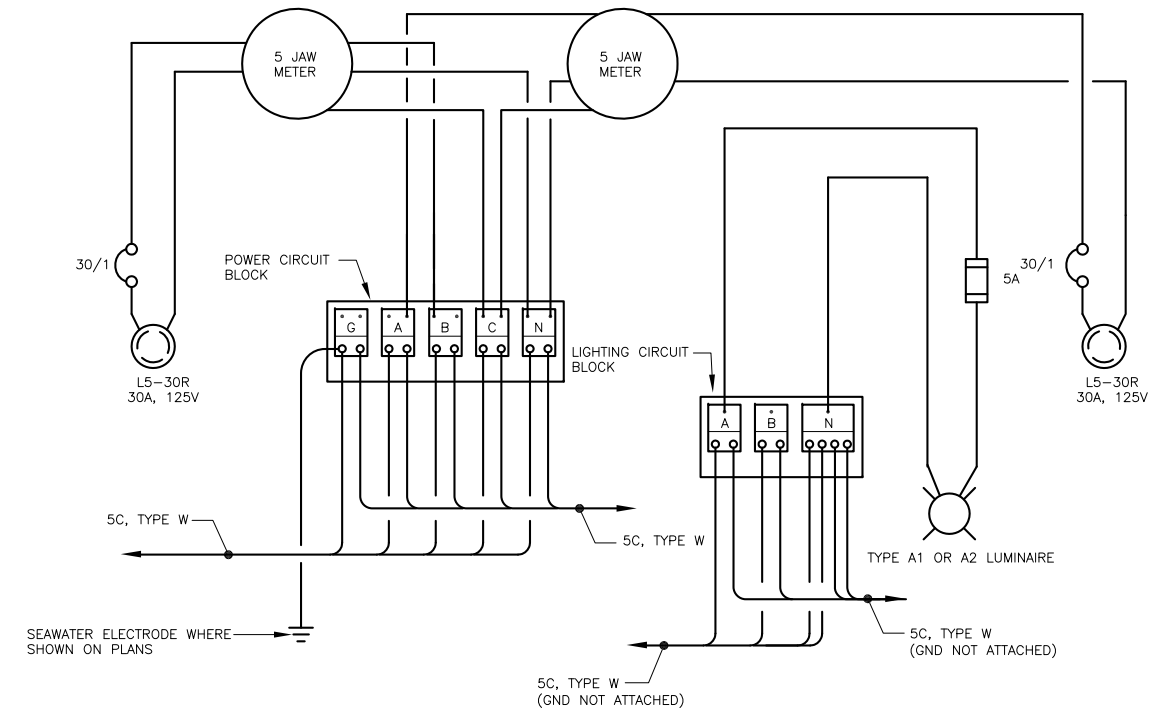
CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
GANGWAY DETAILS

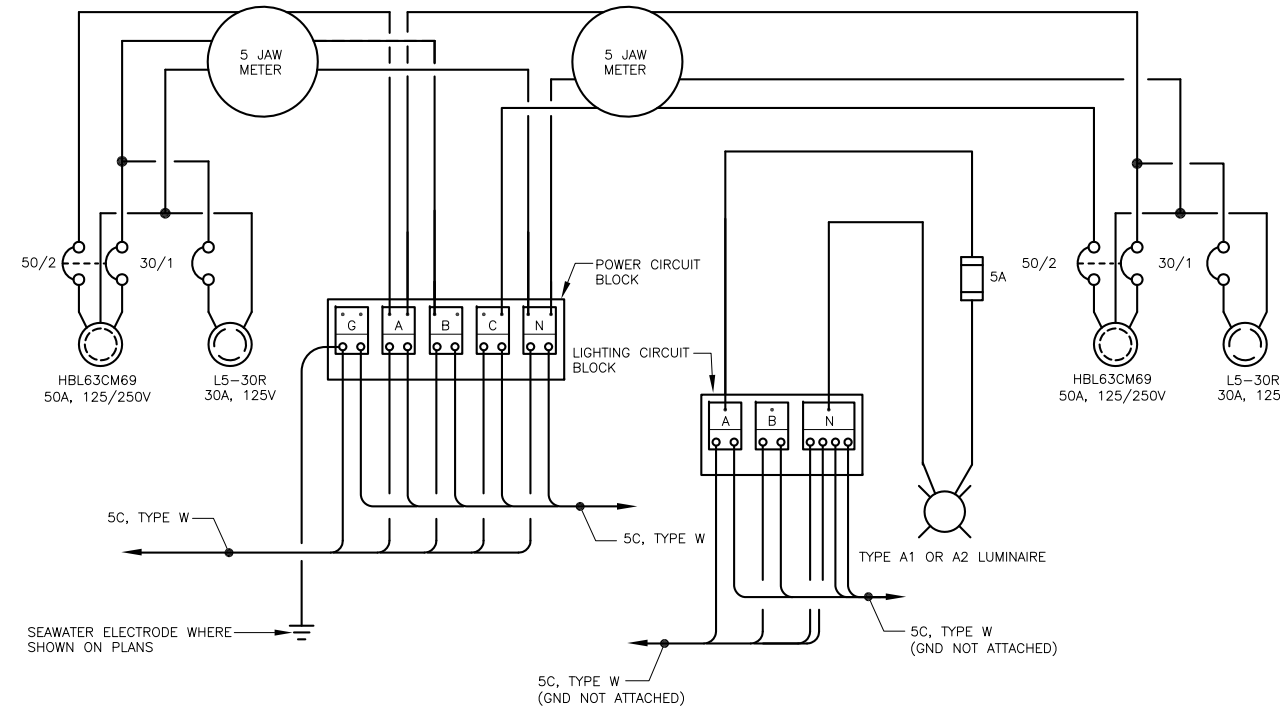
PND PROJECT NO.: 152037 E3.05.DWG

E3.05
SHEET
16 OF 18

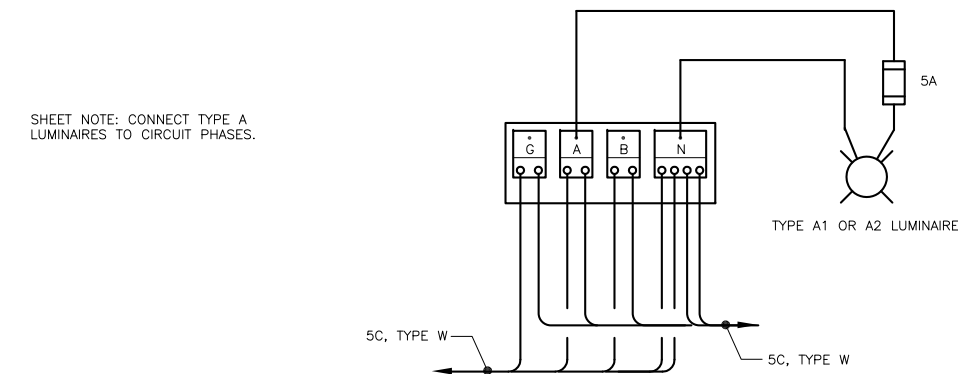
LUMINAIRE SCHEDULE				
TYPE	DESCRIPTION	MANUFACTURER	LAMPS	REMARKS
A	POLE MOUNTED LED AREA LIGHT, IP66 OR BETTER, MARINE GRADE, ALUMINUM HOUSING, STANCHION STRAIGHT, TYPE 1 DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER	CROUSE-HINDS PVM-3L-W-P-R1/UNV1	41W WHITE LED 3000K, CRI 80	PROVIDE BIRD SPIKES. COORDINATE MOUNTING TO POLE.
B	18" SIDE SURFACE MOUNTED EXTERIOR RATED LINEAR LED FIXTURE WITH ALUMINUM HOUSING WITH 60 DEGREE BEAM SPREAD, REMOTE ELECTRONIC DRIVER	IO LIGHTING O-05-E-3K-60-101-1-18-1	5.1 W/FT LED 3000K, CRI 70	AIM DOWNWARD.
C	POLE MOUNTED LED AREA LIGHT, IP66 OR BETTER, MARINE GRADE, ALUMINUM HOUSING, STANCHION STRAIGHT, TYPE 3 DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER	CROUSE-HINDS PVM-3L-W-P-R1/UNV1	41W WHITE LED 3000K, CRI 80	PROVIDE BIRD SPIKES. PROVIDE PE CELL WITH NEW LUMINAIRE AT THE BOAT LAUNCH.
C POLE	4"x4" SQUARE NON-TAPERED HOT DIPPED GALVANIZED	VALMONT DS330-S400Q120-D2-GV		
D	LED WALL PACK, DIE CAST ALUMINUM CONSTRUCTION WITH STAINLESS STEEL, WITH GASKETED OPTICAL, INTERNAL LED ELECTRONIC DRIVE	COOPER LIGHTING XTORA-NOPC1	1800 LED 3500K, CRI 65	
F	2' SURFACE LED STRIP, STEEL HOUSING, MEDIUM DIFFUSED LENS, INTEGRAL ELECTRONIC DRIVER, 2000 LUMENS, 120/277V, WHITE FINISH	LITHONIA LIGHTING ZL2N L26 2000LM MDD MVOLT 35K 80CRI WH	34W WHITE LED 3500K, CRI 80	MOUNT @ 8'-0" AFF TO BOTTOM OF LUMINAIRE, UON.



3 WIRING DIAGRAM - TYPICAL 30A/30A PEDESTAL WITH LUMINAIRE



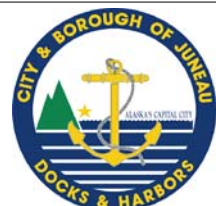
1 WIRING DIAGRAM - TYPICAL 50A/30A PEDESTAL WITH LUMINAIRE NO SCALE



2 WIRING DIAGRAM - TYPICAL POLE MOUNTED LUMINAIRE NO SCALE

SHEET NOTE: CONNECT TYPE A LUMINAIRES TO CIRCUIT PHASES.

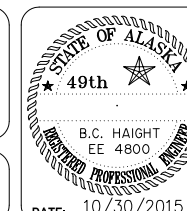
95% DESIGN REVIEW SUBMITTAL



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com



CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE:
WIRING DIAGRAM - PEDESTALS

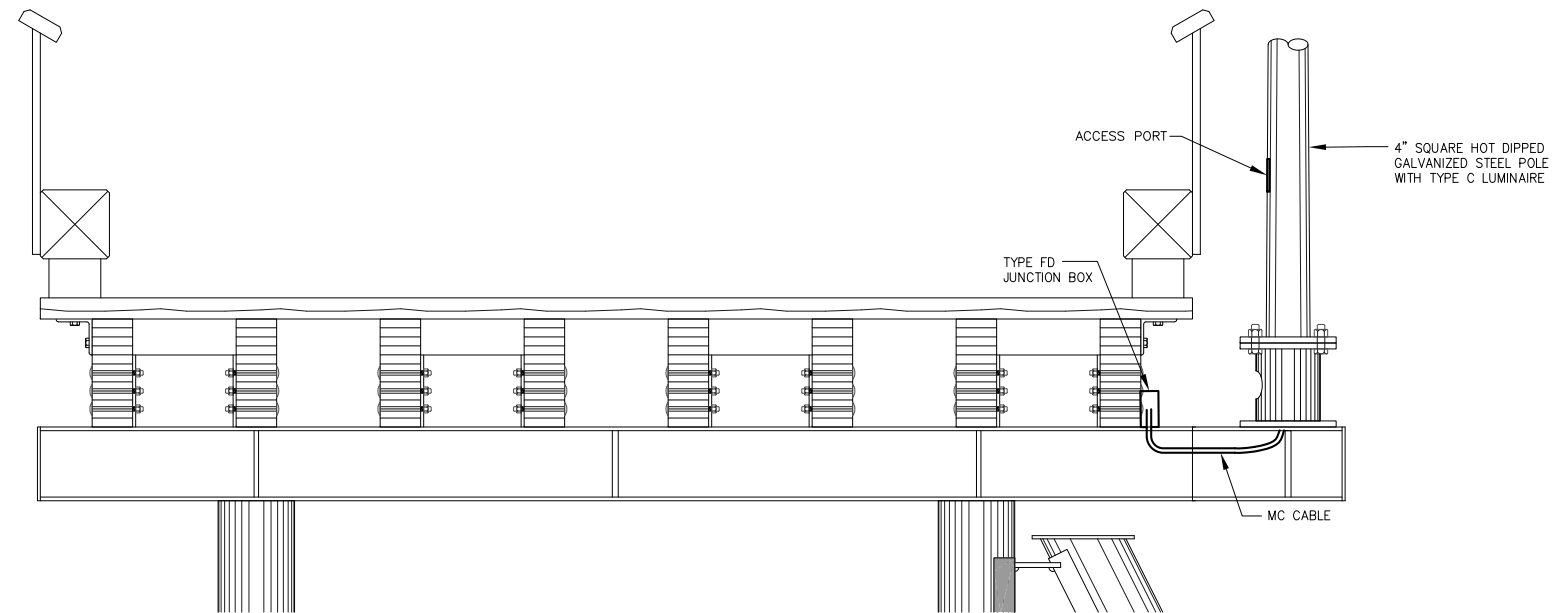
E3.06
SHEET
17 OF 18

PND PROJECT NO.: 152037 E3.06.DWG

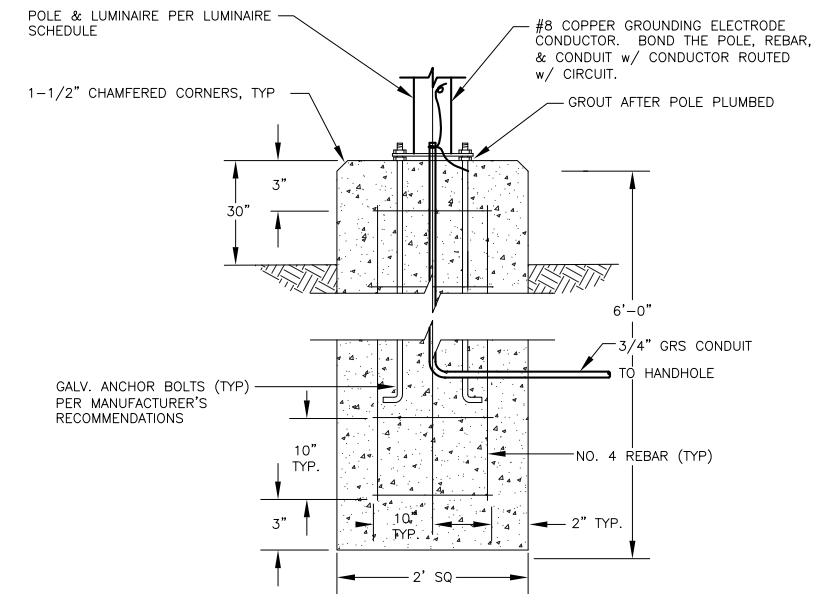
DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE:

DATE: 10/30/2015



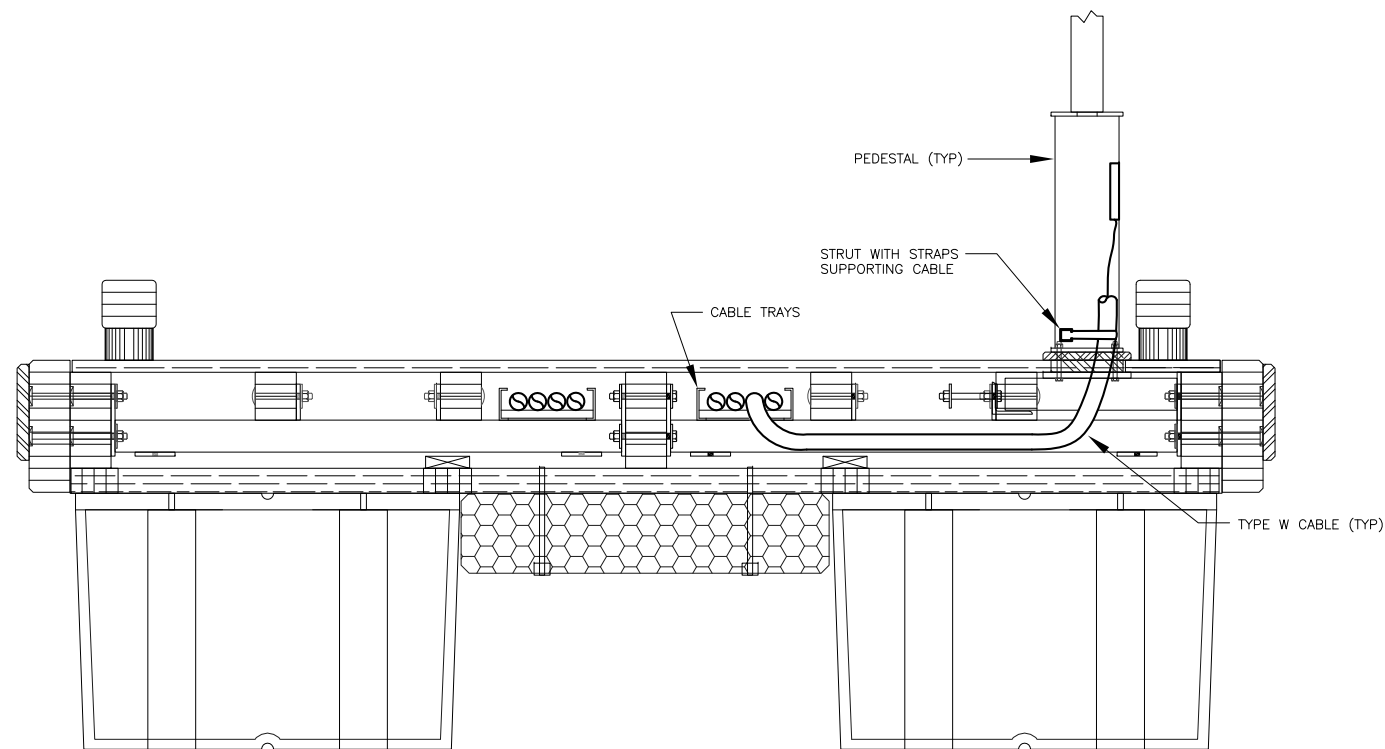
2 SECTION - GANGWAY APPROACH LIGHT POLE BASE (ALT B)



NOTES:

- ANCHOR BOLTS TO MEET ATSM-A36 WITH MINIMUM YIELD STRESS OF 36.0 KSI.

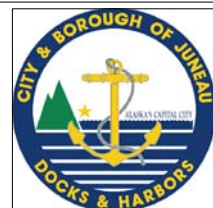
3 DETAIL - POLE BASE FOUNDATION (ALT A)



1 FLOAT SECTION (TYPICAL)

4 DETAIL - HEADWALK TRANSITION

95% DESIGN REVIEW SUBMITTAL



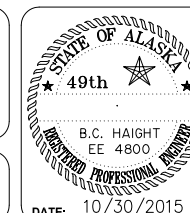
REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: NJP CHECKED: BCH
DRAWN: REJ APPROVED: BCH

SCALE:



CITY & BOROUGH OF JUNEAU, ALASKA
DOUGLAS HARBOR RENOVATION
CBJ PROJECT - DH16-001

SHEET TITLE: DETAILS

PND PROJECT NO.: 152037

E3.07.DWG

E3.07
SHEET
18 OF 18