

AURORA HARBOR REBUILD – PHASE IV

CBJ CONTRACT NO. DH24-022

Volume 2 of 2

PLANS

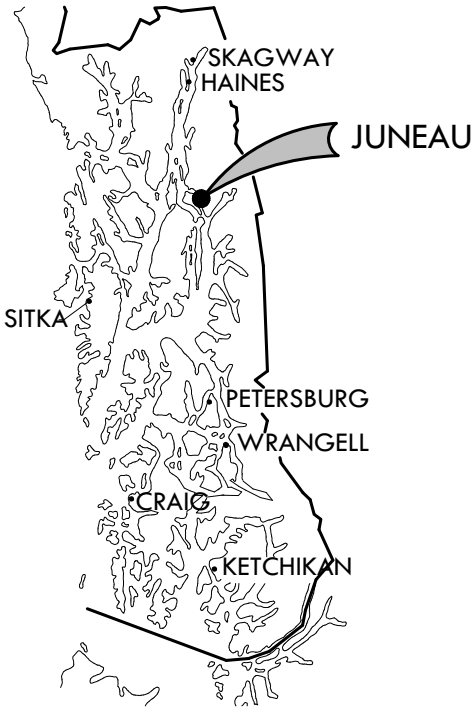


FEBRUARY 2025

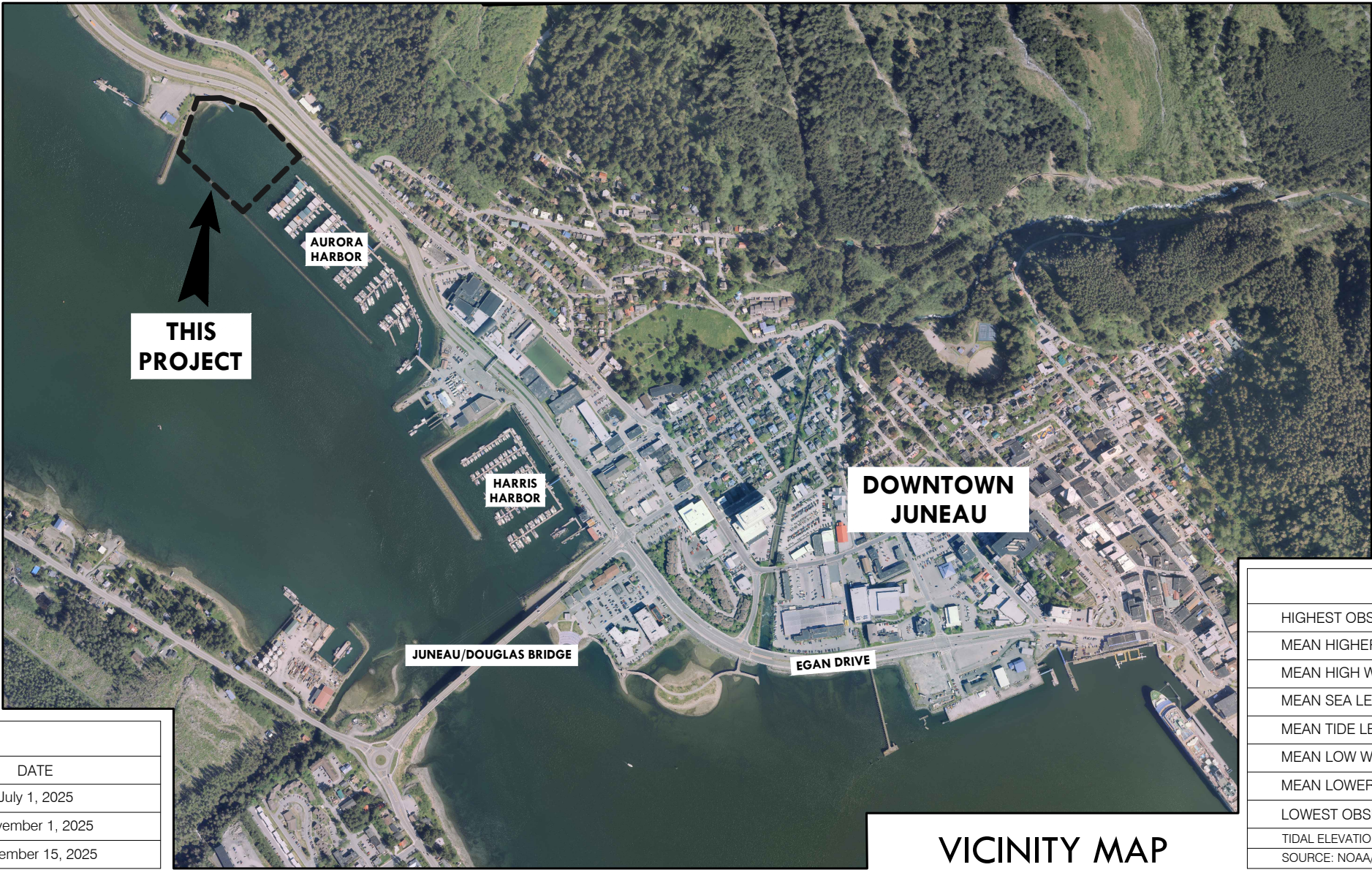
CITY AND BOROUGH OF JUNEAU, ALASKA

AURORA HARBOR REBUILD - PHASE IV

CBJ CONTRACT - DH25-022



SOUTHEAST ALASKA



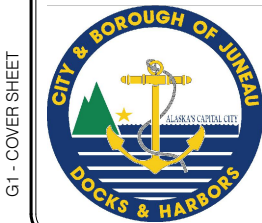
VICINITY MAP



LOCATION MAP

PROJECT SCHEDULE	
MILESTONE	DATE
EARLIEST FIELD START	July 1, 2025
SUBSTANTIAL COMPLETION	November 1, 2025
FINAL COMPLETION	November 15, 2025

TIDAL DATA	ELEVATION
HIGHEST OBSERVED WATER LEVEL	+24.58 FT
MEAN HIGHER HIGH WATER (MHHW)	+16.30 FT
MEAN HIGH WATER (MHW)	+15.34 FT
MEAN SEA LEVEL (MSL)	+8.56 FT
MEAN TIDE LEVEL (MTL)	+8.47 FT
MEAN LOW WATER (MLW)	+1.6 FT
MEAN LOWER LOW WATER (MLLW)	0.0 FT
LOWEST OBSERVED WATER LEVEL	-6.12 FT
TIDAL ELEVATION SHOWN RELATIVE TO MLLW = 0.0 FEET	
SOURCE: NOAA/ NOS/CO-OPS STATION ID: 9452210 JUNEAU, ALASKA	



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



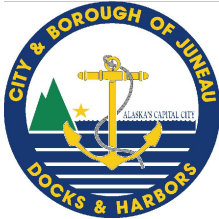
COVER SHEET, VICINITY MAP
AND TIDAL DATA

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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G1

G2 - DRAWING INDEX



REVISIONS					
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CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



DRAWING INDEX & GENERAL NOTES

AURORA HARBOR REBUILD - PHASE IV

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GENERAL		
SHEET	DWG NO.	TITLE
1	G1	COVER SHEET, VICINITY MAP AND TIDAL DATA
2	G2	DRAWING INDEX & GENERAL NOTES
3	G3	EXISTING CONDITIONS, DEMOLITION AND SALVAGE PLAN
4	G4	GENERAL SITE PLAN
REFURBISHED MATERIALS		
SHEET	DWG NO.	TITLE
5	R1	GANGWAY SALVAGE PLAN, ELEVATION AND DETAILS
APPROACH DOCK		
SHEET	DWG NO.	TITLE
6	S1	EXISTING DOCK FRAMING
7	S2	DOCK PLAN AND ELEVATION
8	S3	DOCK FRAMING PLAN AND TYPICAL SECTION
9	S4	PILE SCHEDULE AND DETAILS
10	S5	PILE CAP DETAILS
11	S6	STRINGER CONNECTION DETAILS
12	S7	GANGWAY CONNECTION DETAILS
13	S8	BULLRAIL AND RAILING DETAILS
14	S9	END RAILING DETAILS
15	S10	CONCRETE ABUTMENT SECTION
16	S11	CONCRETE ABUTMENT DETAILS
17	S12	MISCELLANEOUS DETAILS
MOORING FLOATS		
SHEET	DWG NO.	TITLE
18	F1	OVERALL FLOAT PLAN AND PILE LAYOUT
19	F2	FLOAT PILE SCHEDULE AND DETAILS
20	F3	ADDITIVE ALTERNATE A - ANODE DETAILS
21	F4	DETAILED FLOAT PLAN - HEADWALK SOUTH
22	F5	DETAILED FLOAT PLAN - HEADWALK NORTH
23	F6	DETAILED FLOAT PLAN - MAINWALK H FINGERS
24	F7	DETAILED FLOAT PLAN: MAINWALK H - TEE FLOAT
25	F8	DETAILED FLOAT PLAN: MAINWALK J
26	F9	DETAILED FLOAT PLAN: MAINWALK K
27	F10	FLOTATION SCHEDULE
28	F11	FLOTATION SCHEDULE
29	F12	TYPICAL 10x43 MODULE PLAN & ELEVATION
30	F13	TYPICAL 10x53 MODULE PLAN & ELEVATION
31	F14	TYPICAL 10x63 MODULE PLAN & ELEVATION
32	F15	8x53 TEE FLOAT MODULE PLAN & ELEVATION
33	F16	8x63 TEE FLOAT MODULE PLAN & ELEVATION
34	F17	4x24 FINGER FLOAT PLAN & ELEVATION
35	F18	6x42 FINGER FLOAT PLAN & ELEVATION
36	F19	6x48 FINGER FLOAT PLAN & ELEVATION
37	F20	TYPICAL FLOAT SECTIONS

MOORING FLOATS (CONT.)		
SHEET	DWG NO.	TITLE
38	F21	TYPICAL FLOAT SECTIONS
39	F22	END CONNECTION PLANS & ELEVATIONS
40	F23	END CONNECTION DETAILS
41	F24	10' & 6' PIANO HINGE PLANS
42	F25	4' PIANO HINGE & HINGE SECTIONS
43	F26	PIANO HINGE DETAILS
44	F27	DIAPHRAGM DETAILS
45	F28	MISC. FLOAT DETAILS
46	F29	MISC. FLOAT DETAILS
47	F30	CLEAT & BULLRAIL DETAILS
48	F31	FLOTATION TUB, BALLAST TANK AND BILLET DETAILS
49	F32	EXTERNAL PILE HOOP DETAILS
50	F33	INTERNAL PILE HOOP DETAILS
UTILITIES		
SHEET	DWG NO.	TITLE
51	U1	UTILITY SITE PLAN
52	U2	UPLANDS UTILITY PLAN AND PROFILE
53	U3	UTILITY ROUTING DETAILS
54	U4	FLOAT MOUNTED UTILITY DETAILS
55	U5	FLOAT MOUNTED UTILITY DETAILS
56	U6	FLOAT MOUNTED UTILITY DETAILS
57	U7	FLOAT MOUNTED UTILITY DETAILS
58	U8	SIGNAGE AND APPURTENANCE SUPPORT DETAILS
59	U9	HEAT TRACE SUPPORT DETAILS

ELECTRICAL SUPPORT ASSEMBLIES		
SHEET	DWG NO.	TITLE
60	ES1	ELECTRICAL SUPPORT ASSEMBLIES
61	ES2	ELECTRICAL SUPPORT ASSEMBLY DETAILS
62	ES3	ELECTRICAL SUPPORT POST DETAILS

ELECTRICAL		
SHEET	DWG NO.	TITLE
63	E1	GENERAL NOTES, INDEX, & LEGEND
64	E2	SITE PLAN - POWER
65	E3	SITE PLAN - LIGHTING
66	E4	SITE PLAN - HEAT TRACE
67	E5	SINGLE LINE DIAGRAM - OVERALL
68	E6	SINGLE LINE DIAGRAM - PANELS
69	E7	PANEL ELEVATION
70	E8	PANEL SCHEDULES
71	E9	GANGWAY OVERALL ELEVATIONS
72	E10	FLOAT TO GANGWAY ELEVATION
73	E11	GANGWAY TO APPROACH DOCK ELEVATION
74	E12	CABLE ROUTING GANGWAY TO HEADWALK FLOAT TO FLOAT K
75	E13	CABLE ROUTING HEADWALK TO FLOAT J
76	E14	CABLE ROUTING FLOAT H TO NEW TEE FLOAT
77	E15	ELECTRICAL BUILDING FLOOR PLAN
78	E16	10' FLOAT SECTIONS
79	E17	POWERHEAD AND PEDESTAL DETAILS
80	E18	POST MOUNTED PEDESTAL SUPPORT BASE DETAILS
81	E19	POWERHEAD DETAILS
82	E20	POWERHEAD WIRING DIAGRAMS
83	E21	LUMINAIRE SCHEDULE
84	E22	GANGWAY SECTIONS
85	E23	HEAT TRACE JUNCTION BLOX DETAIL
86	E24	GFPE DETAILS

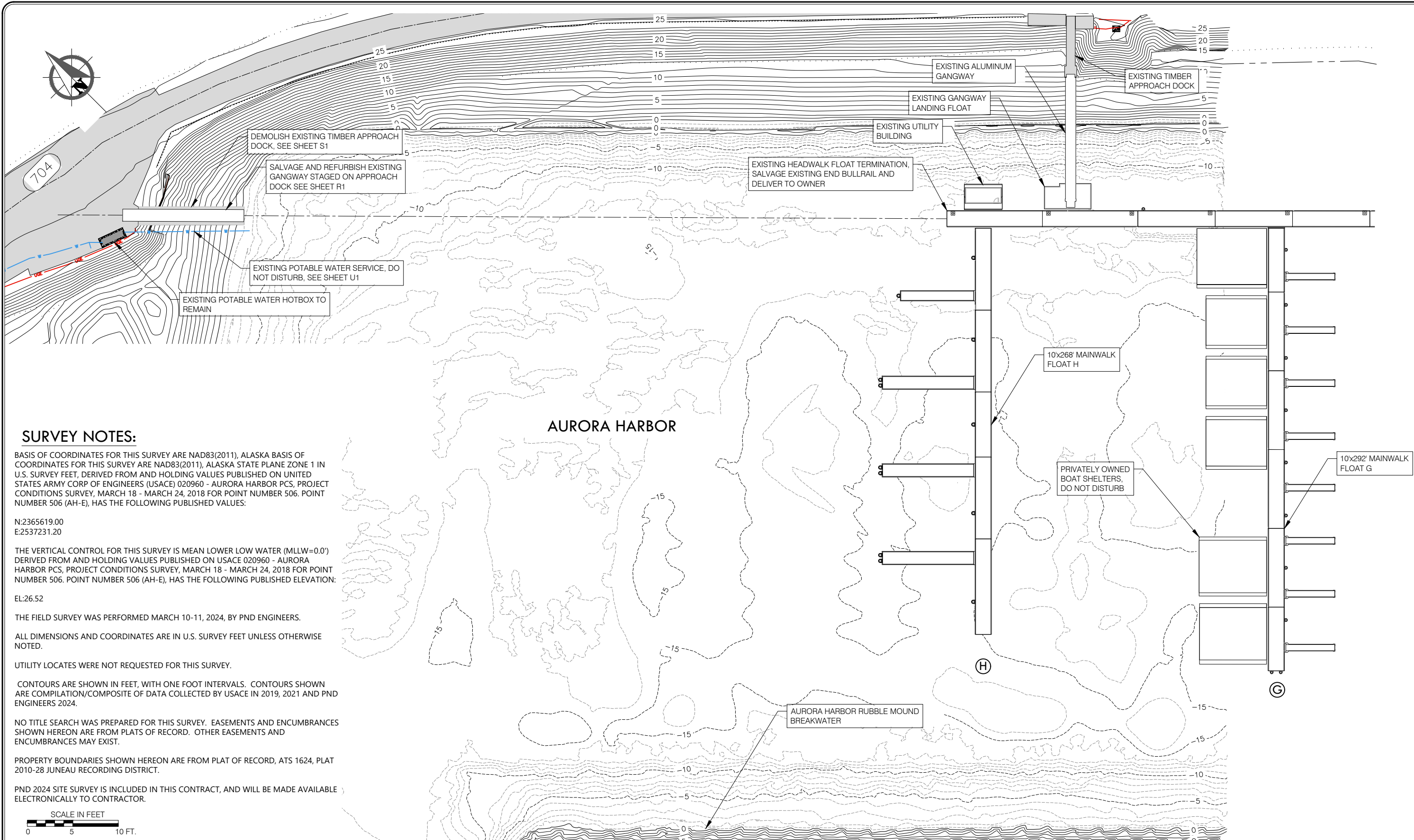
GENERAL NOTES:

- PROPERTY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION OR BETTER AT NO ADDITIONAL COST.
- CBJ ENGINEERING STANDARD DETAILS BOOK DATED AUGUST, 2011 IS MADE A PART OF THIS CONTRACT, WITH CURRENT REVISIONS AS APPLICABLE. STANDARD DETAILS SHALL ONLY BE UTILIZED AS SPECIFICALLY REFERENCED IN THE DRAWINGS WITH MODIFICATIONS SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL APPLICABLE, LOCAL, STATE AND FEDERAL CODES, PERMITS AND SAFETY REQUIREMENTS.
- THE LOCATIONS OF EXISTING FEATURES AND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADDITIONAL UTILITIES NOT SHOWN IN THESE DRAWINGS MAY BE PRESENT. 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 WASTEWATER LINES
ARE IN THE AREA. UTILITIES SHOWN HERE DO NOT
SUBSTITUTE FOR FIELD LOCATES.

- GRADING AND FINAL ALIGNMENT OF UTILITIES & PIPING ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER TO FIT SITE CONDITIONS, AT NO ADDITIONAL COST.
- CONTRACTOR SHALL COORDINATE WITH ALL AFFECTED BOROUGH DEPARTMENTS AND LOCAL UTILITY COMPANIES DURING CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ACCESS TO THE PRIVATELY-OWNED BOAT SHELTERS THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT. IF THE WORK REQUIRES THAT THE CONTRACTOR BLOCK ACCESS TO ANY OF THE BOAT SHELTERS TO EFFECT THE WORK, THE CONTRACTOR SHALL NOTIFY CBJ DOCKS AND HARBORS AT LEAST 48 HOURS IN ADVANCE OF THE PROPOSED ACCESS RESTRICTION. "ACCESS TO THE BOAT SHELTERS" MEANS THAT THE VESSELS MOORED INSIDE THE BOAT SHELTER CAN LEAVE AND RETURN TO THEIR STALLS.



SURVEY NOTES:

BASIS OF COORDINATES FOR THIS SURVEY ARE NAD83(2011), ALASKA BASIS OF COORDINATES FOR THIS SURVEY ARE NAD83(2011), ALASKA STATE PLANE ZONE 1 IN U.S. SURVEY FEET, DERIVED FROM AND HOLDING VALUES PUBLISHED ON UNITED STATES ARMY CORP OF ENGINEERS (USACE) 020960 - AURORA HARBOR PCS, PROJECT CONDITIONS SURVEY, MARCH 18 - MARCH 24, 2018 FOR POINT NUMBER 506. POINT NUMBER 506 (AH-E), HAS THE FOLLOWING PUBLISHED VALUES:

N:2365619.00
E:2537231.20

THE VERTICAL CONTROL FOR THIS SURVEY IS MEAN LOWER LOW WATER (MLLW=0.0') DERIVED FROM AND HOLDING VALUES PUBLISHED ON USACE 020960 - AURORA HARBOR PCS, PROJECT CONDITIONS SURVEY, MARCH 18 - MARCH 24, 2018 FOR POINT NUMBER 506. POINT NUMBER 506 (AH-E), HAS THE FOLLOWING PUBLISHED ELEVATION:

EL:26.52

THE FIELD SURVEY WAS PERFORMED MARCH 10-11, 2024, BY PND ENGINEERS.

ALL DIMENSIONS AND COORDINATES ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.

UTILITY LOCATES WERE NOT REQUESTED FOR THIS SURVEY.

CONTOURS ARE SHOWN IN FEET, WITH ONE FOOT INTERVALS. CONTOURS SHOWN ARE COMPILATION/COMPOSITE OF DATA COLLECTED BY USACE IN 2019, 2021 AND PND ENGINEERS 2024.

NO TITLE SEARCH WAS PREPARED FOR THIS SURVEY. EASEMENTS AND ENCUMBRANCES SHOWN HEREON ARE FROM PLATS OF RECORD. OTHER EASEMENTS AND ENCUMBRANCES MAY EXIST.

PROPERTY BOUNDARIES SHOWN HEREON ARE FROM PLAT OF RECORD, ATS 1624, PLAT 2010-28 JUNEAU RECORDING DISTRICT.

PND 2024 SITE SURVEY IS INCLUDED IN THIS CONTRACT, AND WILL BE MADE AVAILABLE ELECTRONICALLY TO CONTRACTOR.

SCALE IN FEET
0 5 10 FT.

AURORA HARBOR

AURORA HARBOR RUBBLE MOUND
BREAKWATER

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

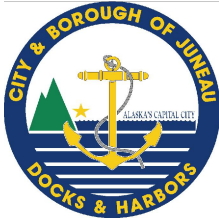


**EXISTING CONDITIONS, DEMOLITION AND
SALVAGE PLAN**

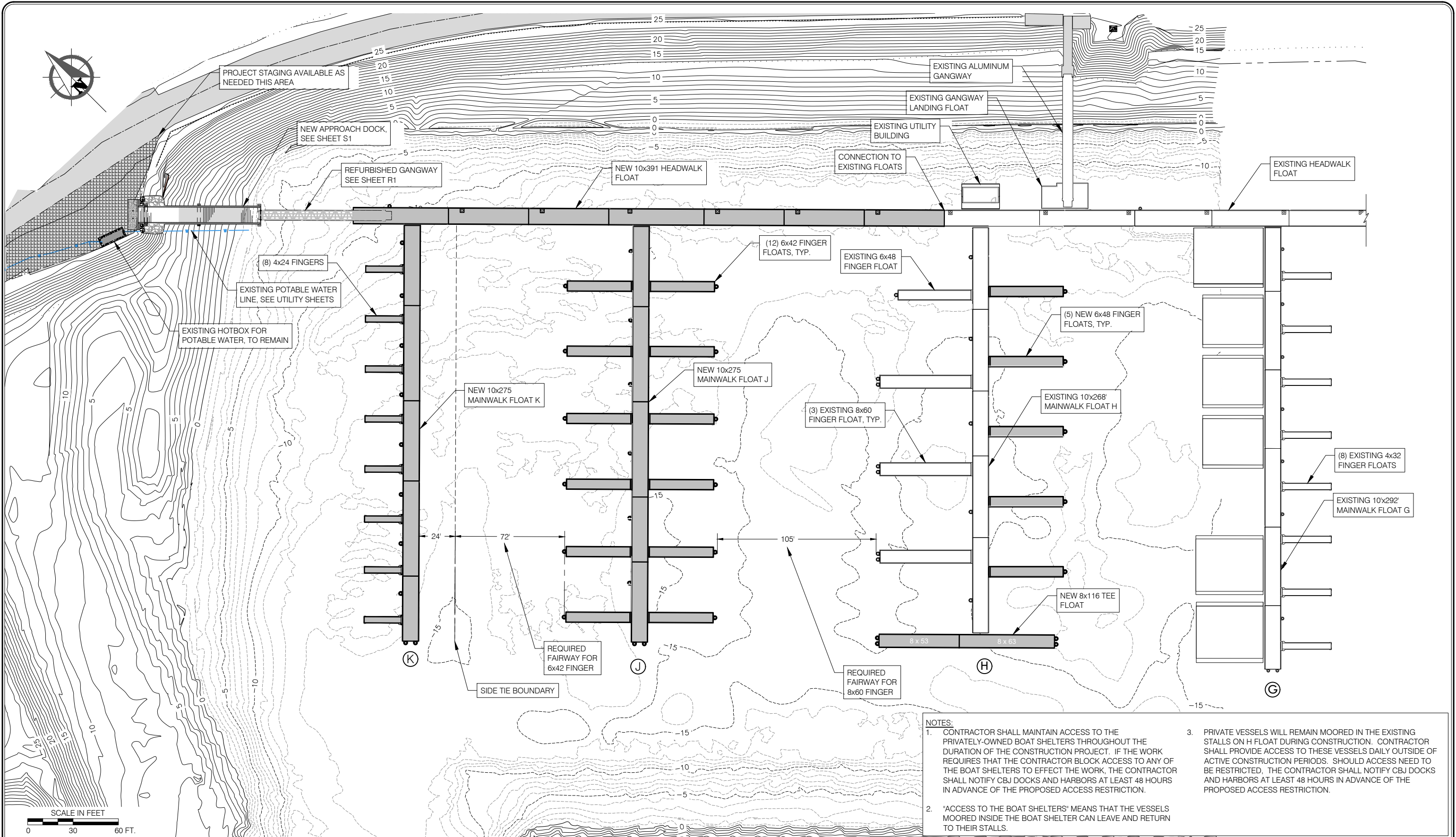
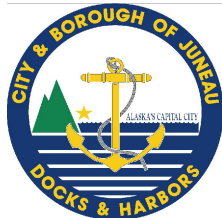
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- NOTES:**
1. CONTRACTOR SHALL MAINTAIN ACCESS TO THE PRIVATELY-OWNED BOAT SHELTERS THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT. IF THE WORK REQUIRES THAT THE CONTRACTOR BLOCK ACCESS TO ANY OF THE BOAT SHELTERS TO EFFECT THE WORK, THE CONTRACTOR SHALL NOTIFY CBJ DOCKS AND HARBORS AT LEAST 48 HOURS IN ADVANCE OF THE PROPOSED ACCESS RESTRICTION.
 2. "ACCESS TO THE BOAT SHELTERS" MEANS THAT THE VESSELS MOORED INSIDE THE BOAT SHELTER CAN LEAVE AND RETURN TO THEIR STALLS.
 3. PRIVATE VESSELS WILL REMAIN MOORED IN THE EXISTING STALLS ON H FLOAT DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE ACCESS TO THESE VESSELS DAILY OUTSIDE OF ACTIVE CONSTRUCTION PERIODS. SHOULD ACCESS NEED TO BE RESTRICTED, THE CONTRACTOR SHALL NOTIFY CBJ DOCKS AND HARBORS AT LEAST 48 HOURS IN ADVANCE OF THE PROPOSED ACCESS RESTRICTION.

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



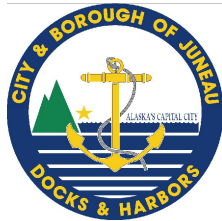
GENERAL SITE PLAN
AURORA HARBOR REBUILD - PHASE IV

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0.23 yards
0.2 Acres



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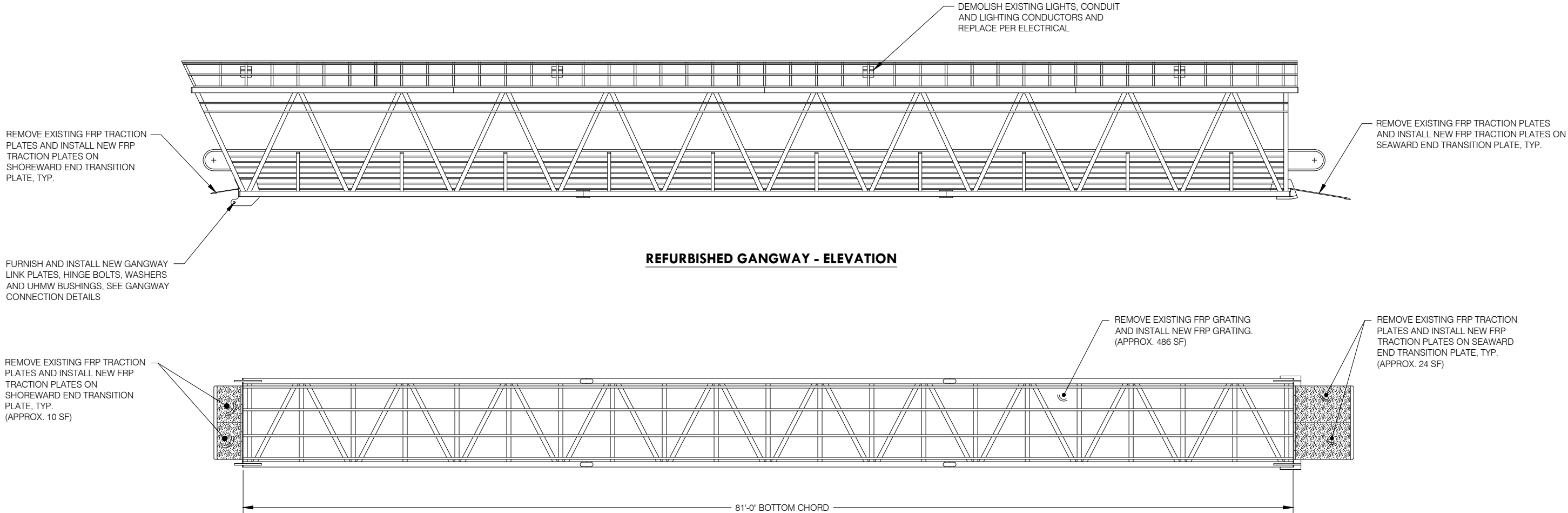
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



GANGWAY SALVAGE PLAN, ELEVATION
AND DETAILS
AURORA HARBOR REBUILD - PHASE IV

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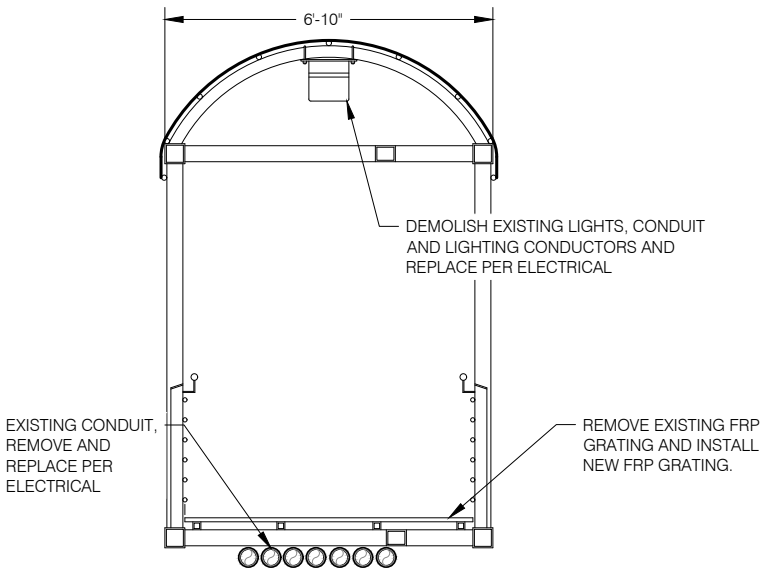
R1



REFURBISHED GANGWAY - PLAN



EXISTING GANGWAY - SOUTH VIEW

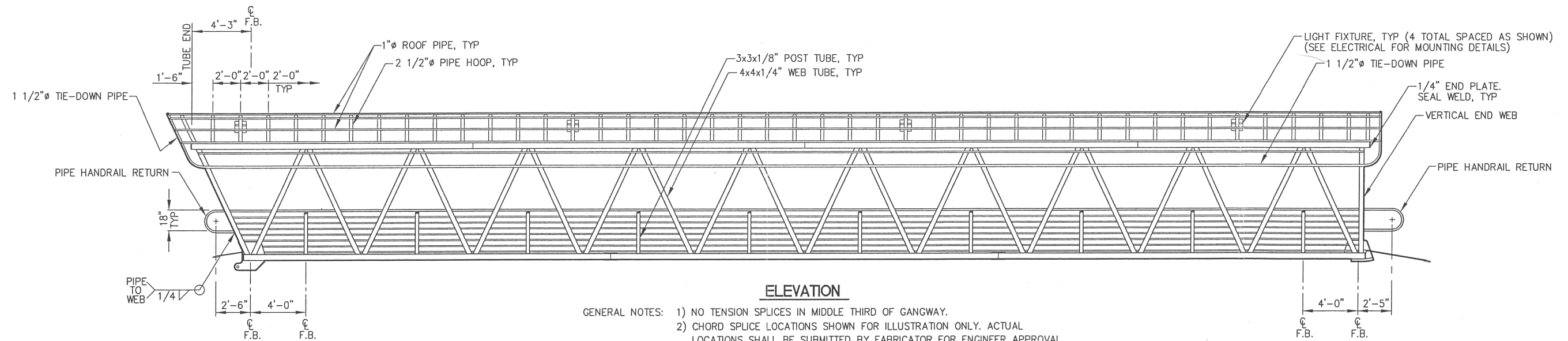
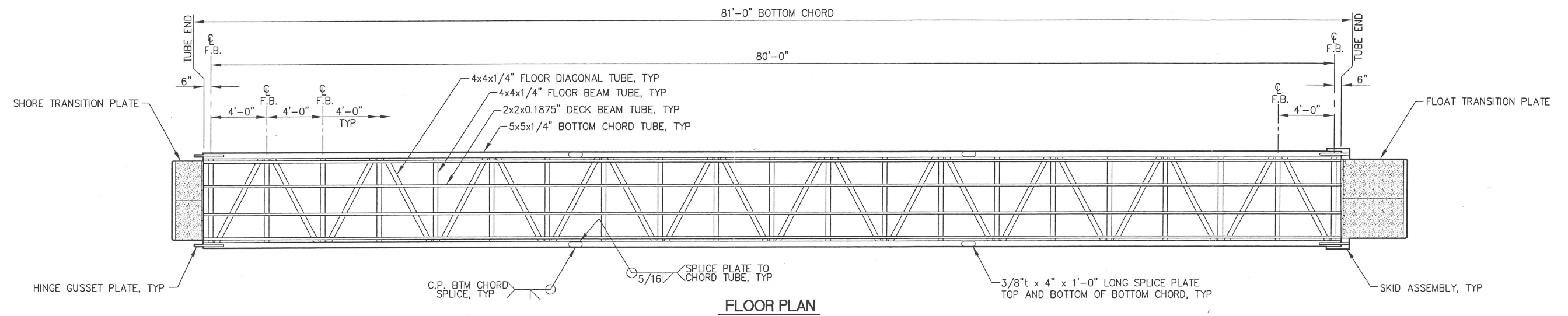
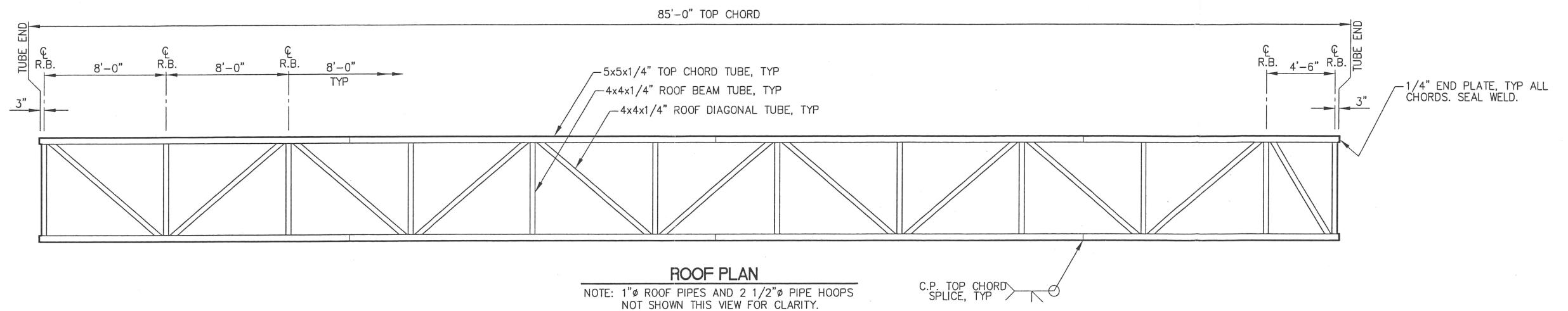


REFURBISHED GANGWAY - SECTION



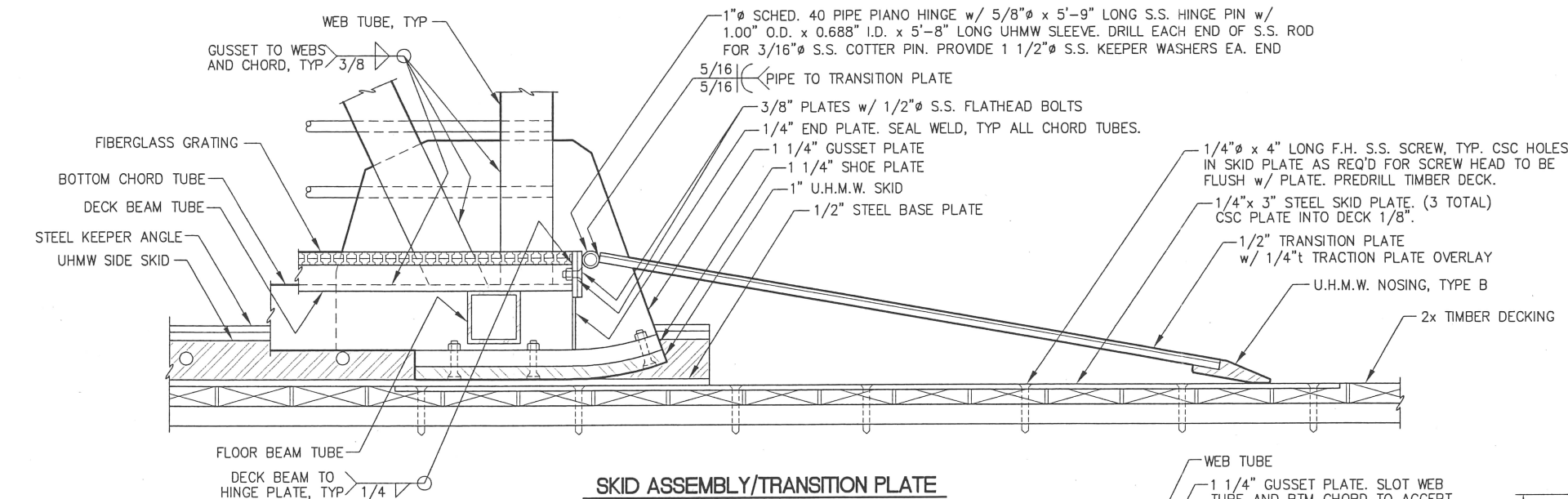
EXISTING GANGWAY - NORTH VIEW

- SALVAGE NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING THE SALVAGED GANGWAY FROM CURRENT LOCATION IN THE UPLANDS ADJACENT TO THE AURORA HARBOR BASIN.
 2. THE CONTRACTOR SHALL DEMOLISH THE EXISTING FRP GRATING WALKING SURFACE (APPROX. 6'-0" x 81'-0") AND REPLACE WITH FIBERGRATE SAFE-T-SPAN MODEL #14010. CONTRACTOR SHALL UTILIZE MANUFACTURER SUPPLIED 316 STAINLESS FASTENERS TO FASTEN THE GRATING TO THE GANGWAY.
 3. THE CONTRACTOR SHALL ADDITIONALLY DEMOLISH THE EXISTING FRP TRACTION PLATES ON BOTH END TRANSITION PLATES AND REPLACE WITH NEW FRP 1/4" TRACTION PLATE OVERLAY WITH INTEGRAL GRIT SURFACE. CONTRACTOR SHALL UTILIZE MANUFACTURER-SUPPLIED 316 STAINLESS FASTENERS TO FASTEN THE TRACTION PLATES TO THE END TRANSITIONS.
 4. THE CONTRACTOR SHALL DEMOLISH THE EXISTING LIGHTS AND LIGHTING CONDUCTORS MOUNTED ON THE GANGWAY AND REPLACE IN ACCORDANCE WITH THE LIGHTING SCHEDULE, SEE ELECTRICAL.
 5. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW LINK PLATES AND GANGWAY HINGE BOLTS. HINGE BOLTS SHALL BE 1-1/2" Ø A235 BOLT WITH HDG WASHERS, NUT AND COTTER PIN. UHMW BUSHINGS SHALL PRESS FIT. SEE GANGWAY CONNECTION DETAILS.

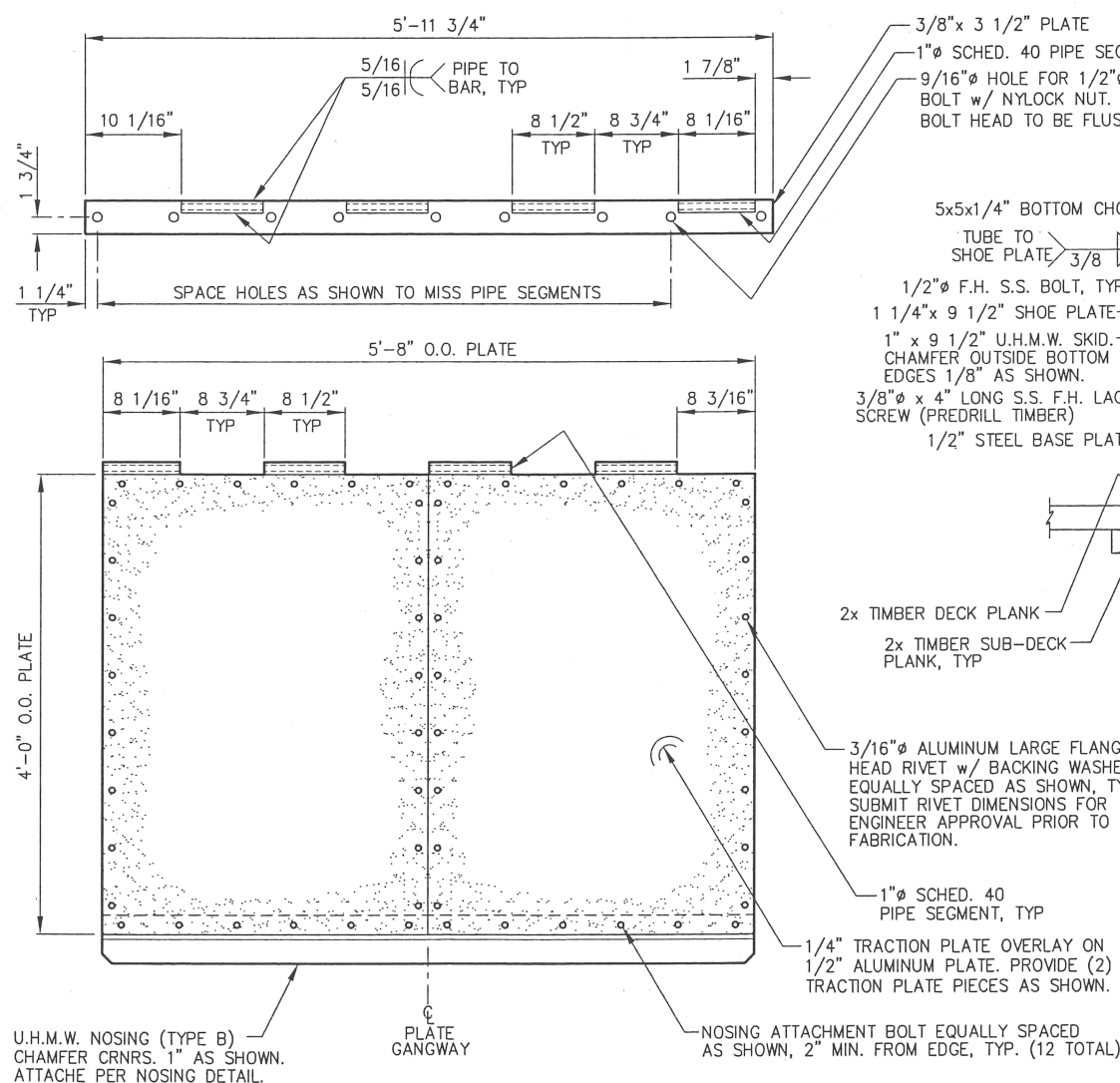


- GENERAL NOTES:
- 1) NO TENSION SPLICES IN MIDDLE THIRD OF GANGWAY.
 - 2) CHORD SPLICE LOCATIONS SHOWN FOR ILLUSTRATION ONLY. ACTUAL LOCATIONS SHALL BE SUBMITTED BY FABRICATOR FOR ENGINEER APPROVAL.
 - 3) TOP AND BOTTOM CHORD SPLICES SHALL BE STAGGERED 5-FT MIN.
 - 4) PROVIDE CAMBER OF 2" MIN. AT MID-SPAN.
 - 5) ALL MATERIALS SHALL BE ALUMINUM UNLESS OTHERWISE NOTED.

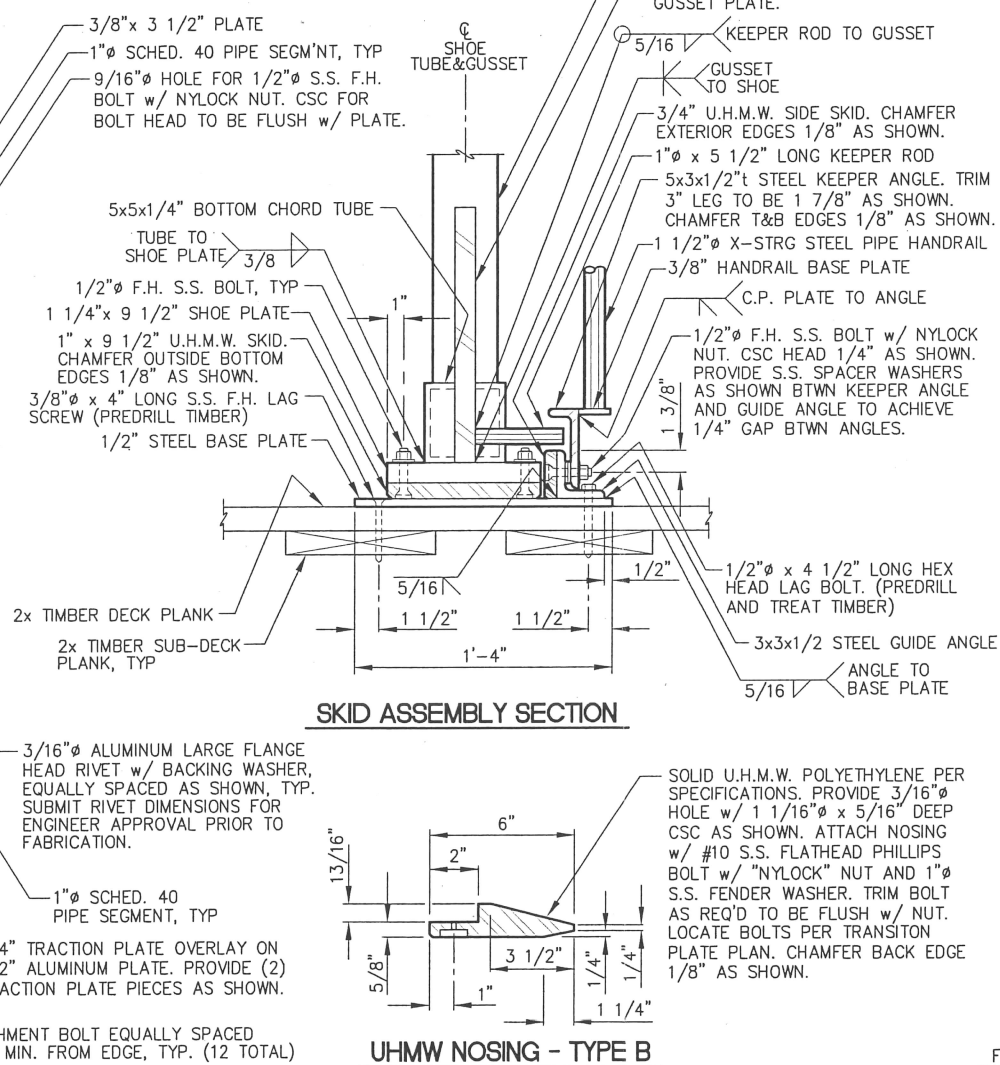
REVISIONS				
REV.	DATE	DESCRIPTION	DWN.	CKD.



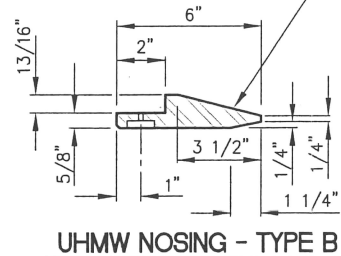
SKID ASSEMBLY/TRANSITION PLATE



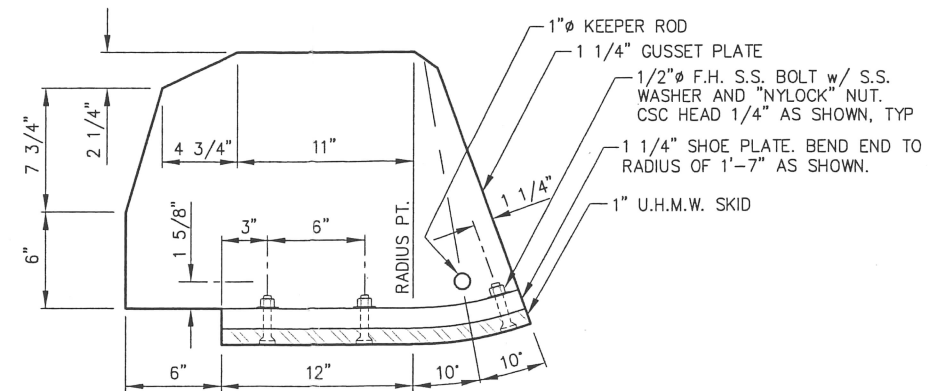
FLOAT TRANSITION PLATE



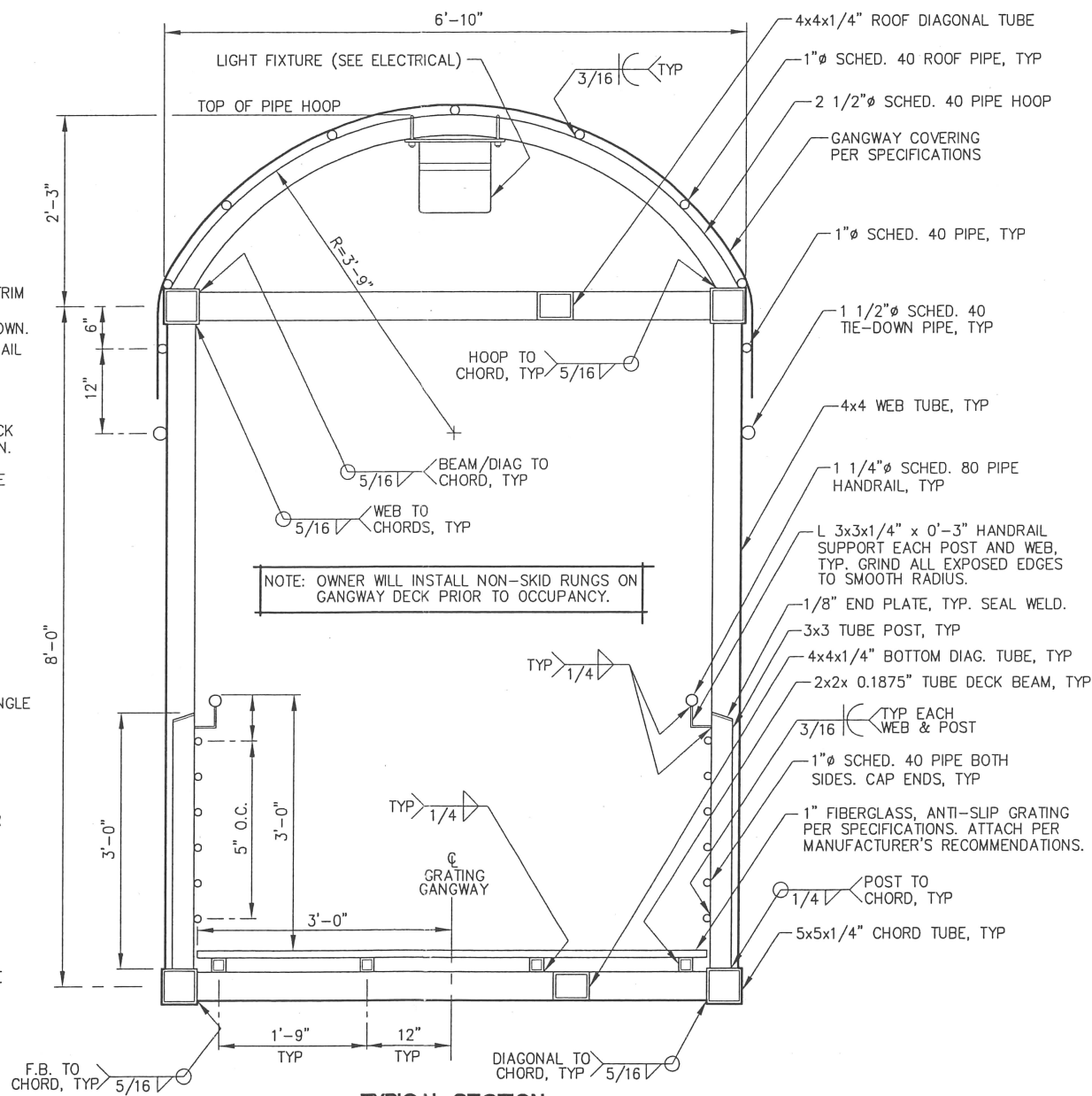
SKID ASSEMBLY SECTION



UHMW NOSING - TYPE B

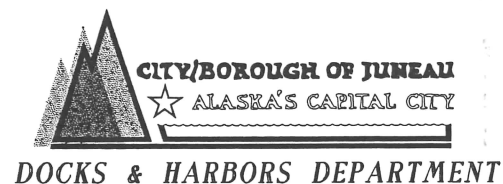
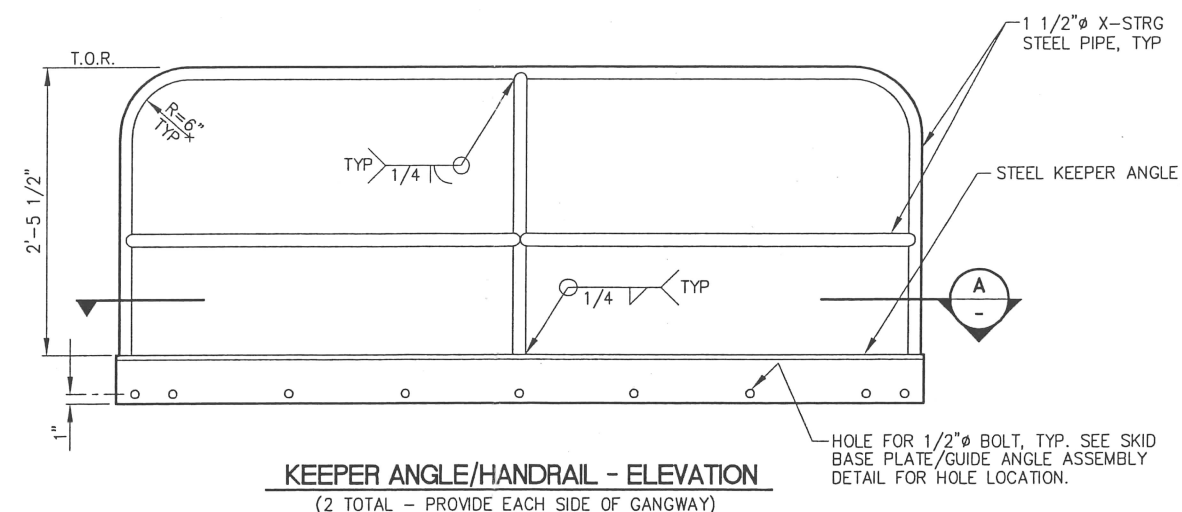
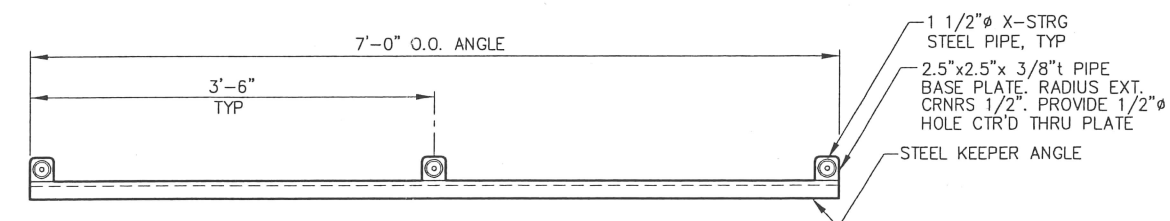
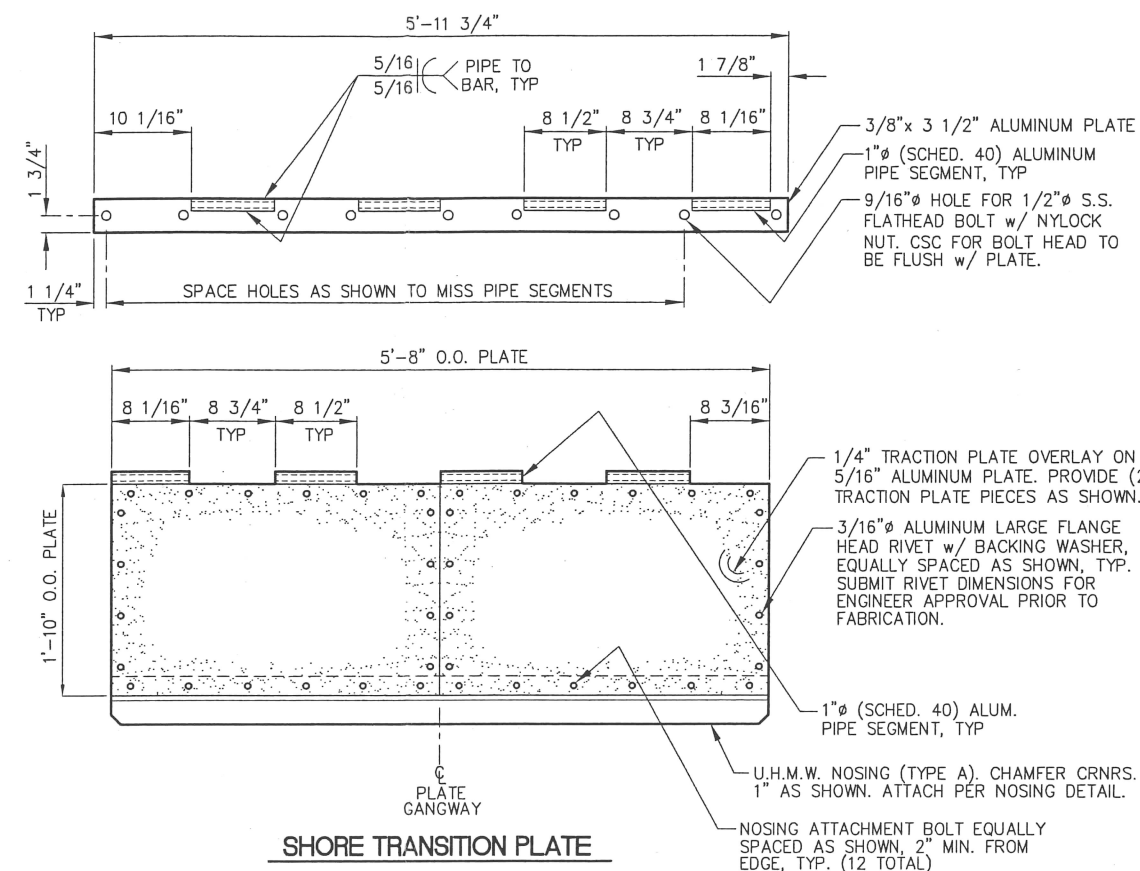
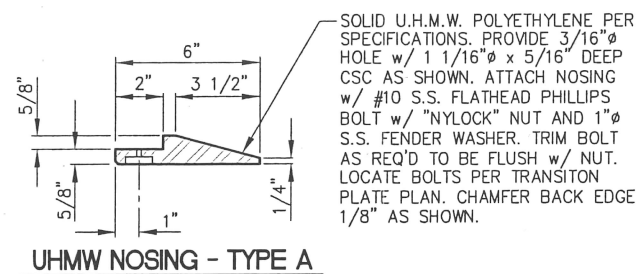
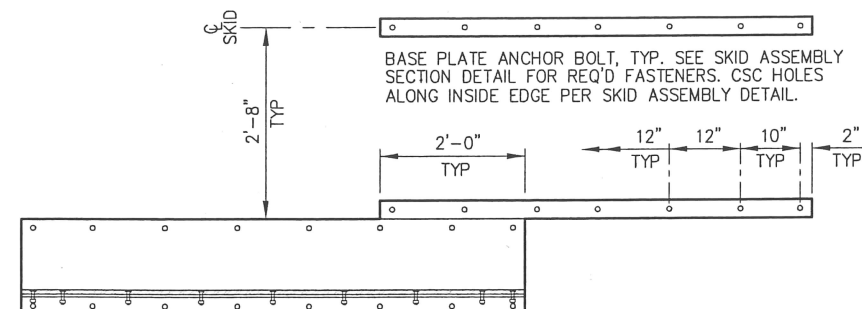
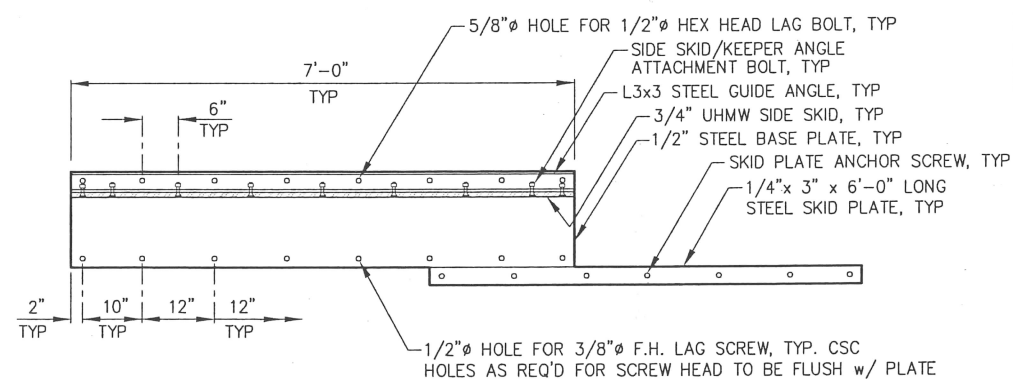
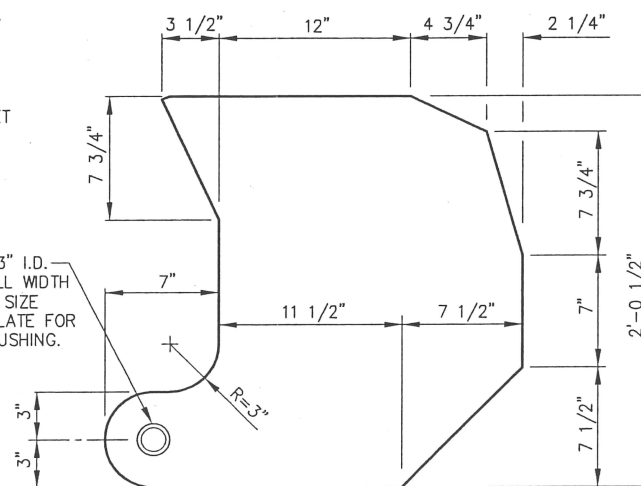
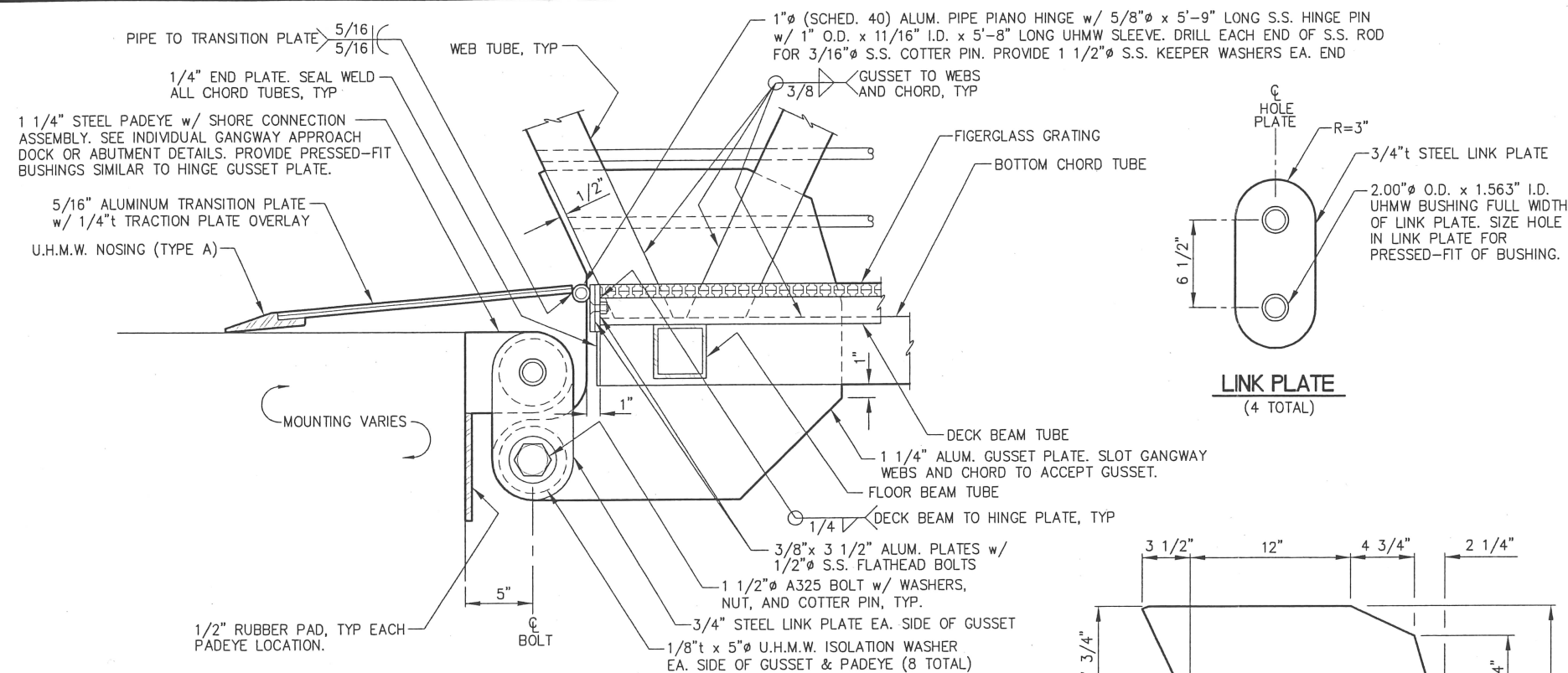


GUSSET/SKID PLATE - (2 TOTAL)



TYPICAL SECTION

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

[illegible]

3220 Hospital Drive Ste 200
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pnd-anc.com

DESIGN: JLD
DRAWN: JLD

CHECKED: CRS
APPROVED: CRS

SCALE, AS SHOWN

P N D
Incorporated
CONSULTING
ENGINEERS

STATE OF ALASKA
 REGISTERED PROFESSIONAL ENGINEER
 Charles R. Somerville
 CE-8845
 DATE: MAR. 5, 2004

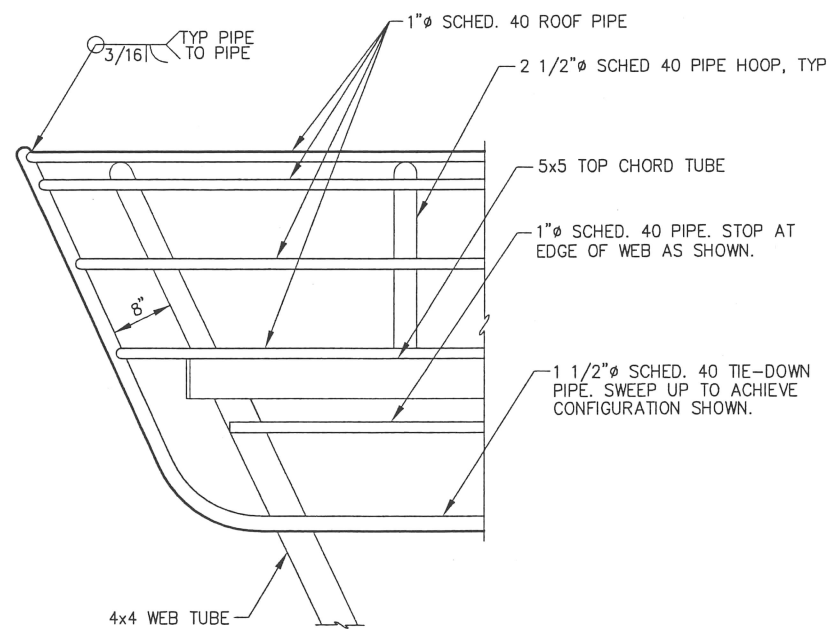
**AURORA HARBOR REPAIR AND
RENOVATION
CONTRACT NO. DH04-269**

SHEET TITLE:

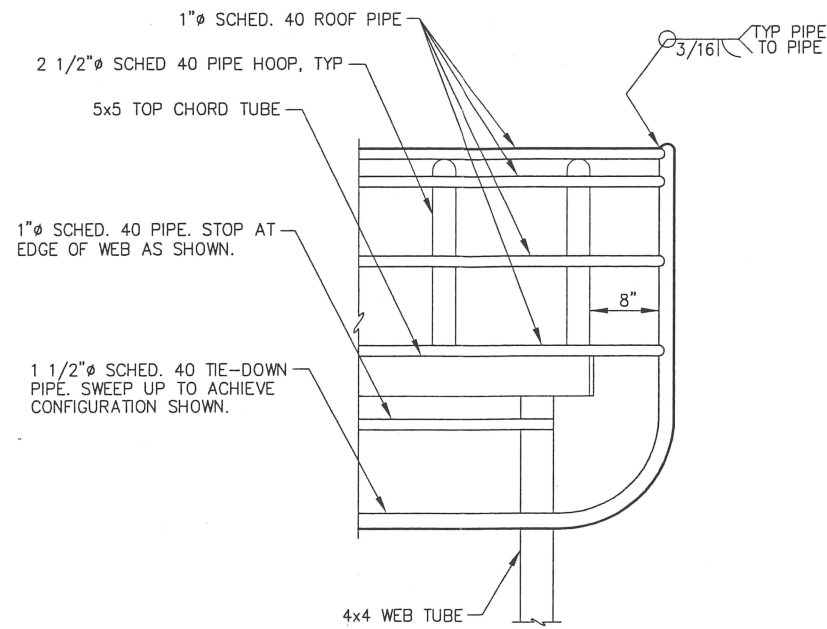
GANGWAY DETAILS

5.03
SHEET
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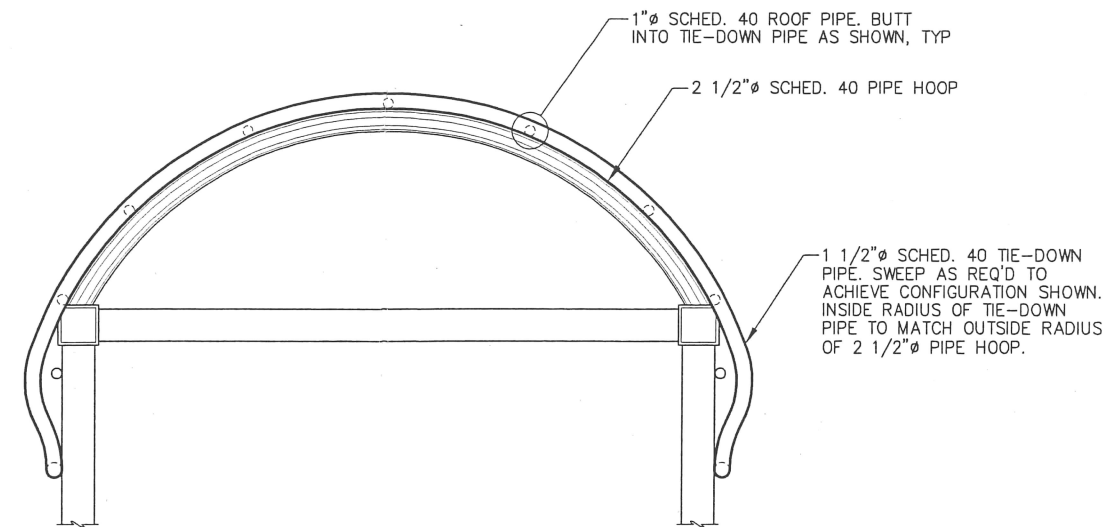
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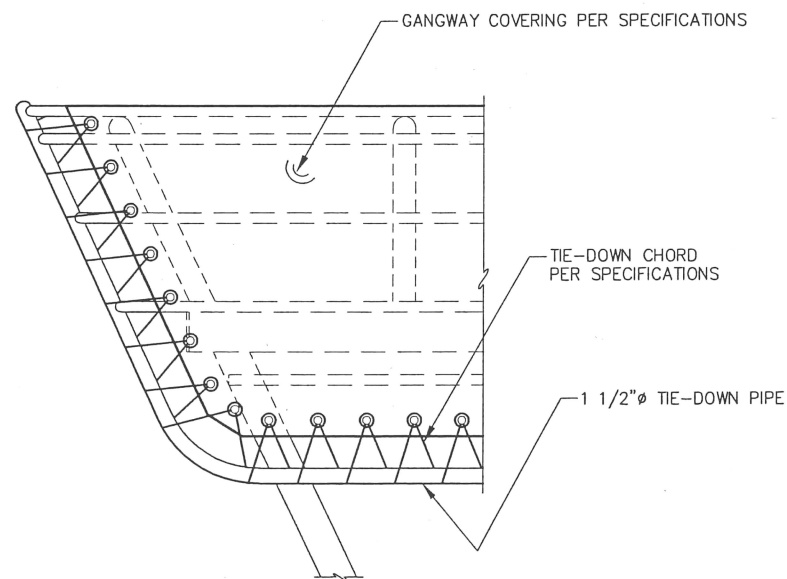
SHORE END ROOF - ELEVATION



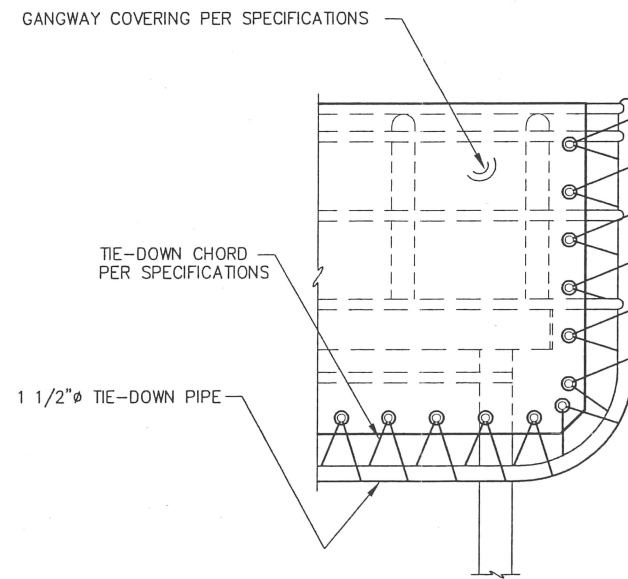
FLOAT END ROOF - ELEVATION



TYPICAL ROOF END VIEW

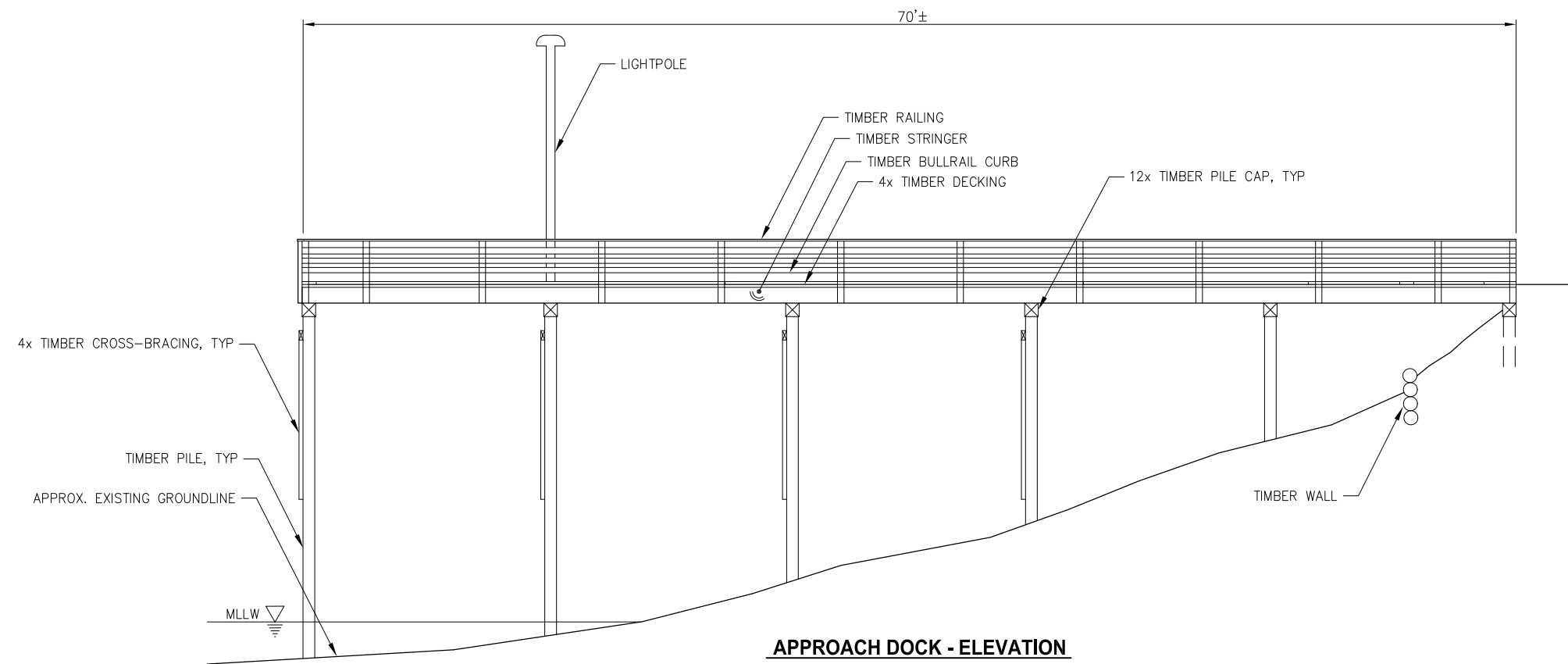


COVERING - SHORE END ELEVATION

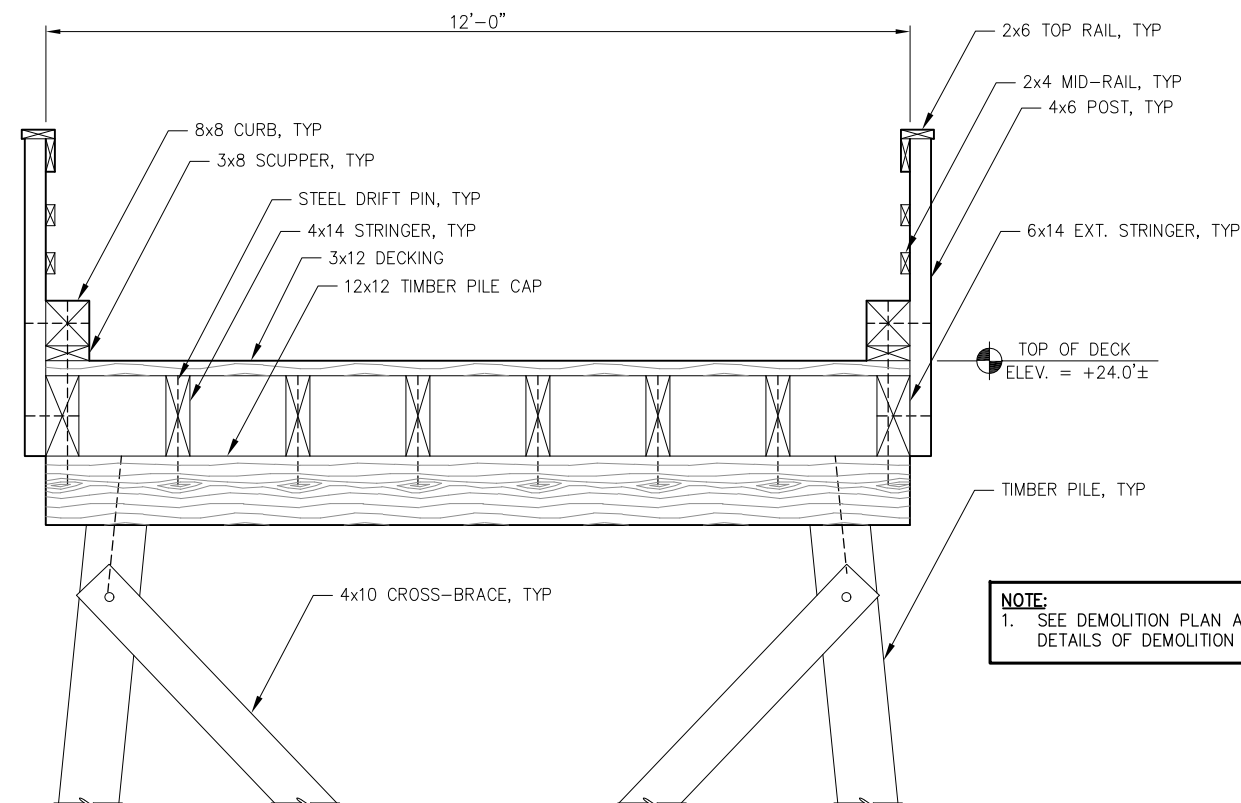


COVERING - FLOAT END ELEVATION

REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



APPROACH DOCK - ELEVATION



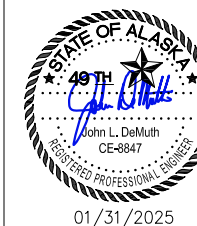
NOTE:
1. SEE DEMOLITION PLAN AND SPECIFICATIONS FOR DETAILS OF DEMOLITION S.O.W.

TYPICAL SECTION



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

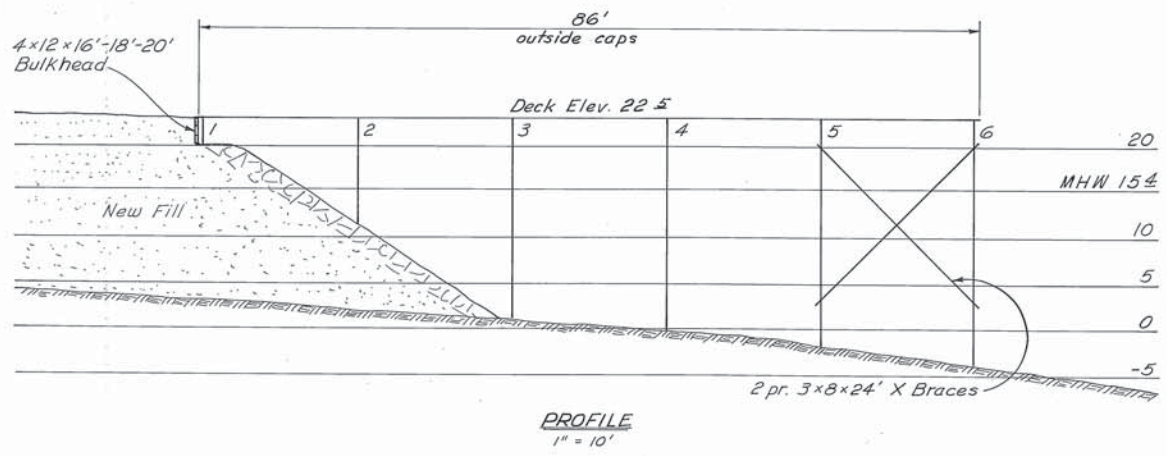
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
 155 HERITAGE WAY
 JUNEAU, ALASKA 99801
 PHONE: 907-586-0292



EXISTING DOCK FRAMING
 AURORA HARBOR REBUILD - PHASE IV

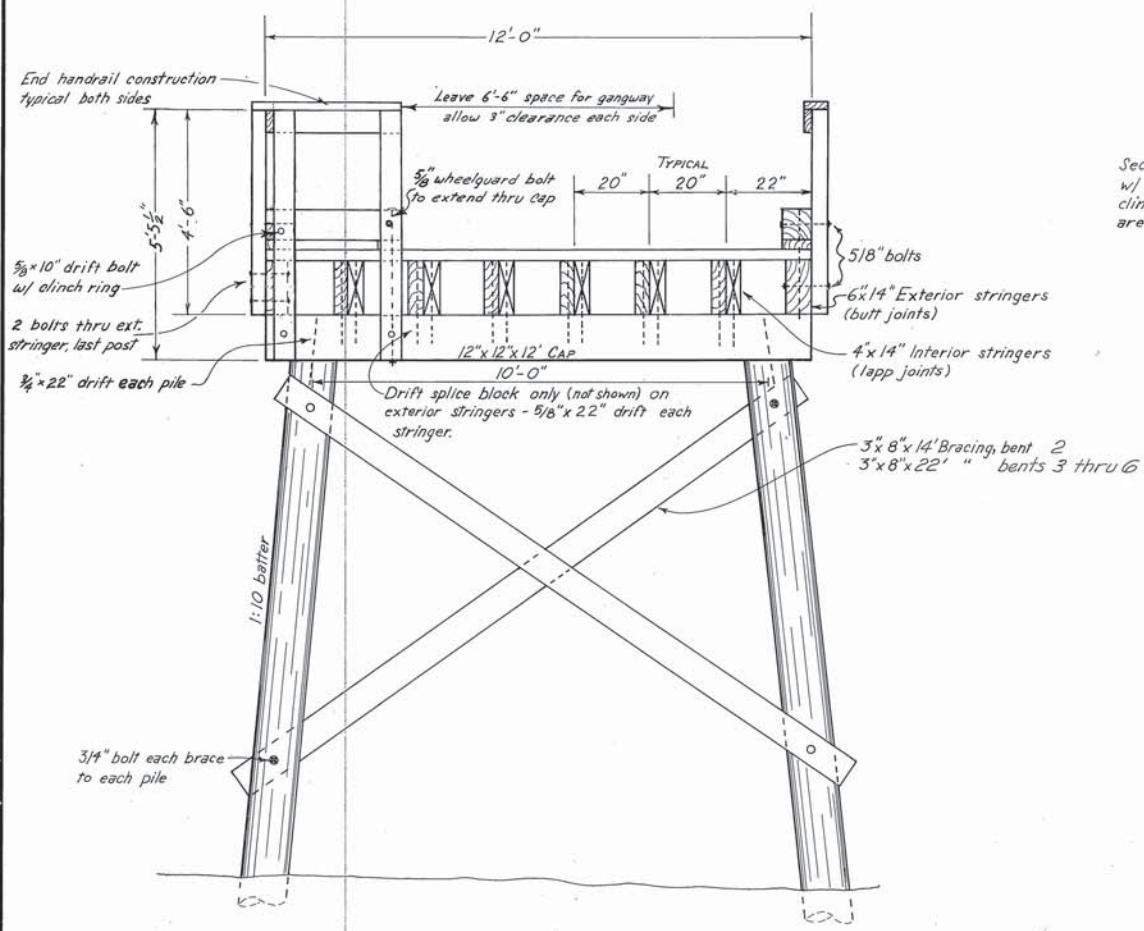
DESIGN:	JLD	DATE:	JANUARY 31, 2025
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S1



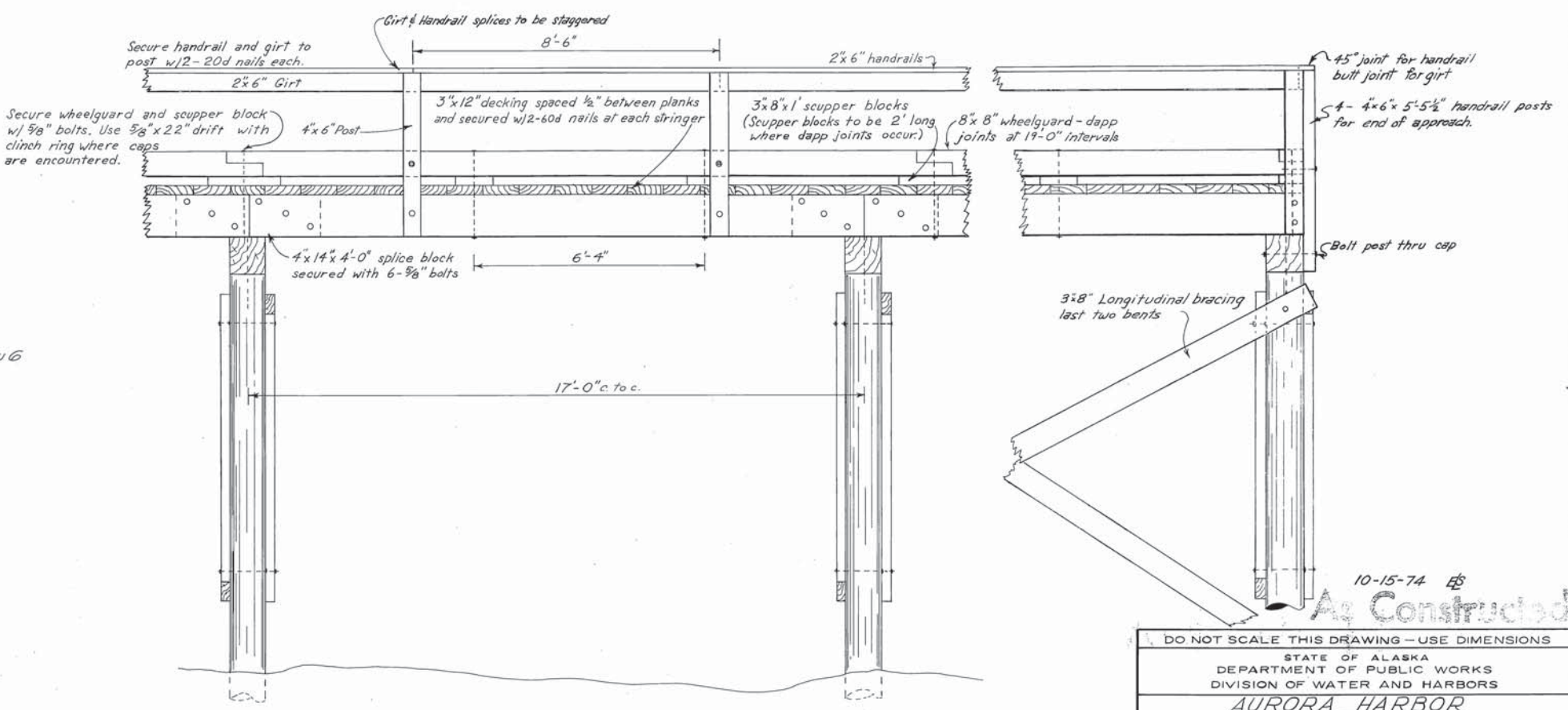
MATERIALS				
ITEM	GRADE	DRESSING	CREO. TREAT.	TYPE
Piling	Class B		12" Ret.	Douglas Fir
Bracing	No. 1	Rough	"	"
Caps	"	S4S	8" Ret.	"
Ext. Stringers	Sel. Str.	"	"	"
Splice Blocks	"	S2E	"	"
Int. Stringers	"	"	"	"
Decking	No. 1	S/S2E	"	"
Scupper Block	"	S4S	"	"
Wheelguard	"	"	"	"
Handrail Post	"	"	"	"
Girt	"	"	0.6 Penta.	"
Handrail	"	"	0.6 Penta.	"

Hardware to be galv. w/ malleable iron washers between all nut & wood surfaces.
Bolts to be mushroom head type
Bolt holes to be drilled 1/16" oversize
Drift holes to be drilled 1/16" undersize
All drift holes to be treated w/ hot creosote oil.
All pressure treated creosote & penta material shall be cut to size prior to treatment.



TYPICAL APPROACH SECTION

Scale 1/2" = 1'-0"



TYPICAL APPROACH ELEVATION

Scale 1/2" = 1'-0"

10-15-74 E.S.

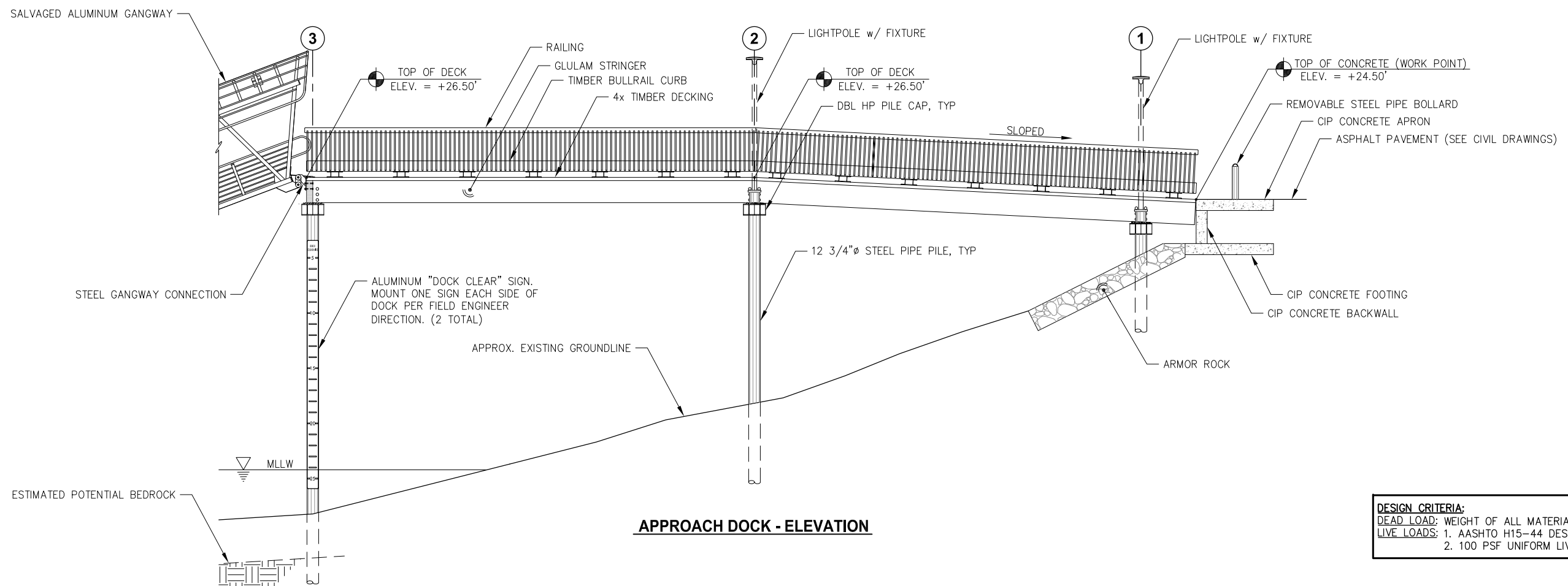
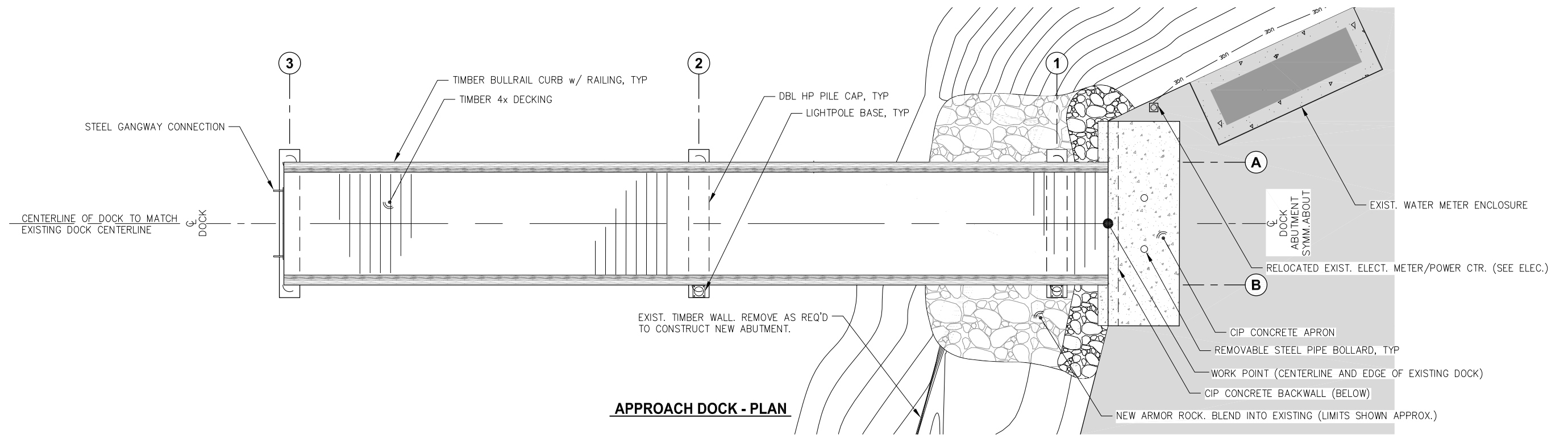
As Constructed

DO NOT SCALE THIS DRAWING - USE DIMENSIONS

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

AURORA HARBOR
TYPICAL 12'-0" APPROACH
CONSTRUCTION DETAILS

SCALE As Shown	SURVEYED	APPROVED
DESIGNED D.S.	DRAWN CED	Don Statter
CHECKED	DATE	DIRECTOR
PROJECT NUMBER 3-74/80		SHEET 7 OF 11

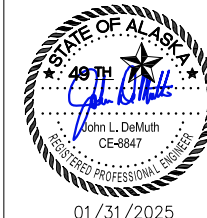


DESIGN CRITERIA:
 DEAD LOAD: WEIGHT OF ALL MATERIALS OF CONSTRUCTION.
 LIVE LOADS: 1. AASHTO H15-44 DESIGN TRUCK.
 2. 100 PSF UNIFORM LIVE LOAD.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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DOCK PLAN AND ELEVATION
 AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
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S2

S1 S2 S3 S5 S6 S7 and S9



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

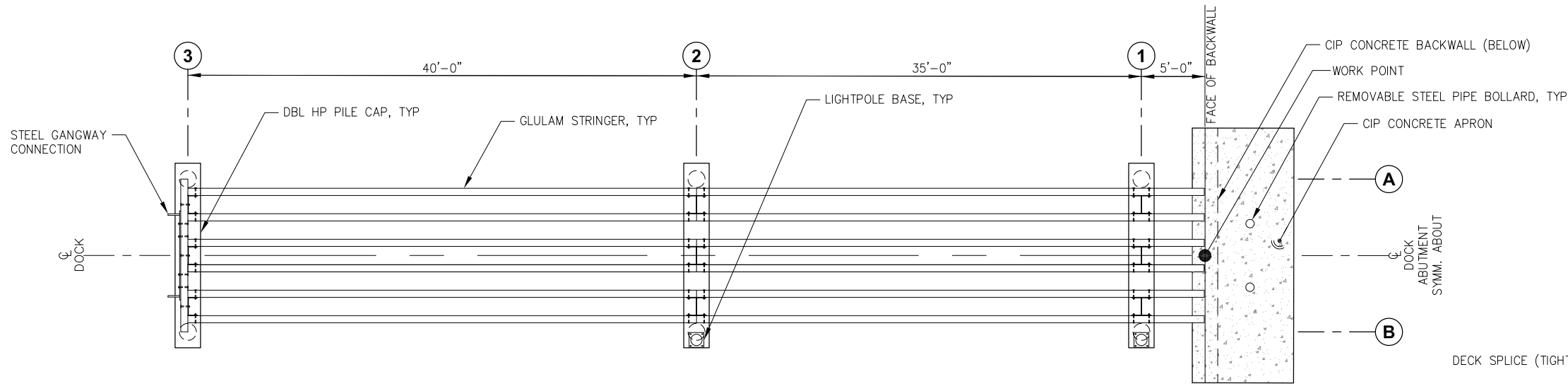


DOCK FRAMING PLAN AND TYPICAL SECTION

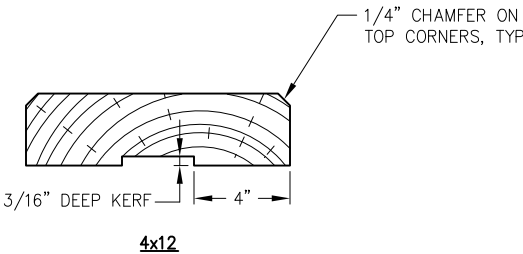
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JLD	FILE NO.	SHEET: of 86

S3

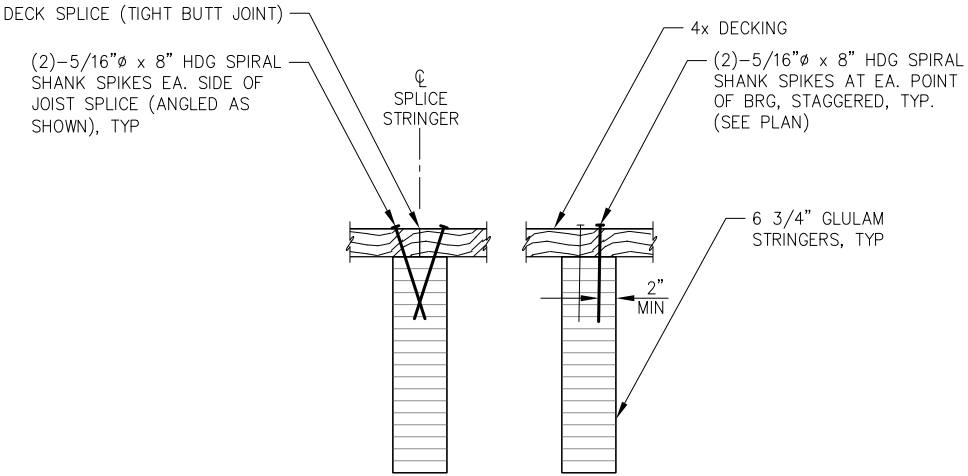


FRAMING PLAN



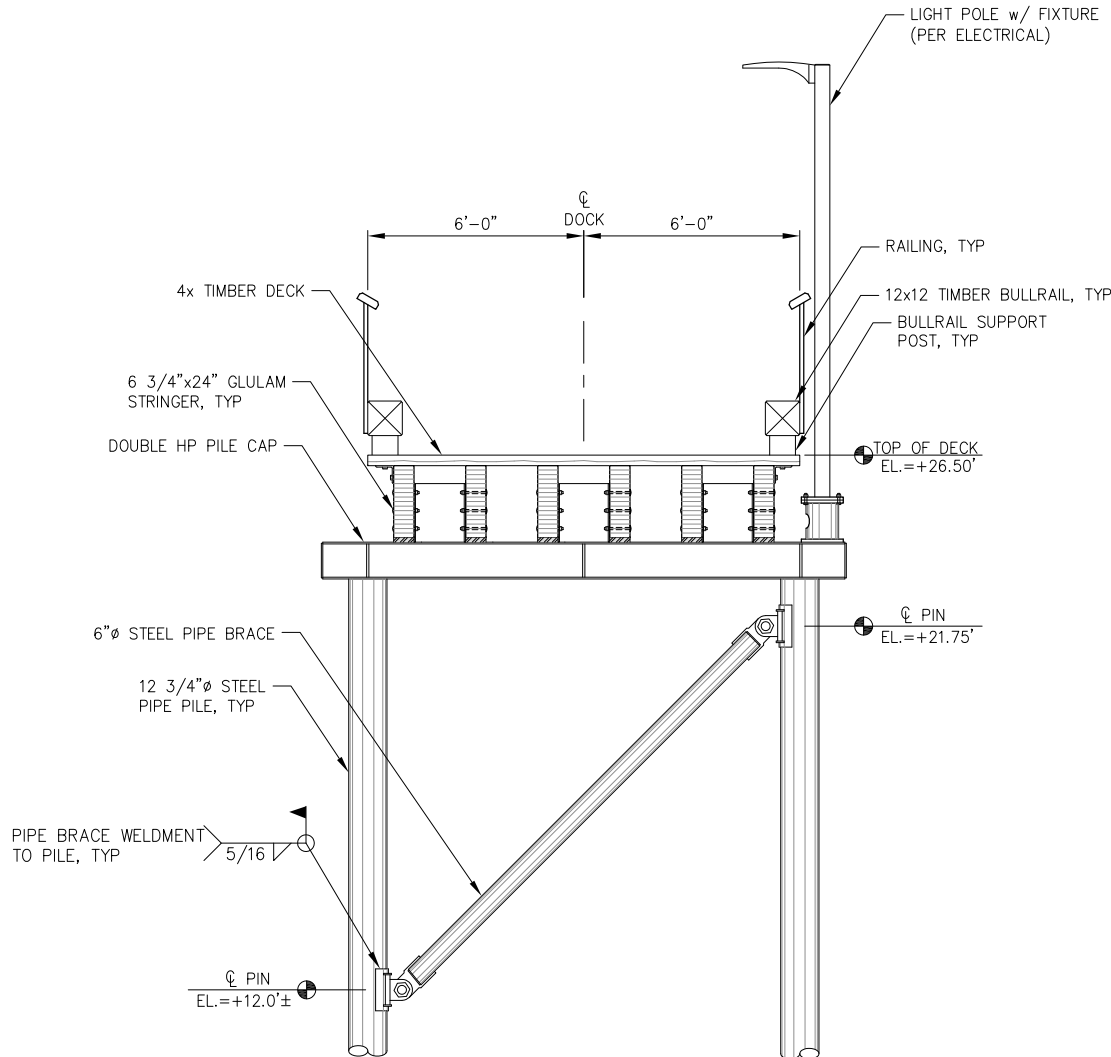
4x12
DECKING PROFILE

- NOTES:
- SEE SPECIFICATIONS FOR COMPLETE DECKING REQUIREMENTS.
 - NO DECKING SHALL BE INCORPORATED INTO THE WORK THAT FALLS OUTSIDE OF THE SPECIFIED GRADING.
 - NO DECKING WITH WANE ON THE TOP OF SURFACE SHALL BE INCORPORATED IN THE WORK.

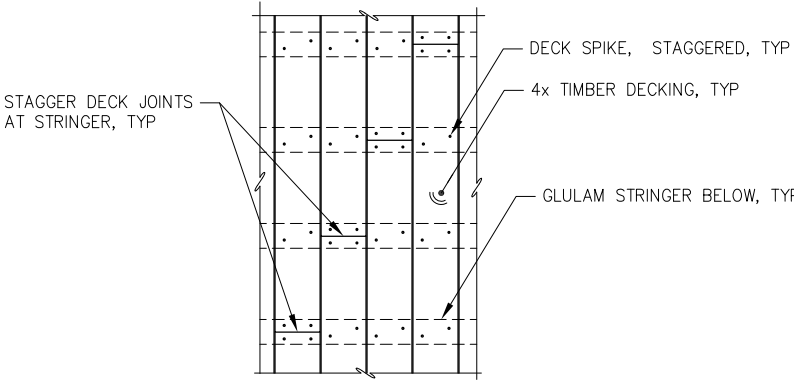


TYPICAL DECK TO STRINGER CONNECTION

- NOTES:
- ALL DECK BOARDS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS.
 - DECK BOARDS SHALL BE SPLICED WITH A RANDOM LAYOUT WITH NO TWO ADJACENT BOARDS SPLICED AT SAME STRINGER.
 - PRE-DRILL HOLES IN DECK PER AITC, TYP.



TYPICAL SECTION



TYPICAL DECK SPLICE AND NAIL STAGGER - PLAN

NOTE: SEE DOCK PLAN FOR LOCATION OF PILES.



TYPICAL PILE SPLICE WELD
(TYPICAL FOR ALL PIPE PILE SPLICES)



PILE BRACE CONNECTION



NOTE:
BASED ON AVAILABLE GEOTECHNICAL INFORMATION, IT IS ANTICIPATED
THAT DOCK SUPPORT PILES WILL NEED TO BE SOCKETED IN BEDROCK.

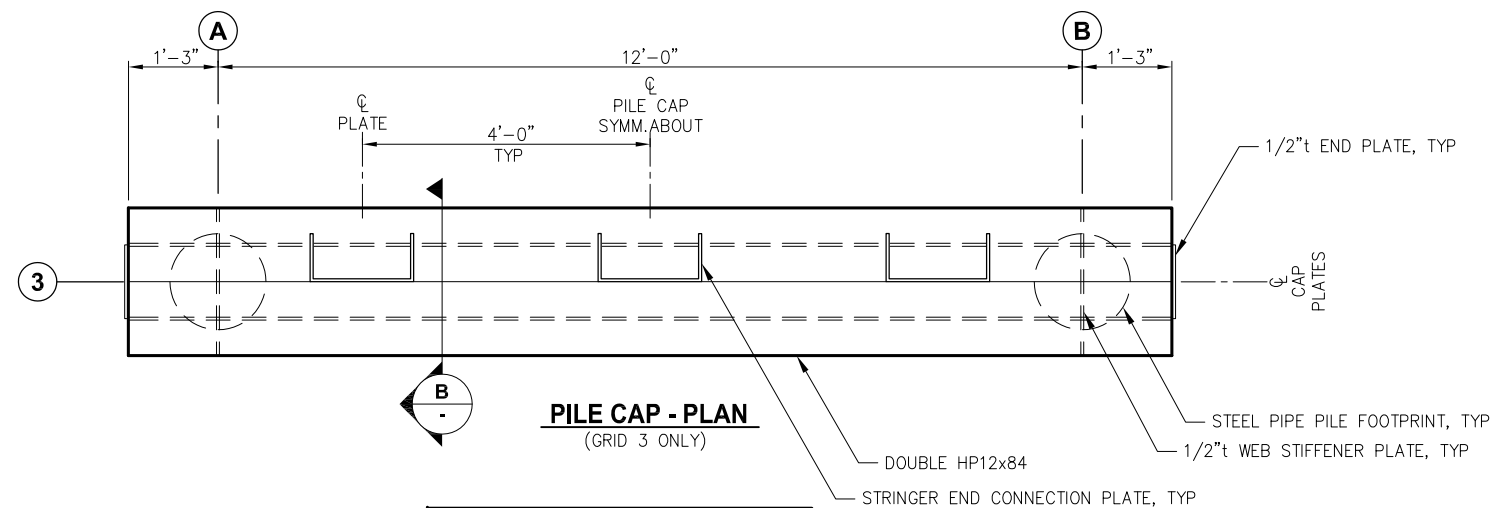
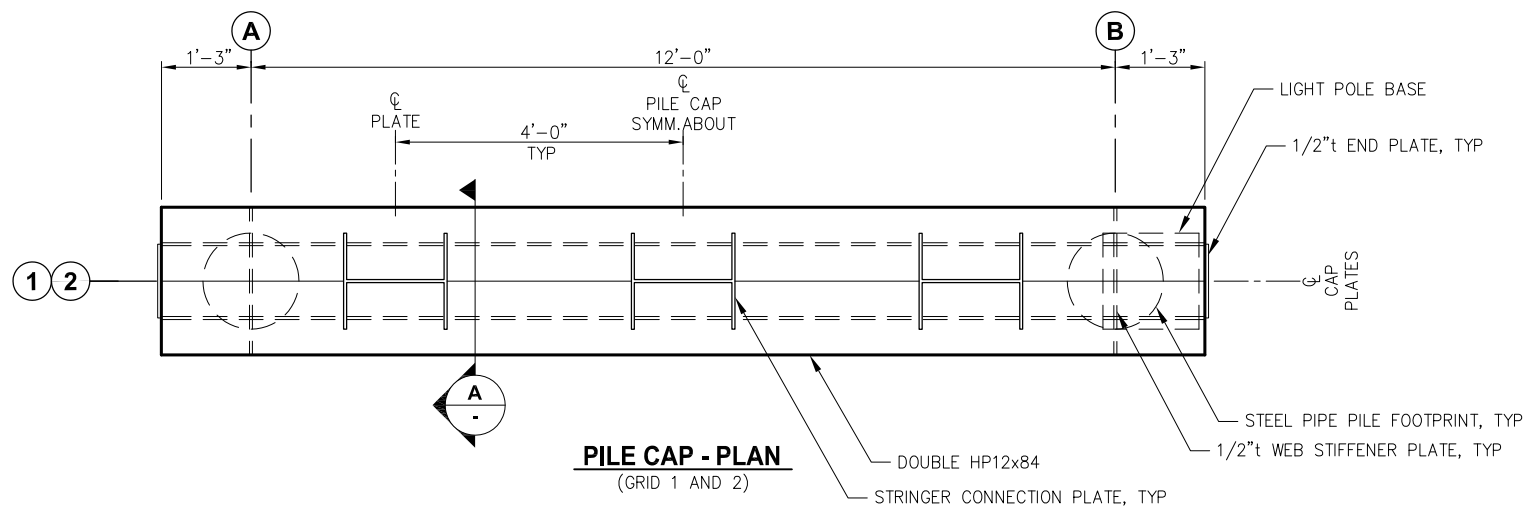
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

STATE OF ALASKA
49TH
John L. DeMuth
CE-8847
REGISTERED PROFESSIONAL ENGINEER
01/31/2025

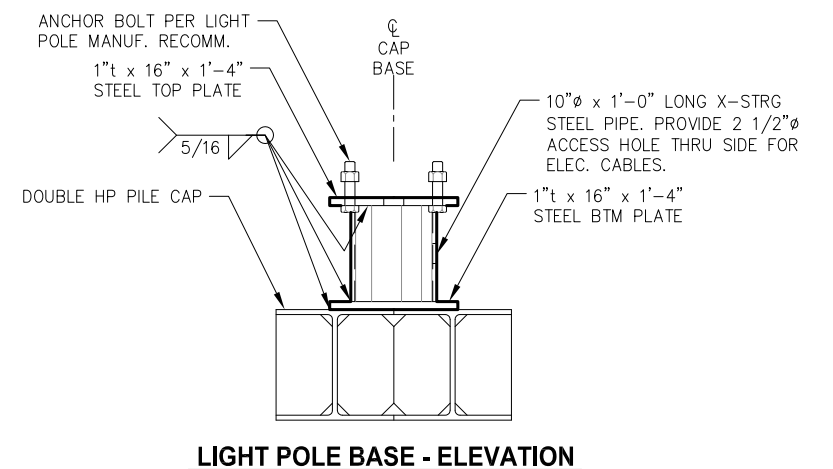
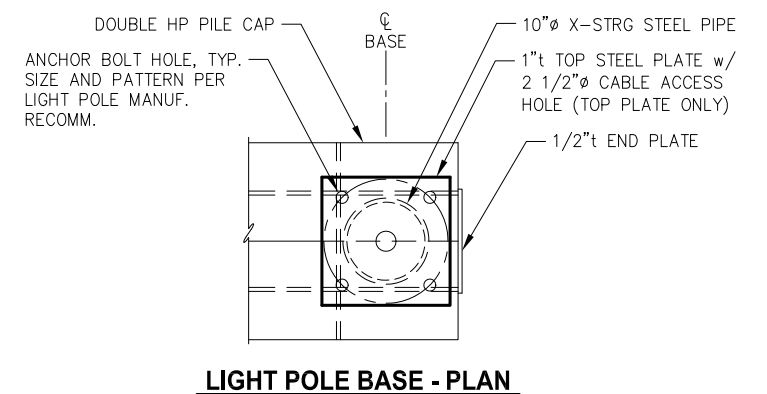
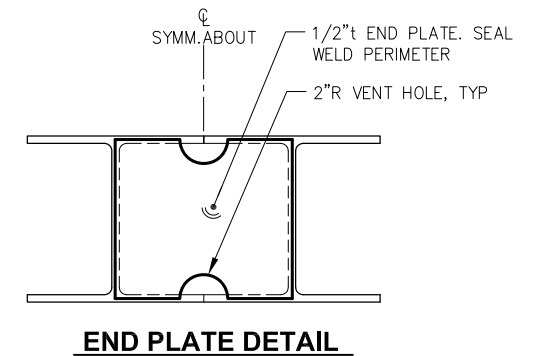
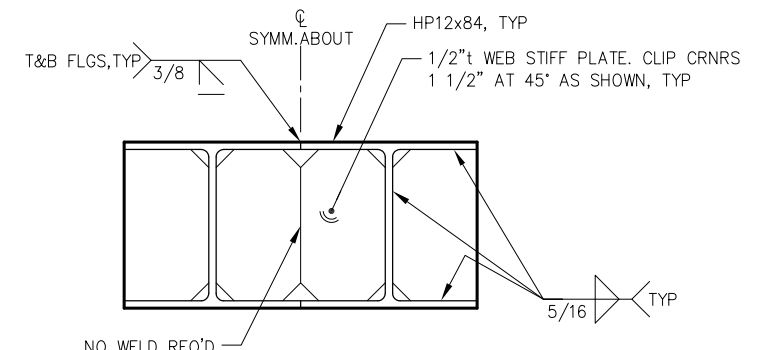
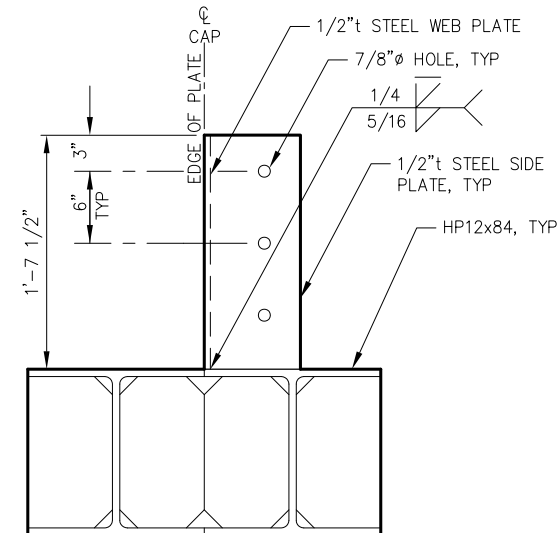
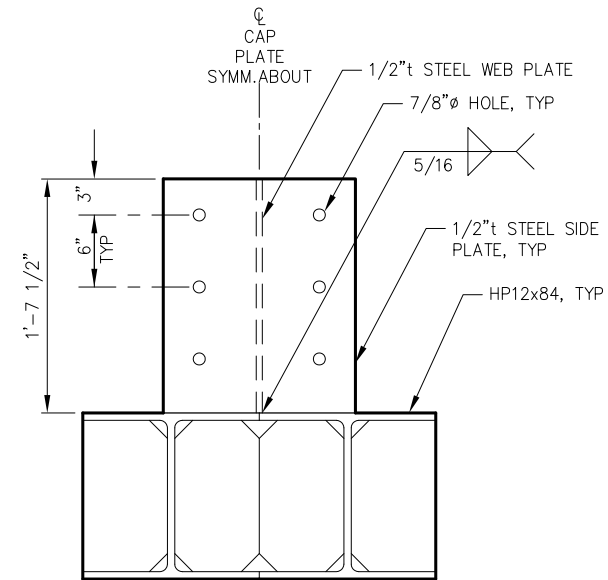
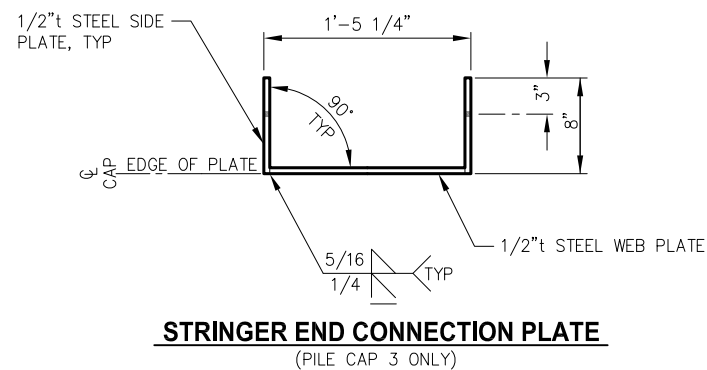
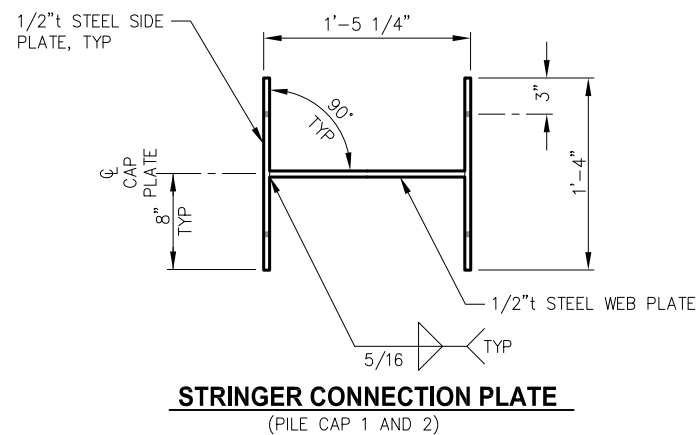
PILE SCHEDULE AND DETAILS

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE: JANUARY 31, 2025	
CHECKED:	BI	CONTRACT NO.: DH25-022	
APPROVED:	JLD	FILE NO.	SHEET: of 86

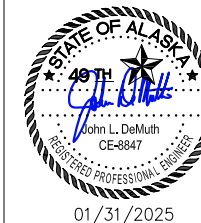


- NOTES:**
- ALL PLATE DIMENSIONS ARE TO THE OUTSIDE OF SIDE PLATES, UNLESS OTHERWISE NOTED.
 - ALL PILE CAPS DBL HP12x84, UNLESS OTHERWISE NOTED.
 - ALL WELDMENT WELDS SHALL BE 5/16" FILLET, ALL AROUND UNLESS OTHERWISE NOTED.



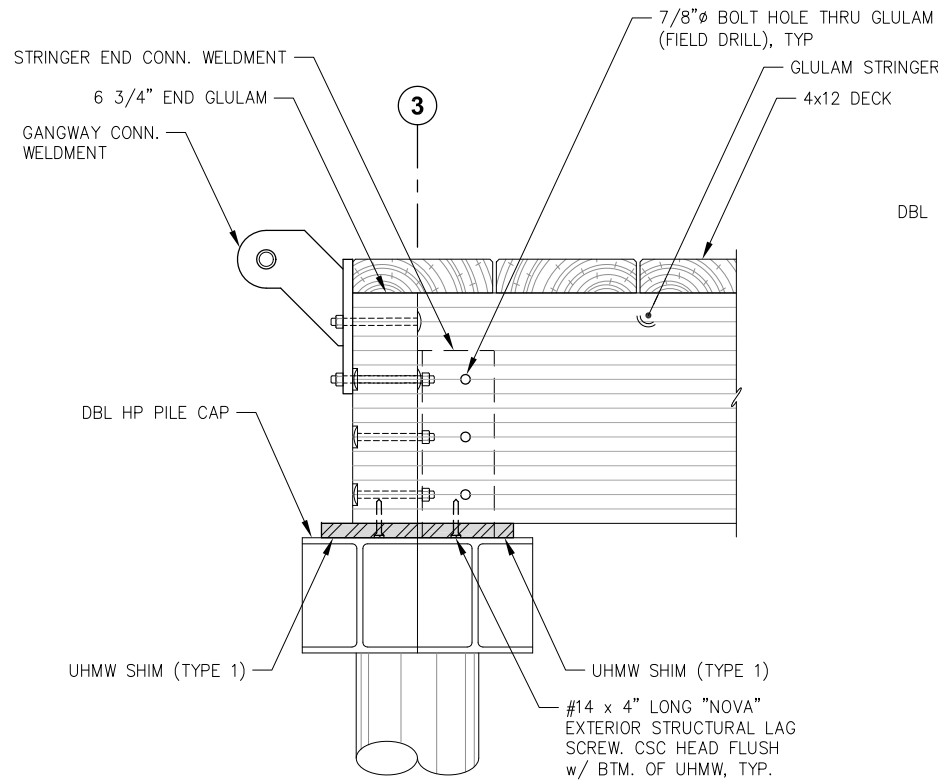
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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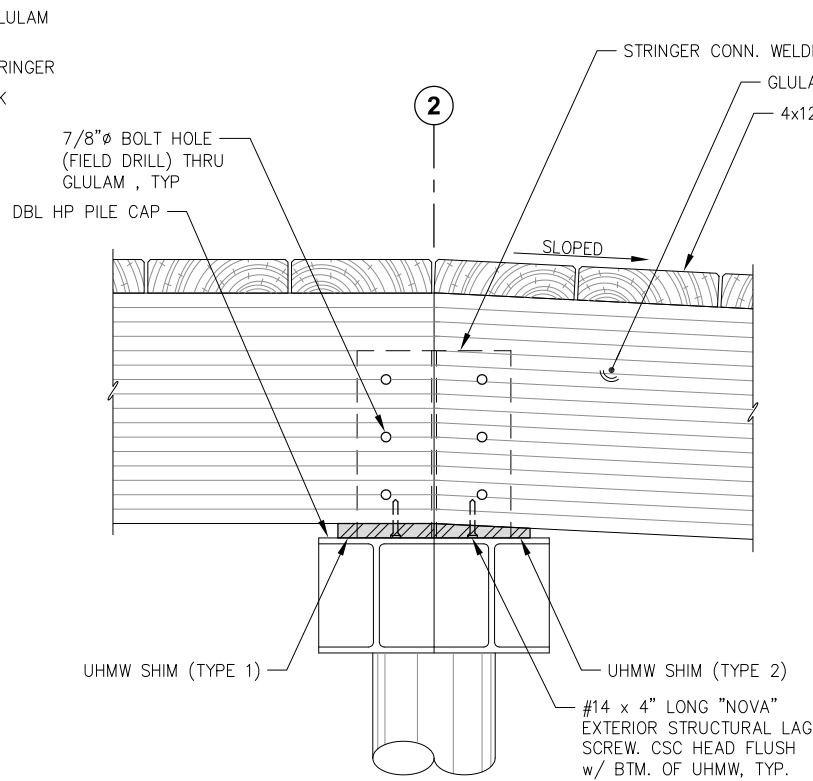


PILE CAP DETAILS			
AURORA HARBOR REBUILD - PHASE IV			
DESIGN:	JLD	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JLD	FILE NO.	SHEET: of 86

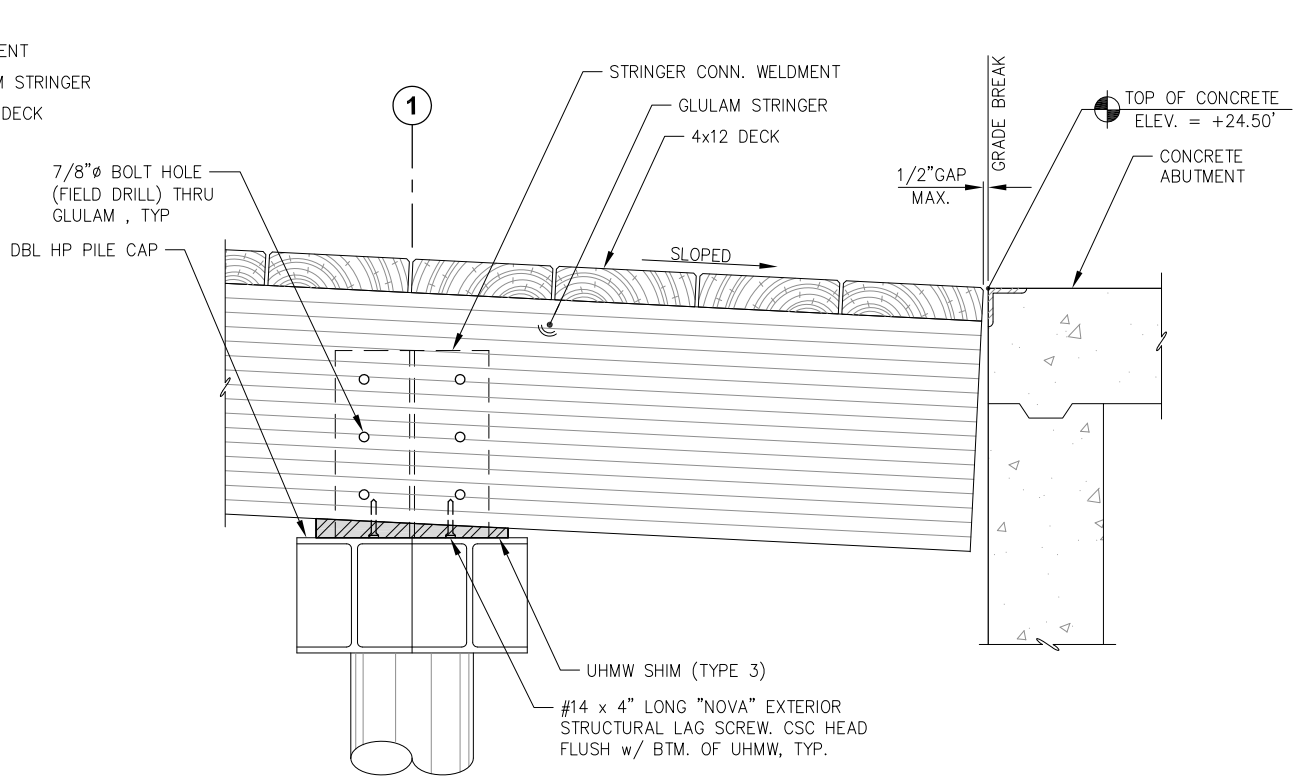
S5



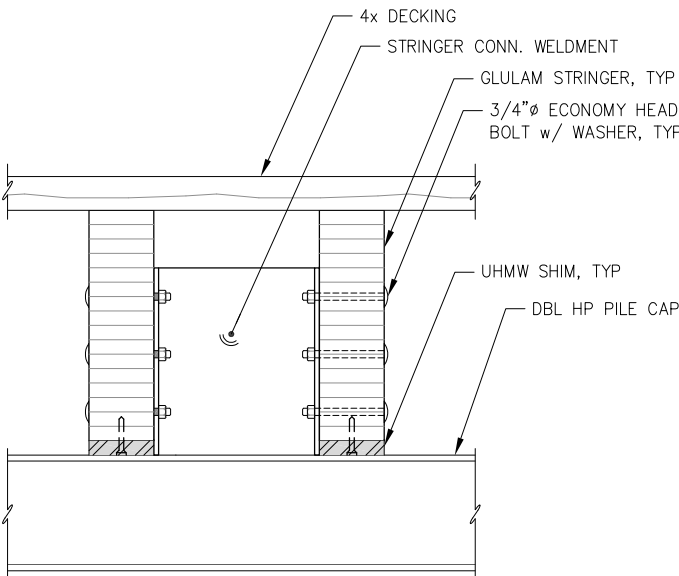
STRINGER CONNECTION - GRID 3



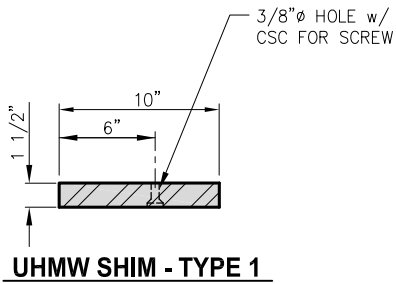
STRINGER CONNECTION - GRID 2



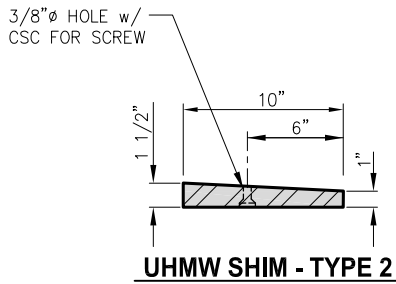
STRINGER CONNECTION - GRID 1



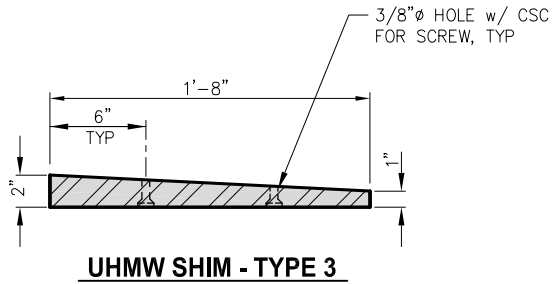
TYPICAL STRINGER CONNECTION



UHMW SHIM - TYPE 1



UHMW SHIM - TYPE 2



UHMW SHIM - TYPE 3



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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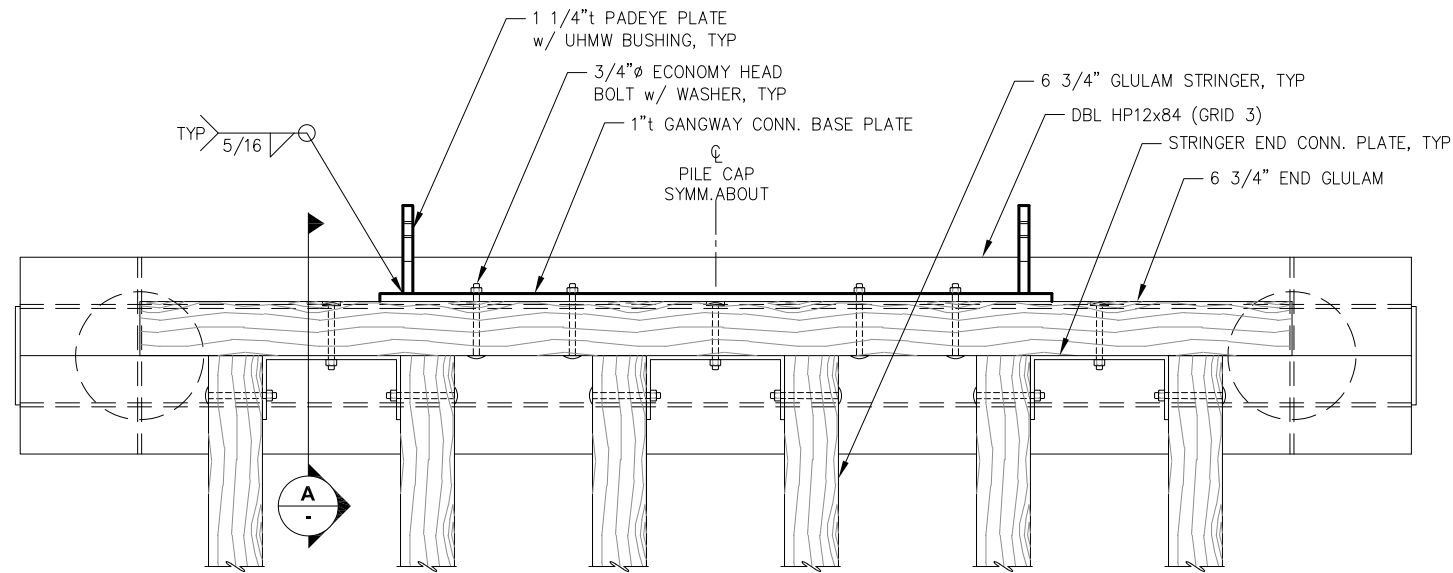
01/31/2025

STRINGER CONNECTION DETAILS

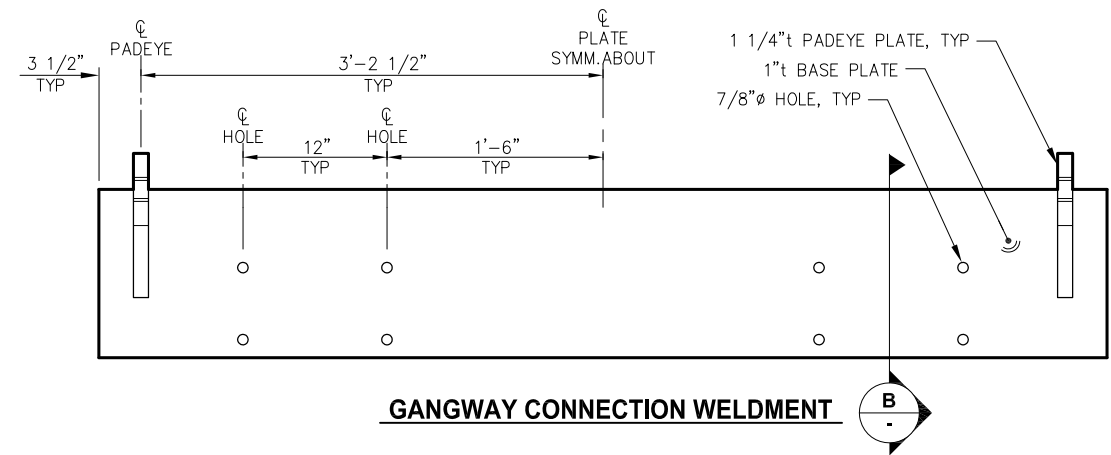
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JLD	FILE NO.	SHEET: of 86

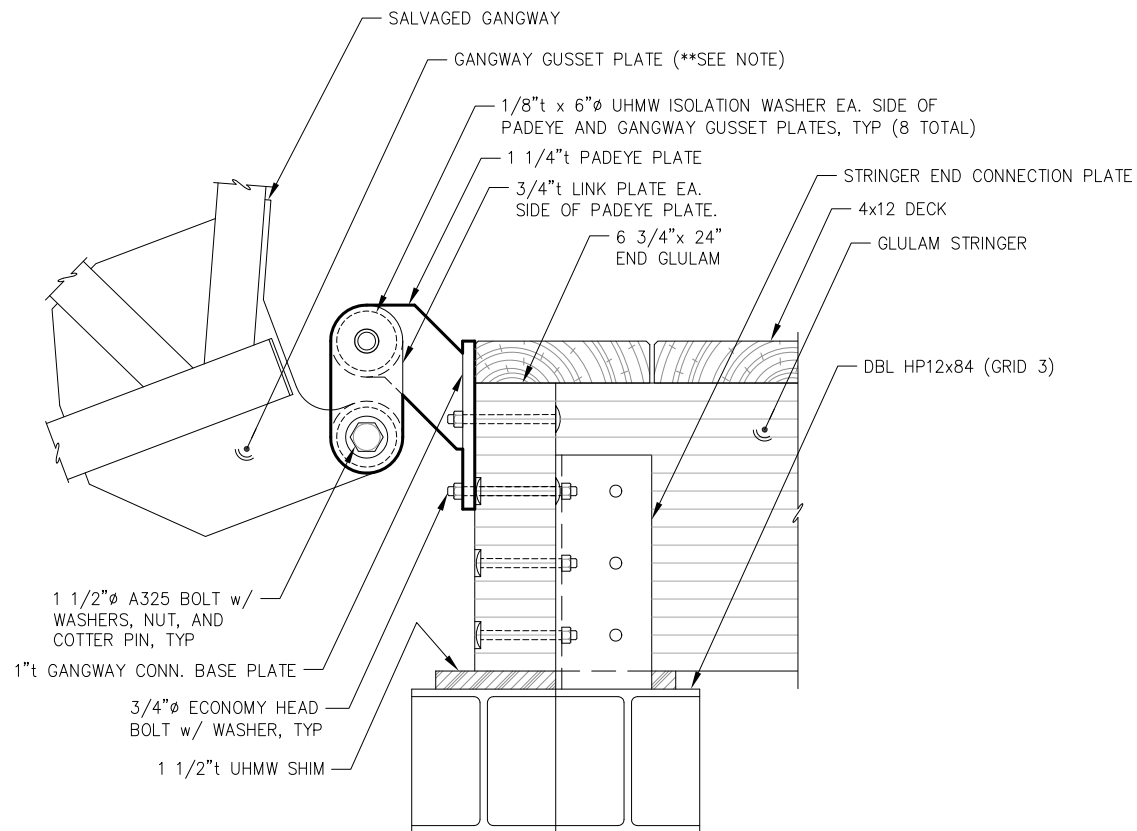
S6



GANGWAY CONNECTION - PLAN



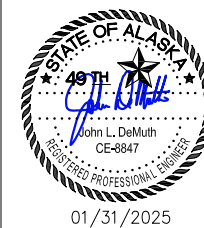
GANGWAY CONNECTION WELDMENT



SECTION A-A

** NOTE: REMOVE EXISTING UHMW BUSHINGS AND REPLACE w/ NEW. SEE PADEYE DETAIL FOR BUSHING DIMENSIONS/REQUIREMENTS

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
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PHONE: 907-586-0292



GANGWAY CONNECTION DETAILS

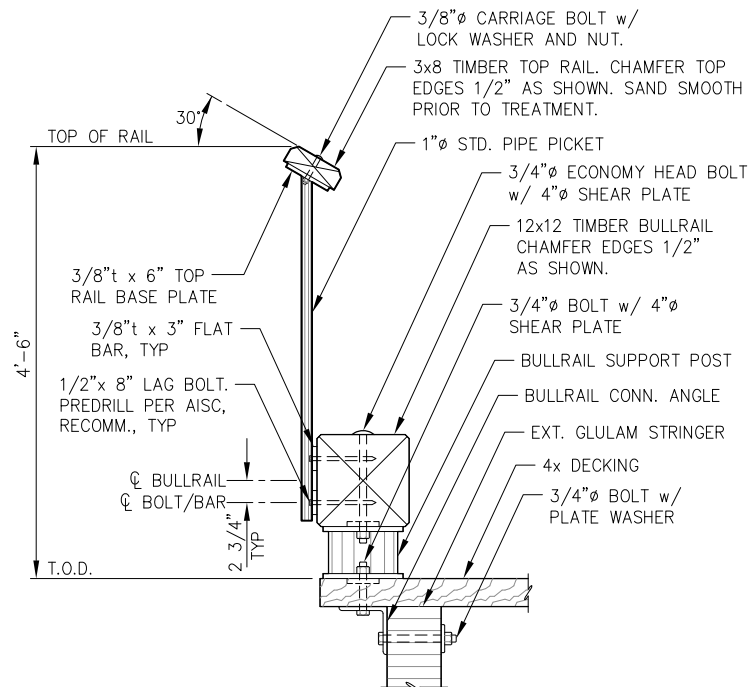
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JLD	FILE NO.	SHEET: of 86

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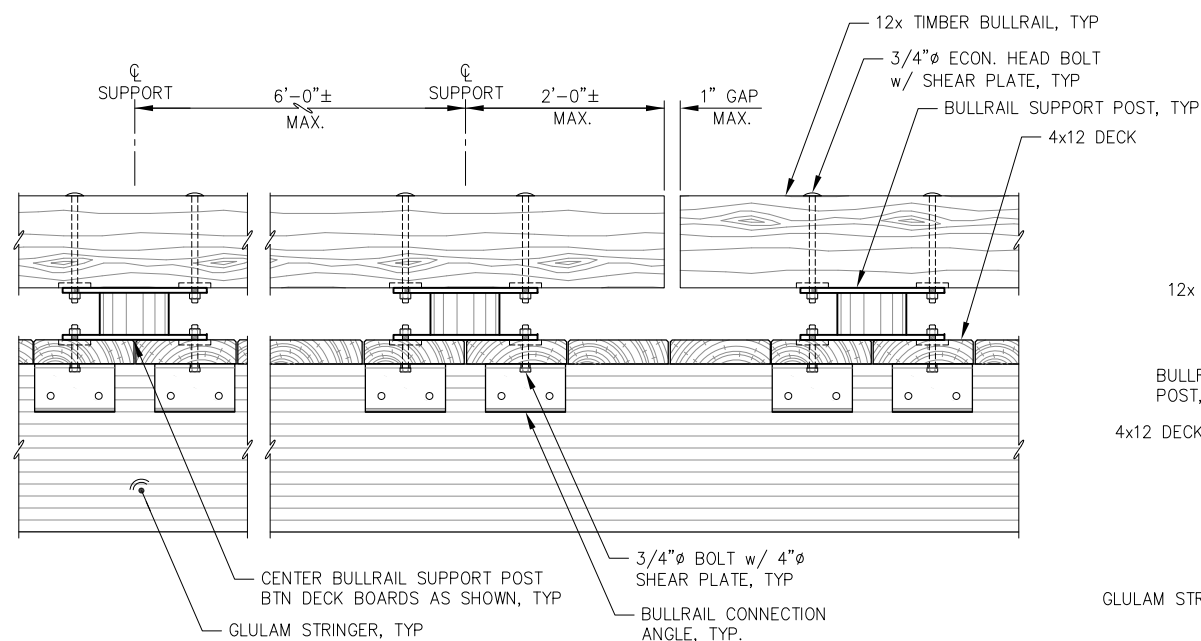


REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP



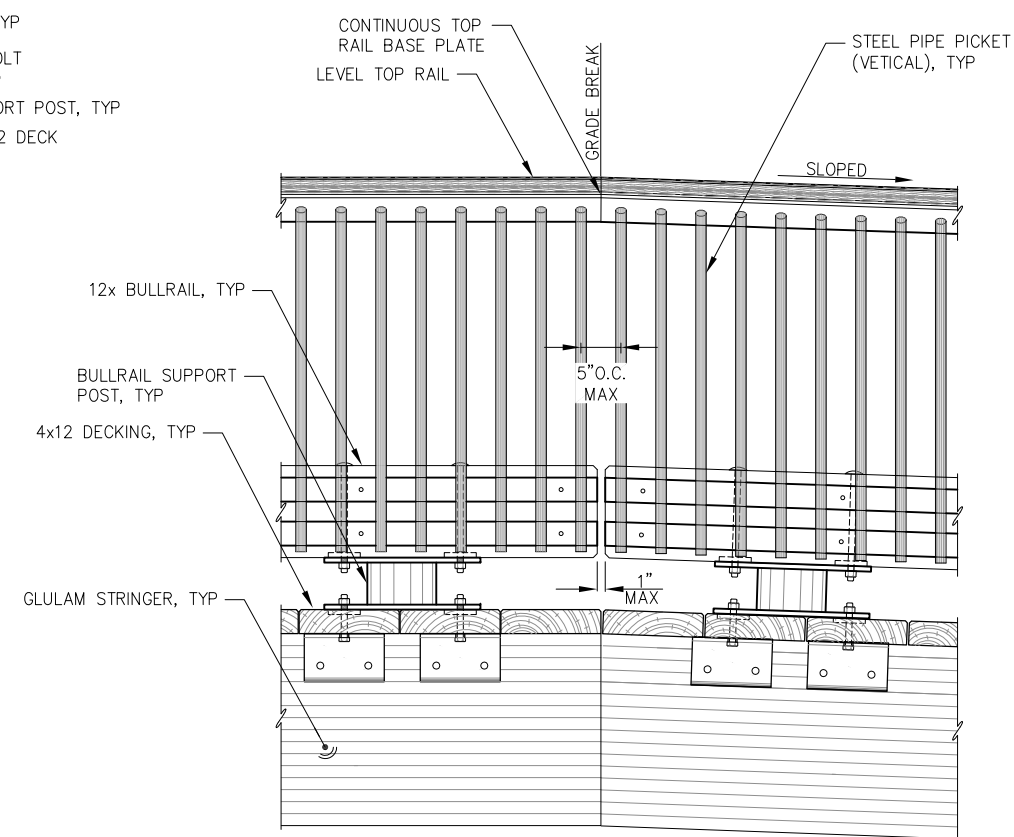
BULLRAIL/RAILING - TYPICAL SECTION

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

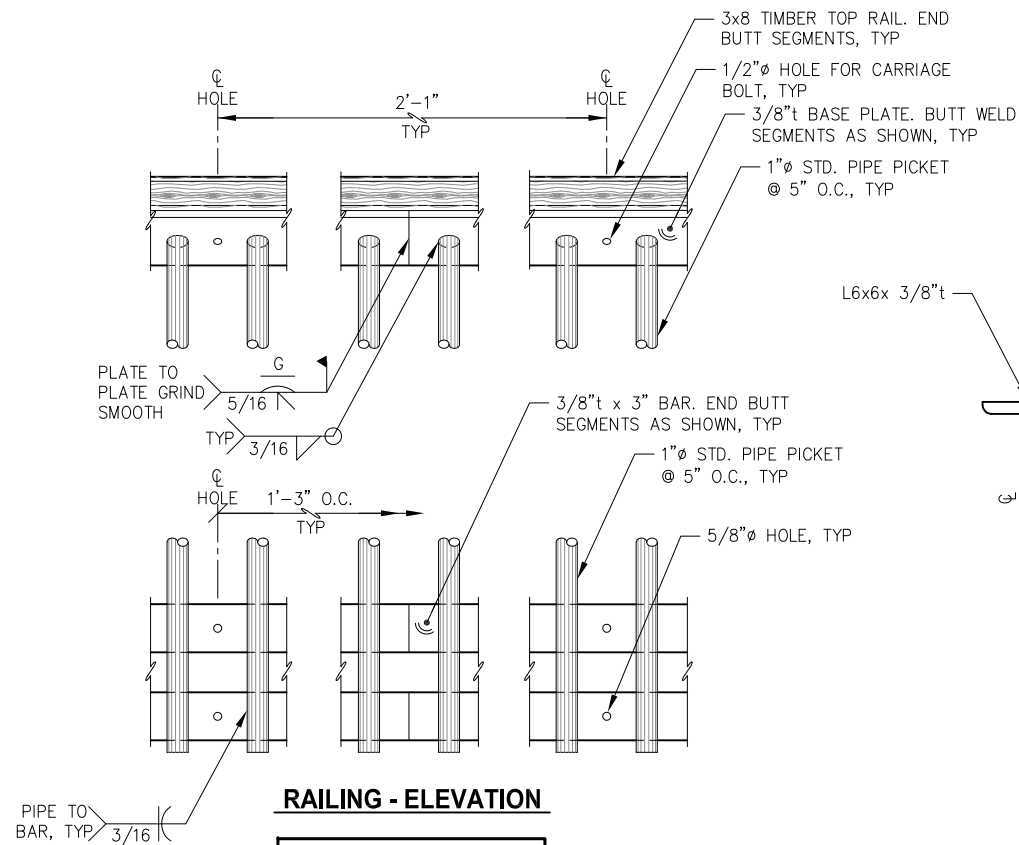


BULLRAIL SUPPORT POST DETAILS

NOTE: RAILING NOT SHOWN FOR CLARITY.

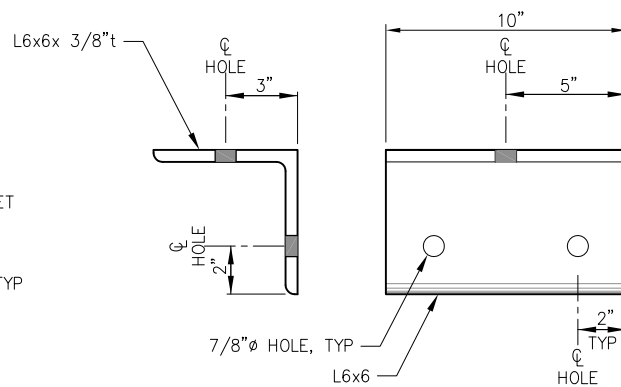


RAILING AT GRADE BREAK

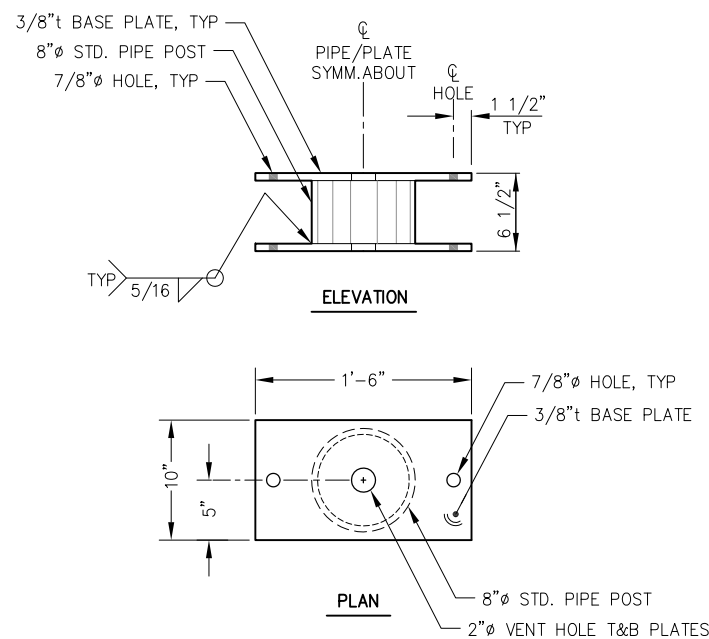


RAILING - ELEVATION

NOTE: RAILING BASE PLATE
SHALL BE WELDED TO CREATE
A CONTINUOUS PLATE.



BULLRAIL CONNECTION ANGLE



BULLRAIL SUPPORT POST



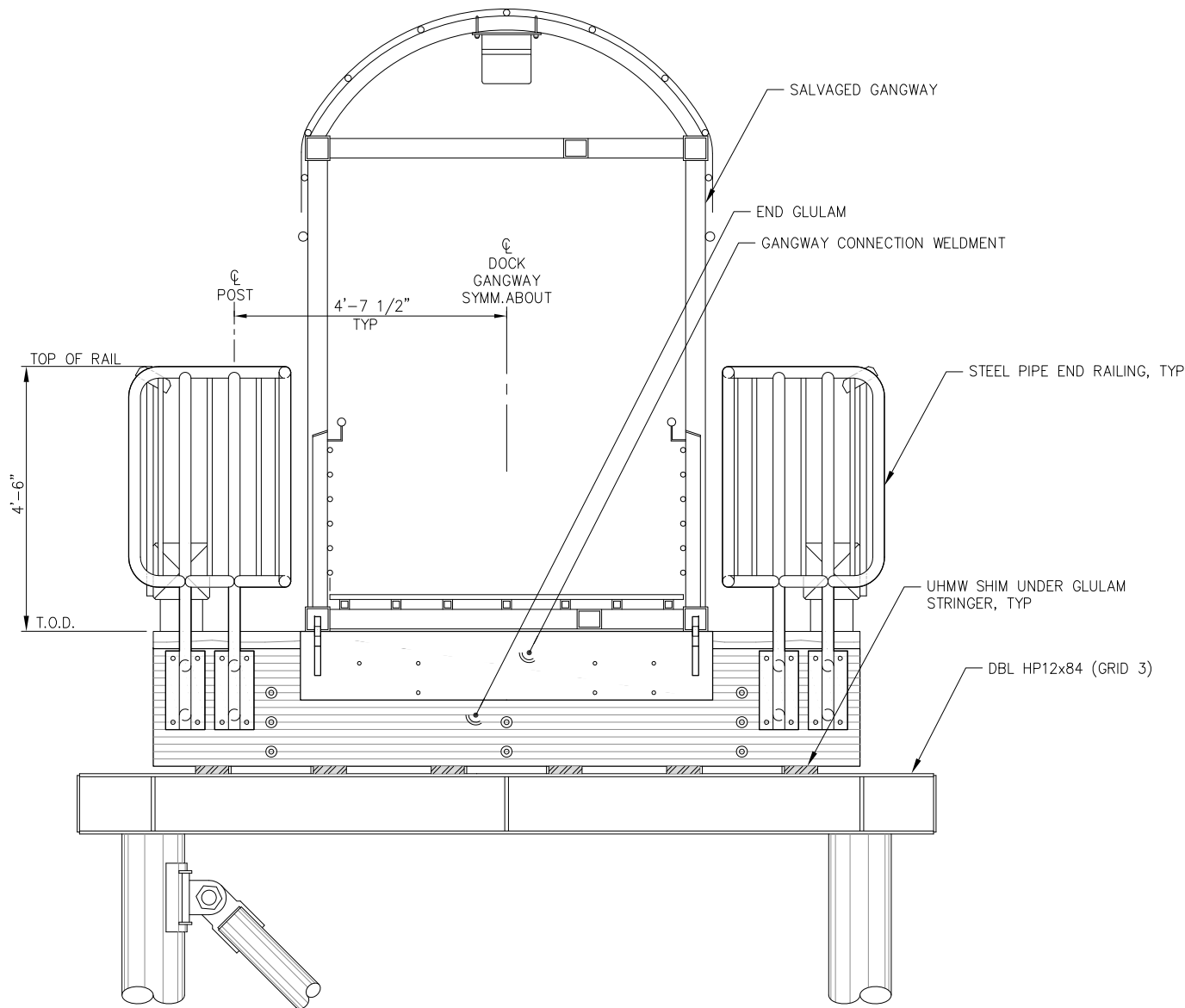
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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PHONE: 907-586-0292

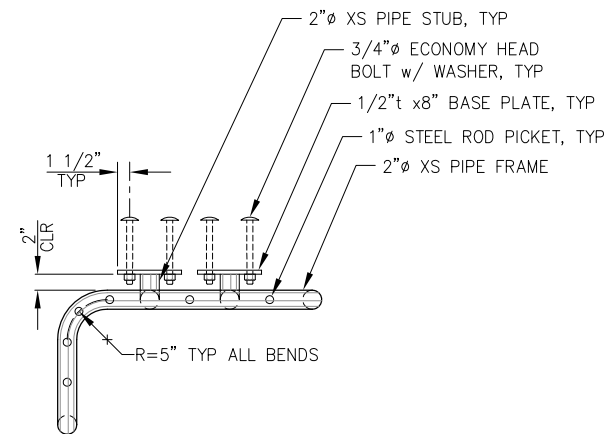


BULLRAIL AND RAILING DETAILS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
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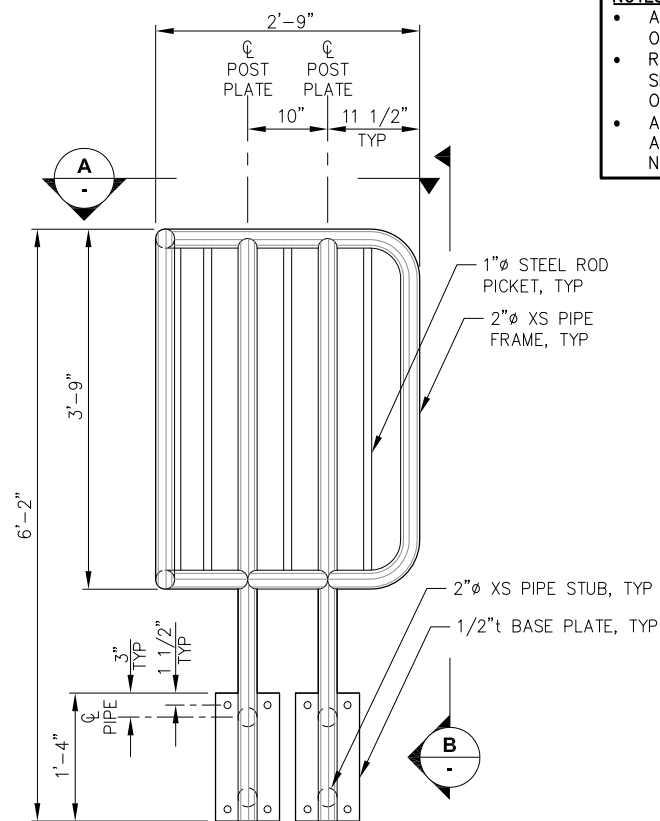


END RAILING LAYOUT

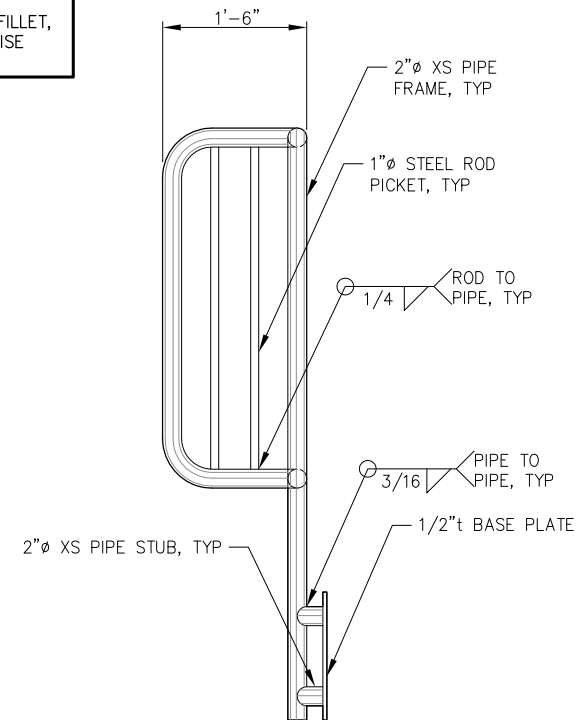


END RAILING - PLAN

- NOTES:**
- ALL PIPE 2"Ø SCHED 80, UNLESS OTHERWISE NOTED.
 - RADIUS OF ALL PIPE BENDS (CRNRS) SHALL BE 5 INCHES TO CENTERLINE OF PIPE.
 - ALL WELDS SHALL BE 3/16" FILLET, ALL AROUND UNLESS OTHERWISE NOTED.



END RAILING - ELEVATION

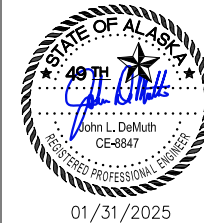


END RAILING - SIDE VIEW

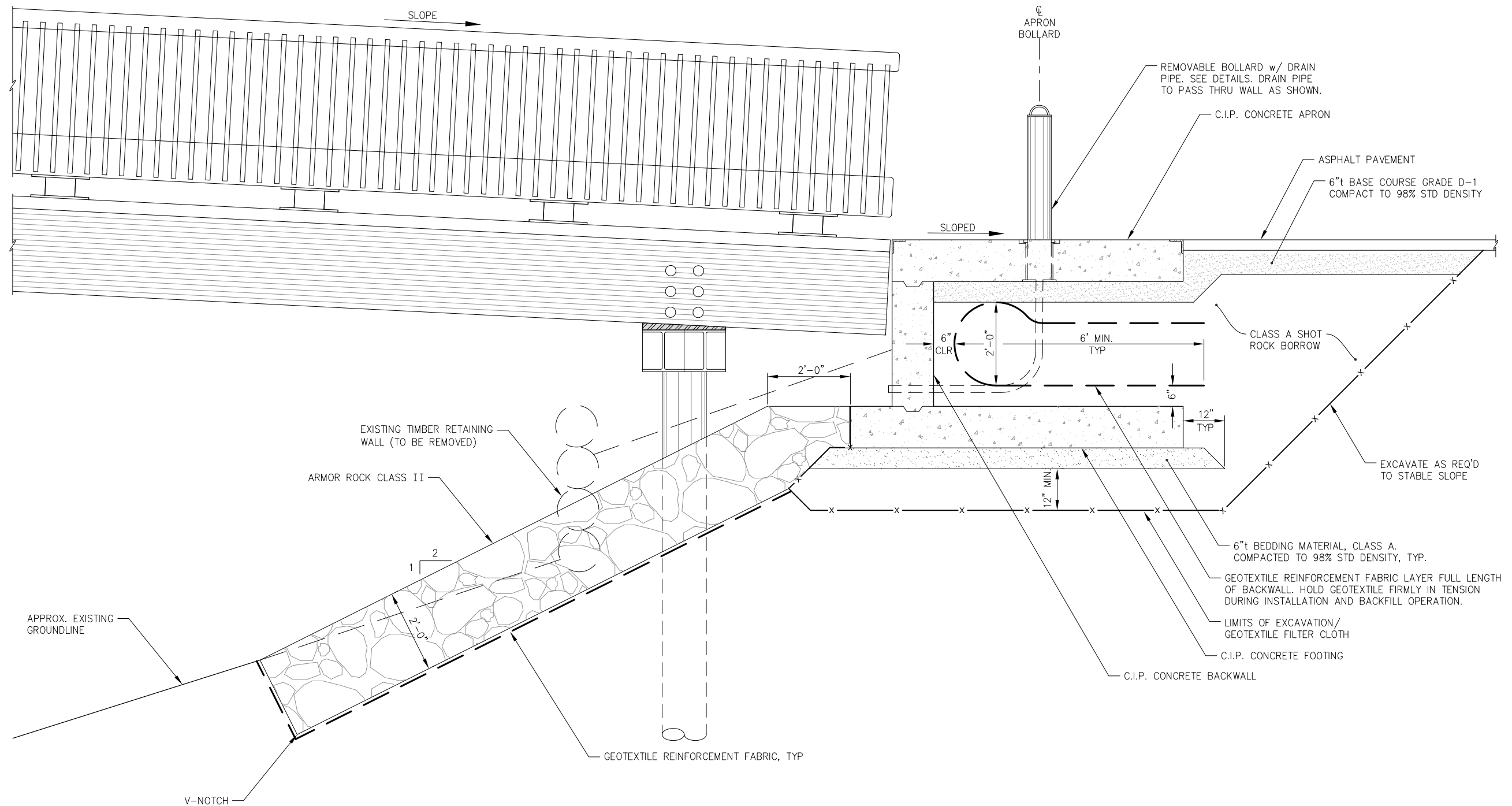


REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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END RAILING DETAILS			
AURORA HARBOR REBUILD - PHASE IV			
DESIGN:	JLD	DATE:	JANUARY 31, 2025
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CONCRETE ABUTMENT SECTION



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
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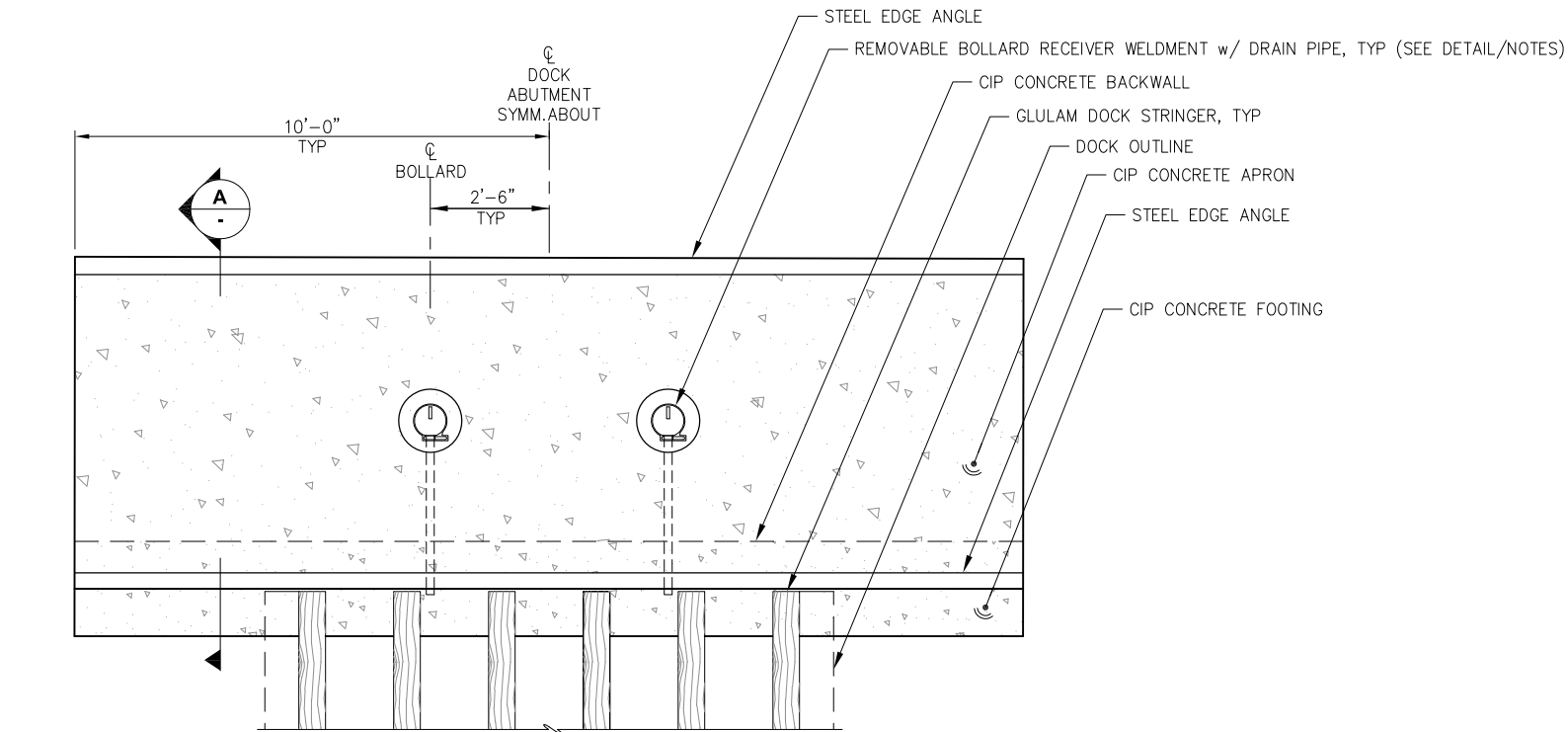
CONCRETE ABUTMENT SECTION
 AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JLD	FILE NO.	SHEET: of 86

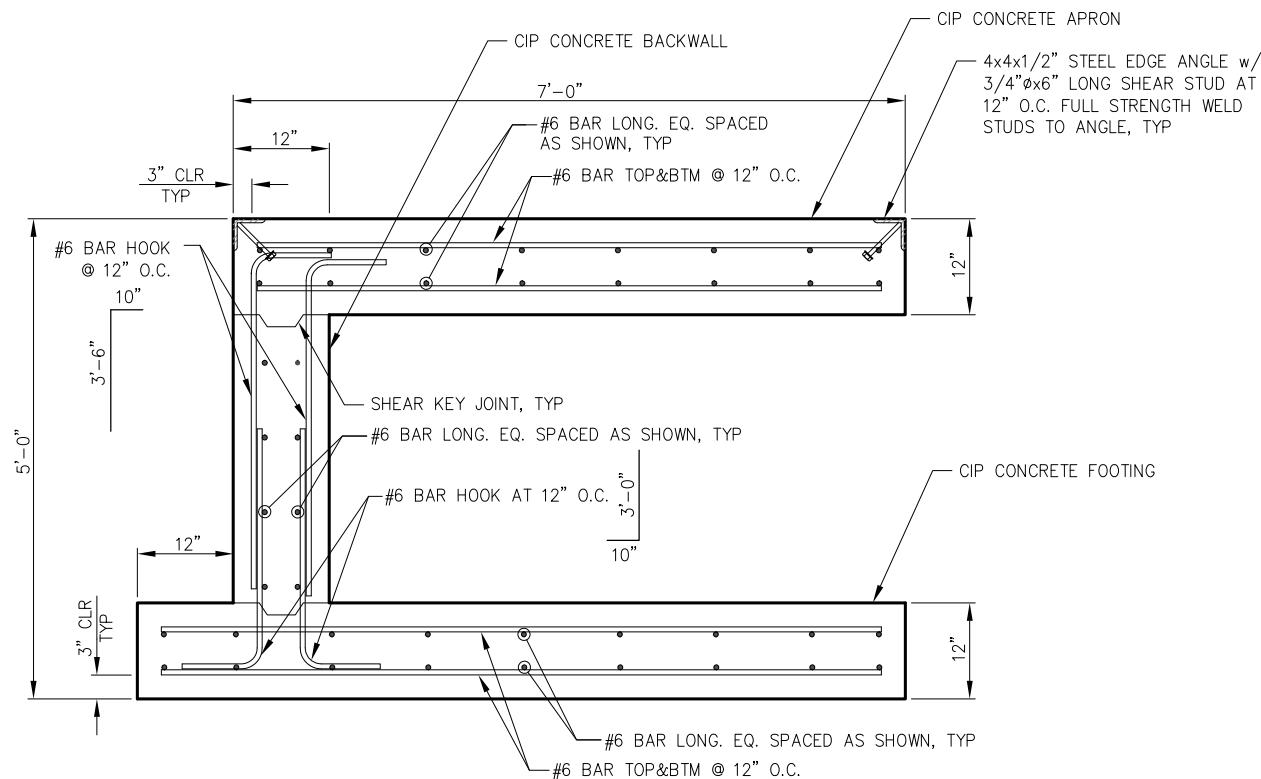
S10

S10 and S11 Concrete Abutment

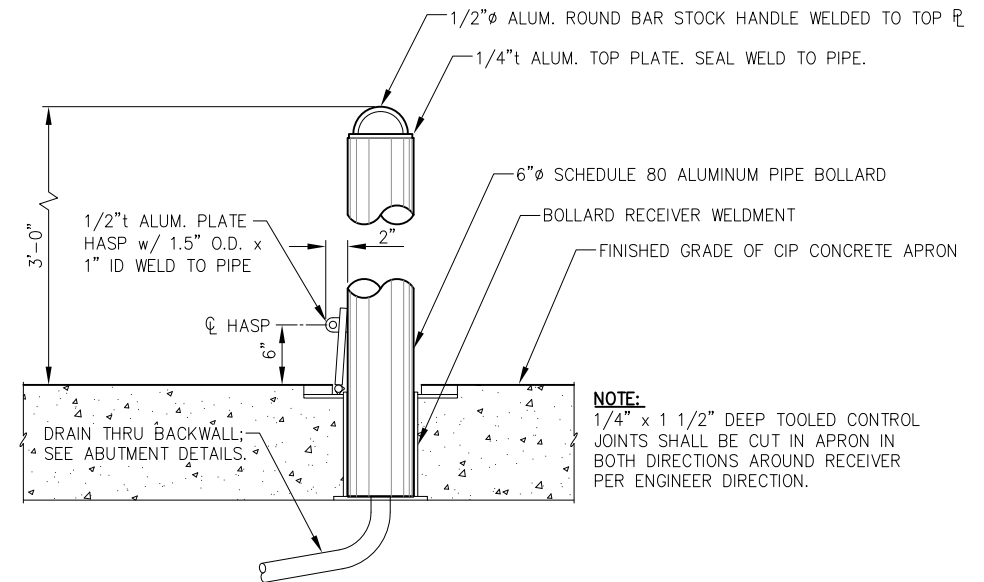
S10 and S11 Concrete Abutment



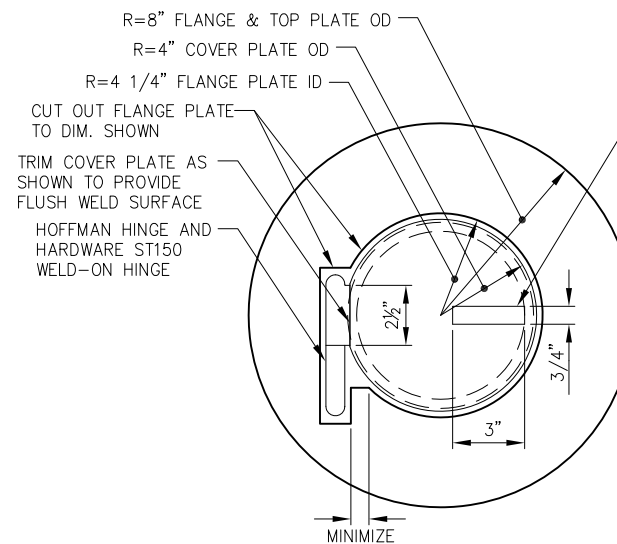
CONCRETE ABUTMENT - PLAN



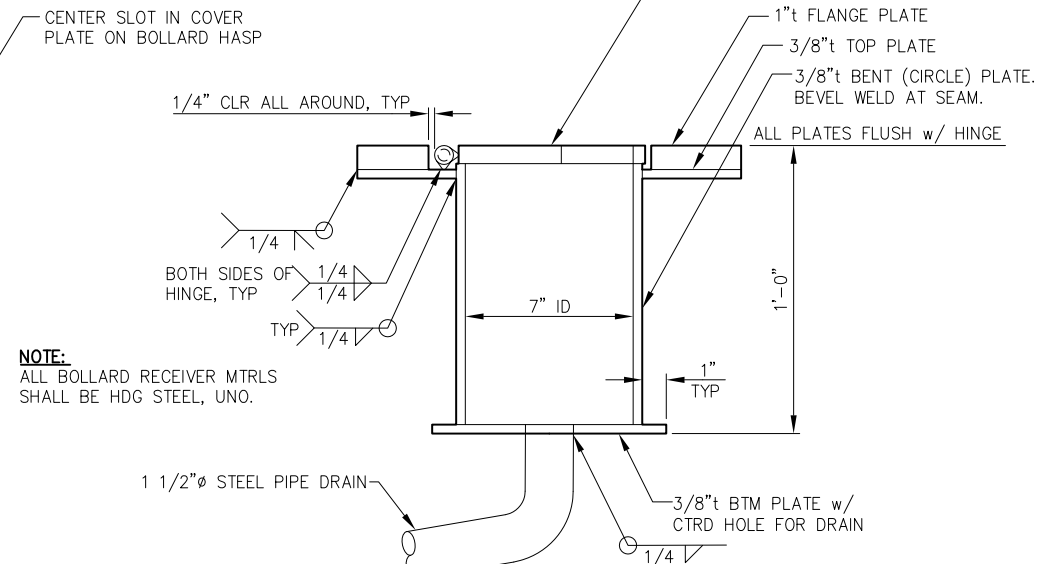
CONCRETE ABUTMENT - TYPICAL SECTION



REMOVABLE BOLLARD



PLAN

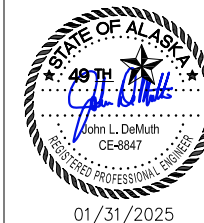


SECTION

REMOVABLE BOLLARD RECEIVER

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
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155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



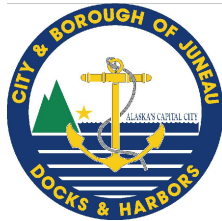
CONCRETE ABUTMENT DETAILS

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JLD	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JLD	FILE NO.	SHEET: of 86

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F1 - Overall Float Plan and Pile Layout



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

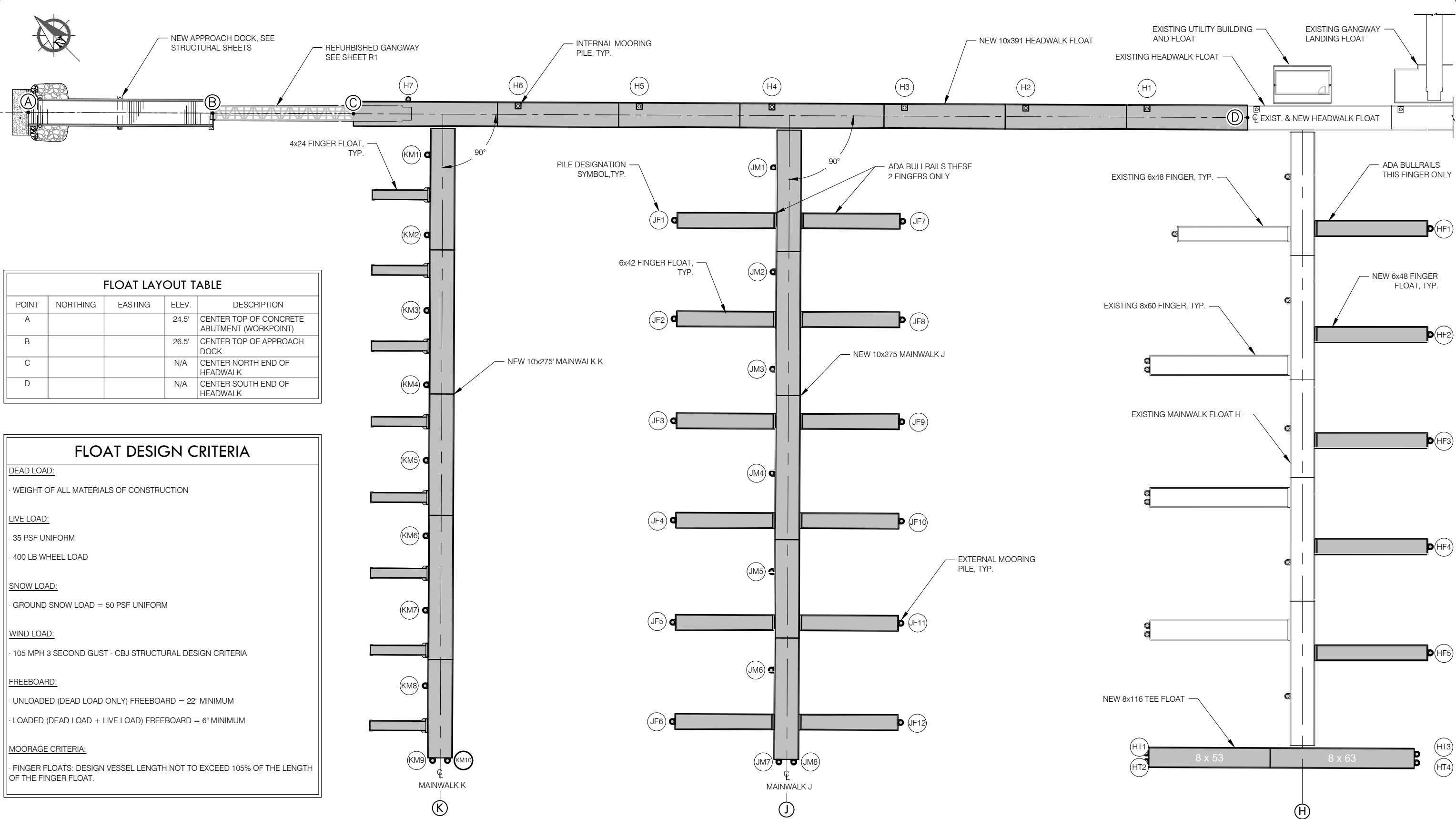


OVERALL FLOAT PLAN AND PILE LAYOUT

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	18 of 86

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FLOAT LAYOUT TABLE

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
A			24.5'	CENTER TOP OF CONCRETE ABUTMENT (WORKPOINT)
B			26.5'	CENTER TOP OF APPROACH DOCK
C			N/A	CENTER NORTH END OF HEADWALK
D			N/A	CENTER SOUTH END OF HEADWALK

FLOAT DESIGN CRITERIA

DEAD LOAD:

· WEIGHT OF ALL MATERIALS OF CONSTRUCTION

LIVE LOAD:

· 35 PSF UNIFORM
· 400 LB WHEEL LOAD

SNOW LOAD:

· GROUND SNOW LOAD = 50 PSF UNIFORM

WIND LOAD:

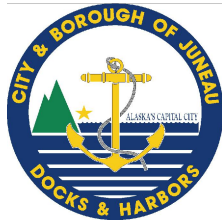
· 105 MPH 3 SECOND GUST - CBJ STRUCTURAL DESIGN CRITERIA

FREEBOARD:

· UNLOADED (DEAD LOAD ONLY) FREEBOARD = 22" MINIMUM
· LOADED (DEAD LOAD + LIVE LOAD) FREEBOARD = 6" MINIMUM

MOORAGE CRITERIA:

· FINGER FLOATS: DESIGN VESSEL LENGTH NOT TO EXCEED 105% OF THE LENGTH OF THE FINGER FLOAT.



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CITY AND BOROUGH OF JUNEAU
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JUNEAU, ALASKA 99801
PHONE: 907-586-0292

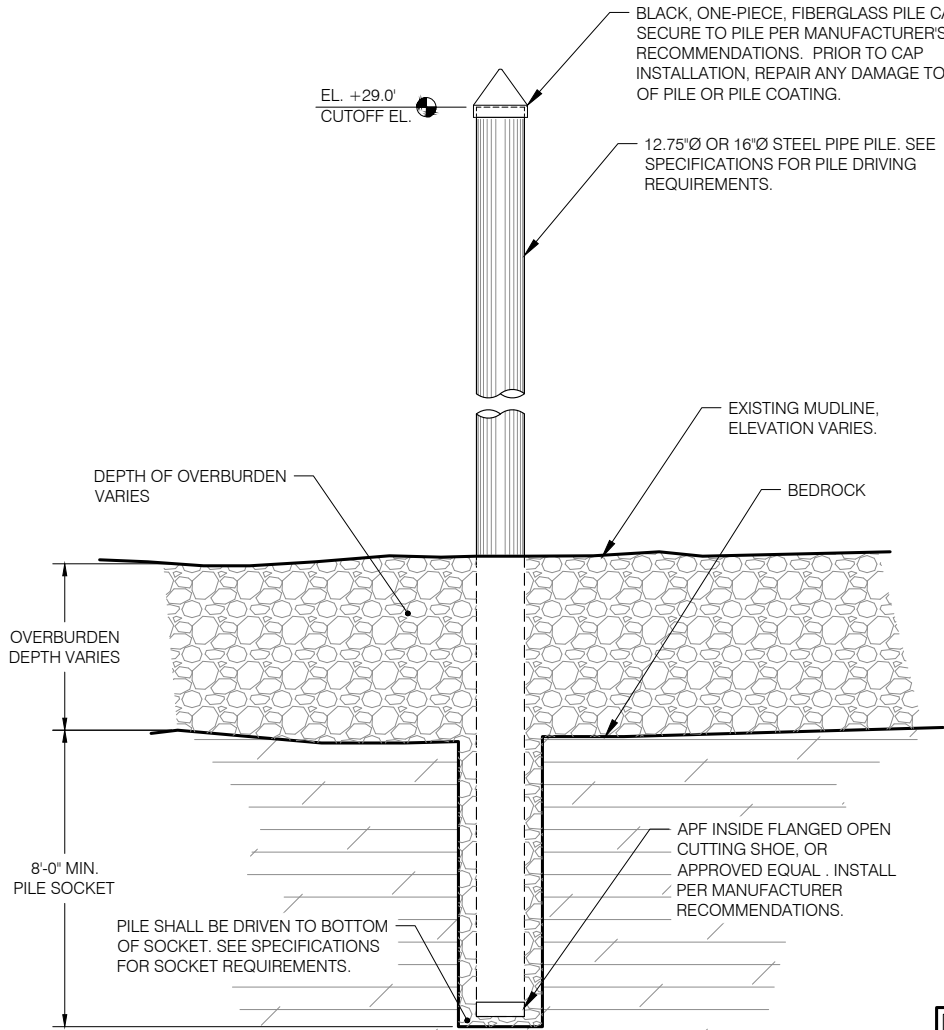


FLOAT PILE SCHEDULE AND DETAILS

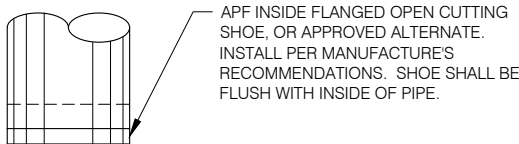
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	19 of 86

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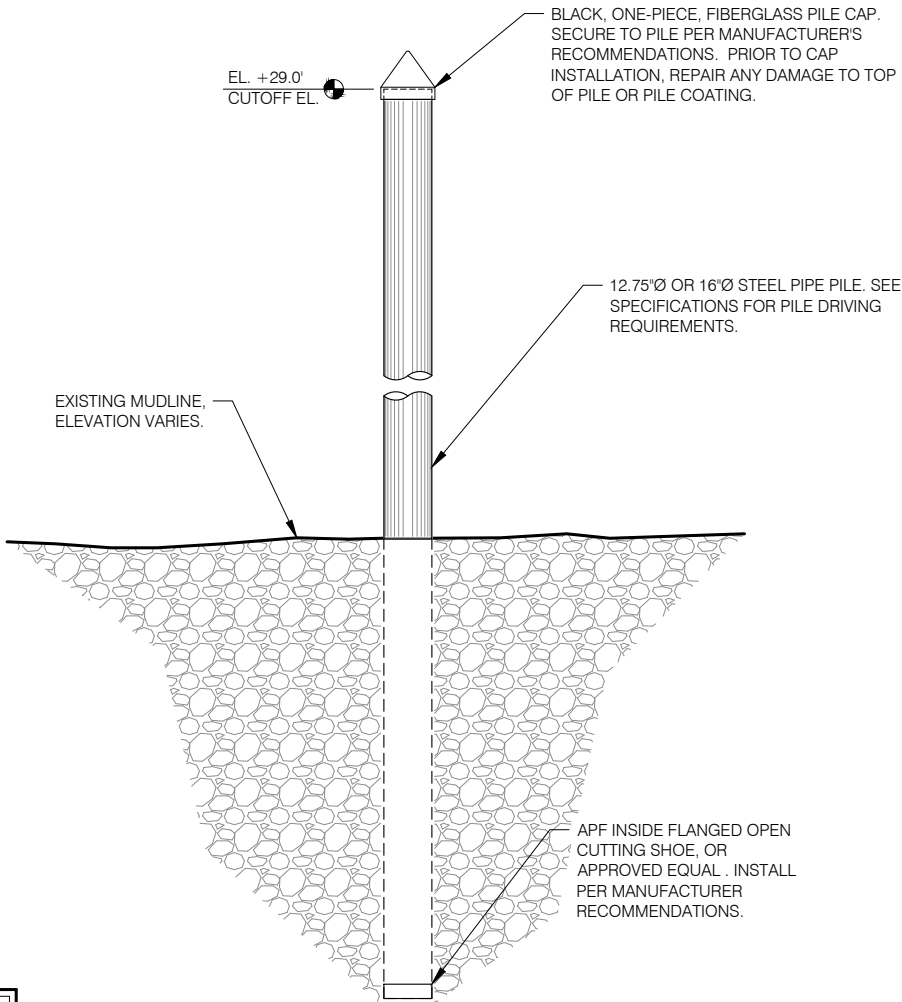
SOCKETED FLOAT MOORING PILE
(BEDROCK CONDITIONS, SOCKET PILES PER
CONTINGENT BID ITEM AS DIRECTED BY ENGINEER)



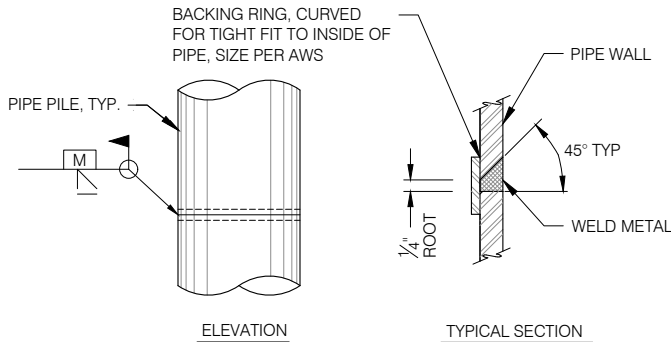
PILE SHOE DETAIL

REQUIRED EMBEDMENT		
PILE SIZE	SOFTER SOIL	DENSE TIL
12 $\frac{3}{4}$ "Ø	20'	15'
16"Ø	25'	20'

NOTE:
ENGINEER WILL DETERMINE WHETHER "SOFTER SOIL" OR "DENSE
TIL" EMBEDMENT VALUES WILL BE USED BASED ON OBSERVED
DRIVING CONDITIONS.



TYPICAL FLOAT MOORING PILE
(TYPICAL SOIL CONDITIONS)

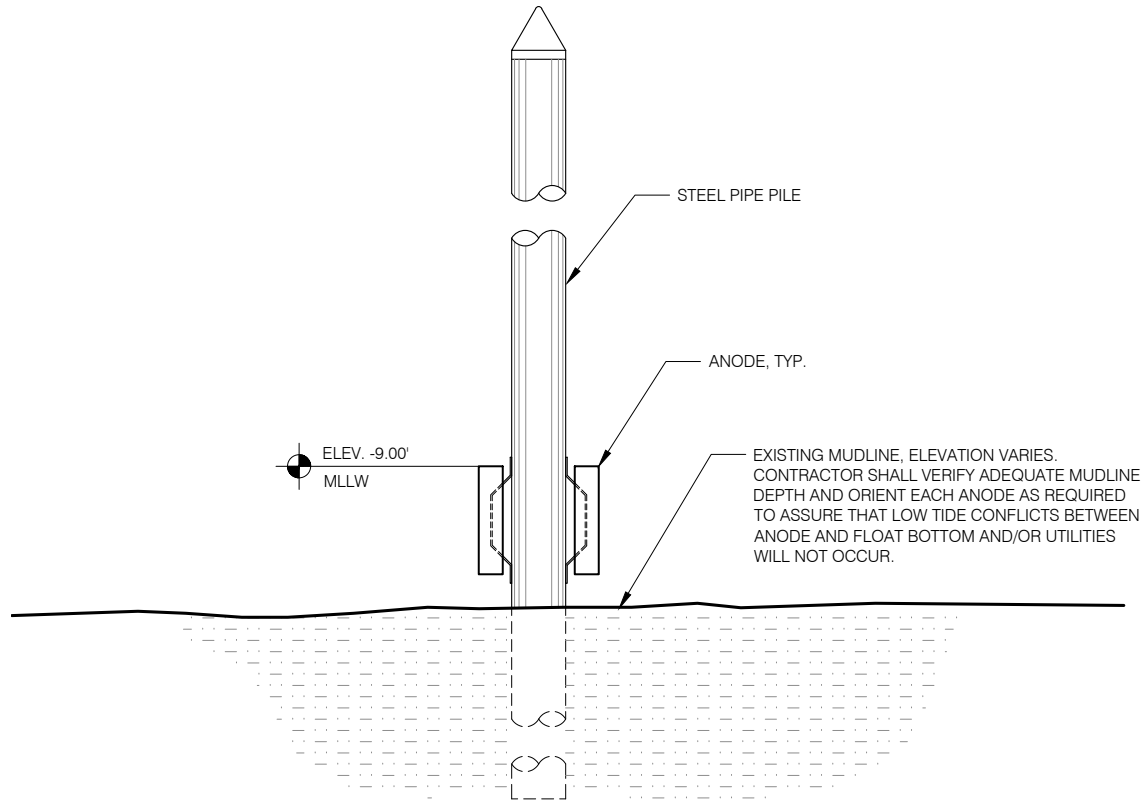


TYPICAL SPLICE DETAIL

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

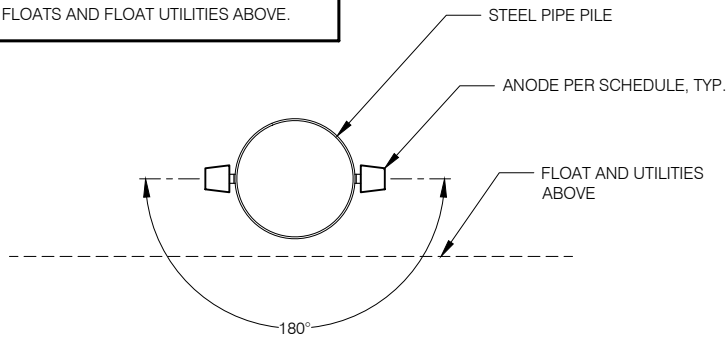
PILE SCHEDULE			
PILE #	LOCATION	MIN. PILE LENGTH	PILE SIZE
1	H1	70 FT	12.75"Ø x 0.50" th.
2	H2	70 FT	12.75"Ø x 0.50" th.
3	H3	70 FT	12.75"Ø x 0.50" th.
4	H4	70 FT	12.75"Ø x 0.50" th.
5	H5	70 FT	12.75"Ø x 0.50" th.
6	H6	70 FT	12.75"Ø x 0.50" th.
7	H7	70 FT	12.75"Ø x 0.50" th.
8	HF1	75 FT	16"Ø x 0.50" th.
9	HF2	75 FT	16"Ø x 0.50" th.
10	HF3	75 FT	16"Ø x 0.50" th.
11	HF4	75 FT	16"Ø x 0.50" th.
12	HF5	75 FT	16"Ø x 0.50" th.
13	HT1	75 FT	16"Ø x 0.50" th.
14	HT2	75 FT	16"Ø x 0.50" th.
15	HT3	75 FT	16"Ø x 0.50" th.
16	HT4	75 FT	16"Ø x 0.50" th.
17	JM1	70 FT	12.75"Ø x 0.50" th.
18	JM2	70 FT	12.75"Ø x 0.50" th.
19	JM3	70 FT	12.75"Ø x 0.50" th.
20	JM4	70 FT	12.75"Ø x 0.50" th.
21	JM5	70 FT	12.75"Ø x 0.50" th.
22	JM6	70 FT	12.75"Ø x 0.50" th.
23	JM7	75 FT	16"Ø x 0.50" th.
24	JM8	75 FT	16"Ø x 0.50" th.
25	JF1	70 FT	12.75"Ø x 0.50" th.
26	JF2	70 FT	12.75"Ø x 0.50" th.
27	JF3	70 FT	12.75"Ø x 0.50" th.
28	JF4	70 FT	12.75"Ø x 0.50" th.
29	JF5	70 FT	12.75"Ø x 0.50" th.
30	JF6	70 FT	12.75"Ø x 0.50" th.
31	JF7	70 FT	12.75"Ø x 0.50" th.
32	JF8	70 FT	12.75"Ø x 0.50" th.
33	JF9	70 FT	12.75"Ø x 0.50" th.
34	JF10	70 FT	12.75"Ø x 0.50" th.
35	JF11	70 FT	12.75"Ø x 0.50" th.
36	JF12	70 FT	12.75"Ø x 0.50" th.
37	KM1	70 FT	12.75"Ø x 0.50" th.
38	KM2	70 FT	12.75"Ø x 0.50" th.
39	KM3	70 FT	12.75"Ø x 0.50" th.
40	KM4	70 FT	12.75"Ø x 0.50" th.
41	KM5	70 FT	12.75"Ø x 0.50" th.
42	KM6	70 FT	12.75"Ø x 0.50" th.
43	KM7	70 FT	12.75"Ø x 0.50" th.
44	KM8	70 FT	12.75"Ø x 0.50" th.
45	KM9	75 FT	16"Ø x 0.50" th.
46	KM10	75 FT	16"Ø x 0.50" th.

NOTE:
1. SEE "OVERALL FLOAT PLAN AND PILE LAYOUT" FOR LOCATION OF
PILES WITHIN FLOAT SYSTEM.
2. APPROACH DOCK PILE SCHEDULE LOCATED IN "S" SHEETS.

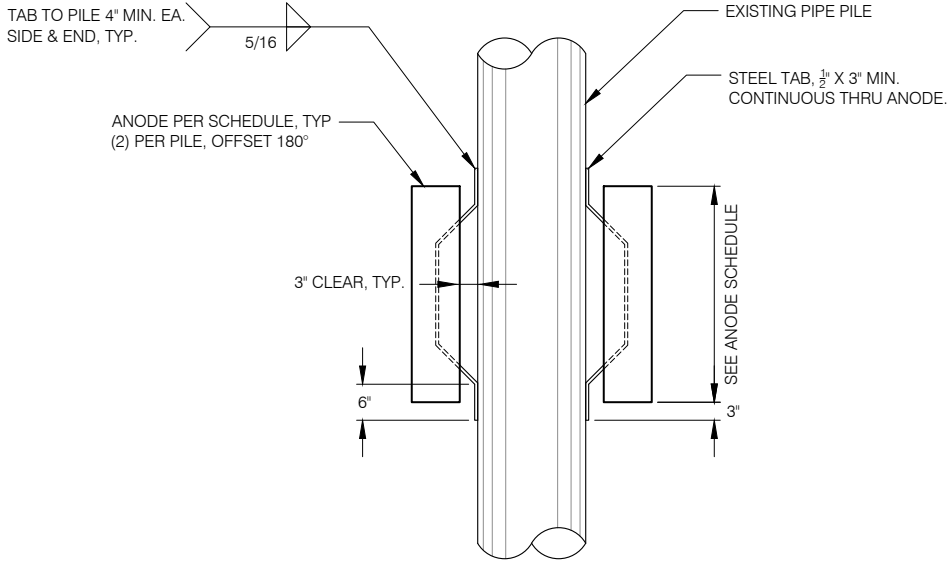


PILE ANODE INSTALLATION

NOTE:
INSTALL ANODES IN ORIENTATION AS SHOWN TO
CLEAR FLOATS AND FLOAT UTILITIES ABOVE.



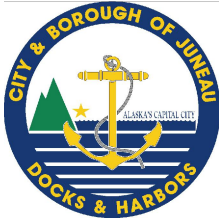
ANODE RADIAL LAYOUT PLAN



ANODE DETAIL

ANODE INSTALLATION SCHEDULE ADDITIVE ALTERNATE A						
FLOAT	PILE QUANTITY	PILE DIAMETER	TYPE	DIMENSIONS	NOMINAL WEIGHT	QUANTITY REQ'D
HEADWALK	7	12.75"Ø	A	8x8x24	153	14
MAINWALK H	9	16"Ø	B	8x8x36	230	18
MAINWALK J	18	12.75"Ø	A	8x8x24	153	36
MAINWALK J	2	16"Ø	B	8x8x36	230	4
MAINWALK J	8	12.75"Ø	A	8x8x24	153	16
MAINWALK K	2	16"Ø	B	8"x8"x36"	230	4
TOTAL:						92

PILE ANODE SCHEDULE



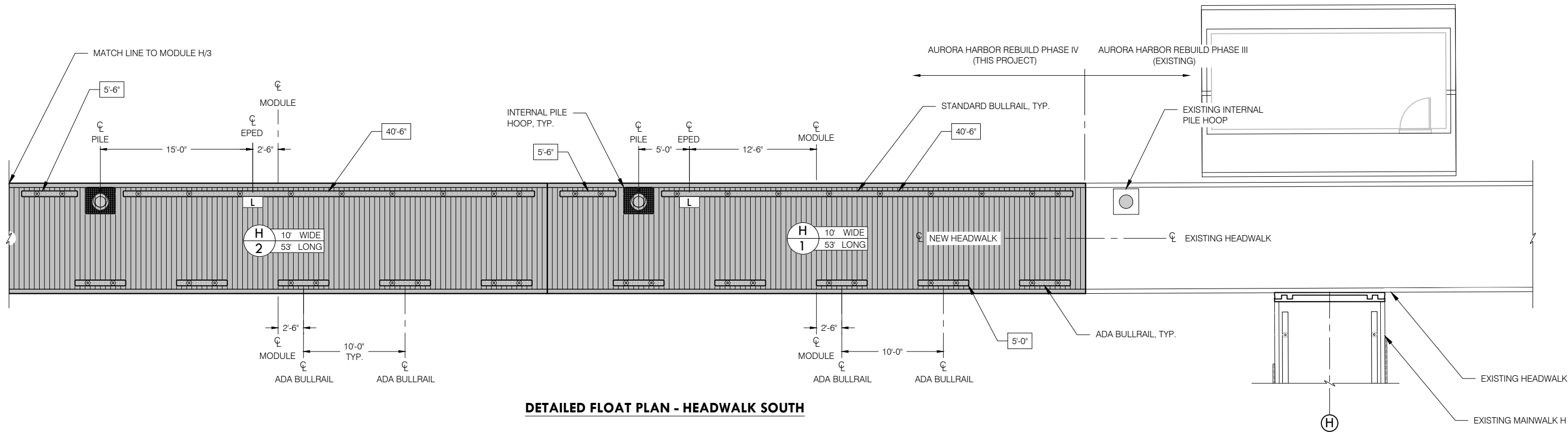
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

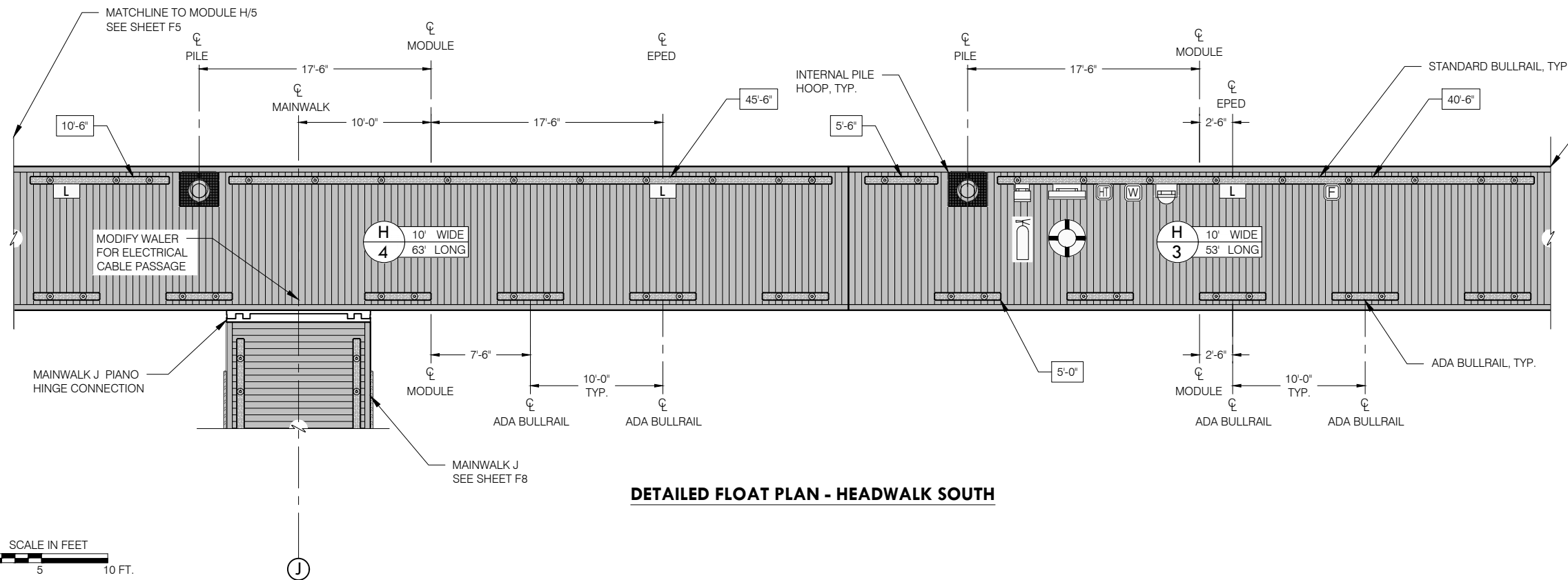


ADDITIVE ALTERNATE A
ANODE DETAILS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
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DETAILED FLOAT PLAN - HEADWALK SOUTH

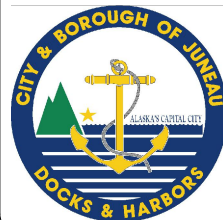


DETAILED FLOAT PLAN - HEADWALK SOUTH

LEGEND:

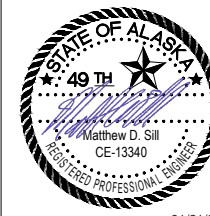
- = ELECTRICAL PEDESTAL W/ LUMINAIRE ONLY
- = FIRE HOSE CONNECTION
- = WATER PEDESTAL
- = HEAT TRACE
- = HOSE MOUNT
- = LIFE RING CABINET & LIFE RING
- = FIRE EXTINGUISHER CABINET & EXTINGUISHER
- = BULLRAIL LENGTH

SCALE IN FEET
0 5 10 FT.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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DOCKS & HARBORS
155 HERITAGE WAY
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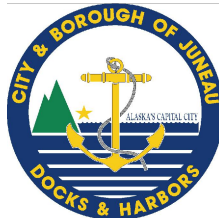


**DETAILED FLOAT PLAN
HEADWALK SOUTH**
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	21 of 86

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PHV - DETAILED FLOAT PLAN



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

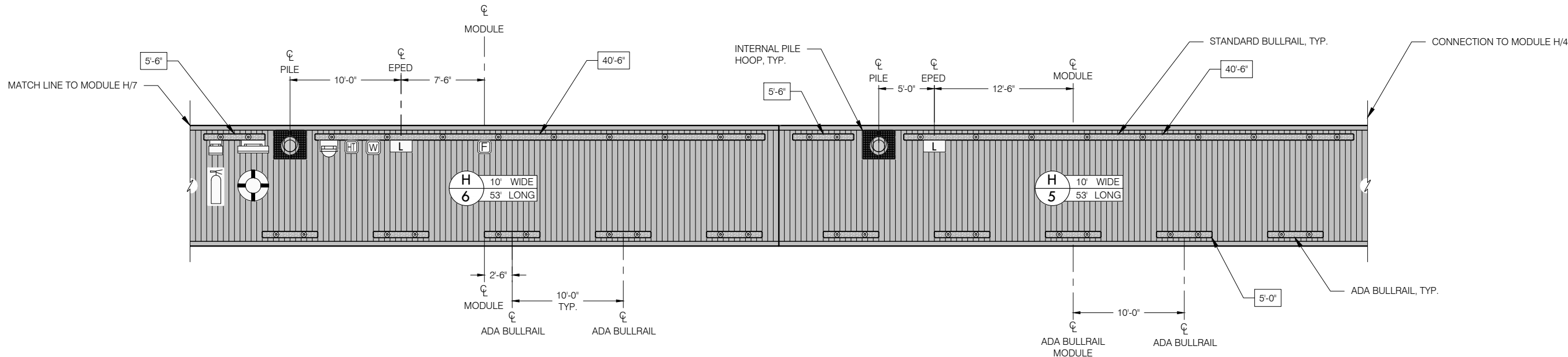
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



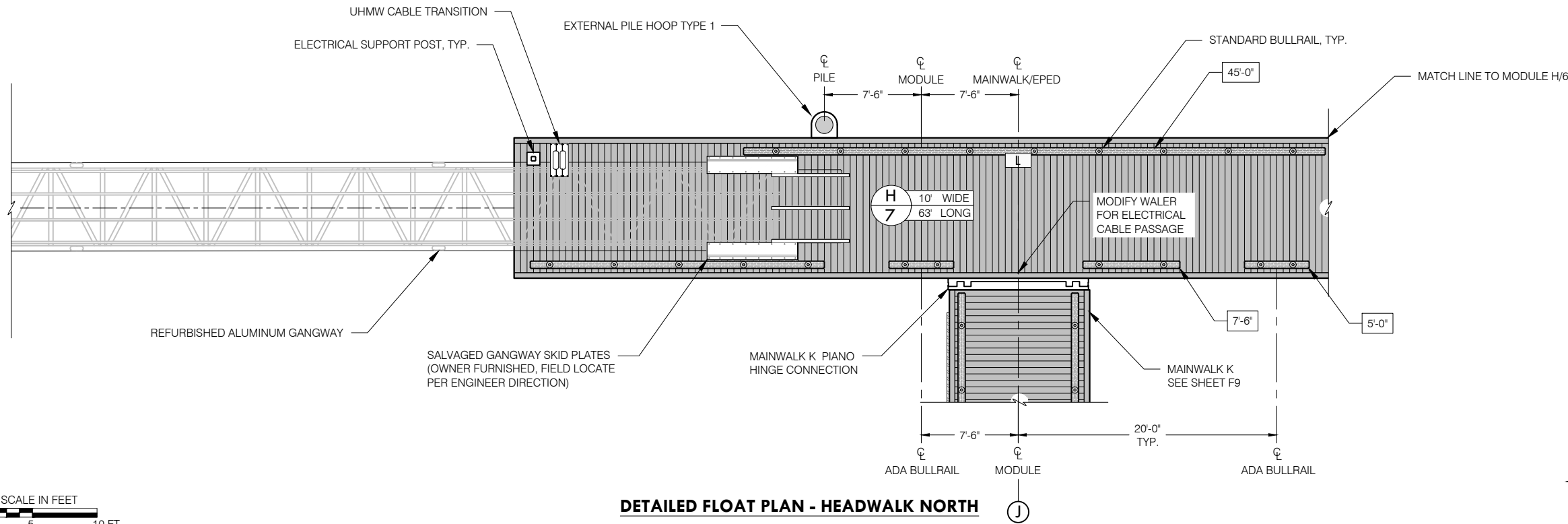
DETAILED FLOAT PLAN
HEADWALK NORTH
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	22 of 86

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DETAILED FLOAT PLAN - HEADWALK NORTH



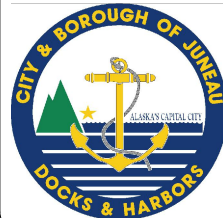
DETAILED FLOAT PLAN - HEADWALK NORTH

SCALE IN FEET
0 5 10 FT.

LEGEND:

- [L] = ELECTRICAL PEDESTAL W/ LUMINAIRE ONLY
- [F] = FIRE HOSE CONNECTION
- [W] = WATER PEDESTAL
- [HT] = HEAT TRACE
- [H] = HOSE MOUNT
- [Life Ring] = LIFE RING CABINET & LIFE RING
- [Fire Extinguisher] = FIRE EXTINGUISHER CABINET & EXTINGUISHER
- [00'-00'] = BULLRAIL LENGTH
- [UHMW Rubstrip] = UHMW RUBSTRIP

PHV - DETAILED FLOAT PLAN



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

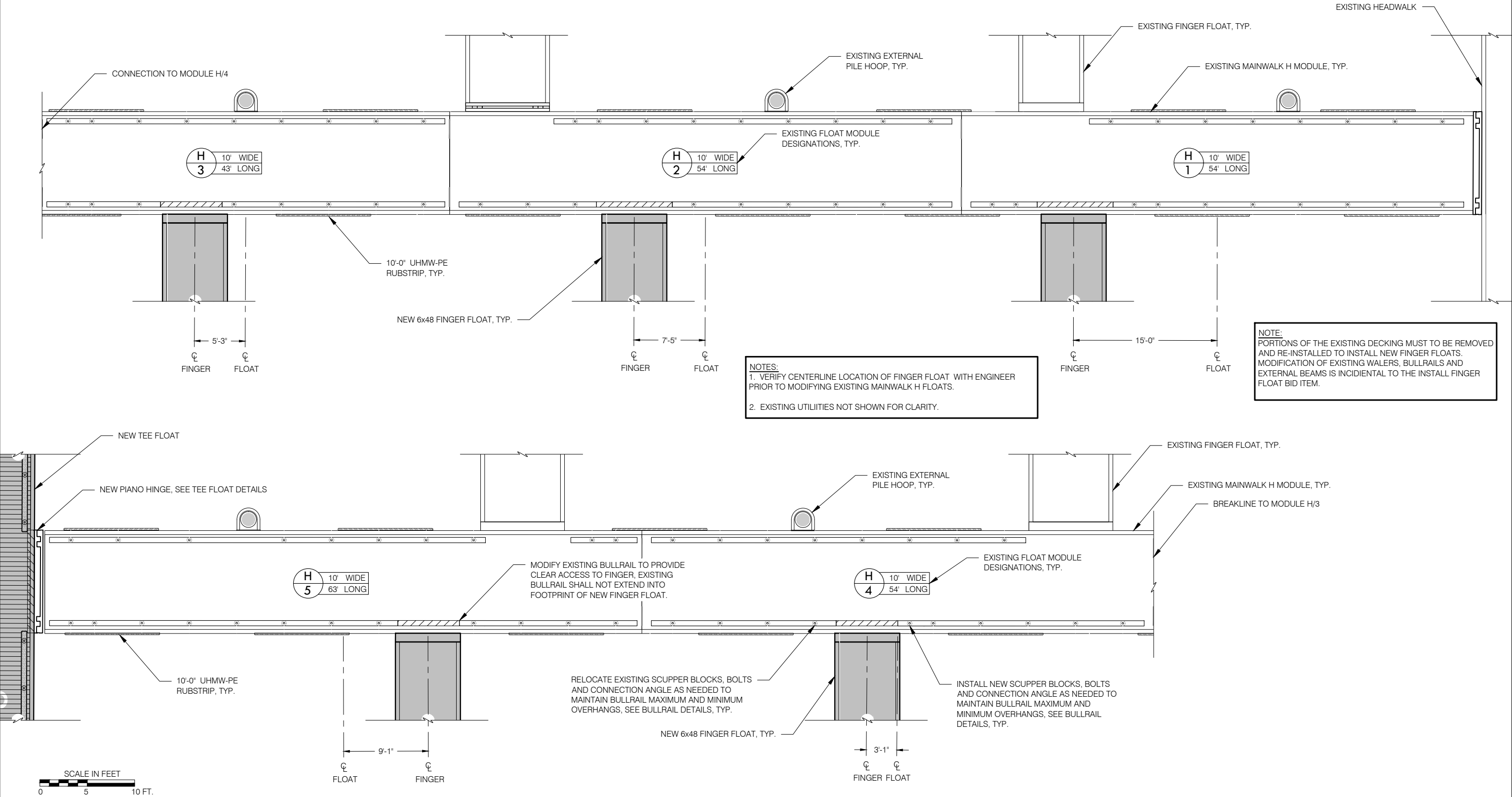
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



DETAILED FLOAT PLAN
MAINWALK H - FINGERS
AURORA HARBOR REBUILD - PHASE IV

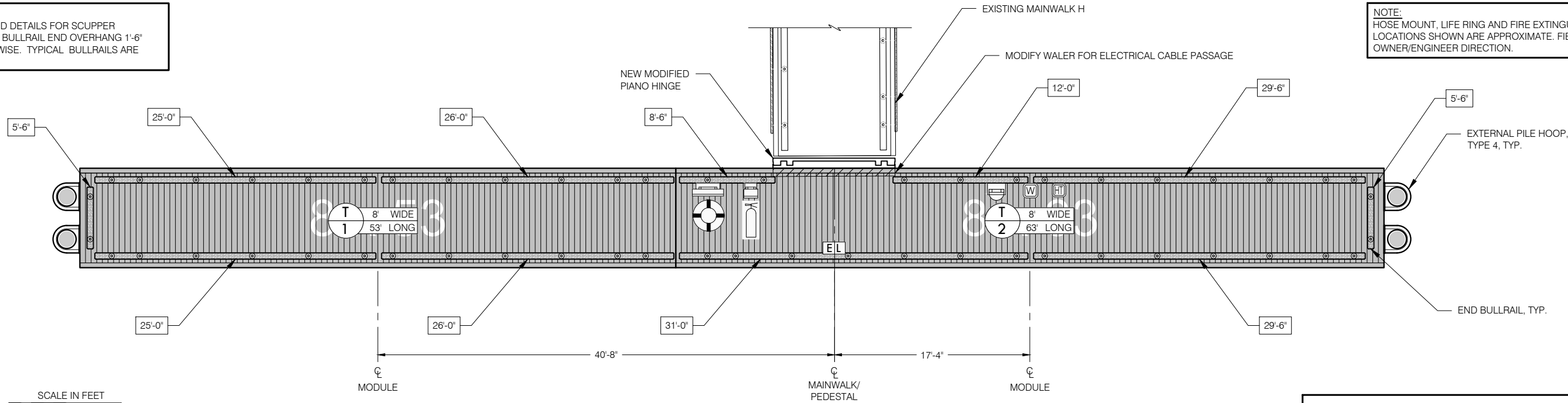
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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APPROVED:	CU	SHEET:	23 of 86

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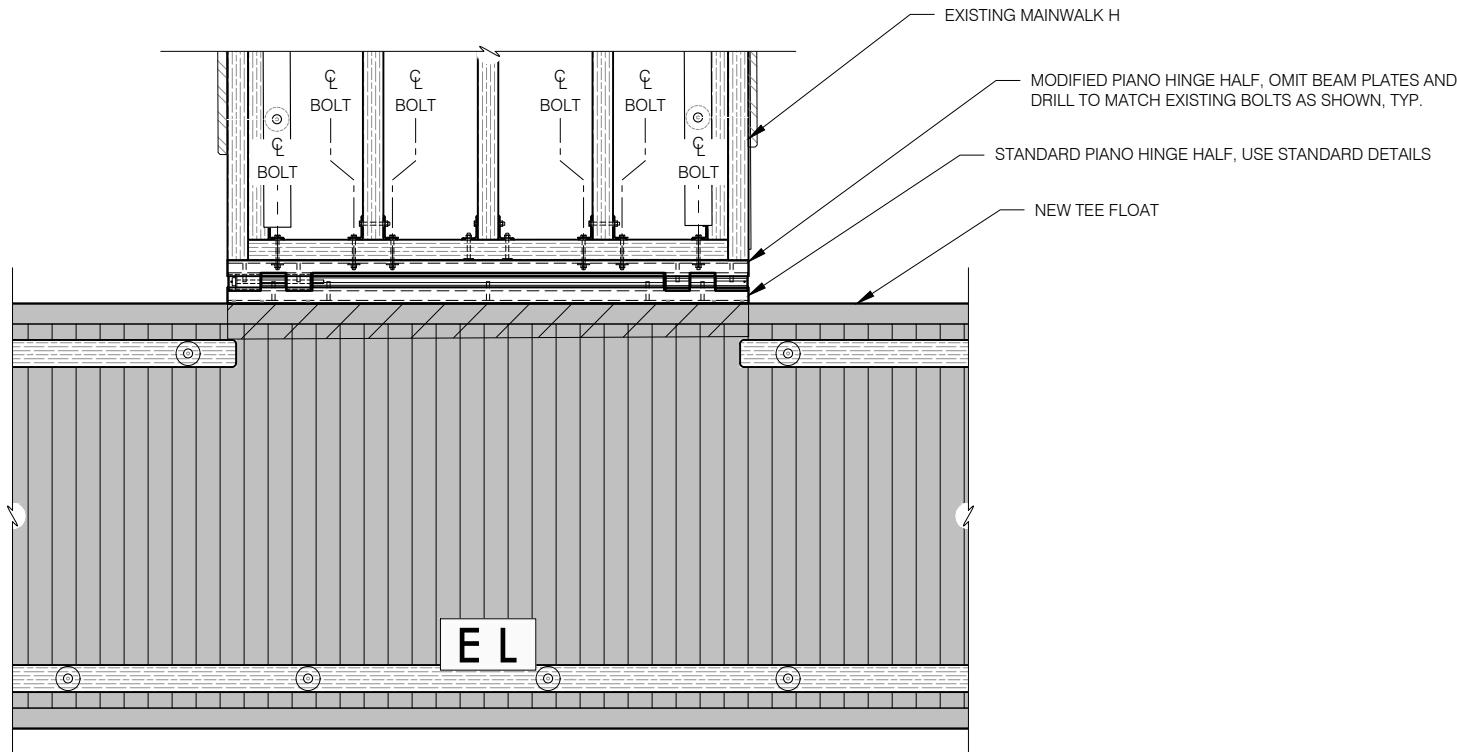
BULLRAIL NOTE:
SEE BULLRAIL STANDARD DETAILS FOR SCUPPER
BLOCK LOCATION, TYP. BULLRAIL END OVERHANG 1'-6"
UNLESS NOTED OTHERWISE. TYPICAL BULLRAILS ARE
5'-0" LONG.

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



DETAILED FLOAT PLAN - TEE FLOAT

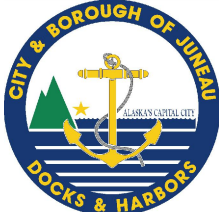
NOTE:
PORTIONS OF DECKING MAY NEED TO BE INSTALLED AFTER ELECTRICAL
CABLES AND/OR PEDESTALS. FABRICATOR SHALL COORDINATE w/
GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR AS REQUIRED.



MAINWALK H - PIANO HINGE INSTALLATION ON EXISTING FLOAT

LEGEND:

- EL** = ELECTRICAL PEDESTAL W/ POWERHEADS AND LUMINAIRE
- W** = WATER PEDESTAL
- HT** = HEAT TRACE
- HM** = HOSE MOUNT
- LR** = LIFE RING CABINET & LIFE RING
- FE** = FIRE EXTINGUISHER CABINET & EXTINGUISHER
- 00'-00'** = BULLRAIL LENGTH



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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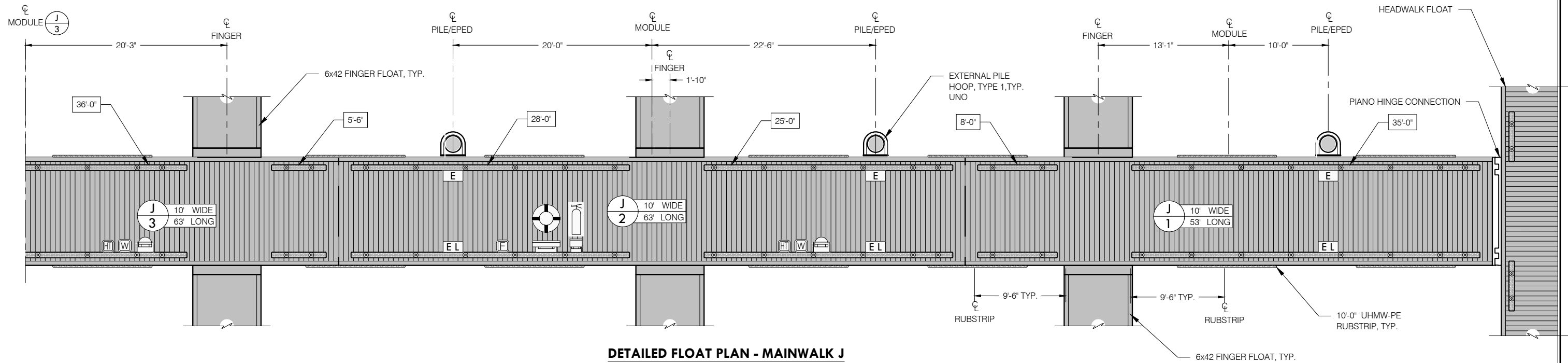


**DETAILED FLOAT PLAN
MAINWALK H - TEE FLOAT**
AURORA HARBOR REBUILD - PHASE IV

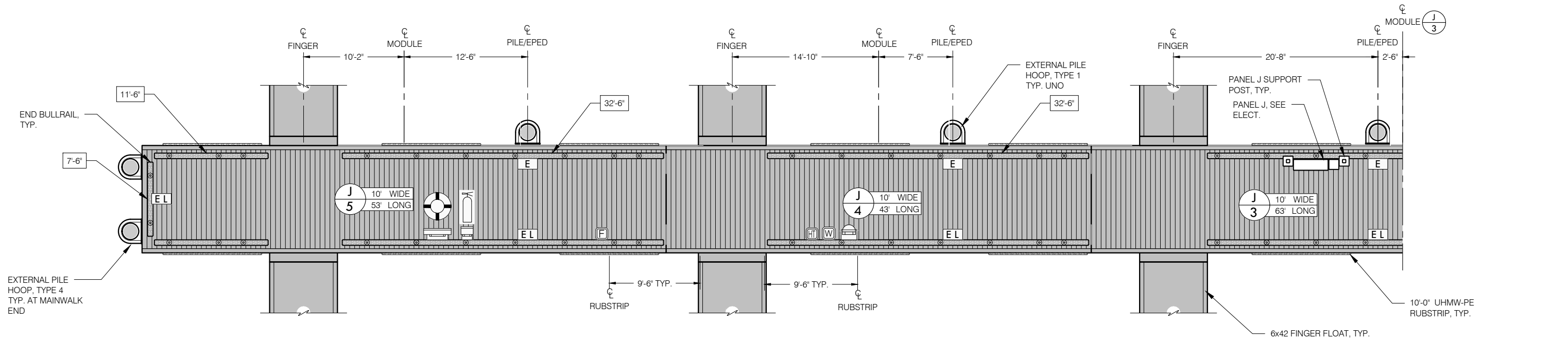
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	24 of 86

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PHV - DETAILED FLOAT PLAN



DETAILED FLOAT PLAN - MAINWALK J

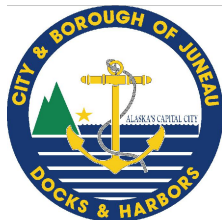


DETAILED FLOAT PLAN - MAINWALK J

LEGEND:

- [E] = ELECTRICAL PEDESTAL W/ POWERHEADS
- [EL] = ELECTRICAL PEDESTAL W/ POWERHEADS AND LUMINAIRE
- [L] = ELECTRICAL PEDESTAL W/ LUMINAIRE ONLY
- [F] = FIRE HOSE CONNECTION
- [W] = WATER PEDESTAL
- [HT] = HEAT TRACE
- [Hose Mount Symbol] = HOSE MOUNT
- [Life Ring Symbol] = LIFE RING CABINET & LIFE RING
- [Fire Extinguisher Symbol] = FIRE EXTINGUISHER CABINET & EXTINGUISHER
- [Bullrail Symbol] = BULLRAIL LENGTH
- [Rubstrip Symbol] = UHMW RUBSTRIP

NOTES:
1. BULLRAILS ON MAINWALK J ARE SYMETRICAL ABOUT FLOAT CENTERLINE.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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PHONE: 907-586-0292

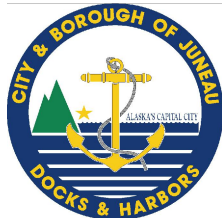


DETAILED FLOAT PLAN
MAINWALK J
AURORA HARBOR REBUILD - PHASE IV

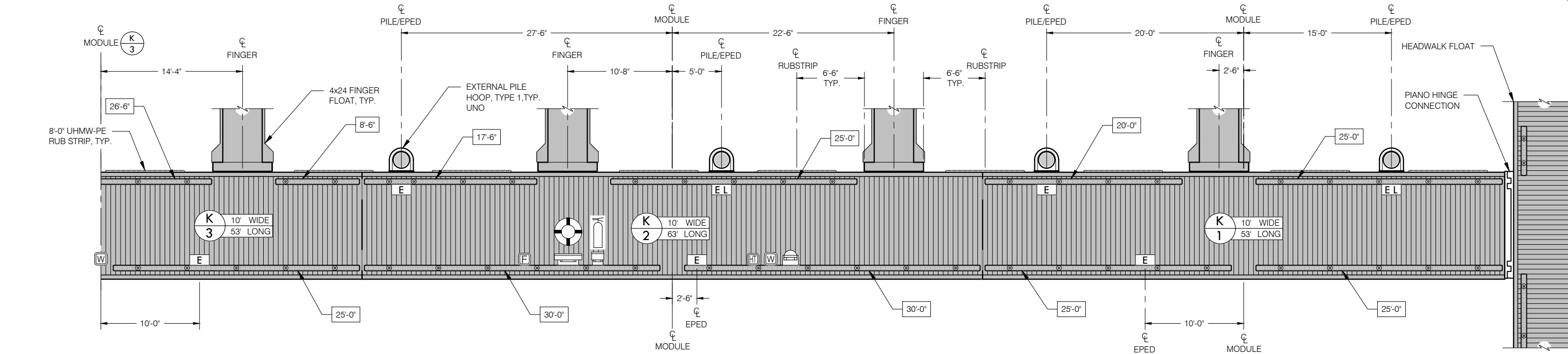
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	25 of 86

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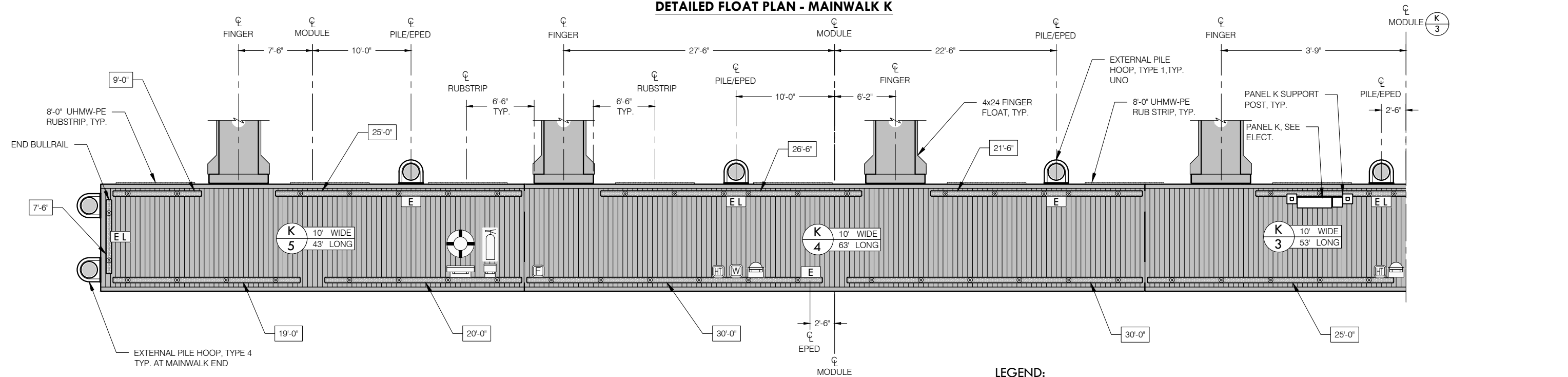
PHV - DETAILED FLOAT PLAN



SCALE IN FEET
0 5 10 FT.



DETAILED FLOAT PLAN - MAINWALK K

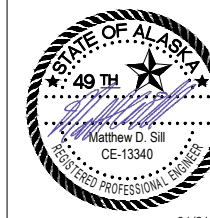


DETAILED FLOAT PLAN - MAINWALK K

LEGEND:

- E** = ELECTRICAL PEDESTAL W/ POWERHEADS
- EL** = ELECTRICAL PEDESTAL W/ POWERHEADS AND LUMINAIRE
- L** = ELECTRICAL PEDESTAL W/ LUMINAIRE ONLY
- F** = FIRE HOSE CONNECTION
- W** = WATER PEDESTAL
- HT** = HEAT TRACE
- = HOSE MOUNT
- = LIFE RING CABINET & LIFE RING
- = FIRE EXTINGUISHER CABINET & EXTINGUISHER
- = BULLRAIL LENGTH
- = UHMW RUBSTRIP

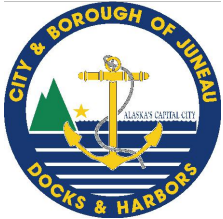
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



**DETAILED FLOAT PLAN
MAINWALK K**
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	26 of 86

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REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
FO #1	5/16/2025	REVISED FLOTATION SCHEDULE	MDS	CU	CU

CITY AND BOROUGH OF JUNEAU
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155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



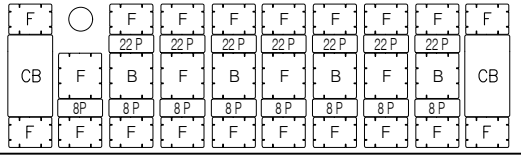
FLOTATION SCHEDULE

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	27 of 86

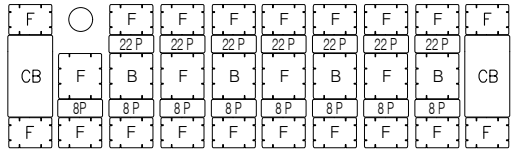
F10

MODULE: H1 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	19
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	7
POLYSTYRENE BILLET	SEE DETAILS		8	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		16	2



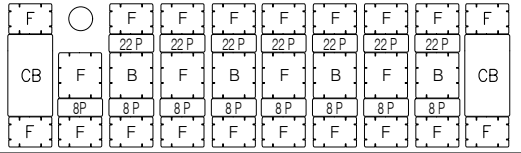
** SEE NOTE 1 THIS SHEET.

MODULE: H2 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	19
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	7
POLYSTYRENE BILLET	SEE DETAILS		8	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		16	2



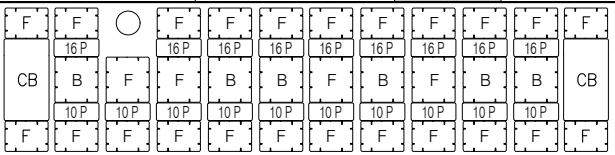
** SEE NOTE 1 THIS SHEET.

MODULE: H3 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	19
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	7
POLYSTYRENE BILLET	SEE DETAILS		8	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		16	2



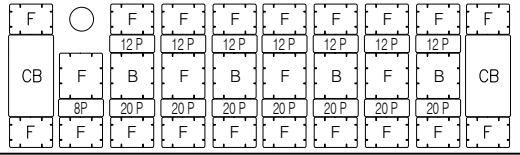
** SEE NOTE 1 THIS SHEET.

MODULE: H4 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	23
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	6
POLYSTYRENE BILLET	SEE DETAILS		16	9
POLYSTYRENE BILLET	SEE DETAILS		10	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		14	2



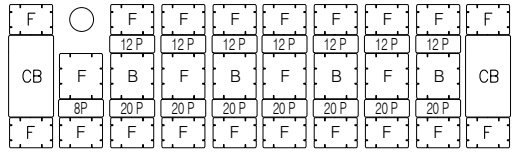
** SEE NOTE 1 THIS SHEET.

MODULE: H5 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	19
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	7
POLYSTYRENE BILLET	SEE DETAILS		8	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		15	2



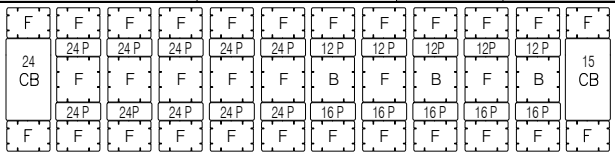
** SEE NOTE 1 THIS SHEET.

MODULE: H6 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	19
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	7
POLYSTYRENE BILLET	SEE DETAILS		8	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		15	2



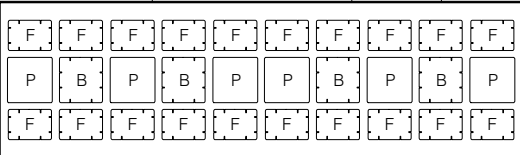
** SEE NOTE 1 THIS SHEET.

MODULE: H7 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
FLOTATION TUB	48	36	24	7
BALLAST TANK	48	36	24	3
POLYSTYRENE BILLET	SEE DETAILS		24 / 12	5 / 5
POLYSTYRENE BILLET	SEE DETAILS		24 / 16	5 / 5
POLYSTYRENE BILLET (CB)	SEE DETAILS		24 / 15	1 / 1



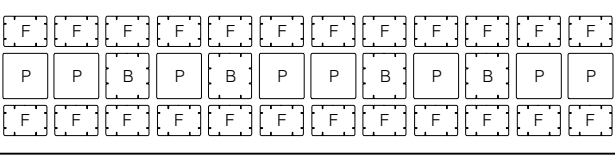
** SEE NOTE 1 THIS SHEET.

MODULE: T1 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	20
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		20	6



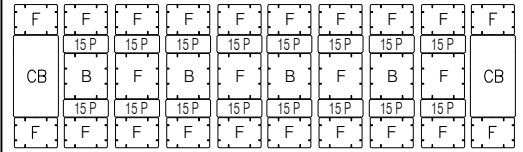
** SEE NOTE 1 THIS SHEET.

MODULE: T2 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		18	8



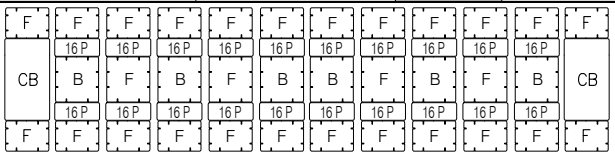
** SEE NOTE 1 THIS SHEET.

MODULE: J1 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	20
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		15	8
POLYSTYRENE BILLET	SEE DETAILS		15	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2



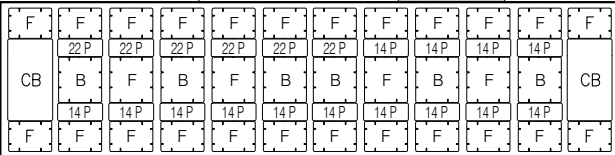
** SEE NOTE 1 THIS SHEET.

MODULE: J2 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	6
POLYSTYRENE BILLET	SEE DETAILS		16	10
POLYSTYRENE BILLET	SEE DETAILS		16	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		20	2



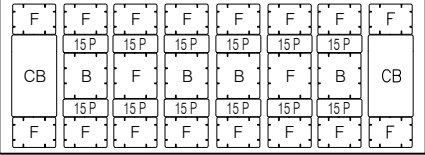
** SEE NOTE 1 THIS SHEET.

MODULE: J3 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	6
POLYSTYRENE BILLET	SEE DETAILS		22 / 14	6 / 4
POLYSTYRENE BILLET	SEE DETAILS		22	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		20	2



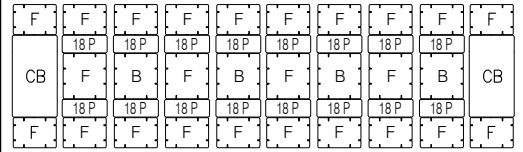
** SEE NOTE 1 THIS SHEET.

MODULE: J4 (43)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	16
FLOTATION TUB	48	36	24	2
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		15	6
POLYSTYRENE BILLET	SEE DETAILS		15	6
POLYSTYRENE BILLET (CB)	SEE DETAILS		20	2



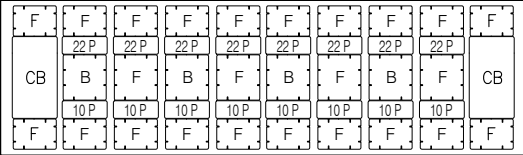
** SEE NOTE 1 THIS SHEET.

MODULE: J5 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	20
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		18	8
POLYSTYRENE BILLET	SEE DETAILS		18	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		20	2



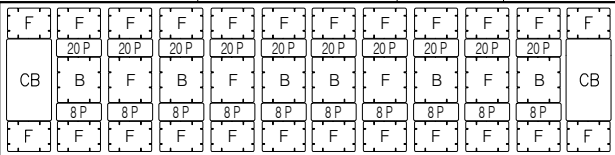
** SEE NOTE 1 THIS SHEET.

MODULE: K1 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	20
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	8
POLYSTYRENE BILLET	SEE DETAILS		10	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2



** SEE NOTE 1 THIS SHEET.

MODULE: K2 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	6
POLYSTYRENE BILLET	SEE DETAILS		20	10
POLYSTYRENE BILLET	SEE DETAILS		8	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2



** 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
CB= CENTER POLYSTYRENE BILLET
GB= GANGWAY POLYSTYRENE BILLET
- ORIENTATION OF FLOATS ON THIS SHEET MATCHES ORIENTATION SHOWN ON DETAILED FLOAT PLANS.



CHANGES IN TABLE INDICATED BY SHADED TABLE CELL, FLOAT SCHEMATIC REVISED ADDITIONALLY. ALL QUANTITIES REDUCED FROM QUANTITIES IN BID SET.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
FO #1	5/16/2025	REVISED FLOTATION SCHEDULE	MDS	CU	CU

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



01/31/2025

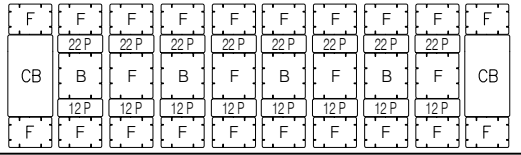
FLOTATION SCHEDULE

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	28 of 86

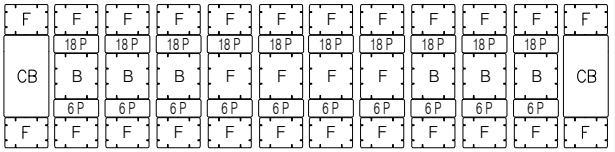
F11

MODULE: K3 (53)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	20
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	8
POLYSTYRENE BILLET	SEE DETAILS		12	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2



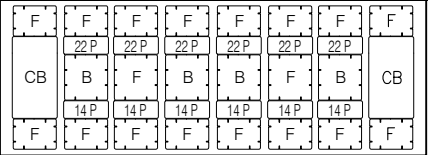
** SEE NOTE 1 THIS SHEET.

MODULE: K4 (63)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	6
POLYSTYRENE BILLET	SEE DETAILS		18	10
POLYSTYRENE BILLET	SEE DETAILS		6	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		16	2



** SEE NOTE 1 THIS SHEET.

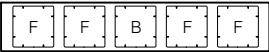
MODULE: K5 (43)	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	16
FLOTATION TUB	48	36	24	2
BALLAST TANK	48	36	24	4
POLYSTYRENE BILLET	SEE DETAILS		22	6
POLYSTYRENE BILLET	SEE DETAILS		14	6
POLYSTYRENE BILLET (CB)	SEE DETAILS		20	2



** SEE NOTE 1 THIS SHEET.

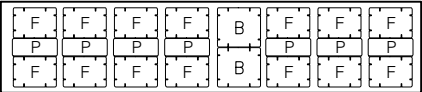
FINGER 24'	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	36	24	4
BALLAST TANK	48	36	24	1
POLYSTYRENE BILLET*	36	9	24	4

* BETWEEN SILLS,
SEE FLOTATION
DETAILS.



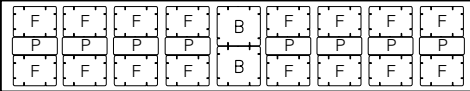
** SEE NOTE 1 THIS SHEET.

FINGER 42'	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	14
BALLAST TANK	48	36	24	2
POLYSTYRENE BILLET	SEE DETAILS		20	8



** SEE NOTE 1 THIS SHEET.

FINGER 48'	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	16
BALLAST TANK	48	36	24	2
POLYSTYRENE BILLET	SEE DETAILS		22	8



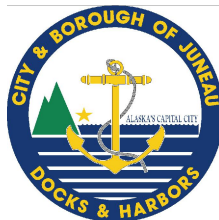
** SEE NOTE 1 THIS SHEET.

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
CB= CENTER POLYSTYRENE BILLET
GB= GANGWAY POLYSTYRENE BILLET
- ORIENTATION OF FLOATS ON THIS SHEET MATCHES ORIENTATION SHOWN ON DETAILED FLOAT PLANS.



CHANGES IN TABLE INDICATED BY
SHADED TABLE CELL, FLOAT
SCHEMATIC REVISED ADDITIONALLY.
ALL QUANTITIES REDUCED FROM
QUANTITIES IN BID SET.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

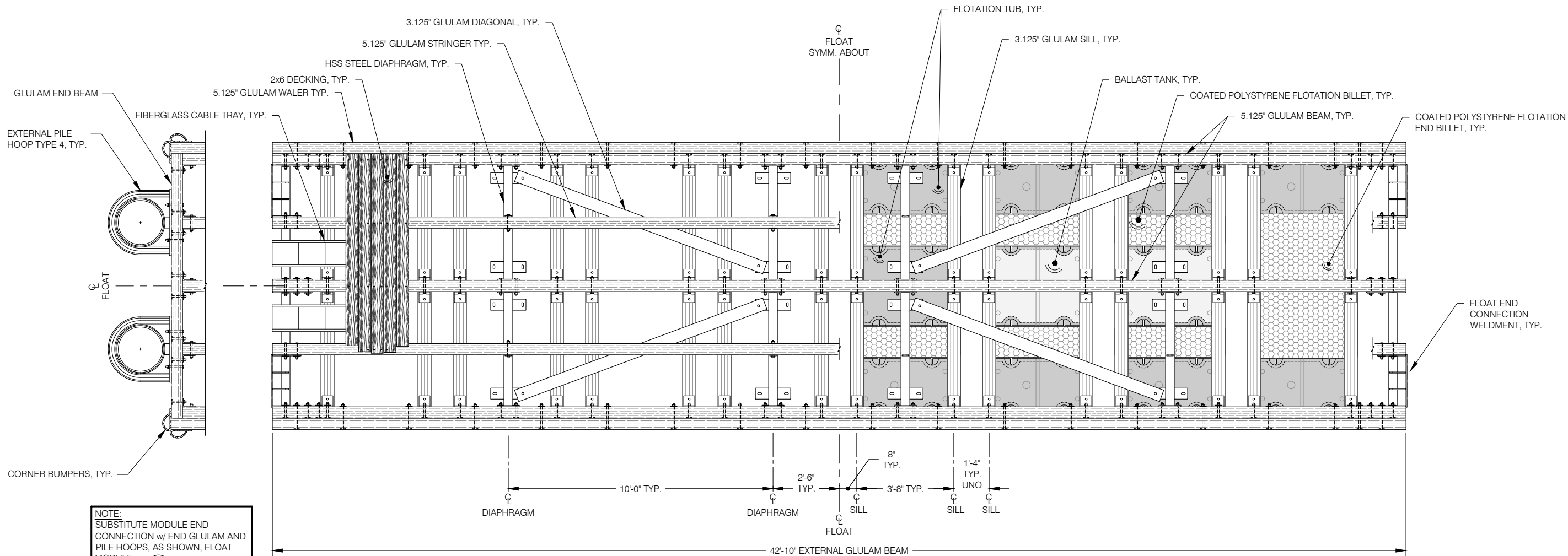


TYPICAL 10x43 MODULE PLAN & ELEVATION

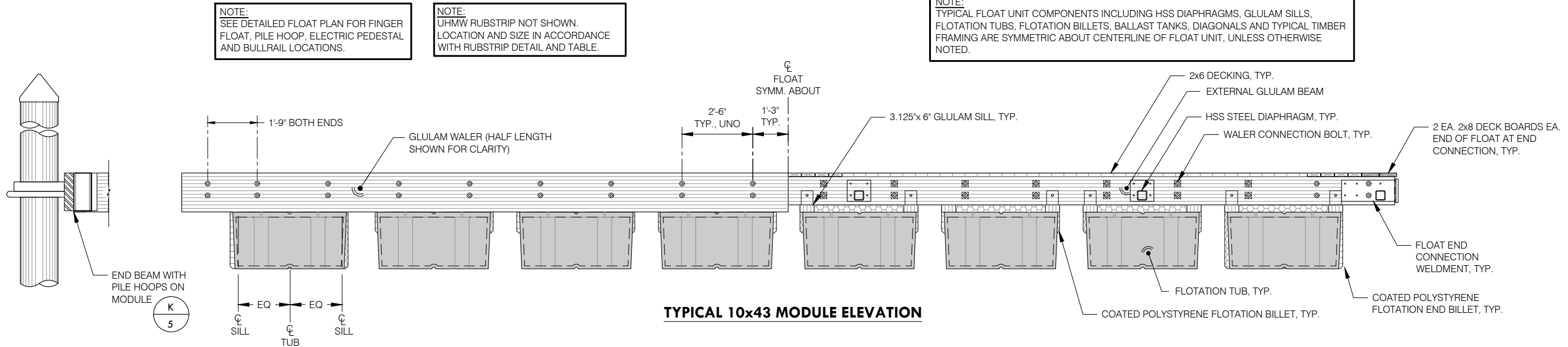
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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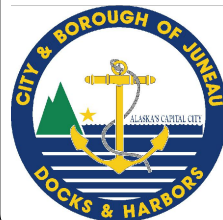
F12



TYPICAL 10x43 MODULE PLAN

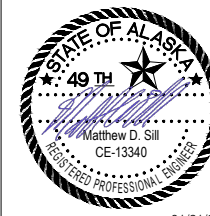


TYPICAL 10x43 MODULE ELEVATION



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
 155 HERITAGE WAY
 JUNEAU, ALASKA 99801
 PHONE: 907-586-0292

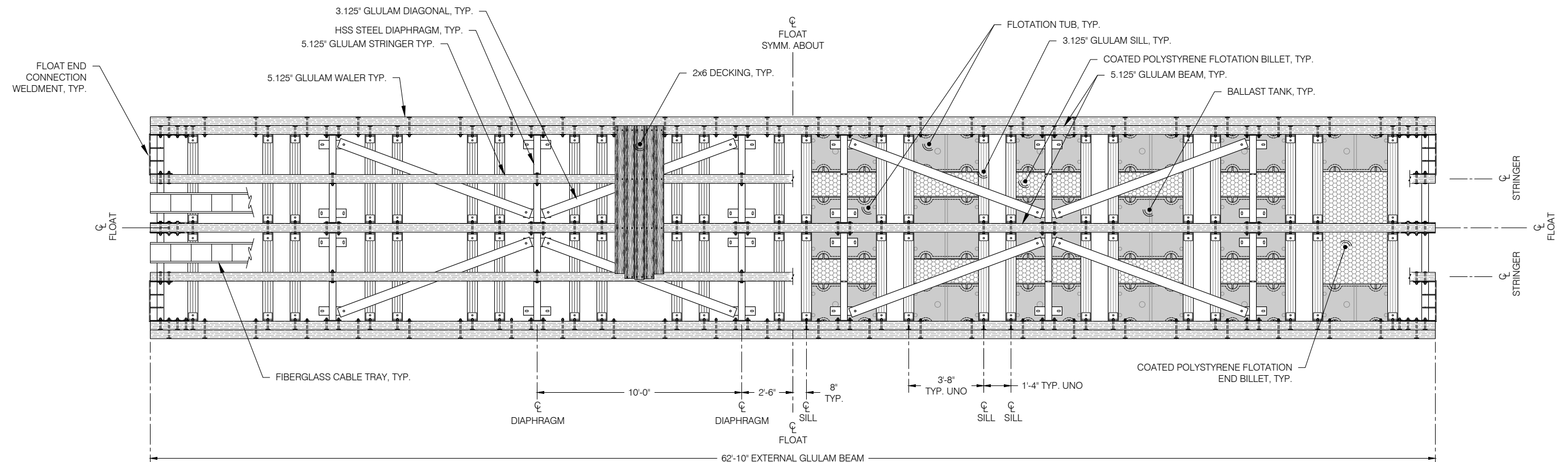


TYPICAL 10x63 MODULE PLAN & ELEVATION

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	31 of 86

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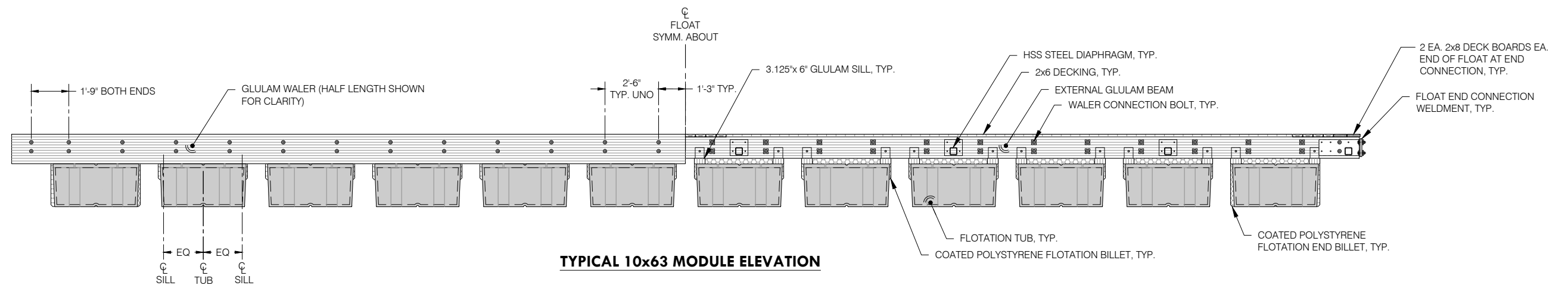


TYPICAL 10x63 MODULE PLAN

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

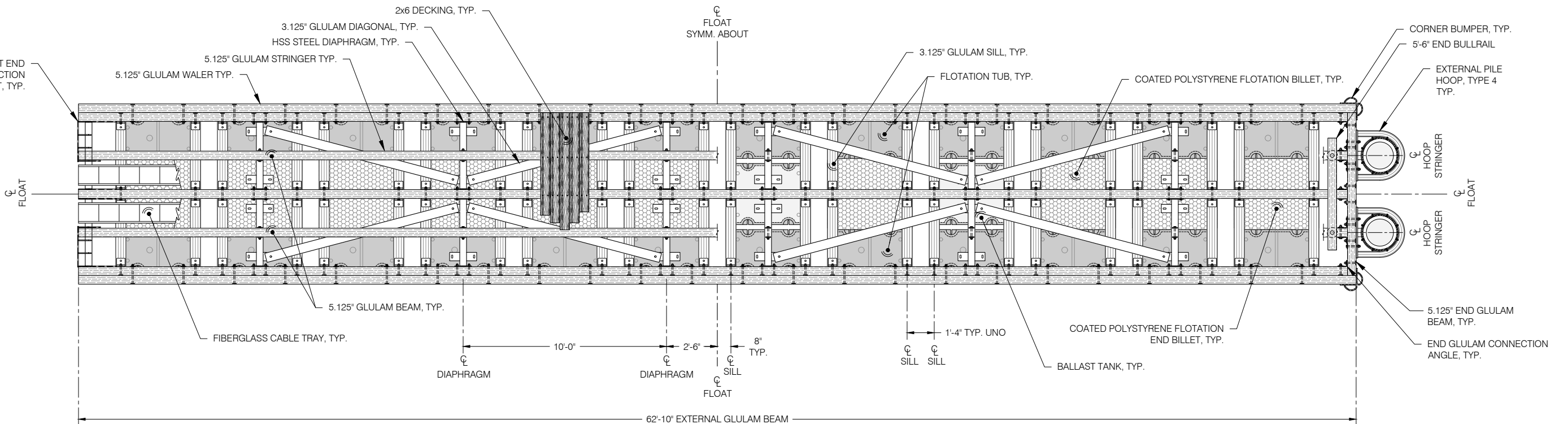
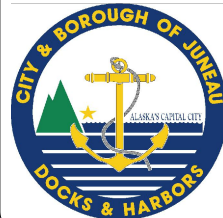
NOTE:
UHMW RUBSTRIP NOT SHOWN.
LOCATION AND SIZE IN ACCORDANCE
WITH RUBSTRIP DETAIL AND TABLE.

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.

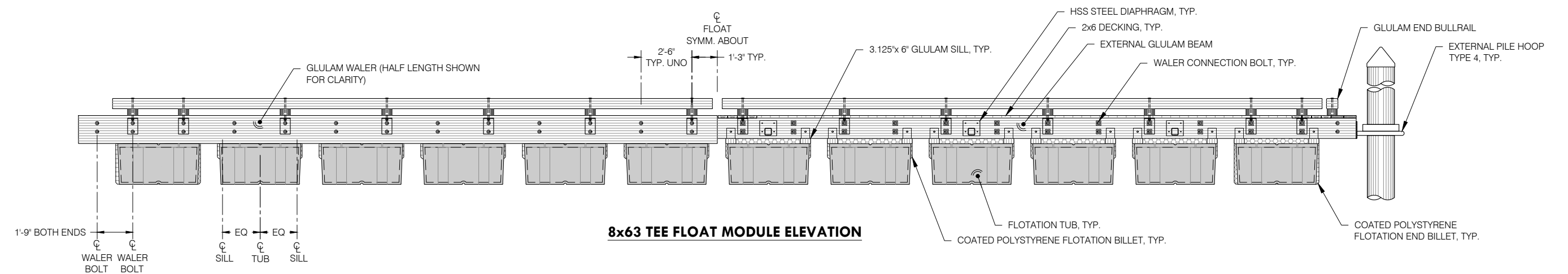


TYPICAL 10x63 MODULE ELEVATION

F16 - 8x63 TEE FLOAT MODULE



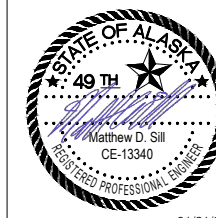
8x63 TEE FLOAT MODULE PLAN



8x63 TEE FLOAT MODULE ELEVATION

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

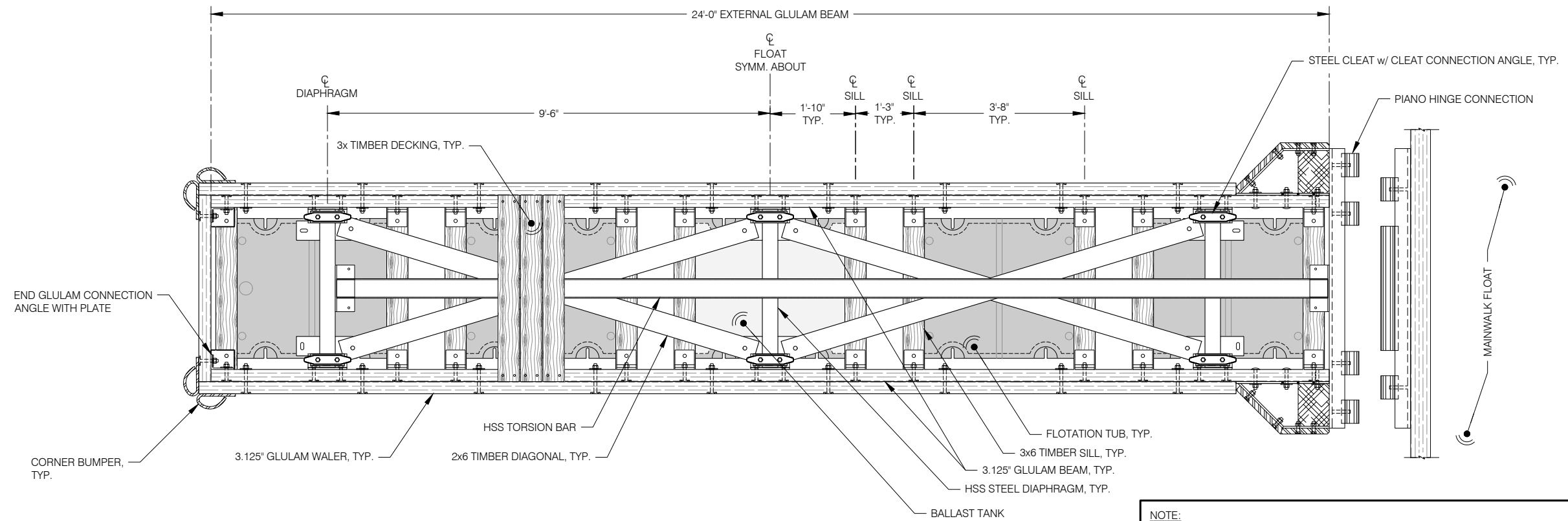
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



8x63 TEE FLOAT MODULE
PLAN & ELEVATION
AURORA HARBOR REBUILD - PHASE IV

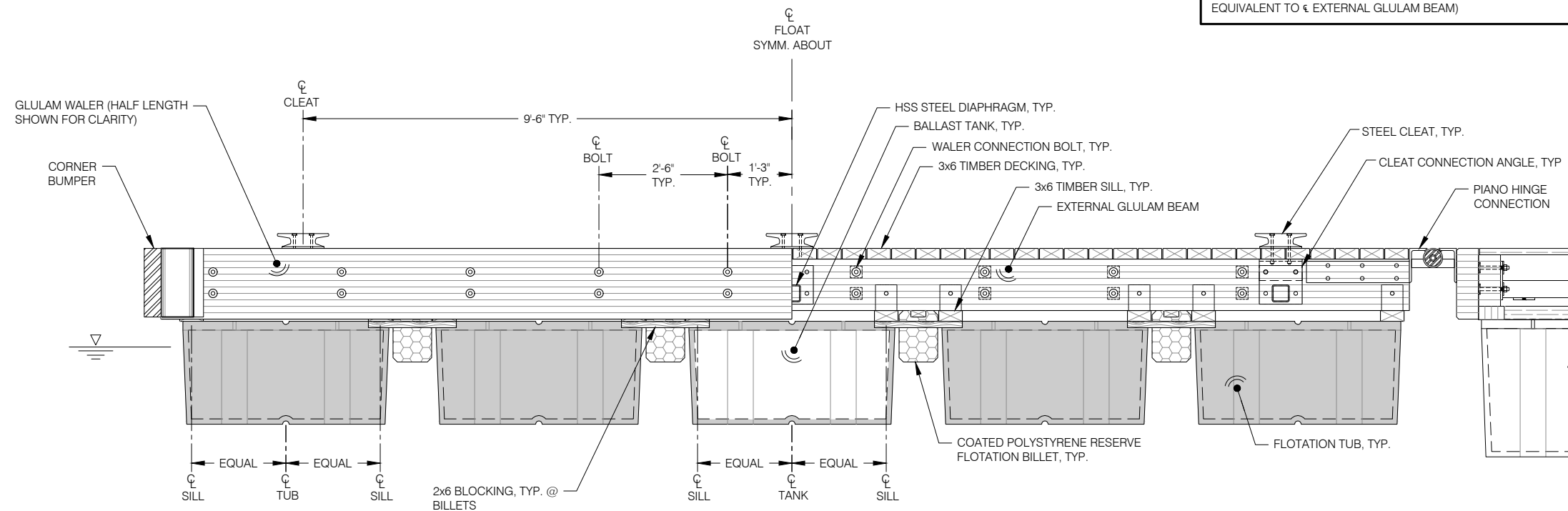
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	33 of 86

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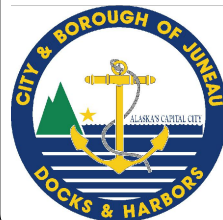


4' x 24' FINGER FLOAT MODULE - PLAN

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

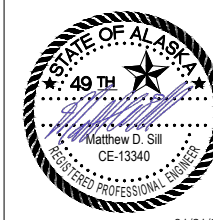


4' x 24' FINGER FLOAT MODULE - ELEVATION



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
 155 HERITAGE WAY
 JUNEAU, ALASKA 99801
 PHONE: 907-586-0292

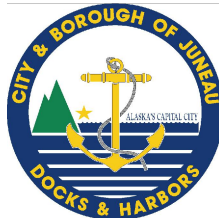


4x24 FINGER FLOAT PLAN & ELEVATION

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	34 of 86

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REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



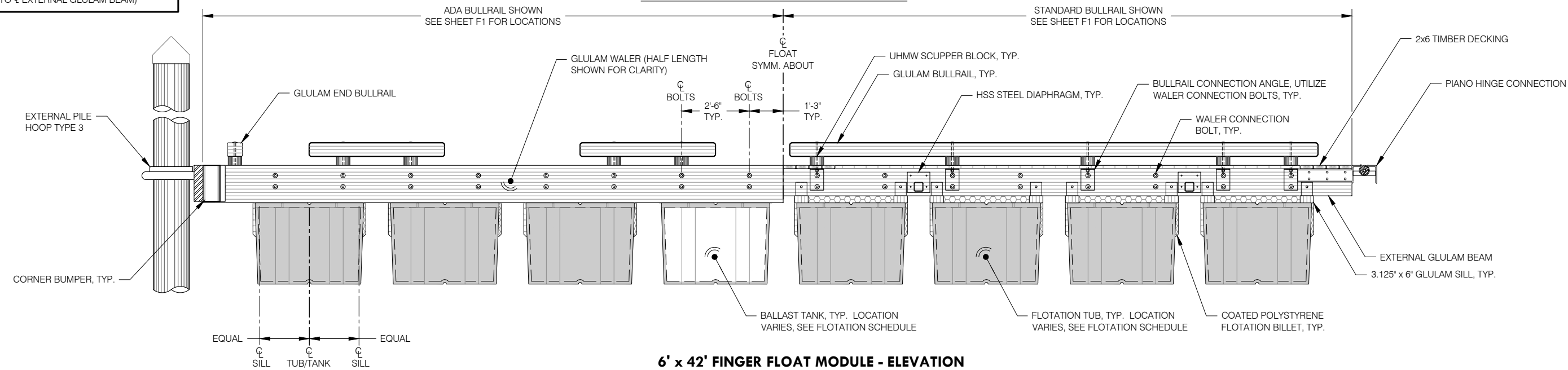
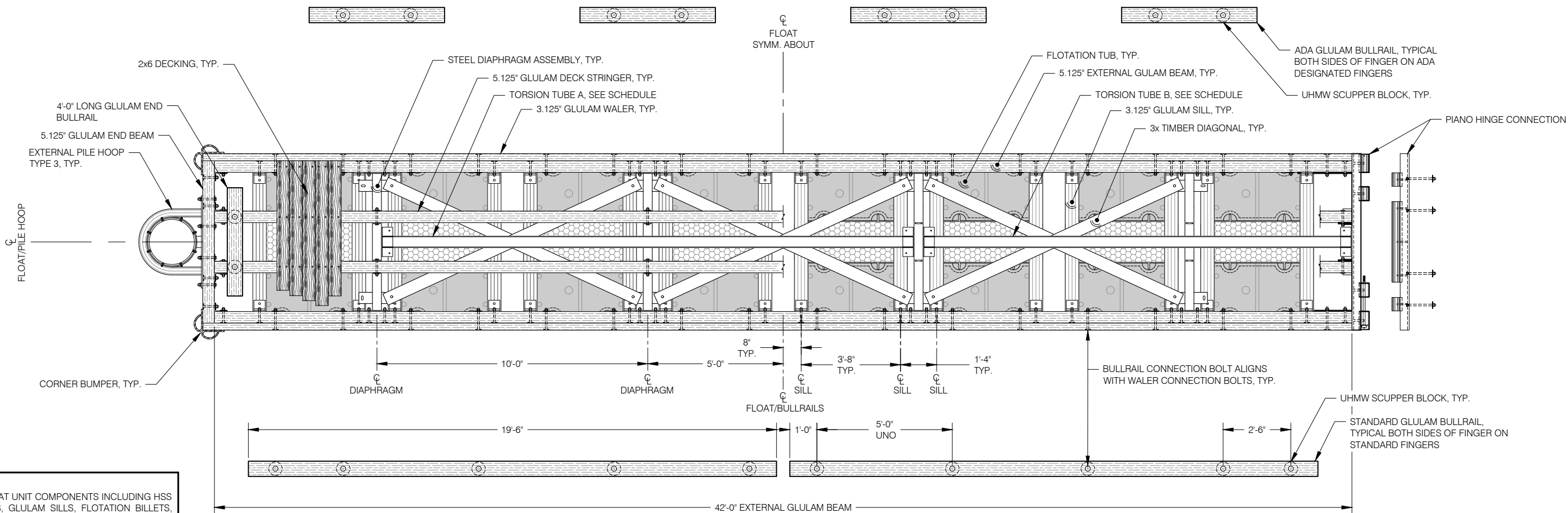
6x42 FINGER FLOAT PLAN & ELEVATION

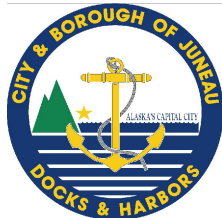
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	35 of 86

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





REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

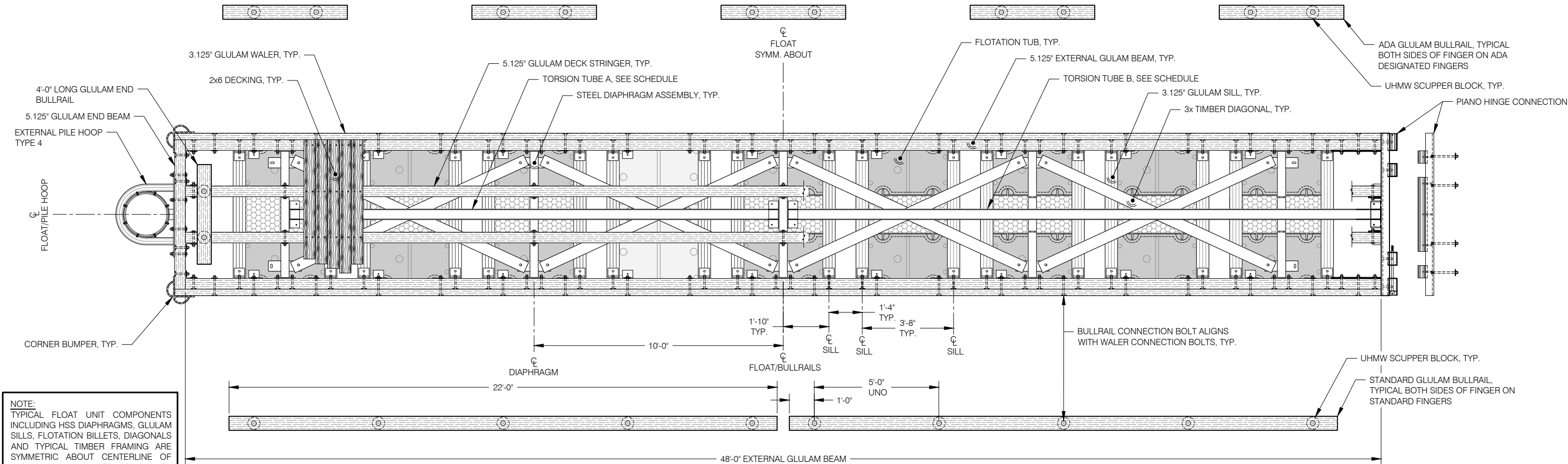


6x48 FINGER FLOAT PLAN & ELEVATION

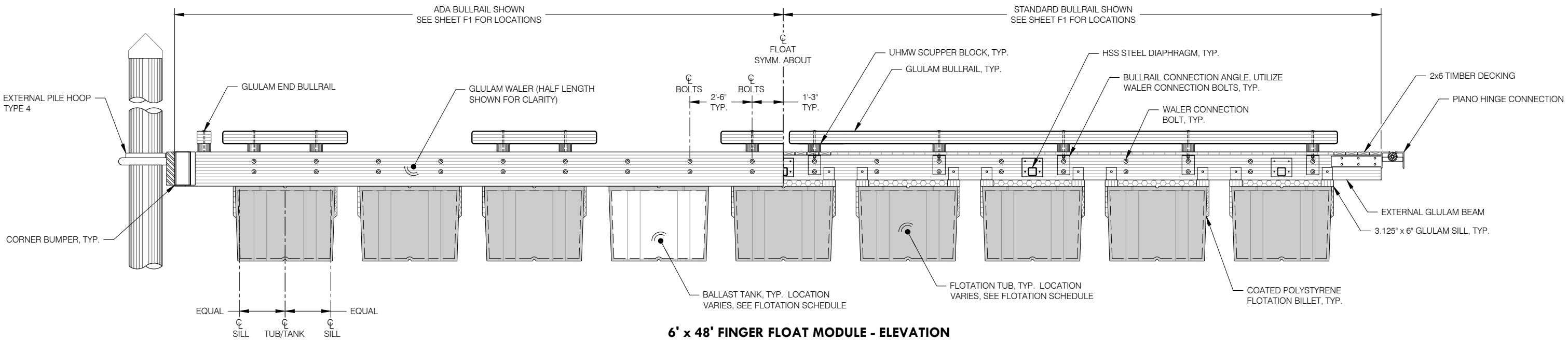
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	36 of 86

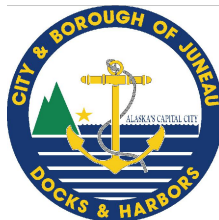
F19



6' x 48' FINGER FLOAT MODULE - PLAN



6' x 48' FINGER FLOAT MODULE - ELEVATION



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

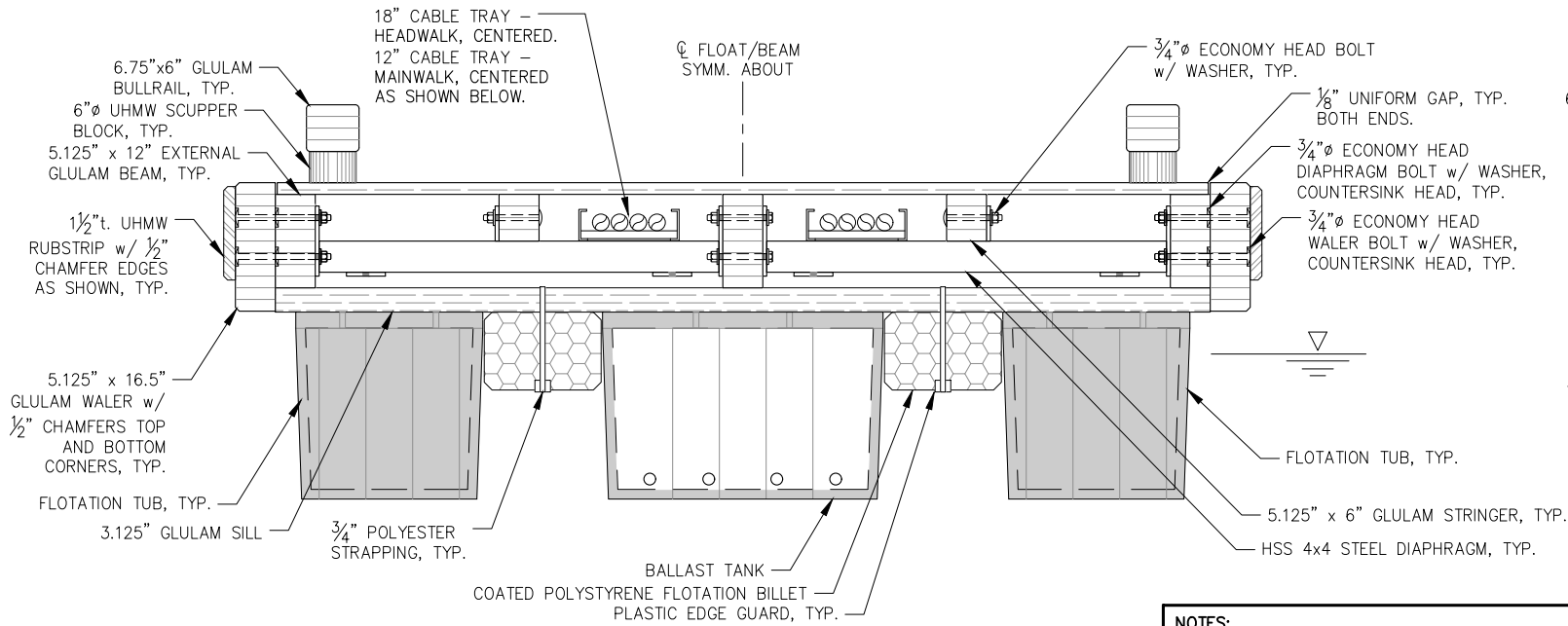
CITY AND BOROUGH OF JUNEAU
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JUNEAU, ALASKA 99801
PHONE: 907-586-0292



TYPICAL FLOAT SECTIONS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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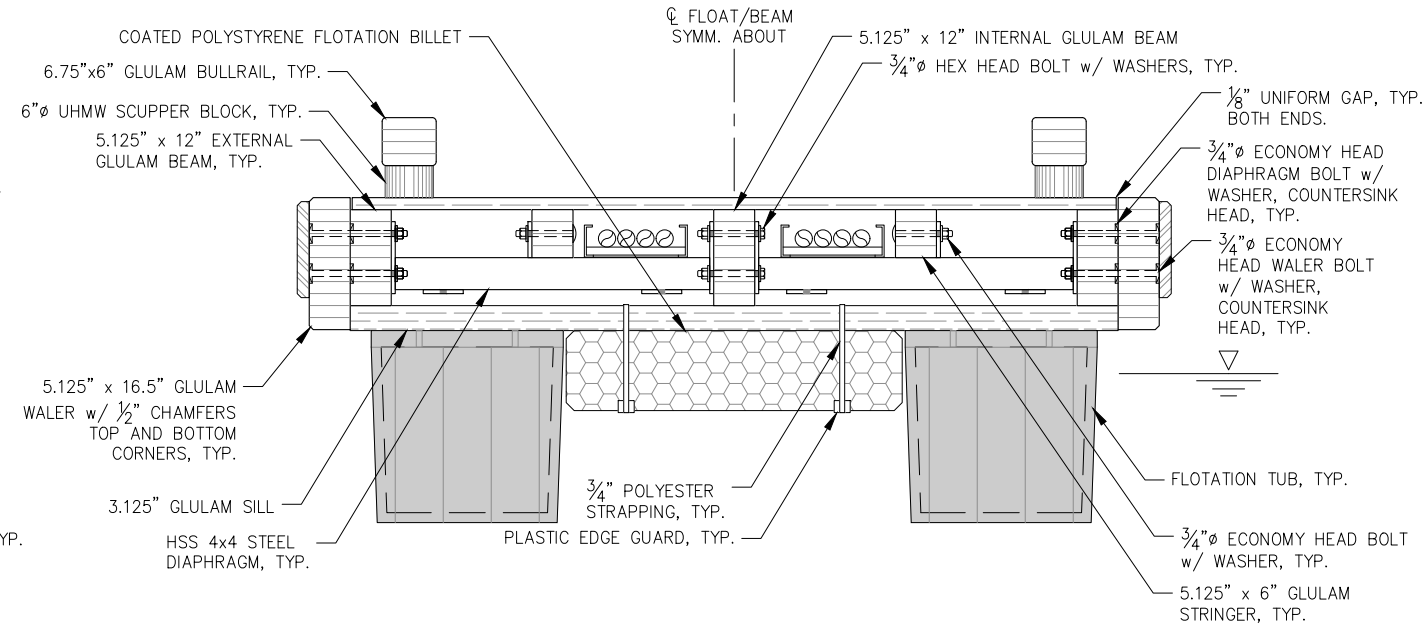
F20



SECTION AT DIAPHRAGM - 10' MODULE

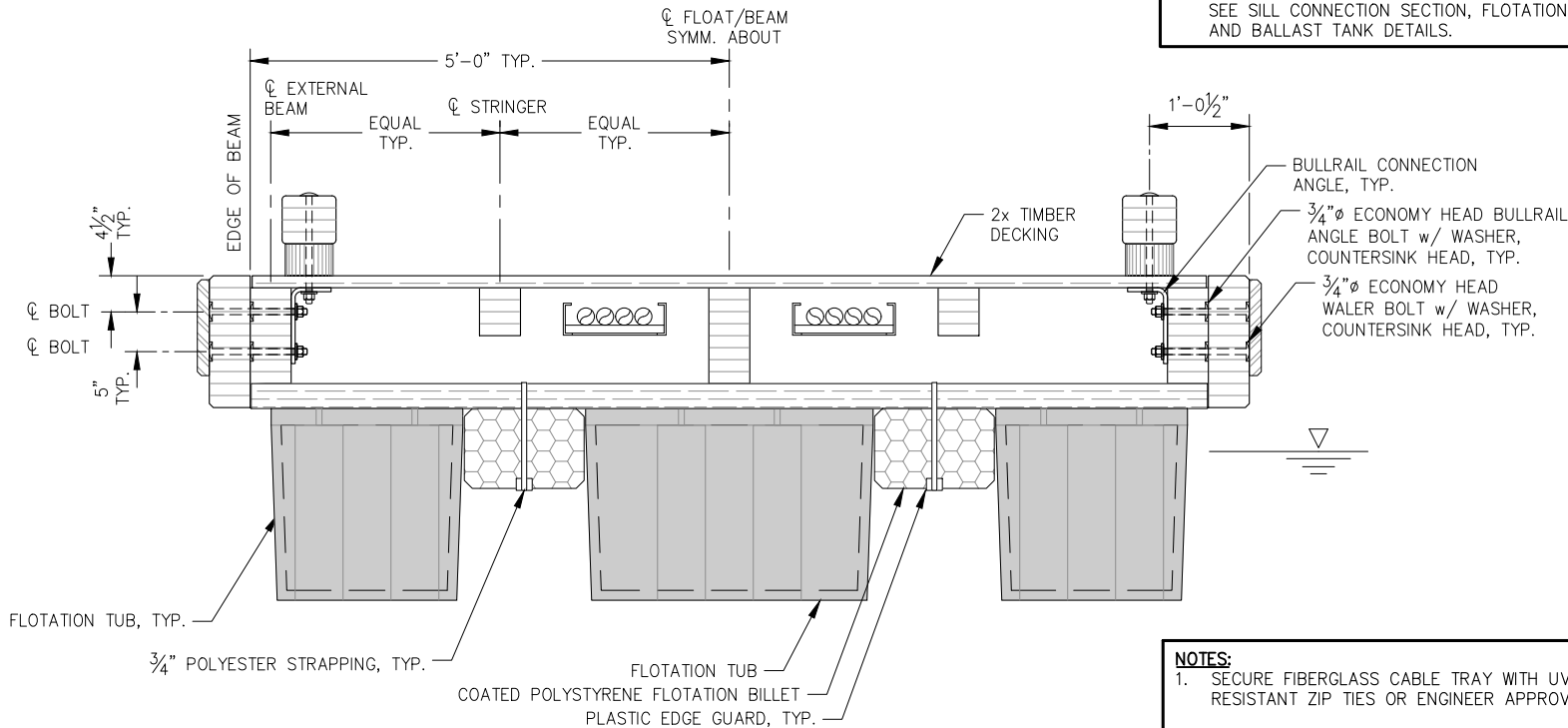
NOTE: DETAILS NOT SHOWN SIMILAR TO 10' SECTION BETWEEN DIAPHRAGMS.

- NOTES:**
- FURNISH CABLE TRAY FULL LENGTH OF FLOAT, FULL STRENGTH SPLICE CABLE TRAY PER MANUFACTURE RECOMMENDATIONS.
 - SILL CONNECTION ANGLES AND TUB/TANK CONNECTION HARDWARE NOT SHOWN FOR CLARITY, SEE SILL CONNECTION SECTION, FLOTATION TUB AND BALLAST TANK DETAILS.



SECTION AT FLOTATION BILLET - 8' MODULE

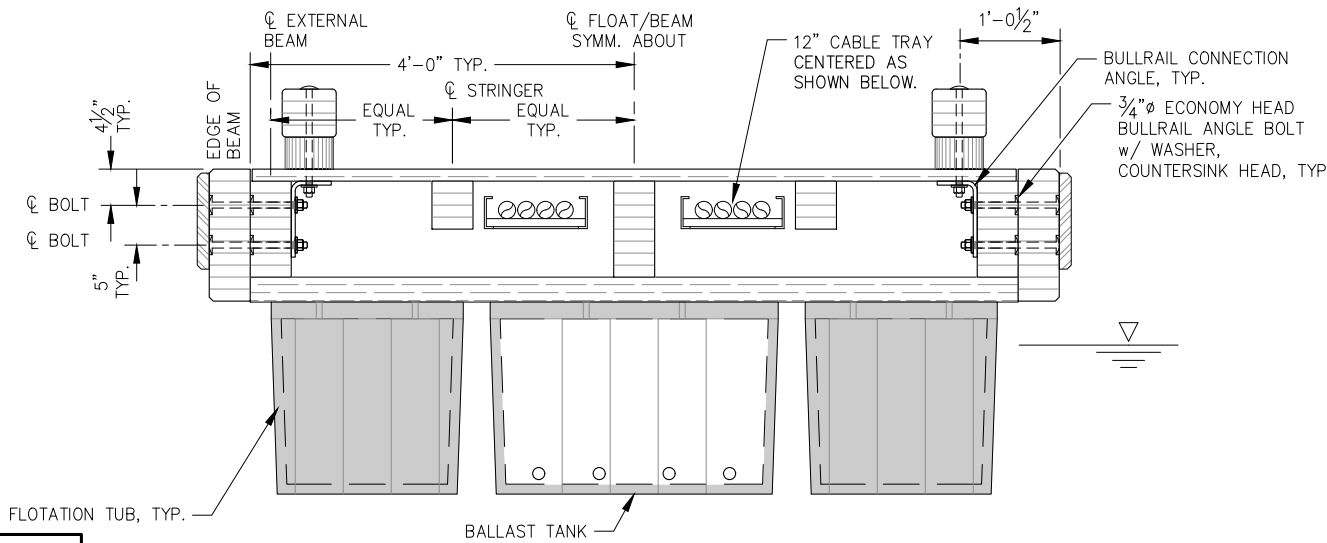
NOTE: DETAILS NOT SHOWN SIMILAR TO 8' SECTION AT BALLAST TANK AND FLOTATION TUB.



SECTION BETWEEN DIAPHRAGMS - 10' MODULE

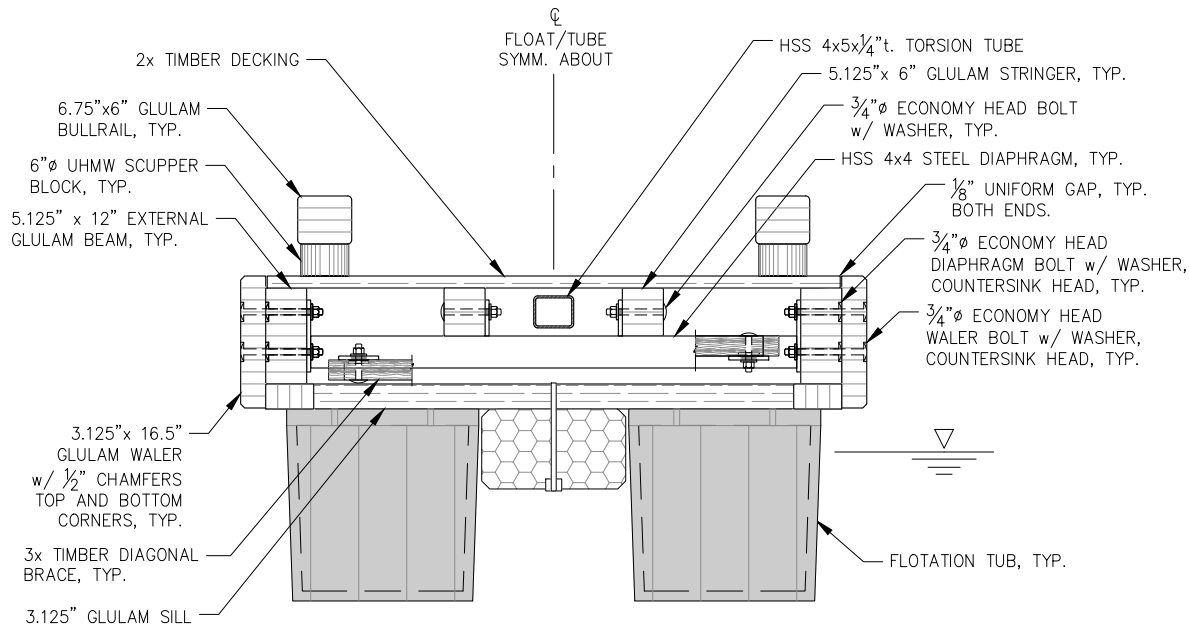
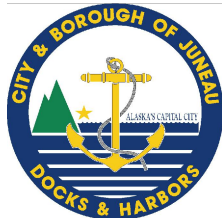
NOTE: DETAILS NOT SHOWN SIMILAR TO 10' DIAPHRAGM SECTION.

- NOTES:**
- SECURE FIBERGLASS CABLE TRAY WITH UV AND WEATHER RESISTANT ZIP TIES OR ENGINEER APPROVED ALTERNATE.



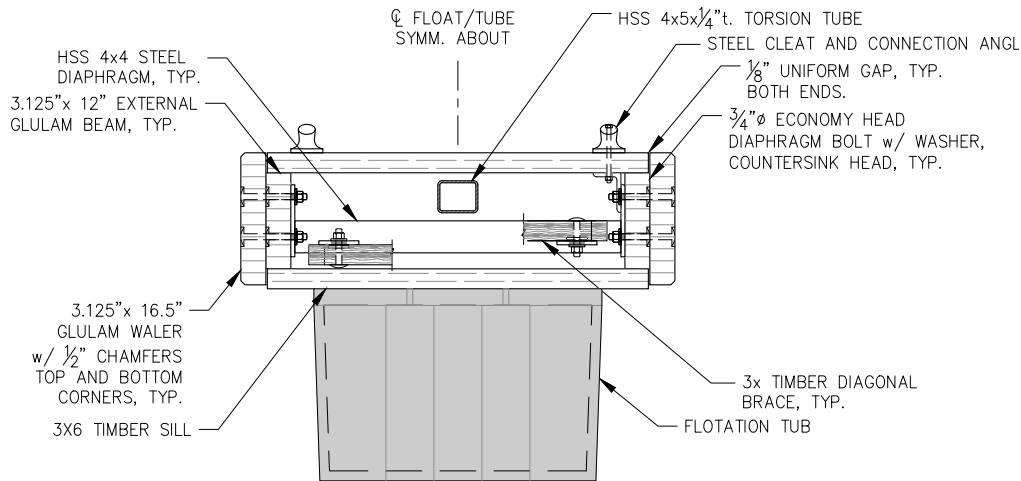
SECTION AT BALLAST TANK - 8' MODULE

NOTE: DETAILS NOT SHOWN SIMILAR TO 8' SECTION AT FLOTATION BILLET AND FLOTATION TUB.



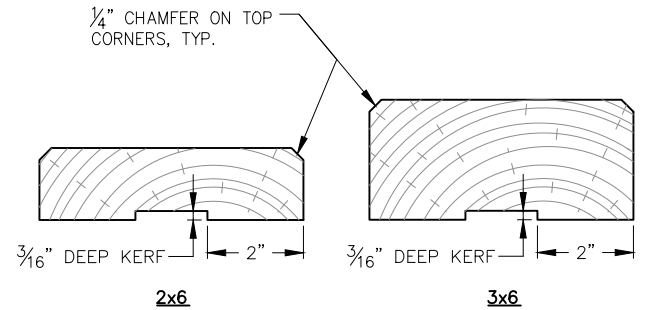
SECTION AT FLOTATION TUB - 6' MODULE

NOTE: DETAILS NOT SHOWN SIMILAR TO 6' BALLAST TANK SECTION.



SECTION AT FLOTATION TUB - 4' MODULE

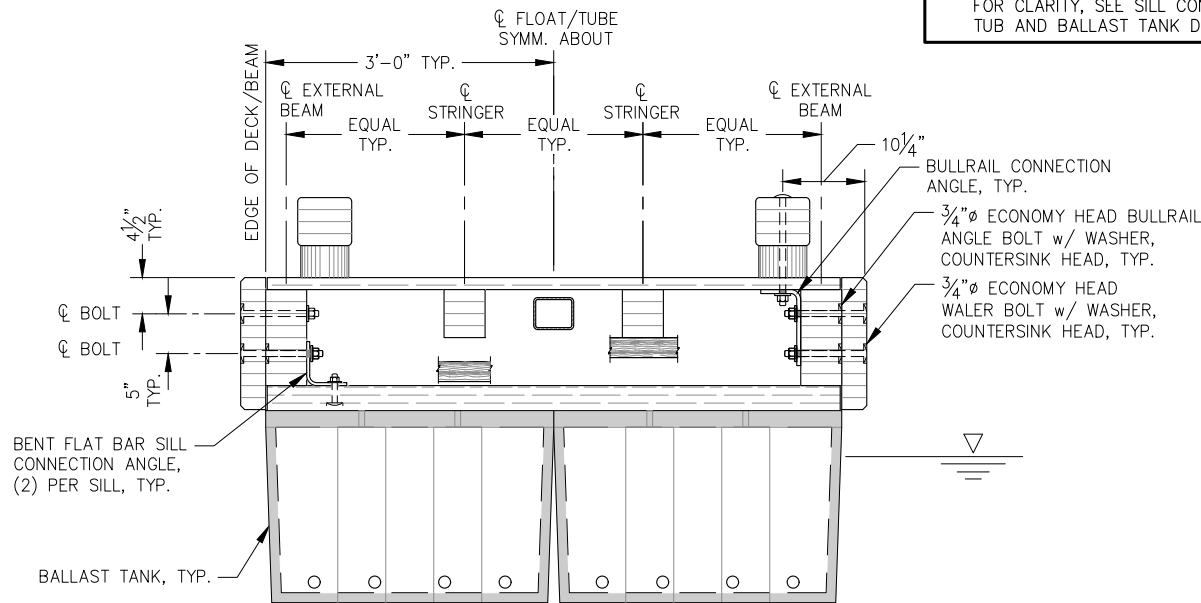
NOTE: DETAILS NOT SHOWN SIMILAR TO 4' BALLAST TANK SECTION.



DECKING PROFILES

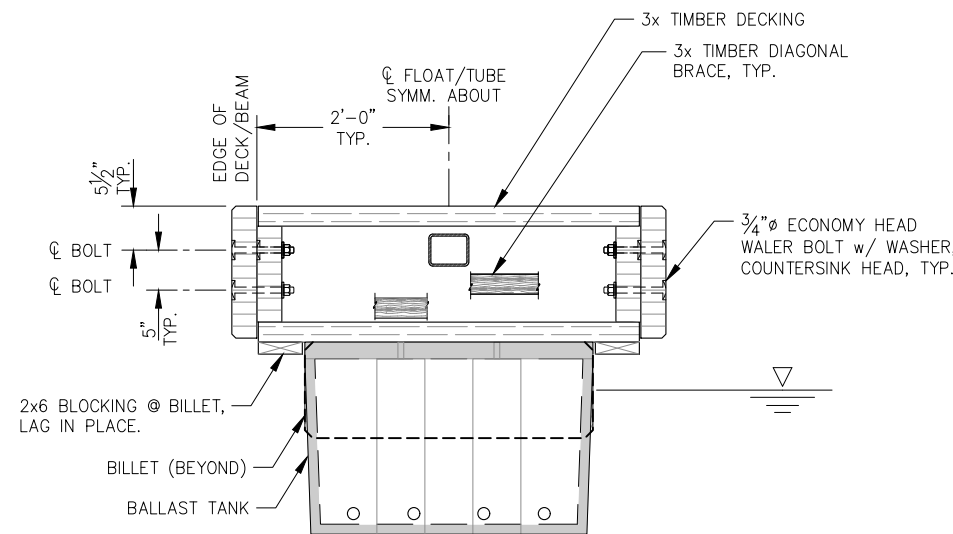
- NOTES:
- SEE SPECIFICATIONS FOR COMPLETE DECKING REQUIREMENTS.
 - NO DECKING SHALL BE INCORPORATED INTO THE WORK THAT FALLS OUTSIDE OF THE SPECIFIED GRADING.
 - NO DECKING WITH WANE ON THE TOP OF SURFACE SHALL BE INCORPORATED IN THE WORK.
 - FASTEN 2x DECKING TO GLULAM w/ 9 GAUGE 16d HOT DIP GALVANIZED SPIRAL SHANK NAILS AS SHOWN IN PLAN.
 - FASTEN 3x DECKING TO GLULAM w/ 8 GAUGE 40d HOT DIP GALVANIZED SPIRAL SHANK NAILS AS SHOWN IN PLAN.
 - PREDRILL ALL DECKING. SIZE HOLE AS REQUIRED PER AITC TO PREVENT SPLITTING.

- NOTES:
- SILL CONNECTION ANGLES AND TUB/TANK CONNECTION HARDWARE NOT SHOWN IN SECTIONS FOR CLARITY, SEE SILL CONNECTION, FLOTATION TUB AND BALLAST TANK DETAILS.



SECTION AT BALLAST TANK - 6' MODULE

NOTE: DETAILS NOT SHOWN SIMILAR TO 6' FLOTATION TUB SECTION, SILL CONNECTION ANGLE AND BULLRAIL CONNECTION ANGLE OMITTED FOR CLARITY.



SECTION AT BALLAST TANK - 4' MODULE

NOTE: DETAILS NOT SHOWN SIMILAR TO 4' FLOTATION TUB SECTION.

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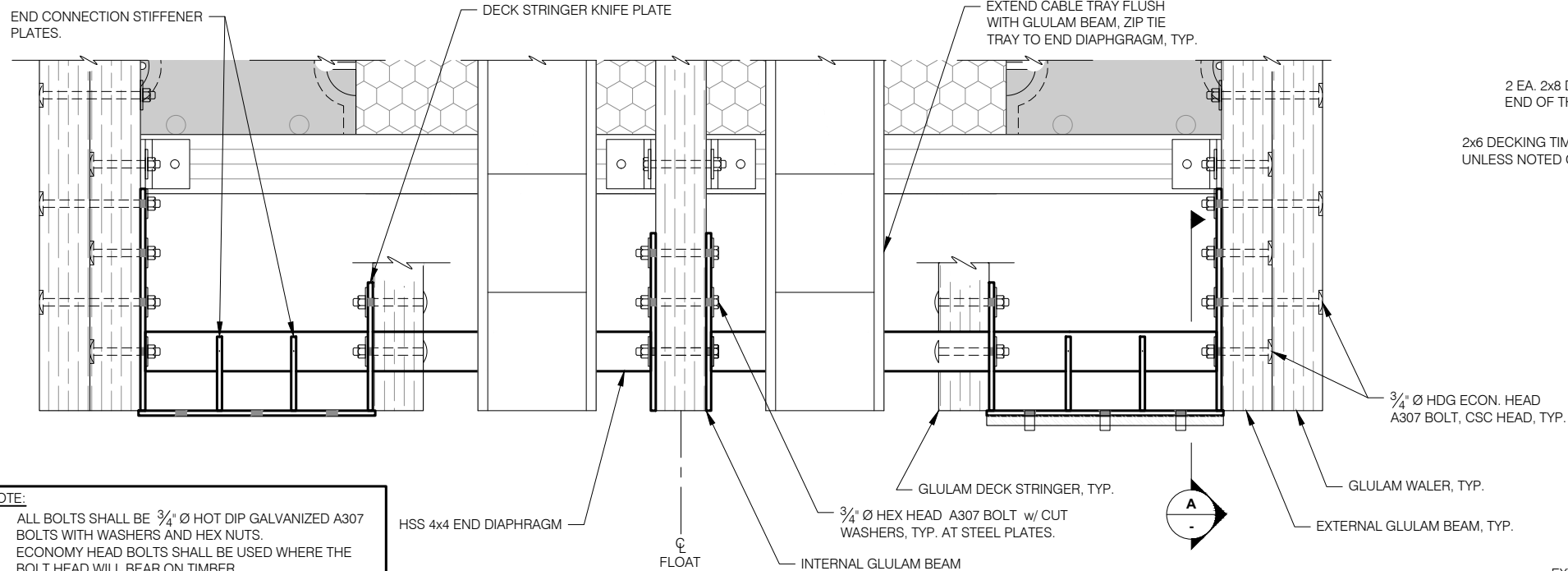
CITY AND BOROUGH OF JUNEAU
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JUNEAU, ALASKA 99801
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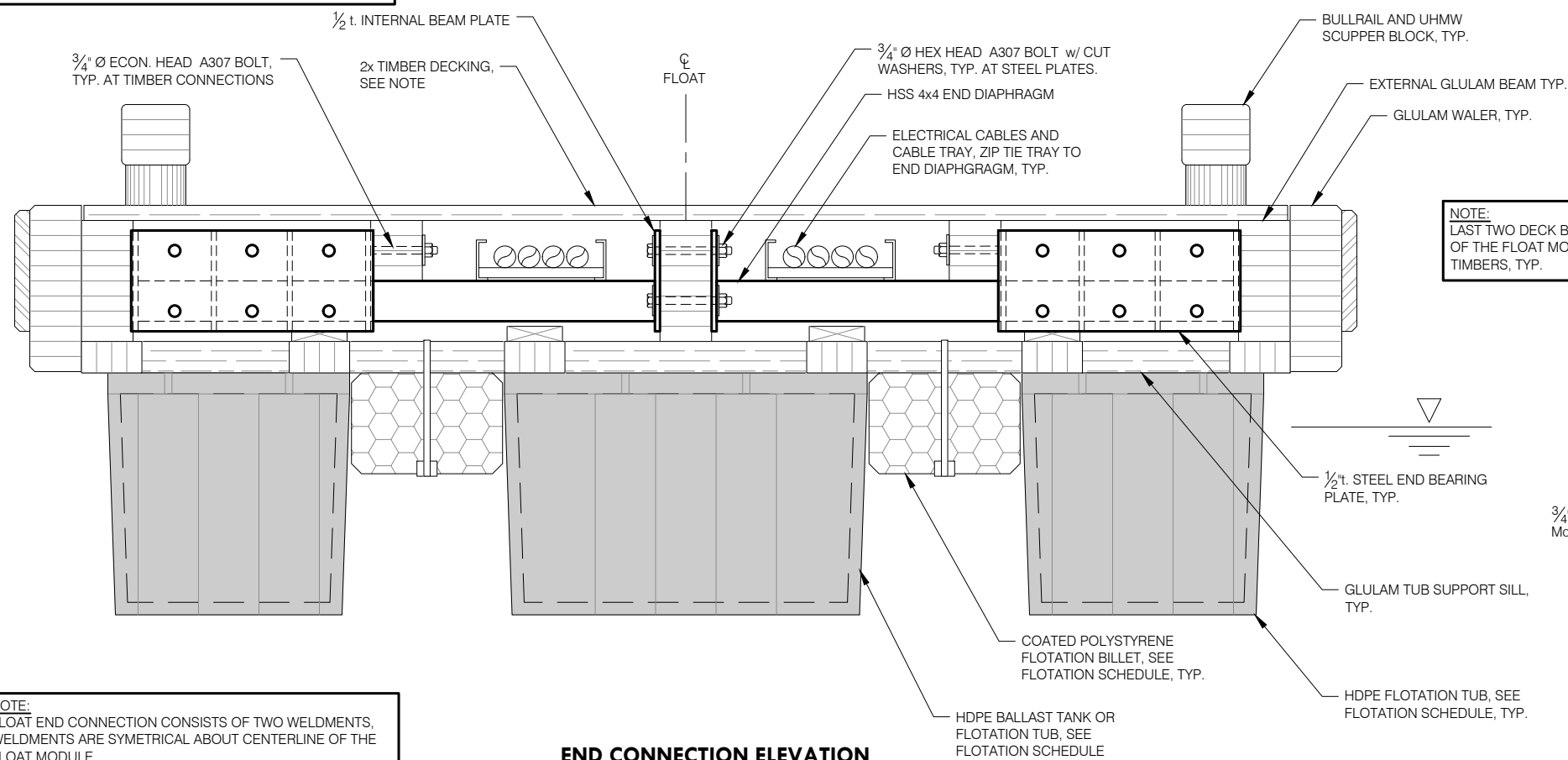
TYPICAL FLOAT SECTIONS

AURORA HARBOR REBUILD - PHASE IV

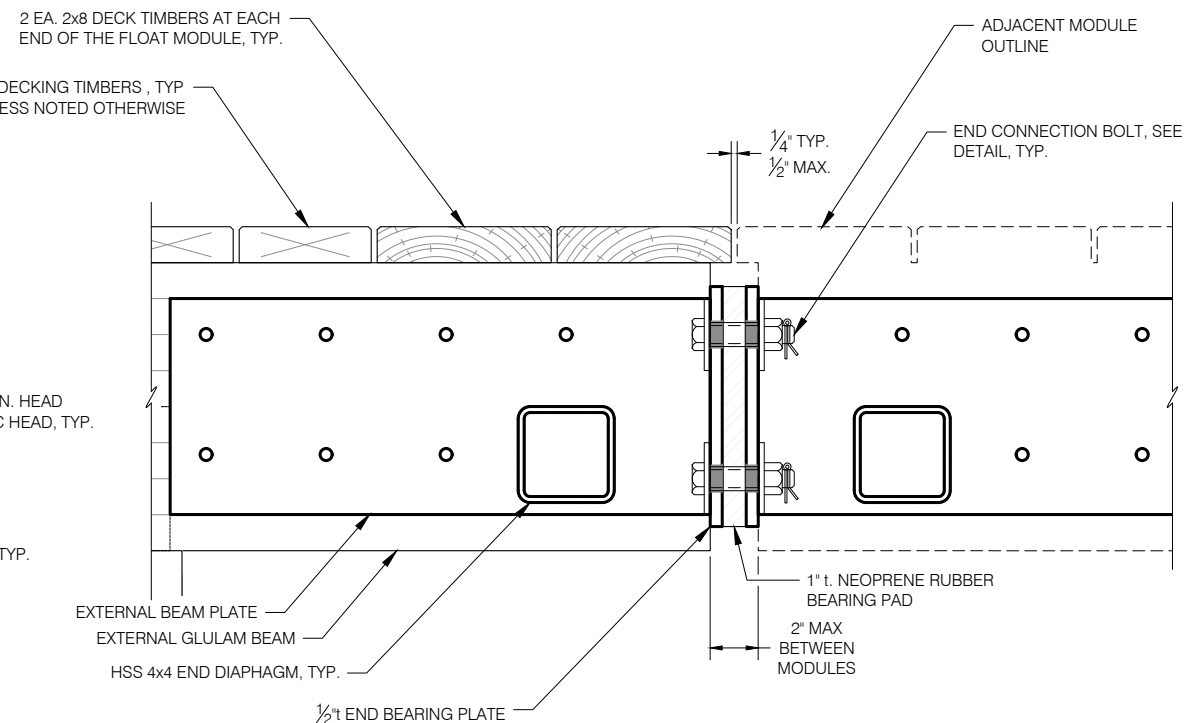
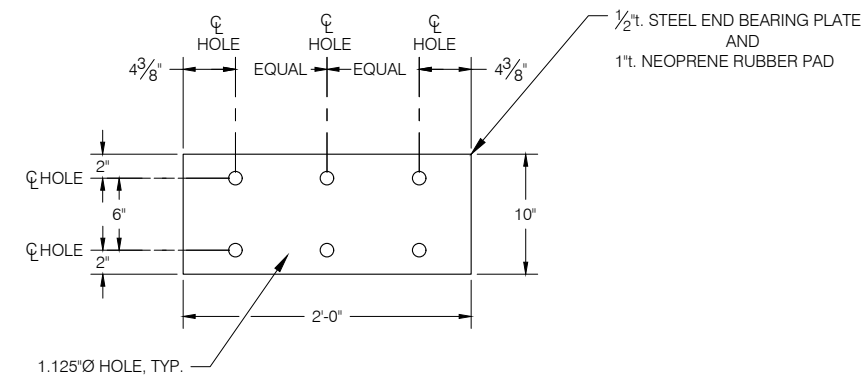
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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**NOTE:**

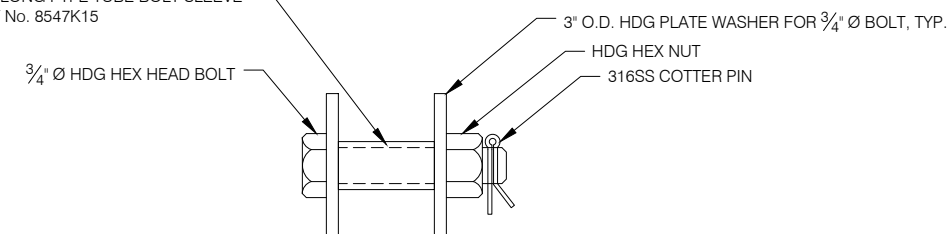
- ALL BOLTS SHALL BE 3/4" Ø HOT DIP GALVANIZED A307 BOLTS WITH WASHERS AND HEX NUTS.
- ECONOMY HEAD BOLTS SHALL BE USED WHERE THE BOLT HEAD WILL BEAR ON TIMBER.
- HEX HEAD BOLTS SHALL BE USED WHERE THE BOLT HEAD WILL BEAR ON STEEL.
- HEX NUTS SHALL BE INSTALLED WITH CUT WASHERS, TO PROTECT GALVANIZED COATING DURING INSTALLATION.

END CONNECTION PLAN**NOTE:**

LAST TWO DECK BOARDS AT EACH END OF THE FLOAT MODULE SHALL BE 2x8 TIMBERS, TYP.

END CONNECTION ELEVATION**END CONNECTION ASSEMBLY
(SECTION A THIS SHEET)****END BEARING PLATE AND BEARING PAD**

3/4" Ø I.D. x 1" Ø O.D. x 2" LONG PTFE TUBE BOLT SLEEVE
McMASTER-CARR PART No. 8547K15

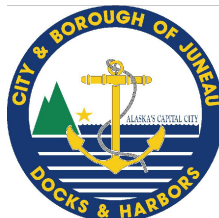
**END CONNECTION BOLT DETAIL**

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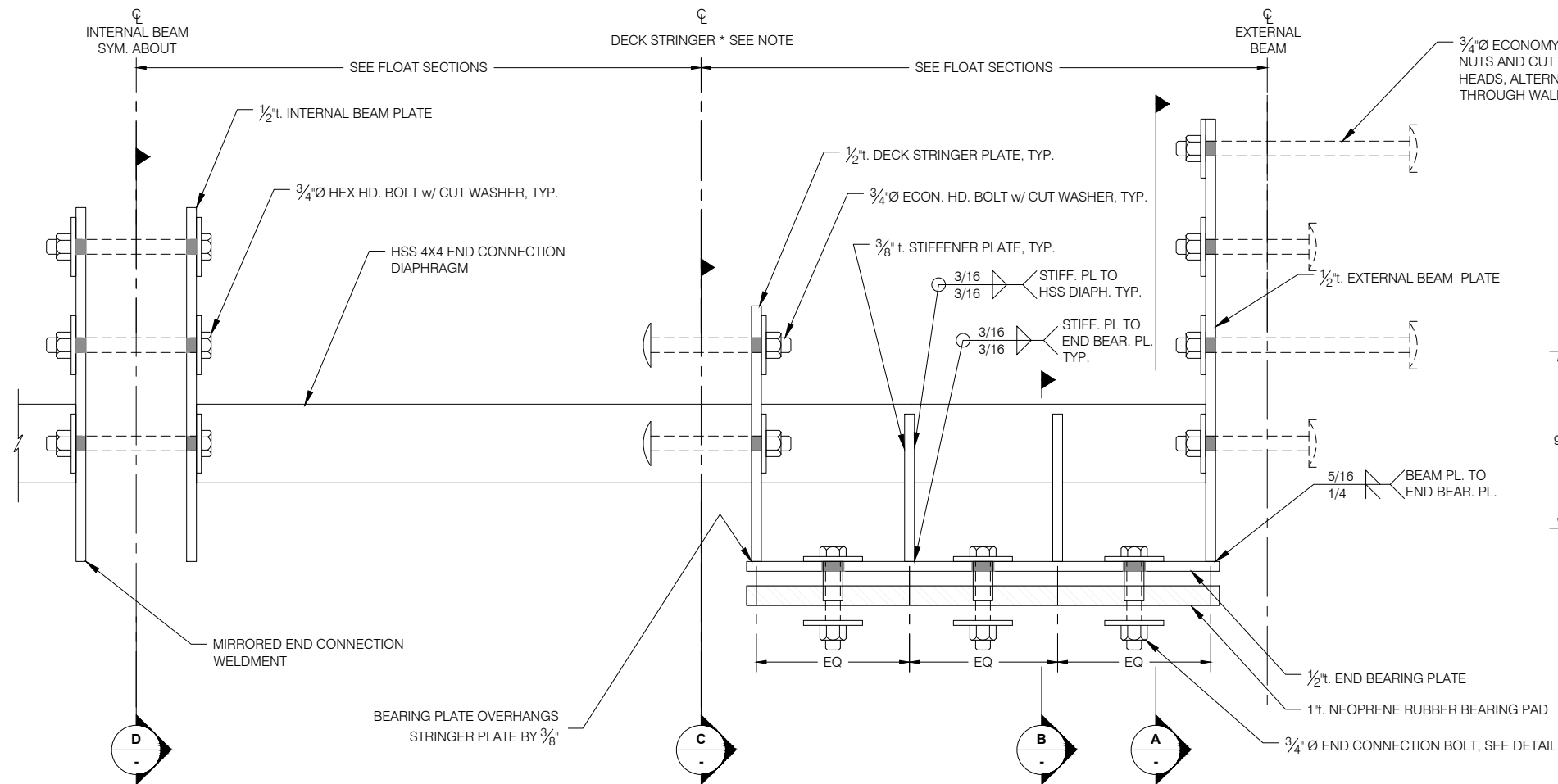
**END CONNECTION PLANS & ELEVATIONS**

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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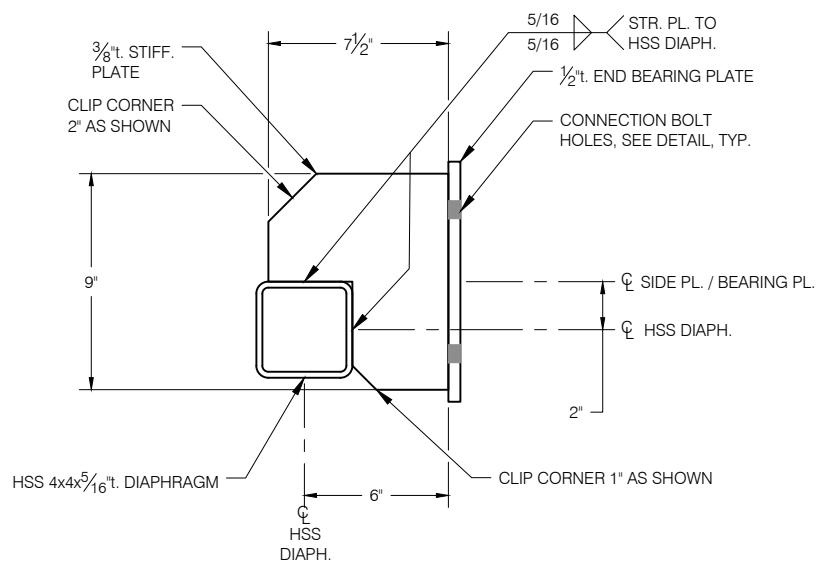
F22

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

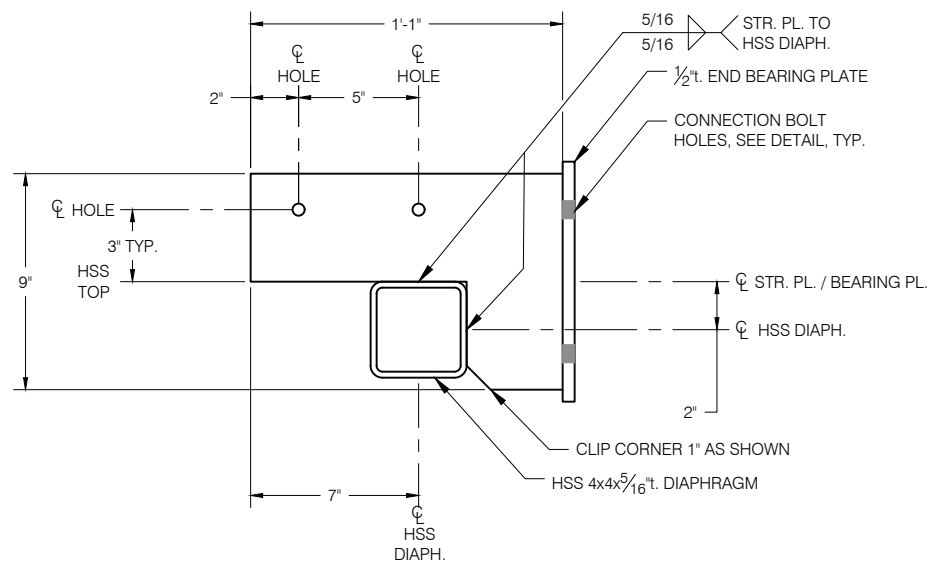


END CONNECTION WELDMENT PLAN

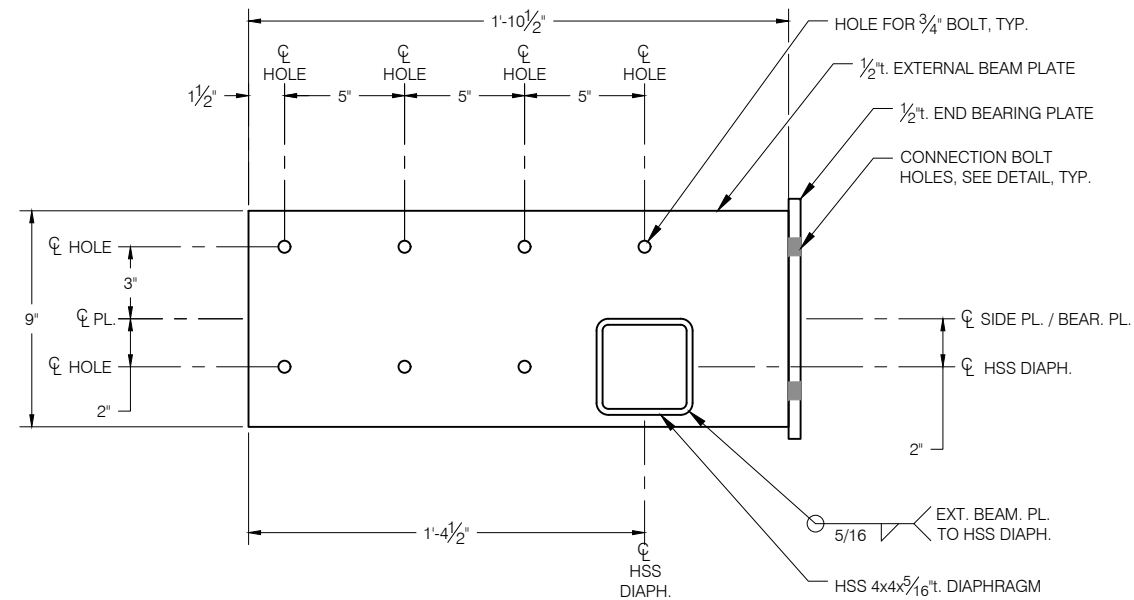
(TWO WELDMENTS PER END OF FLOAT, MIRROR WELDMENT FOR OTHER HAND)



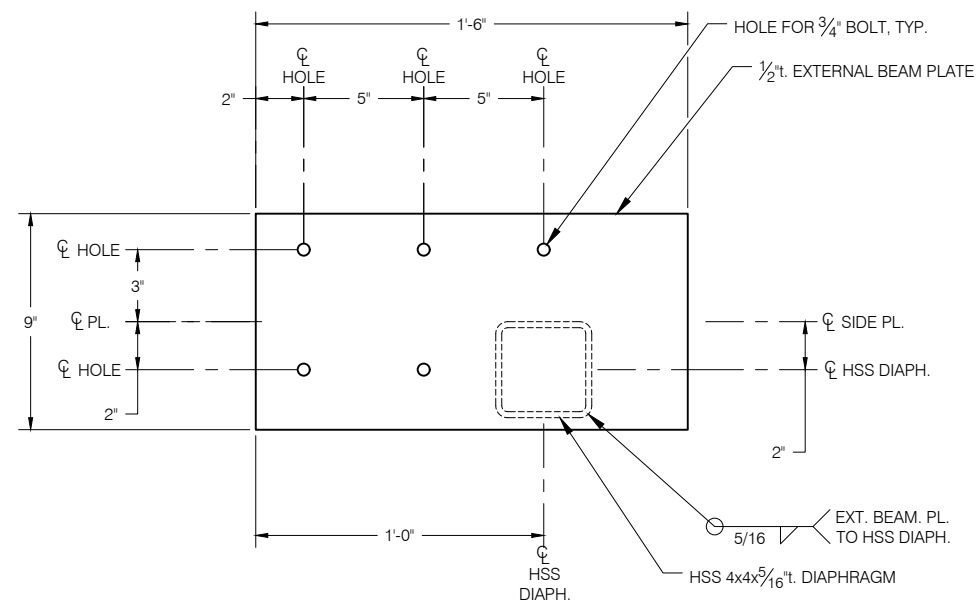
SECTION B - STIFFENER PLATE



SECTION C - DECK STRINGER PLATE



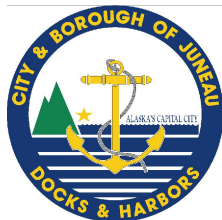
SECTION A - EXTERNAL BEAM PLATE



SECTION D - INTERNAL BEAM PLATE

NOTE:
* 8 FOOT WIDE MODULES UTILIZE SIMILAR END CONNECTION. USE THESE DETAILS FOR END BEARING PLATE, BEAM PLATE AND STRINGER PLATE SIZE AND LOCATION.

FOR 8 FOOT WIDE MODULE END CONNECTION, HSS DIAPHRAGM IS 1'-0" SHORTER AND THE DECK STRINGER LANDS ON THE OPPOSITE SIDE OF THE DECK STRINGER PLATE AS SHOWN IN THESE DETAILS.



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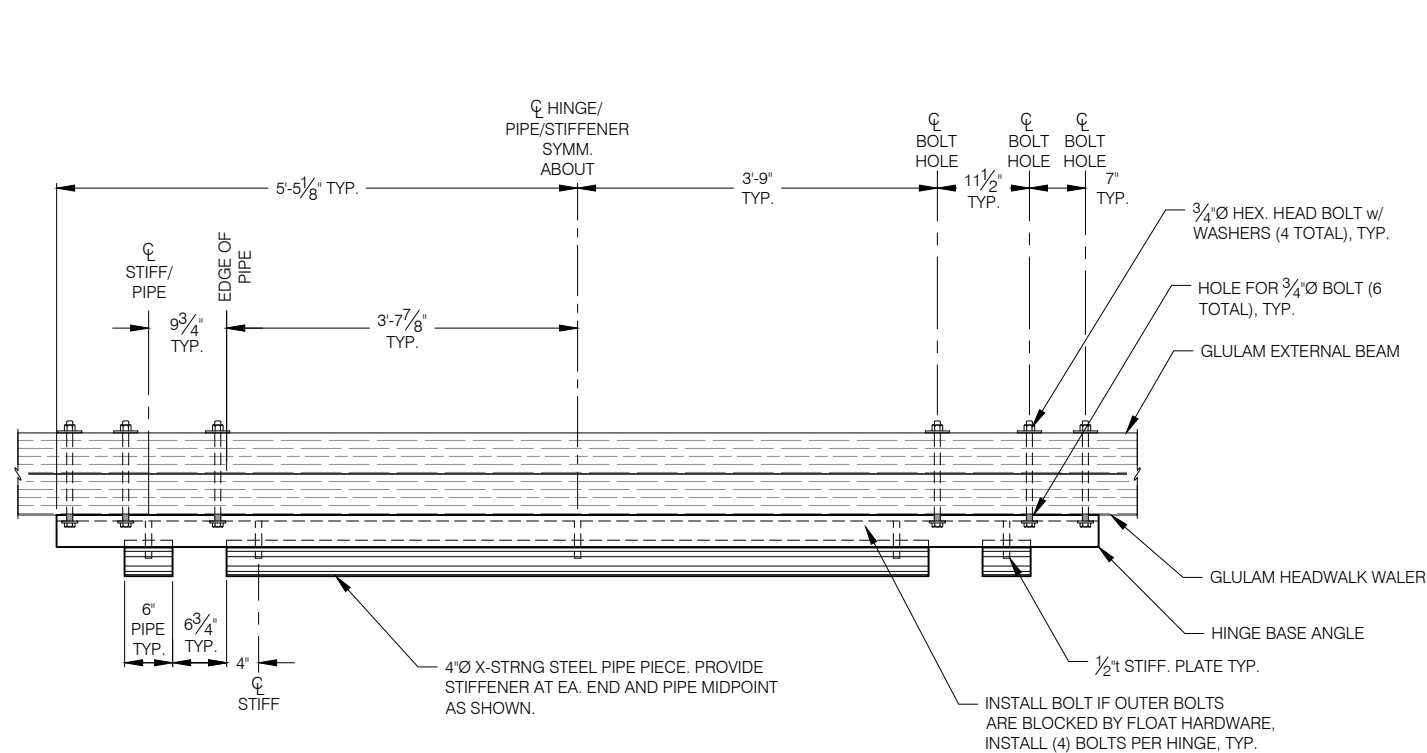
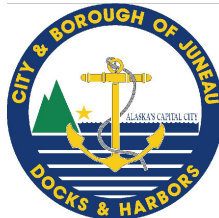


END CONNECTION DETAILS

AURORA HARBOR REBUILD - PHASE IV

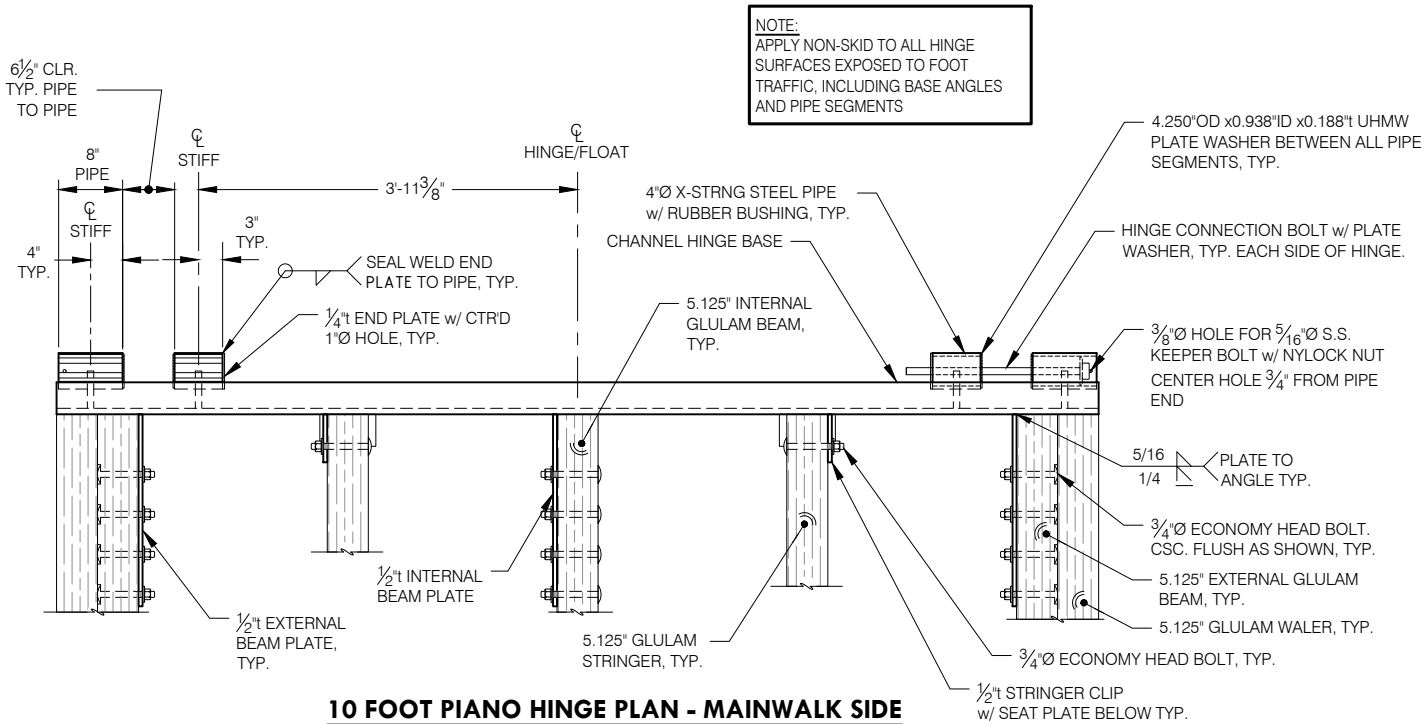
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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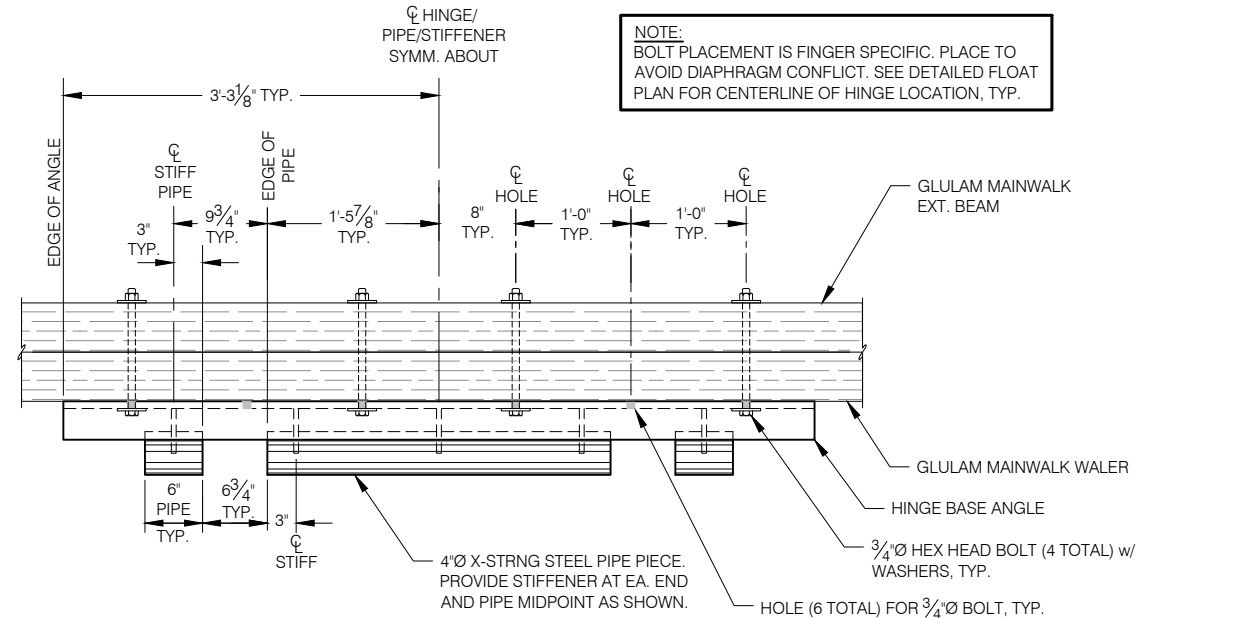


10 FOOT PIANO HINGE PLAN - HEADWALK & TEE FLOAT SIDE

NOTE:
OMIT BEAM PLATES FOR EXISTING
MAINWALK FLOAT H PIANO HINGE, SEE
F26.

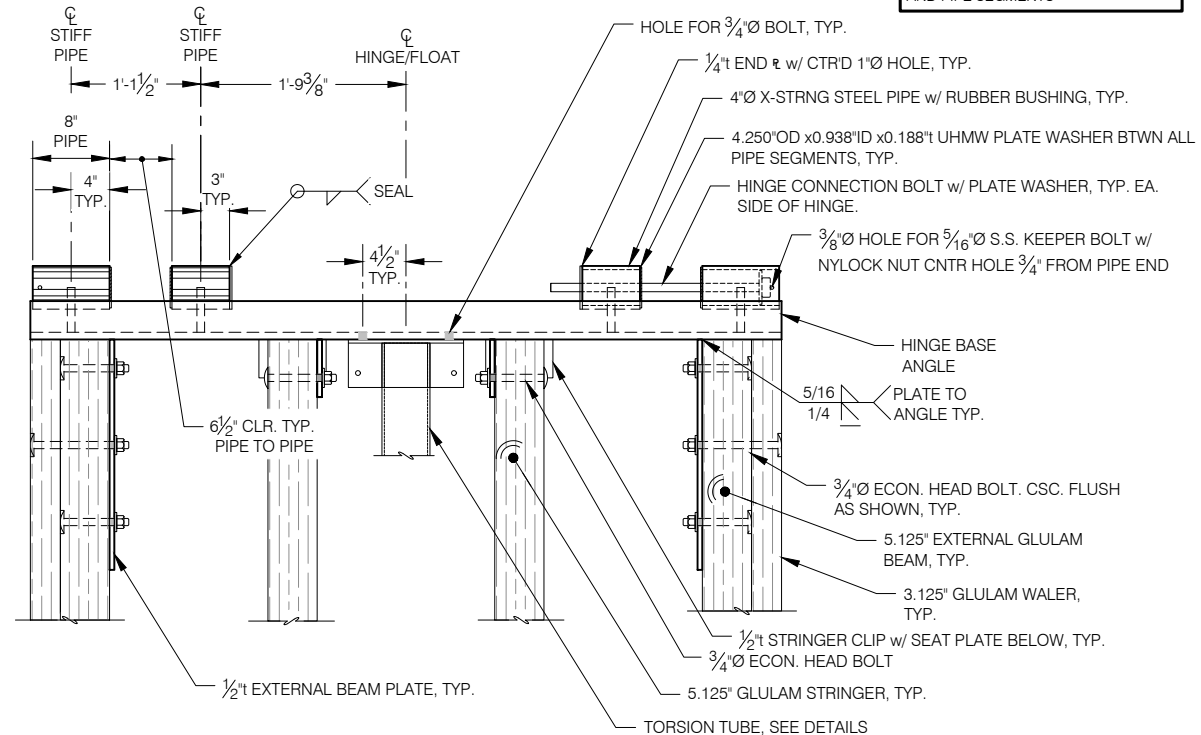


10 FOOT PIANO HINGE PLAN - MAINWALK SIDE



6 FOOT PIANO HINGE PLAN - HEADWALK SIDE

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



6 FOOT PIANO HINGE PLAN - FINGER SIDE

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			MDS	CU	CU

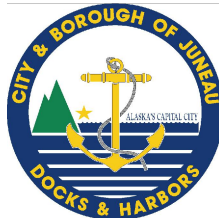
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10' & 6' PIANO HINGE PLANS
AURORA HARBOR REBUILD - PHASE IV

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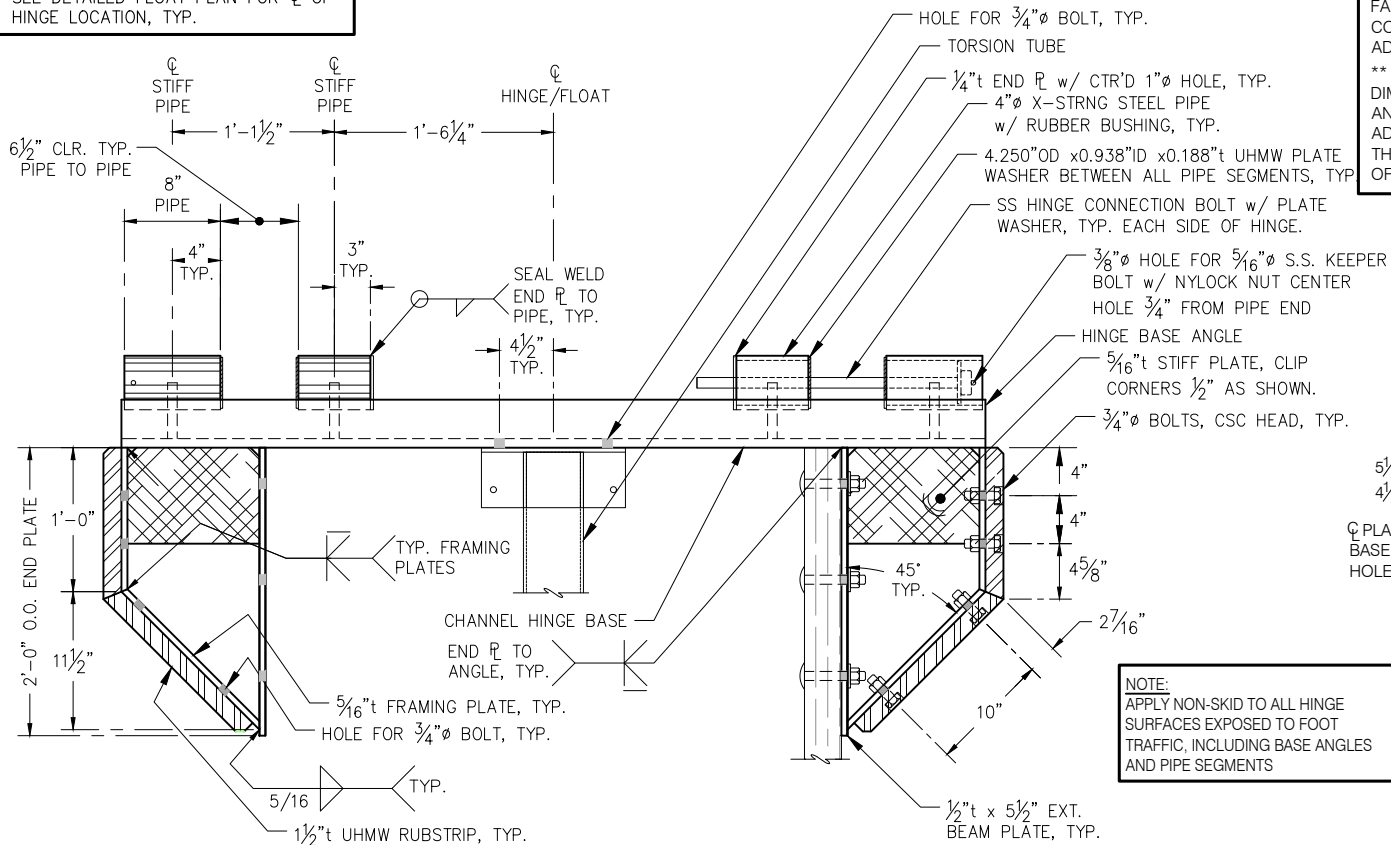


4' PIANO HINGE PLAN & HINGE SECTIONS

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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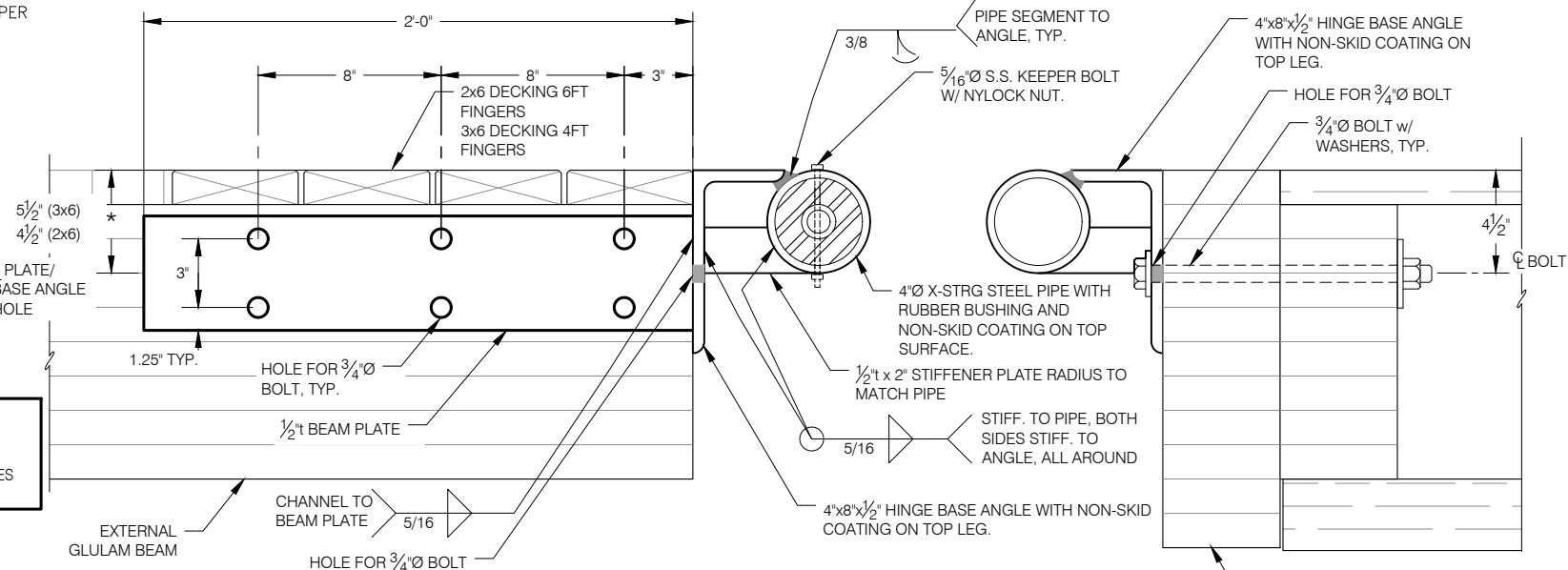
F25



4' HINGE WELDMENT

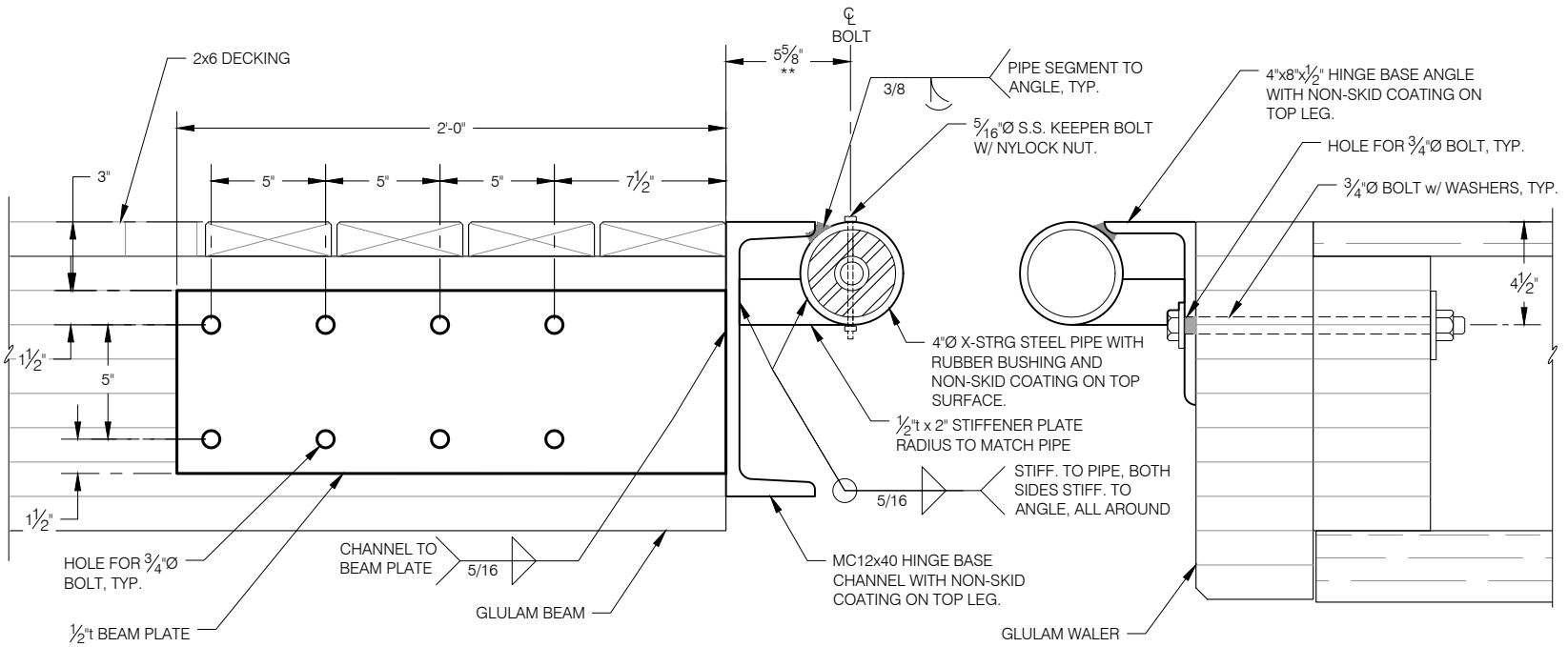
NOTES:
FABRICATOR TO DRY-FIT HINGE ASSEMBLIES PRIOR TO APPLICATION OF COATINGS TO ENSURE HINGE MOVES FREELY, DOES NOT BIND AND HAS ADEQUATE GAPS BETWEEN PIPE SEGMENTS OF EQUAL SIZE.
** DIMENSION ASSUMED TO BE MINIMUM OF 5 5/8". FABRICATOR SHALL VERIFY DIMENSION REQUIRED FOR TOP OF PIPE SEGMENT TO BE 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.

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



6' PIANO HINGE SECTION

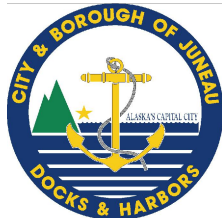
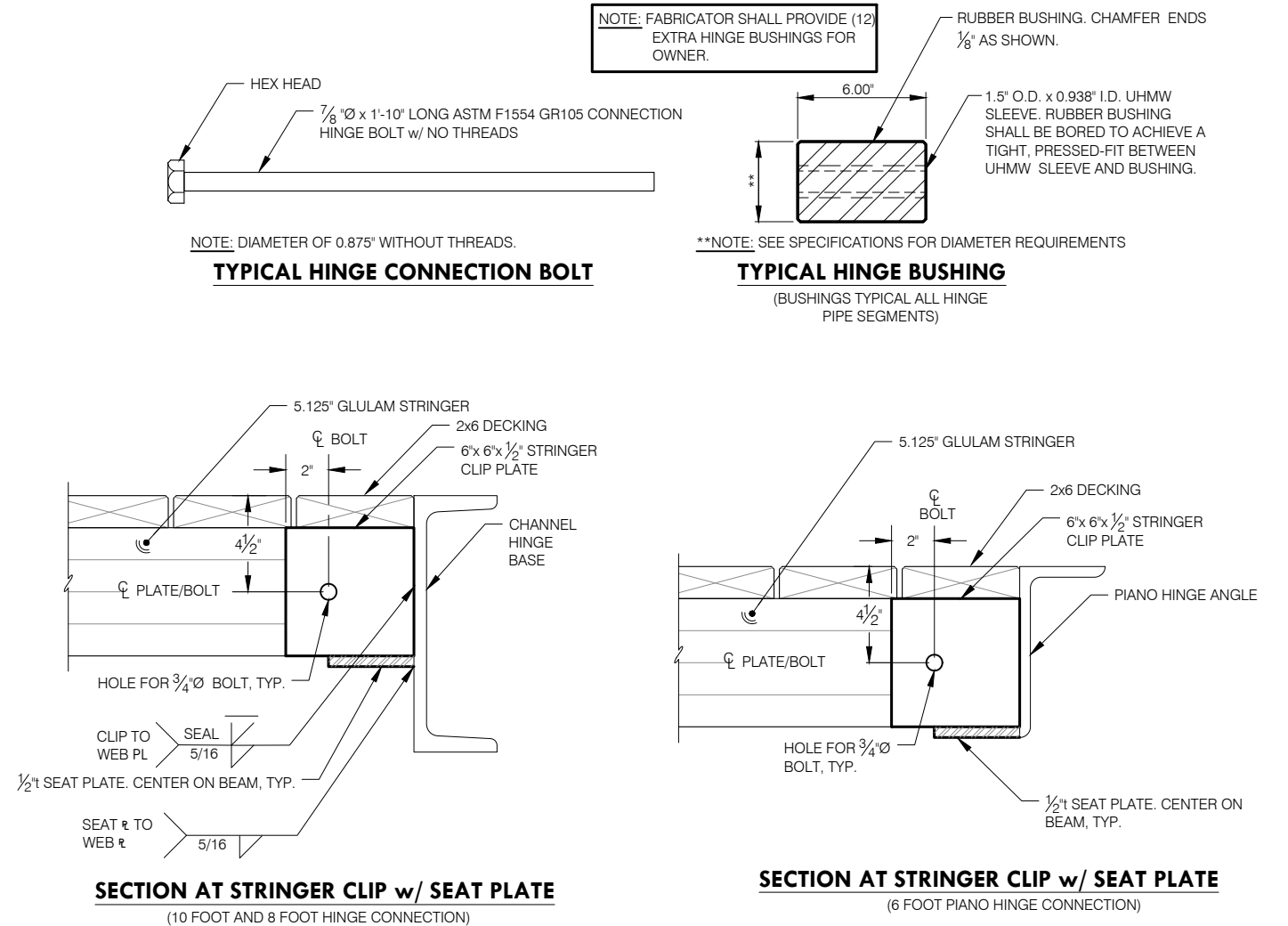
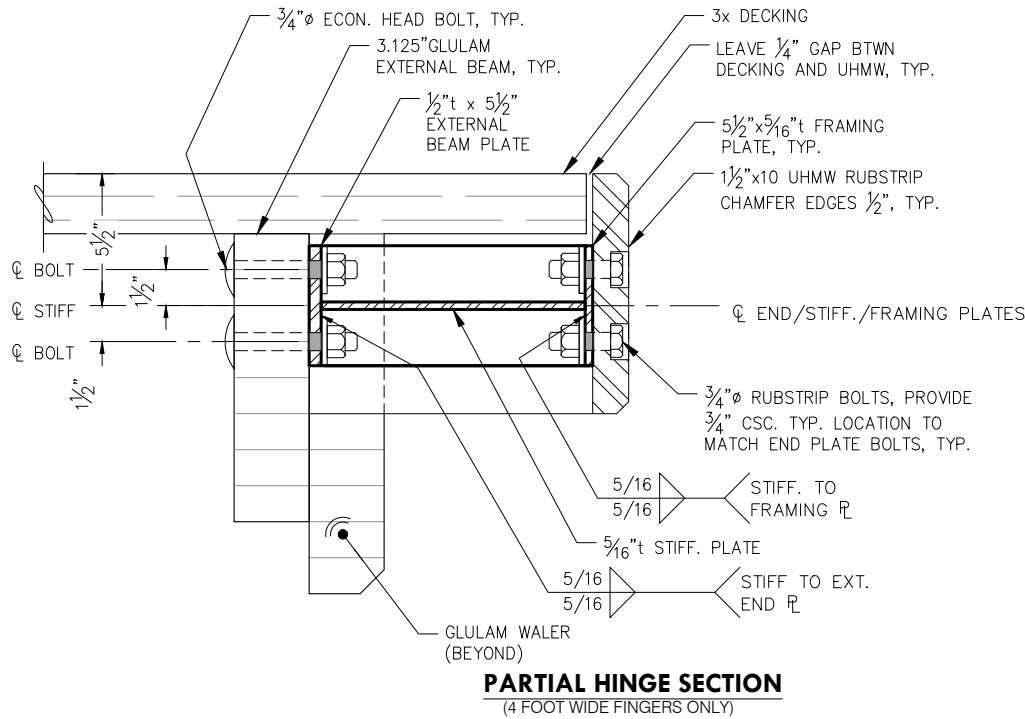
(NOTE: HINGE HALVES SEPARATED FOR CLARITY, SEE PLAN VIEW)
(4' HINGE SIMILAR)



10' PIANO HINGE SECTION

(NOTE: HINGE HALVES SEPARATED FOR CLARITY, SEE PLAN VIEW)

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

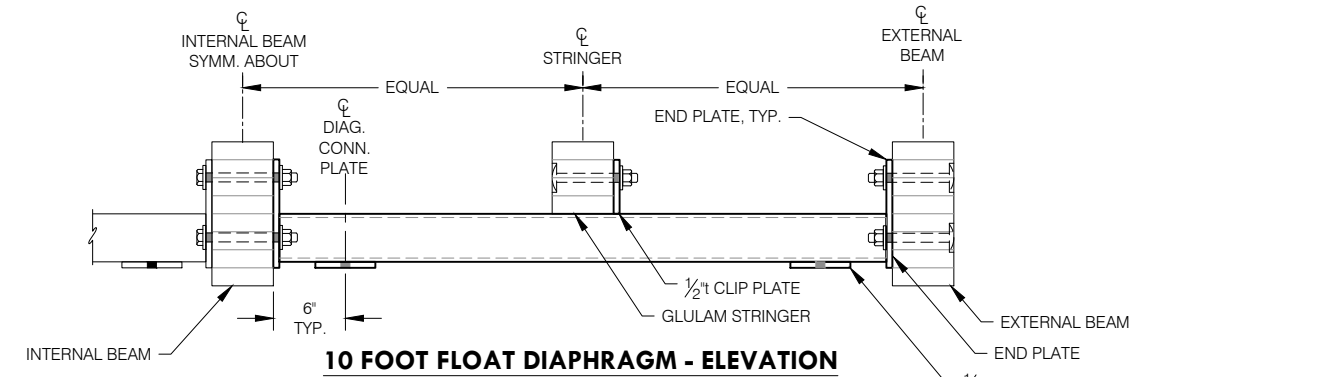
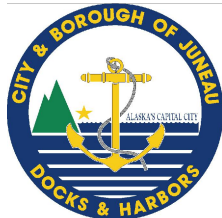


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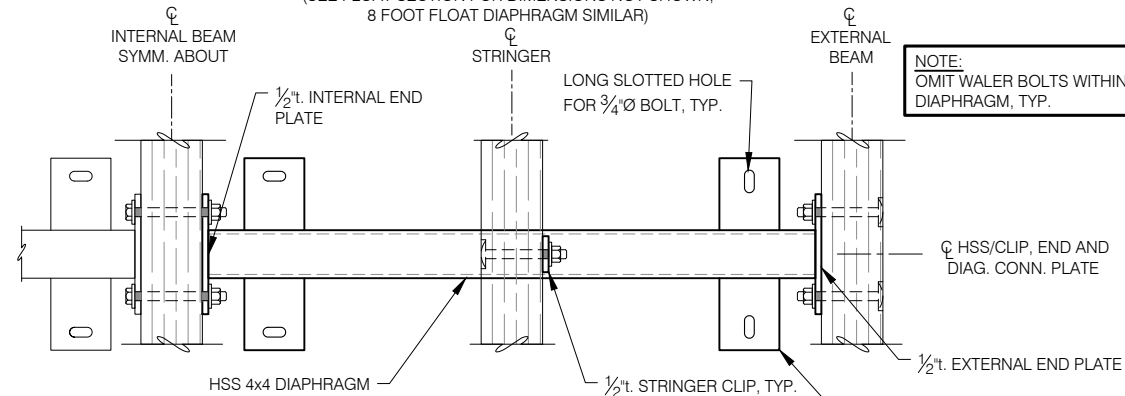


PIANO HINGE DETAILS			
AURORA HARBOR REBUILD - PHASE IV			
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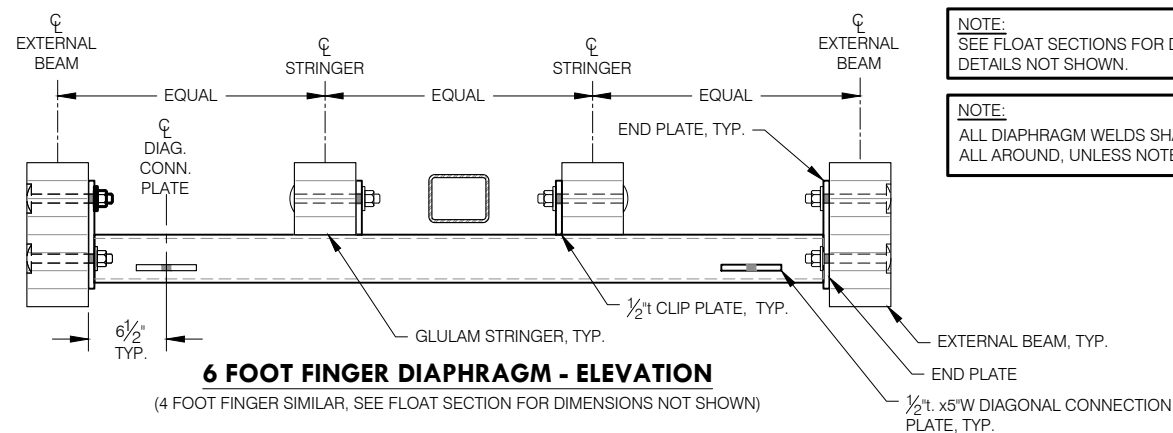
10 FOOT FLOAT DIAPHRAGM - ELEVATION

(SEE FLOAT SECTION FOR DIMENSIONS NOT SHOWN, 8 FOOT FLOAT DIAPHRAGM SIMILAR)



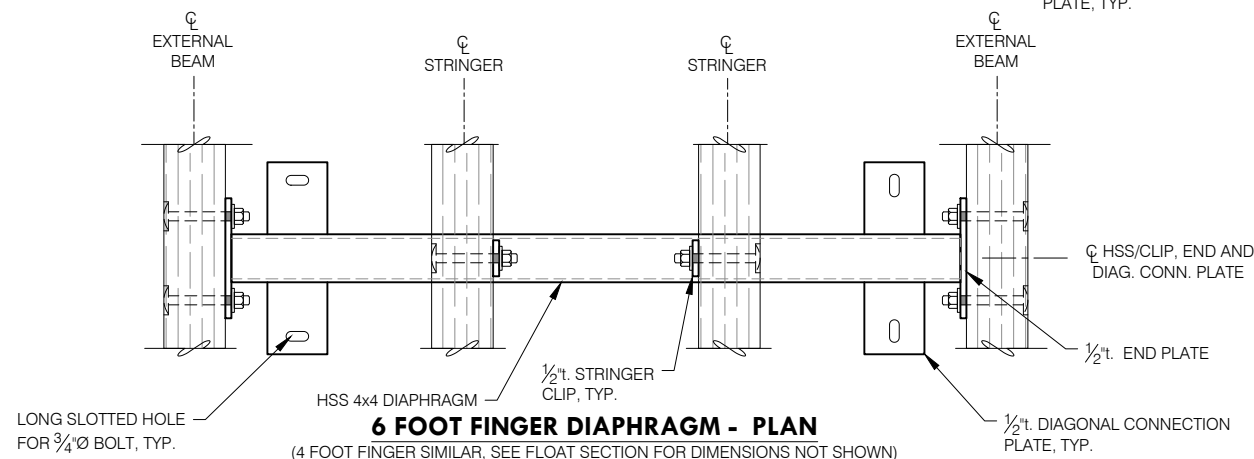
10 FOOT FLOAT DIAPHRAGM - PLAN

(SEE FLOAT SECTION FOR DIMENSIONS NOT SHOWN, 8 FOOT FLOAT DIAPHRAGM SIMILAR)



6 FOOT FINGER DIAPHRAGM - ELEVATION

(4 FOOT FINGER SIMILAR, SEE FLOAT SECTION FOR DIMENSIONS NOT SHOWN)



6 FOOT FINGER DIAPHRAGM - PLAN

(4 FOOT FINGER SIMILAR, SEE FLOAT SECTION FOR DIMENSIONS NOT SHOWN)

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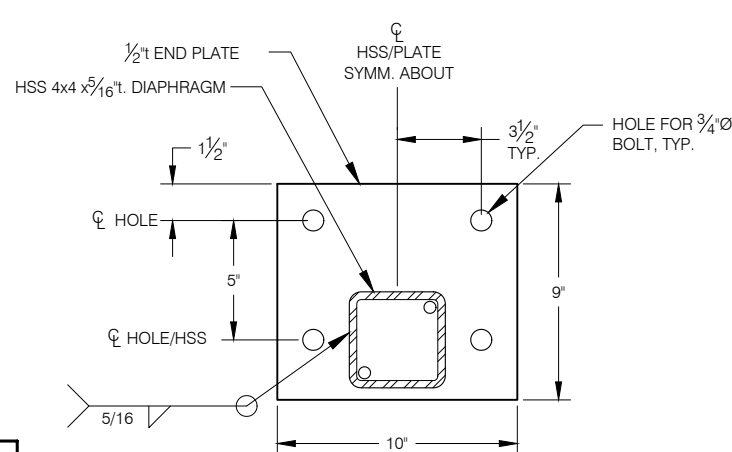


DIAPHRAGM DETAILS

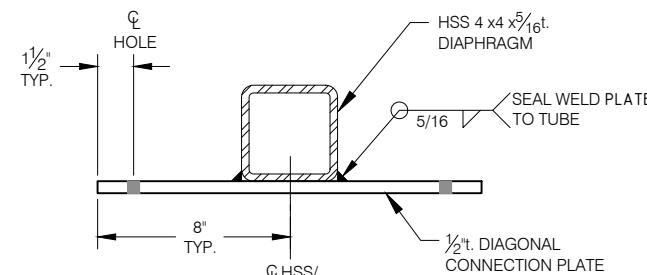
AURORA HARBOR REBUILD - PHASE IV

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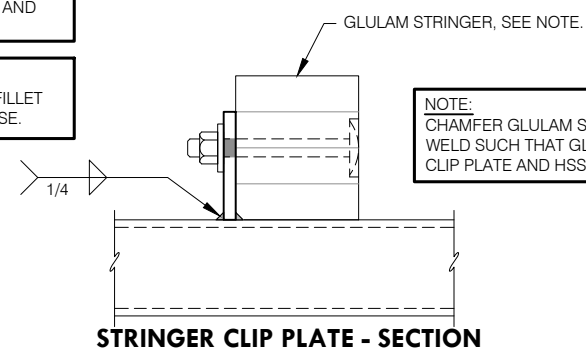


END PLATE - ELEVATION

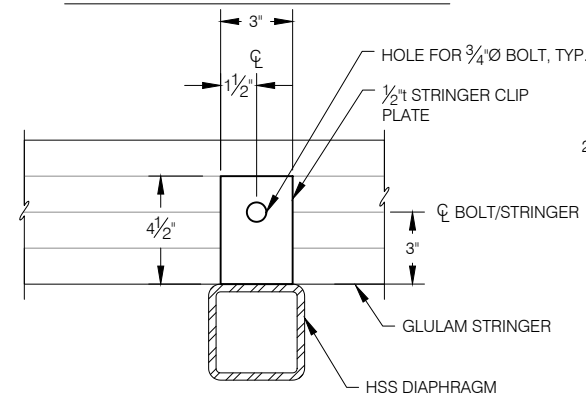


DIAPHRAGM SECTION AT DIAG. CONN. PLATE

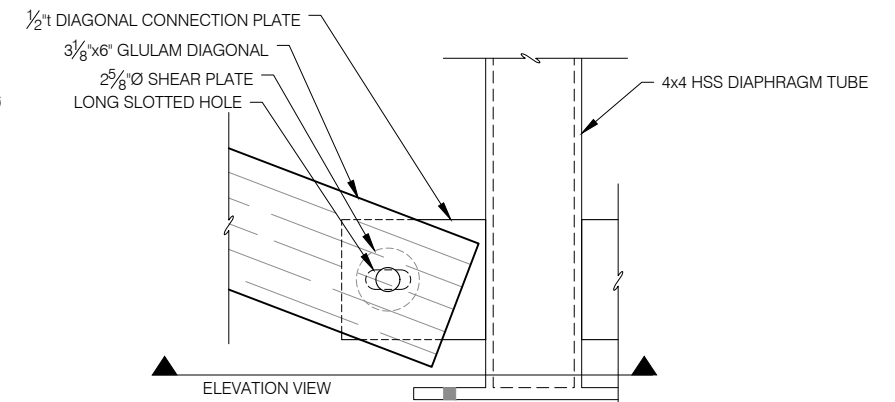
(TYPICAL FOR 10 & 8 FOOT FLOAT DIAPHRAGMS)



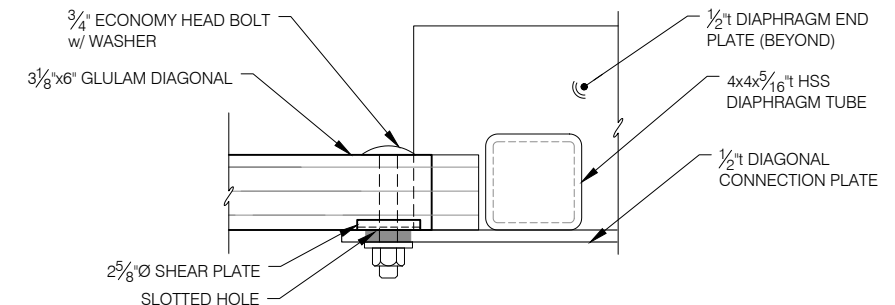
STRINGER CLIP PLATE - SECTION



STRINGER CLIP PLATE - ELEVATION

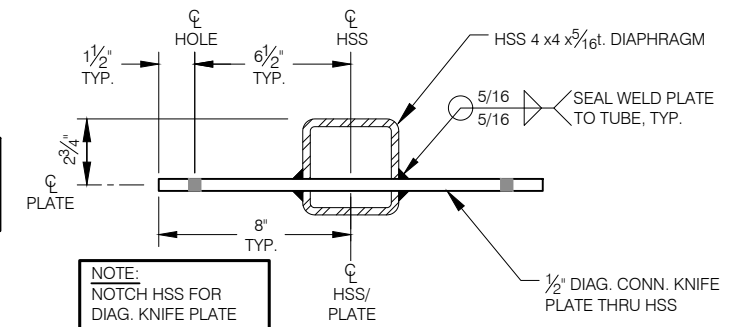


DIAPHRAGM - DIAG. BRACING CONN. DETAIL - PLAN



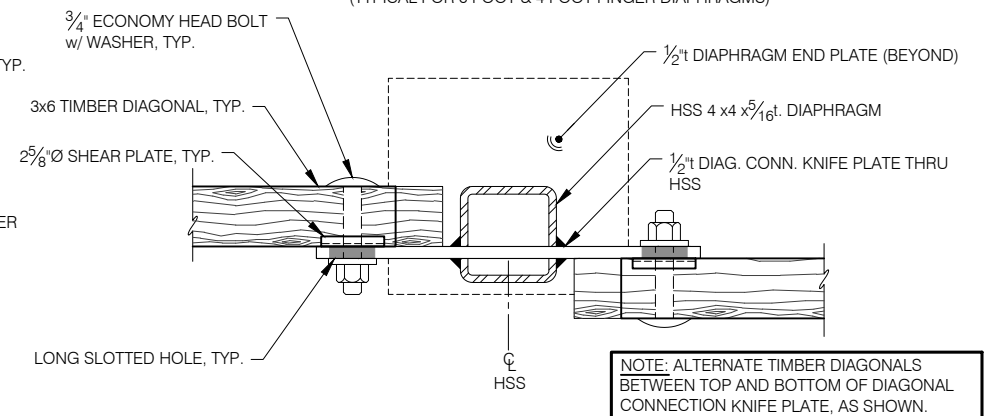
DIAPHRAGM - DIAG. BRACING CONN. DETAIL - ELEV.

(TYPICAL FOR 10 & 8 FOOT FLOAT DIAPHRAGMS)



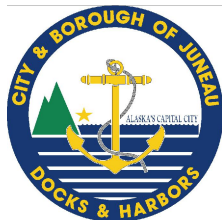
DIAPHRAGM SECTION AT DIAG. CONN. PLATE

(TYPICAL FOR 6 FOOT & 4 FOOT FINGER DIAPHRAGMS)



DIAPHRAGM - DIAG. BRACING CONN. DETAIL

(TYPICAL FOR 6 FOOT & 4 FOOT FINGER DIAPHRAGMS)



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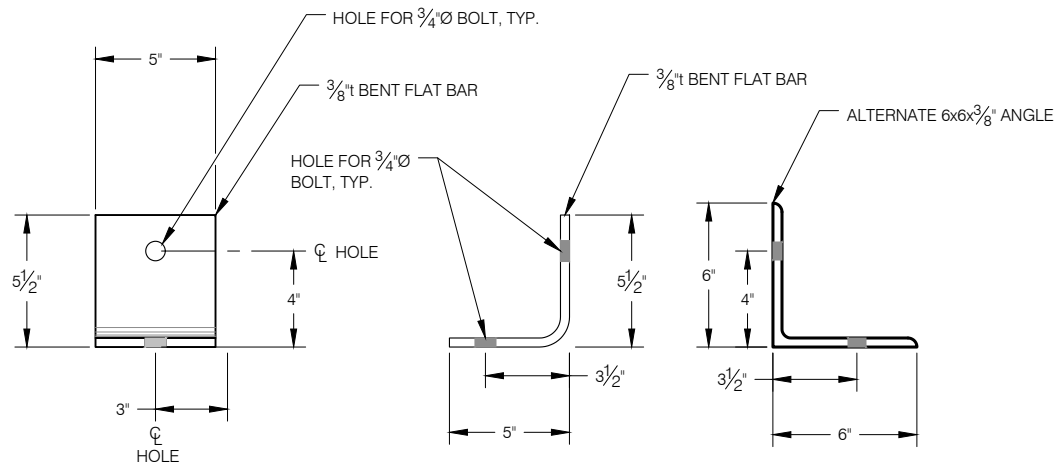


MISC. FLOAT DETAILS

AURORA HARBOR REBUILD - PHASE IV

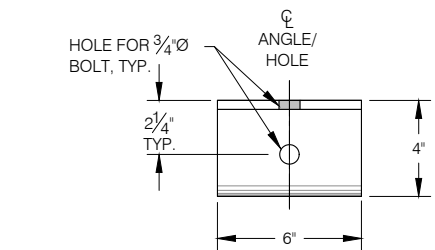
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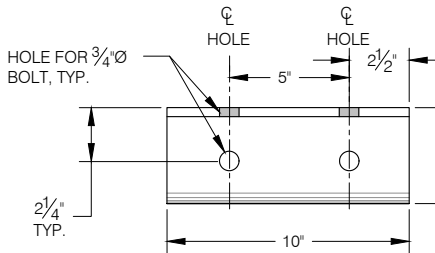


BENT FLAT BAR SILL CONNECTION ANGLE

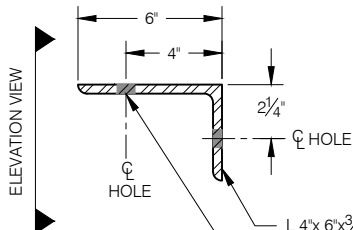
(CONTRACTOR MAY UTILIZE 6x6x 3/8 inch ANGLE FOR THE SILL CONNECTION ANGLE INSTEAD OF THE BENT BAR)



ELEVATION AT STRINGER

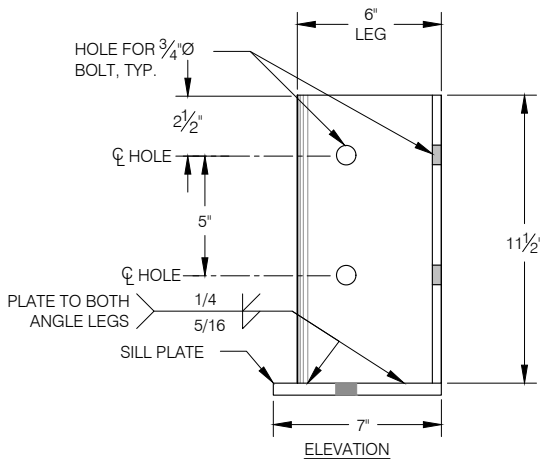


ELEVATION AT BEAM

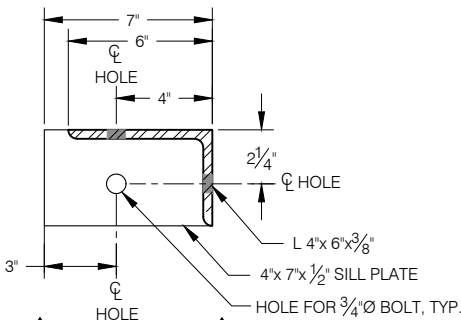


SECTION

HOLE FOR 3/4 inch BOLT, TYP.



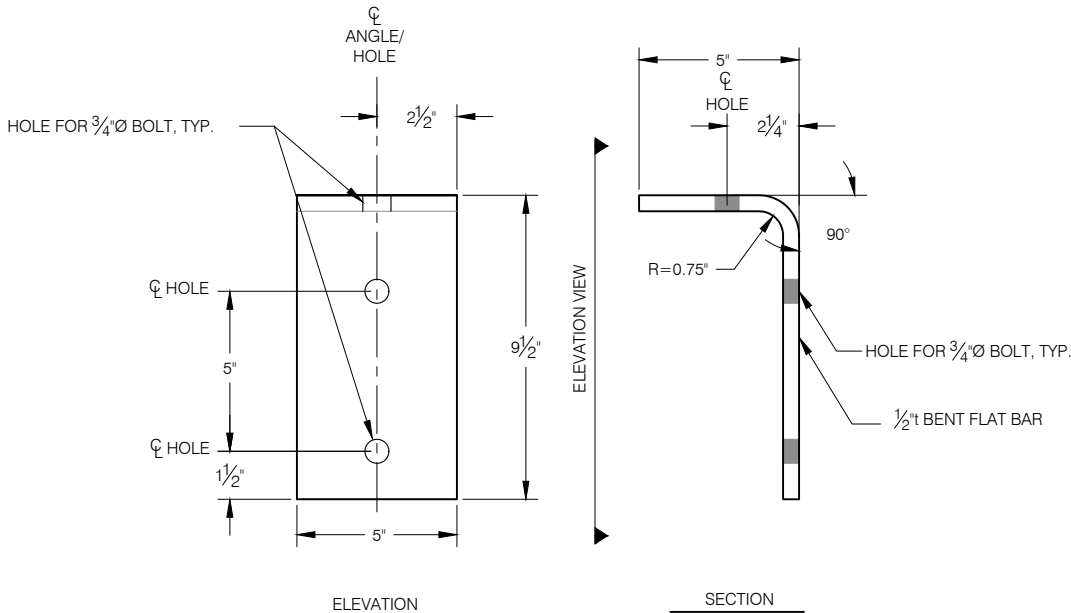
NOTE:
EACH FLOAT REQUIRES LEFT
AND RIGHT VERSIONS OF THIS
ASSEMBLY. MIRROR DETAIL
FOR OPPOSITE HAND.



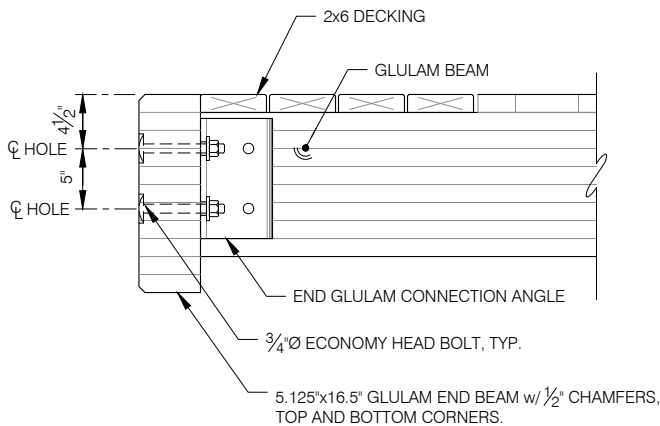
SECTION

END GLULAM CONNECTION ANGLE WITH SILL PLATE

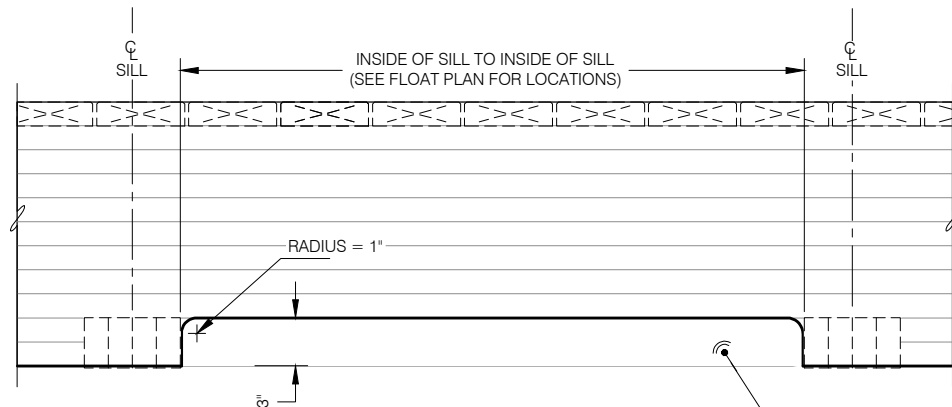
(4x24 FINGER ONLY)



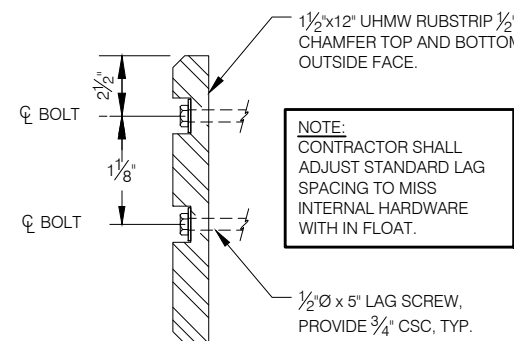
BULLRAIL CONNECTION ANGLE



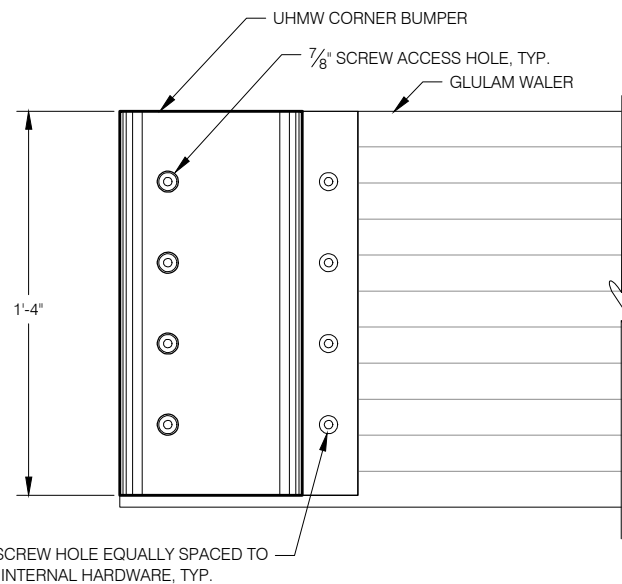
FLOAT END GLULAM SECTION



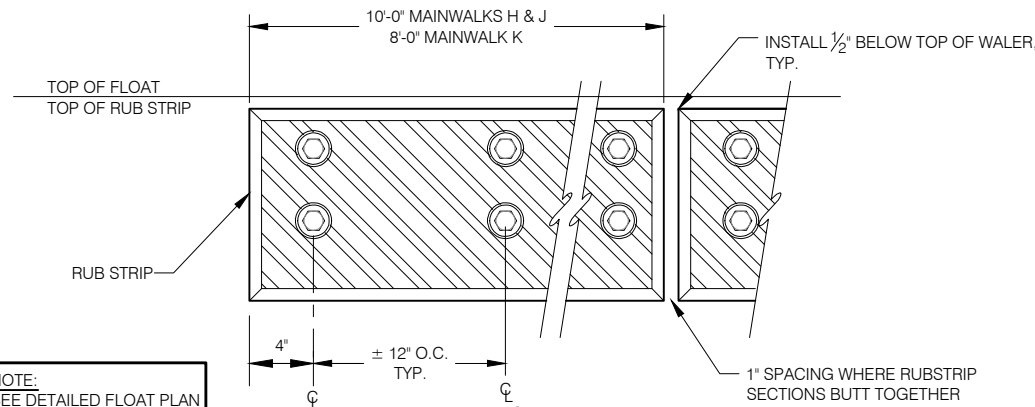
GLULAM WATER MODIFICATION FOR CABLE PASSAGE
(TYPICAL AT ALL FLOAT TO FLOAT CONNECTIONS)



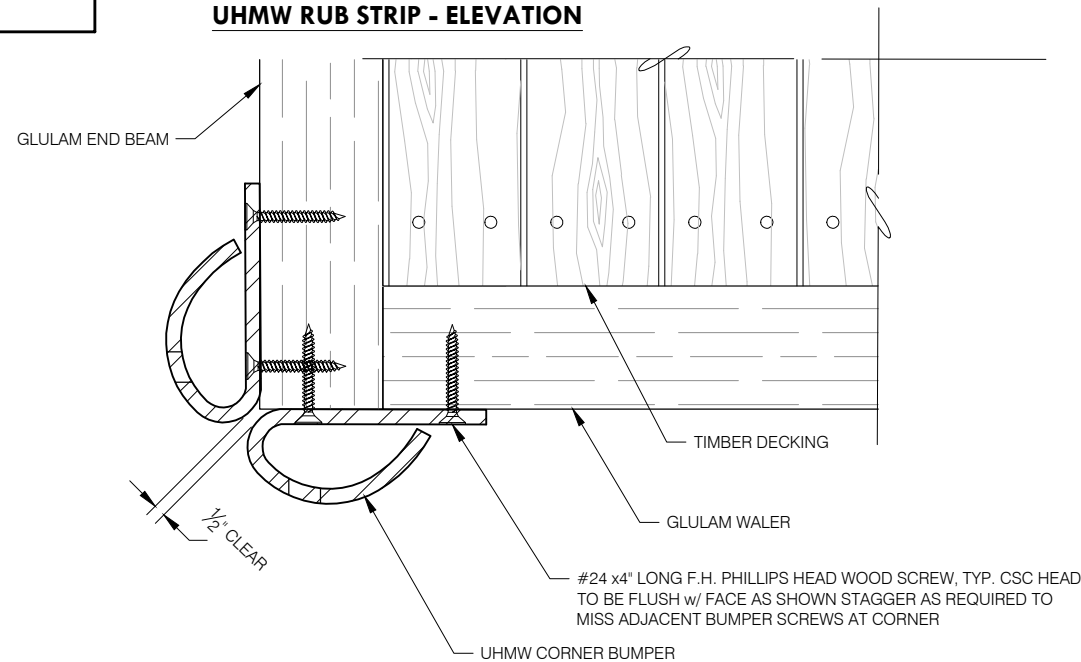
UHMW RUB STRIP - SECTION



CORNER BUMPER DETAIL - ELEVATION

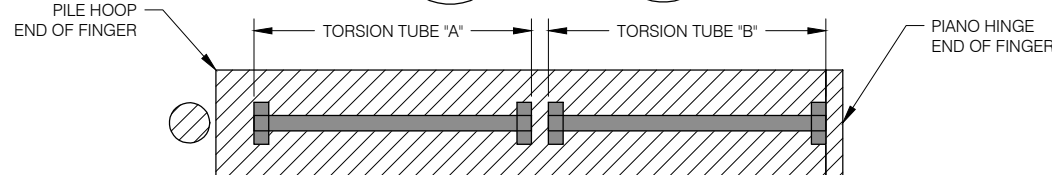


UHMW RUB STRIP - ELEVATION

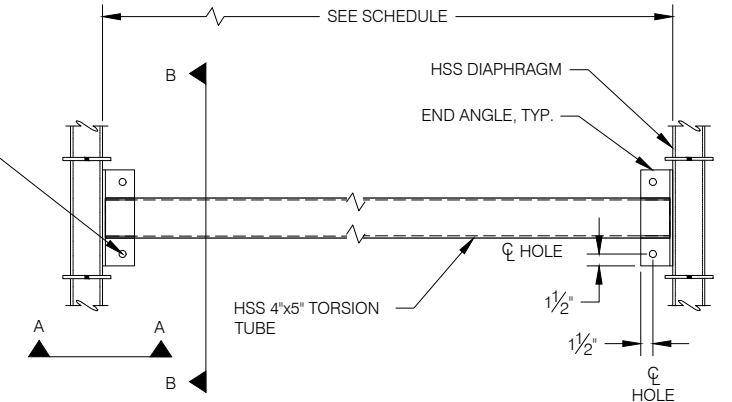


CORNER BUMPER DETAIL - PLAN

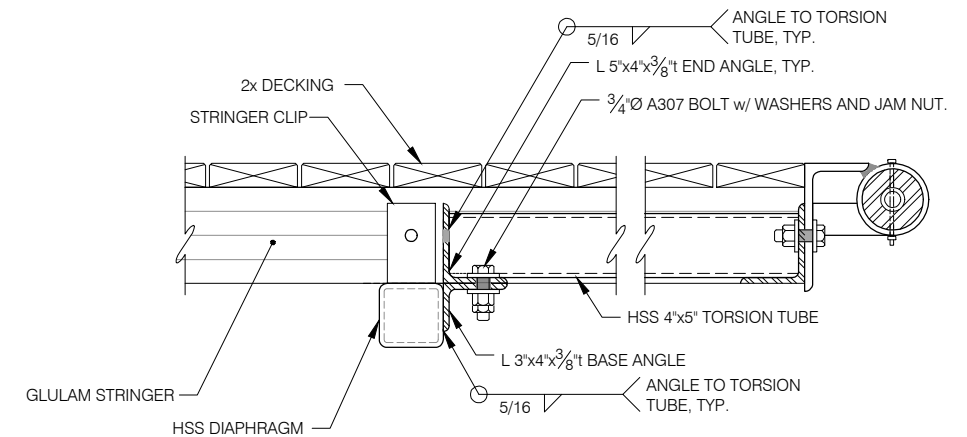
TORSION TUBE SCHEDULE		
FLOAT	LENGTH A	LENGTH B
4' x 24' FINGER	N/A	21'-4"
6' x 42' FINGER	19'-8"	15'-10"
6' x 48' FINGER	19'-8"	23'-10"



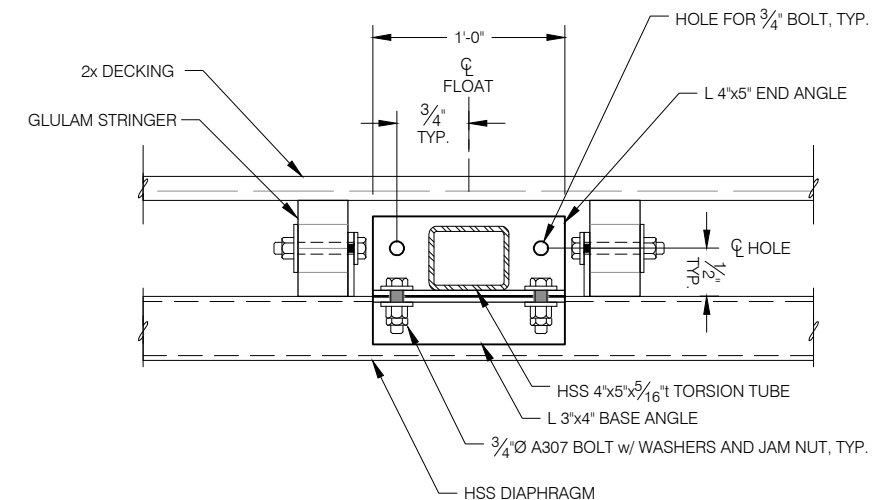
TORSION TUBE SCHEMATIC



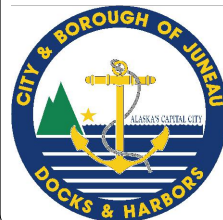
FINGER FLOAT TORSION TUBE - PLAN



FINGER FLOAT TORSION TUBE - SECTION AA



FINGER FLOAT TORSION TUBE - SECTION BB



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
ADD. 4	03/14/2025	REVISE TORSION TUBE SCHEDULE	MDS	CU	CU

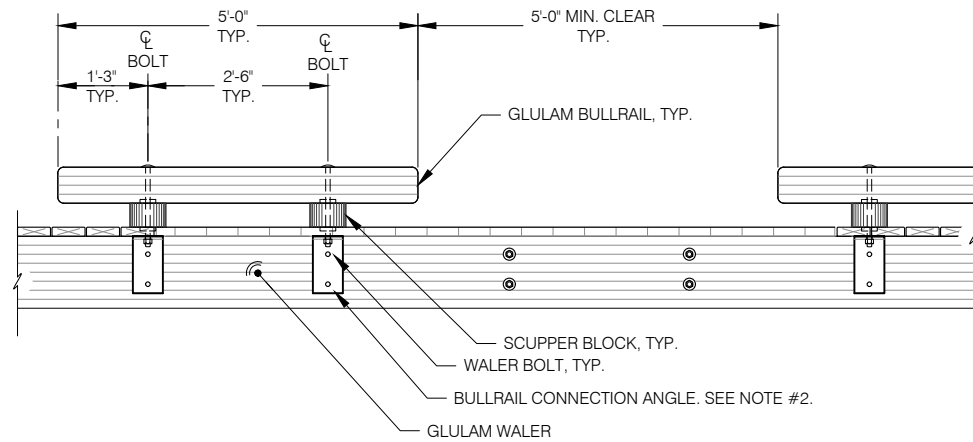
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



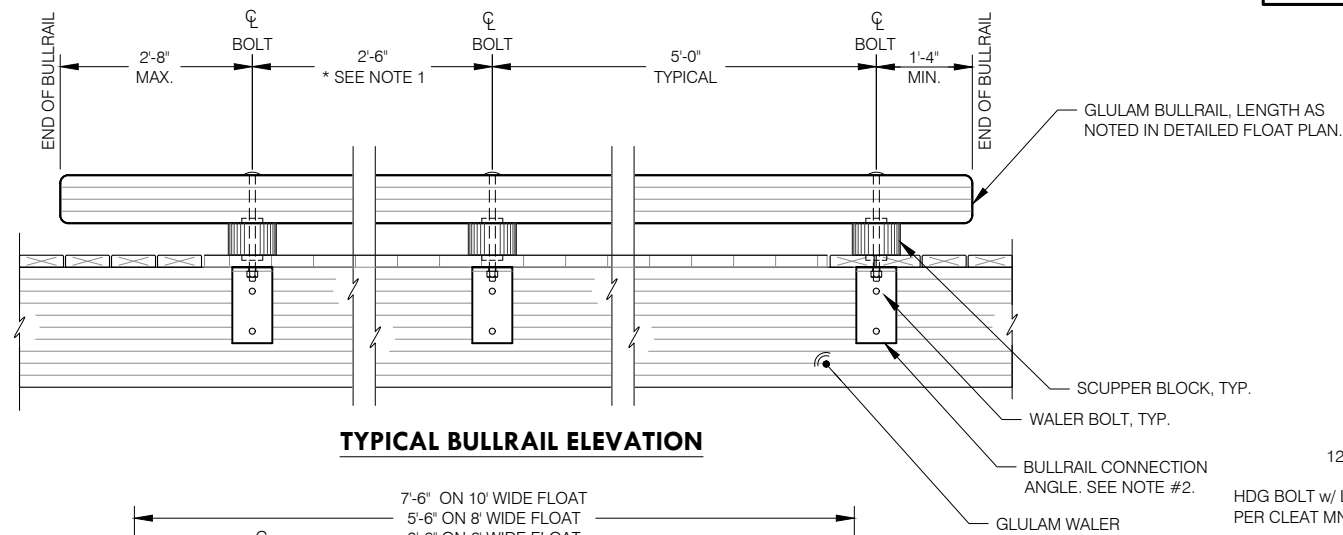
MISC. FLOAT DETAILS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	MARCH 5, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	45 of 86

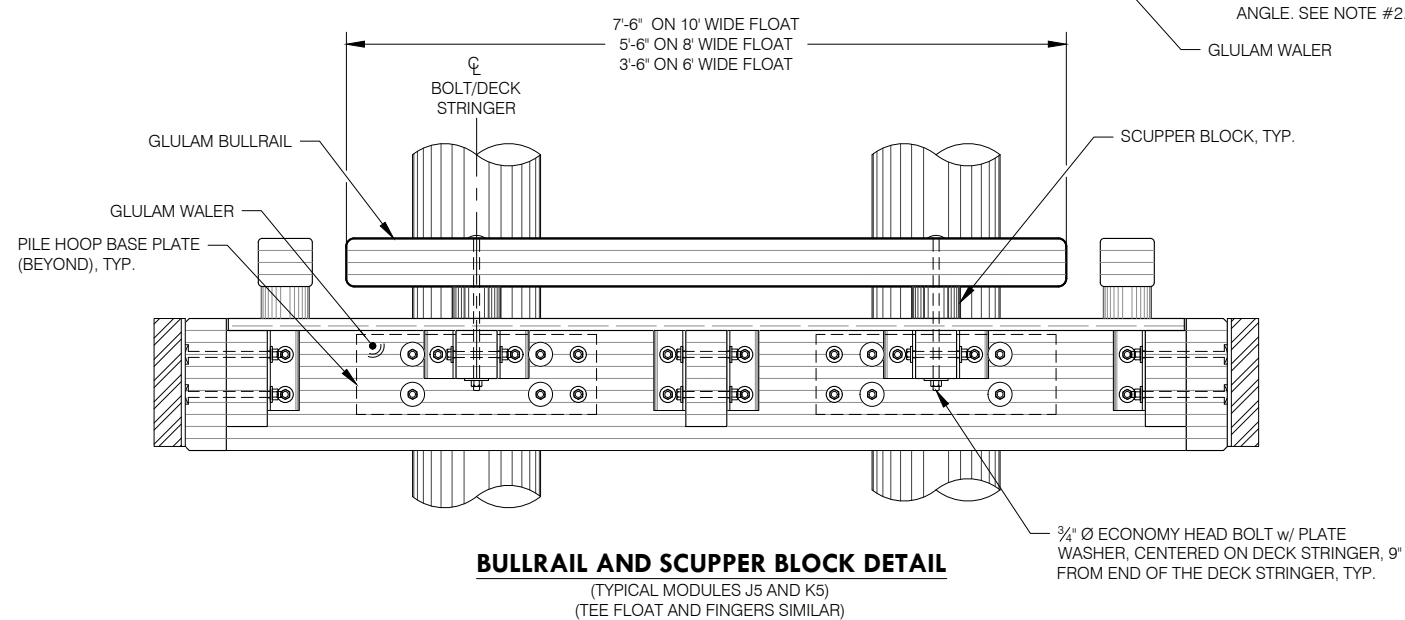
F28



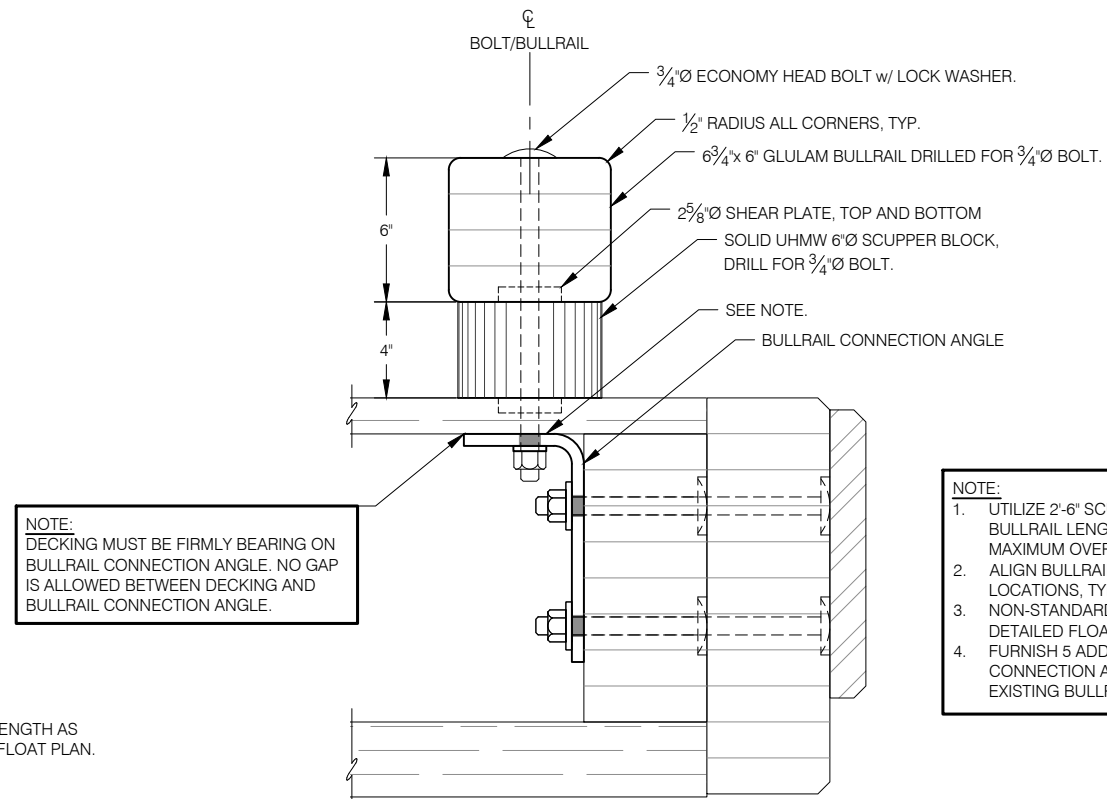
ADA BULLRAIL SEGMENTS



TYPICAL BULLRAIL ELEVATION

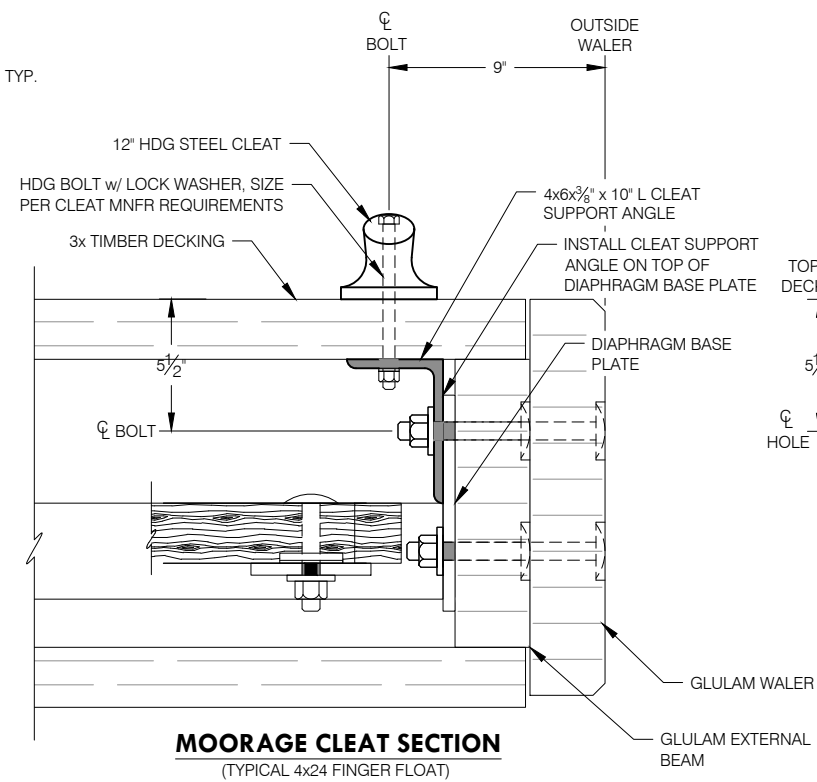


BULLRAIL AND SCUPPER BLOCK DETAIL
(TYPICAL MODULES J5 AND K5)
(TEE FLOAT AND FINGERS SIMILAR)

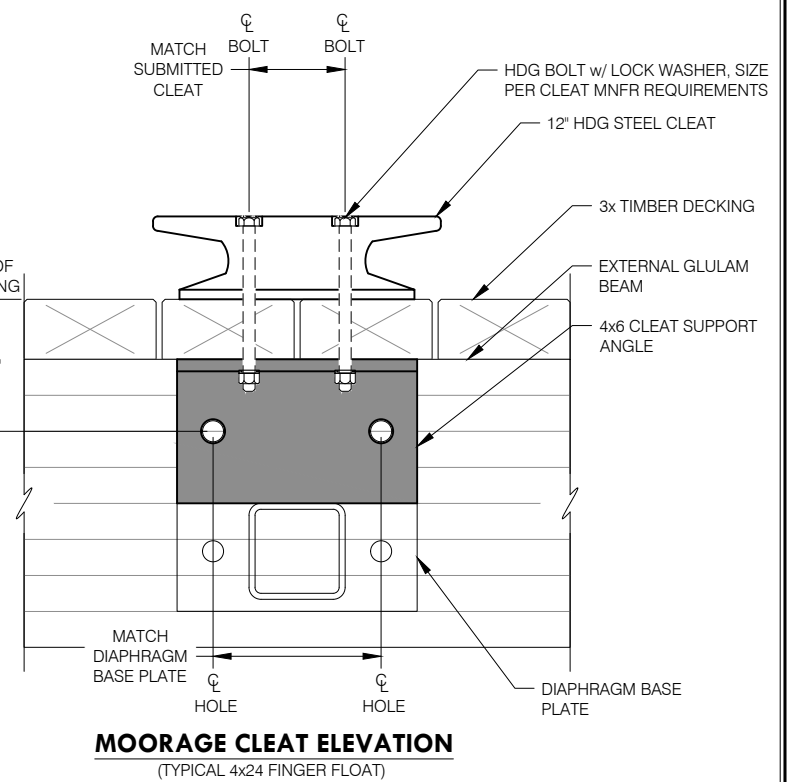


BULLRAIL AND SCUPPER BLOCK DETAIL

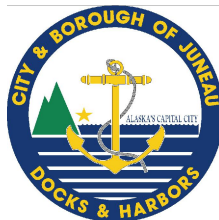
- NOTE:**
1. UTILIZE 2'-6" SCUPPER BLOCK SPACING AS REQUIRED ON BULLRAIL LENGTHS THAT CANNOT MEET MINIMUM AND MAXIMUM OVERHANG REQUIREMENTS WITH 5'-0" SPACING.
 2. ALIGN BULLRAIL CONNECTION ANGLE WITH WALER BOLT LOCATIONS, TYPICAL, UNLESS NOTED OTHERWISE.
 3. NON-STANDARD SCUPPER BLOCK DIMENSIONS ARE SHOWN ON DETAILED FLOAT PLANS.
 4. FURNISH 5 ADDITIONAL SETS OF BOLTS, SCUPPER BLOCKS AND CONNECTION ANGLES TO INSTALL WHEN MODIFYING THE EXISTING BULLRAILS ON MAINWALK H.



MOORAGE CLEAT SECTION
(TYPICAL 4x24 FINGER FLOAT)

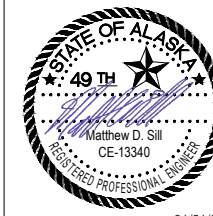


MOORAGE CLEAT ELEVATION
(TYPICAL 4x24 FINGER FLOAT)



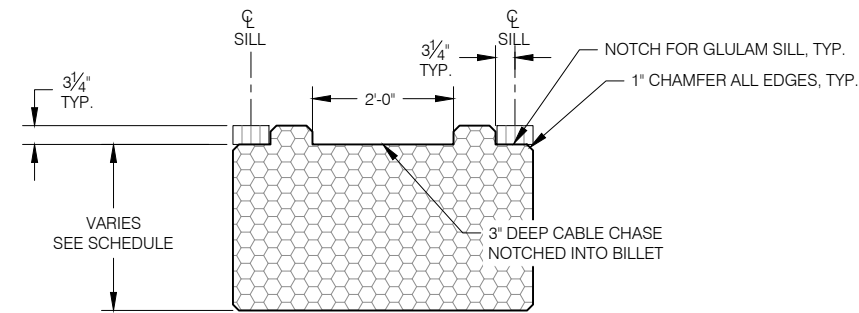
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

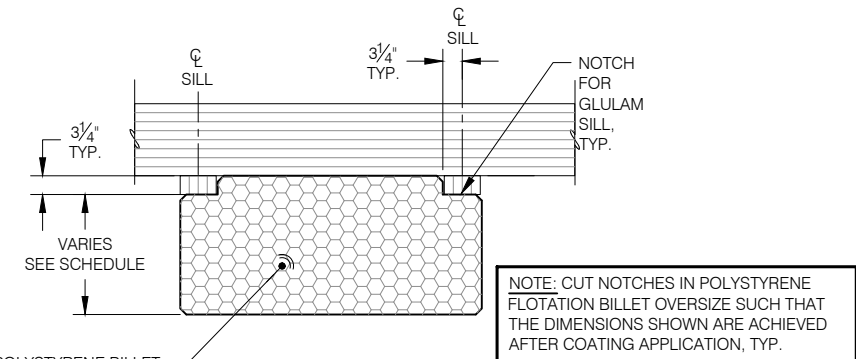


CLEAT & BULLRAIL DETAILS
AURORA HARBOR REBUILD - PHASE IV

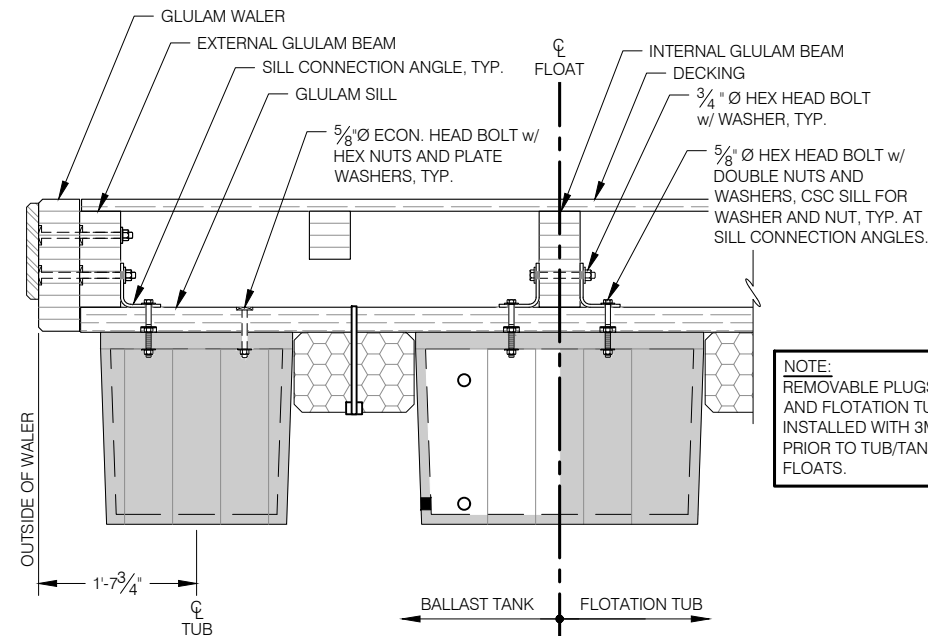
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	47 of 86



FLOTATION BILLET w/ CABLE CHASE
(TYPICAL MODULES H4, H7, & T2)



FLOTATION BILLET - TYPICAL SIDE ELEVATION
(SEE FLOTATION SCHEDULE FOR DEPTH AND WIDTH OF BILLETS)



TUB, TANK AND FLOTATION BILLET CONNECTIONS

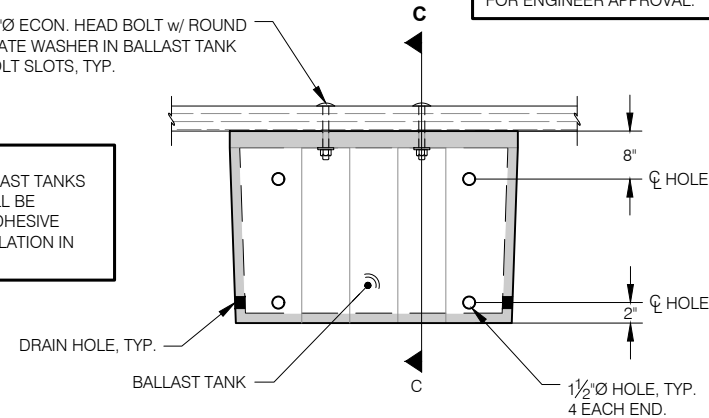
NOTE: 10' WIDE FLOAT SECTION SHOWN, 8', 6' AND 4' FLOAT SECTIONS SIMILAR.

NOTE: COUNTERSINK TUB AND TANK BOLTS AS REQUIRED TO AVOID CONFLICTS.

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.

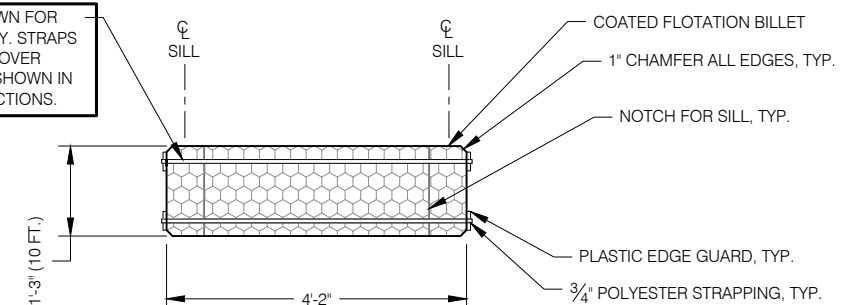
5/8" Ø ECON. HEAD BOLT w/ ROUND PLATE WASHER IN BALLAST TANK BOLT SLOTS, TYP.

NOTE: REMOVABLE PLUGS IN BALLAST TANKS AND FLOTATION TUBS SHALL BE INSTALLED WITH 3M 5200 ADHESIVE PRIOR TO TUB/TANK INSTALLATION IN FLOATS.



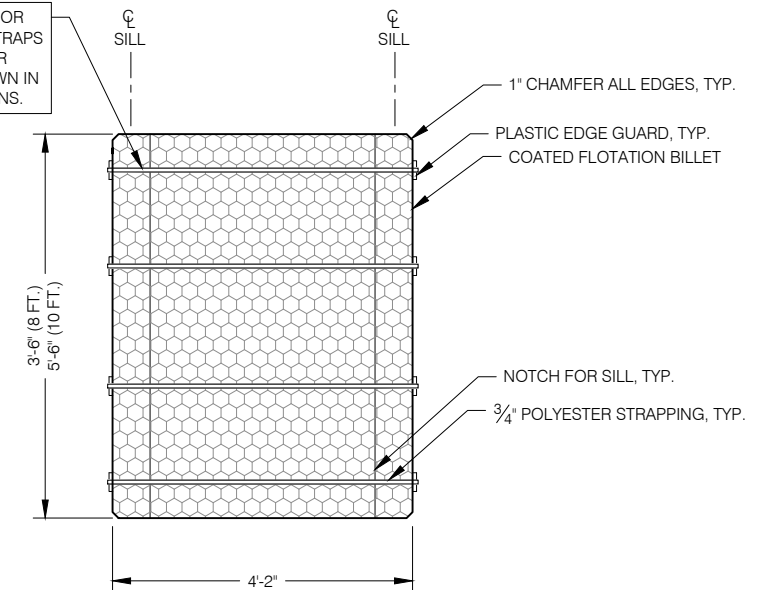
3X4 FLOTATION TUB - END ELEVATION

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



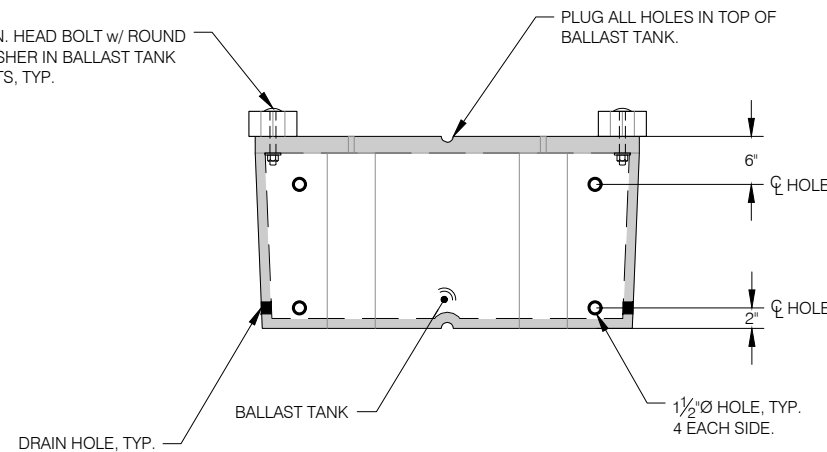
FLOTATION BILLET - TYPICAL PLAN

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



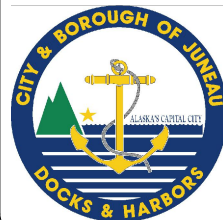
CENTER BILLET - TYPICAL PLAN

5/8" Ø ECON. HEAD BOLT w/ ROUND PLATE WASHER IN BALLAST TANK BOLT SLOTS, TYP.



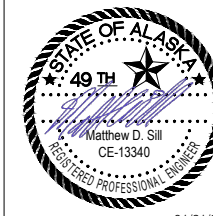
3X4 BALLAST TANK - SIDE ELEVATION
(SECTION C-C VIEW, 2x4 BALLAST TANK SIMILAR)

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



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

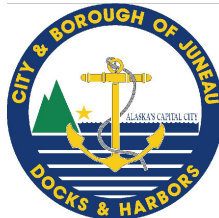
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



**FLOTATION TUB, BALLAST TANK
AND BILLET DETAILS**
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

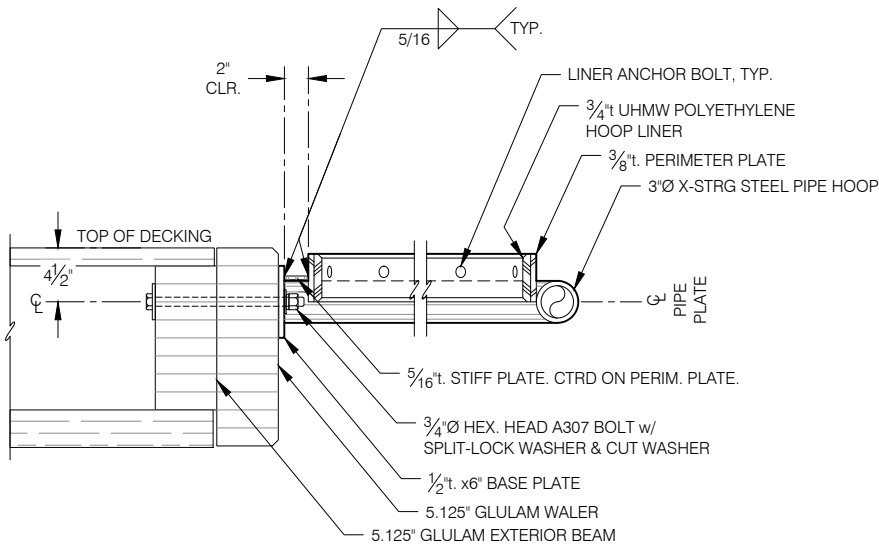
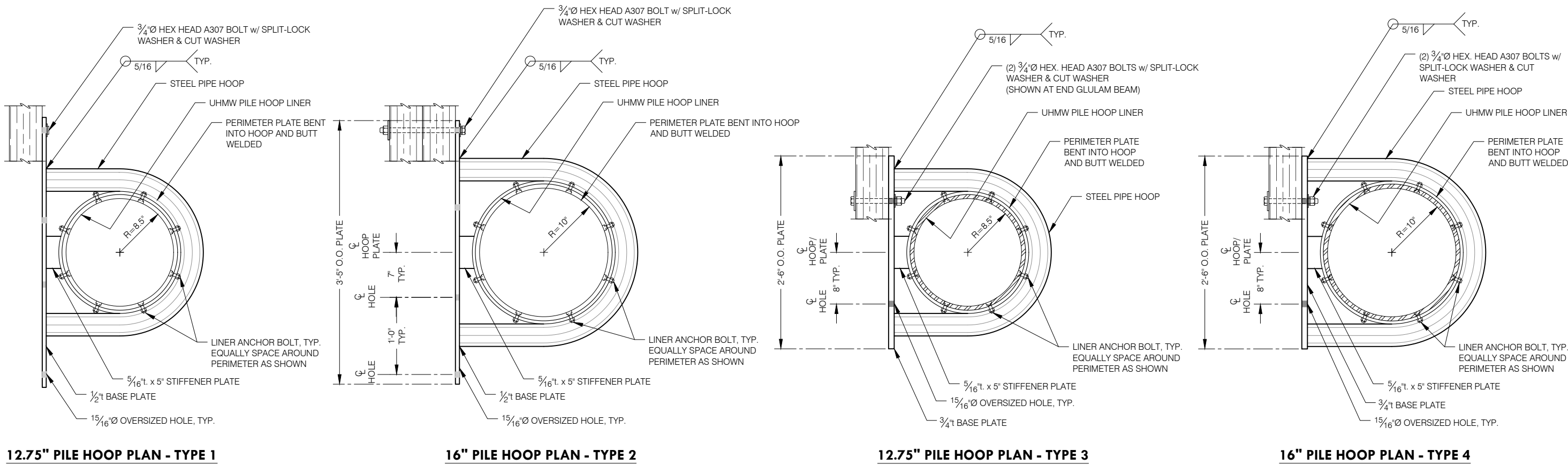
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



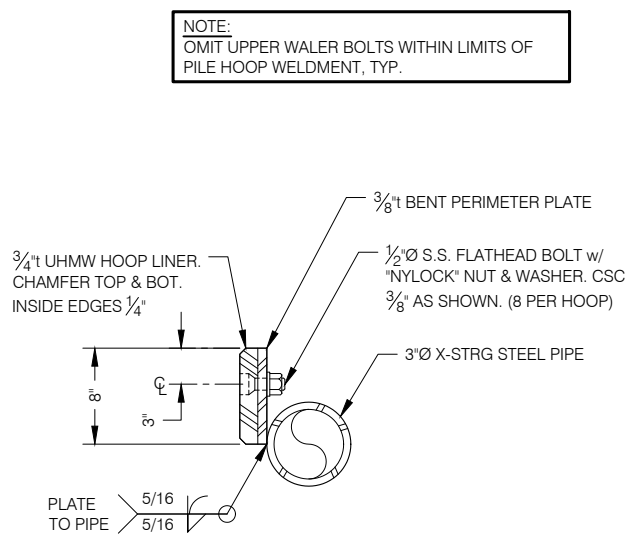
EXTERNAL PILE HOOP DETAILS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	49 of 86

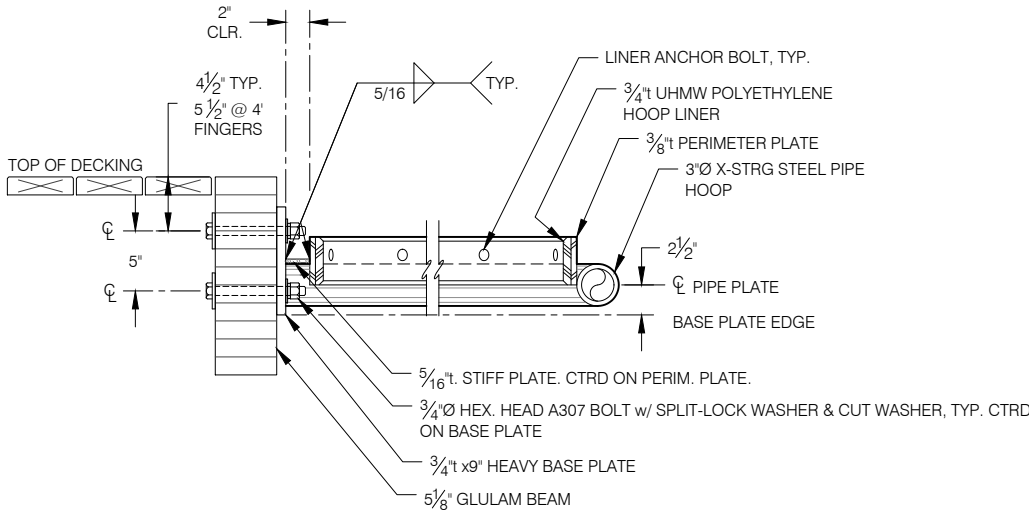
F32



EXTERNAL PILE HOOP ELEVATION - TYPE 1 & 2



TYPICAL HOOP SECTION



EXTERNAL PILE HOOP ELEVATION - TYPE 3 & 4

ERS AGAINST STEEL
ATE WASHERS
URFACES, UNLESS
D.

GLULAM STRINGER, TYP.

GLULAM EXTERNAL BEAM

3/4" Ø ECONOMY HEAD BOLT
w/WASHER, TYP.

WATER BOLT LOCATIONS MAY
FALL WITHIN PILE HOOP,
INSTALL AS SHOWN.

SECURE GRATING w/ MANUFACTURER
SUPPLIED 316SS FASTENERS. (4/HALF)

GLULAM WALER

FRP GRATING PILE SURROUND, TYP.

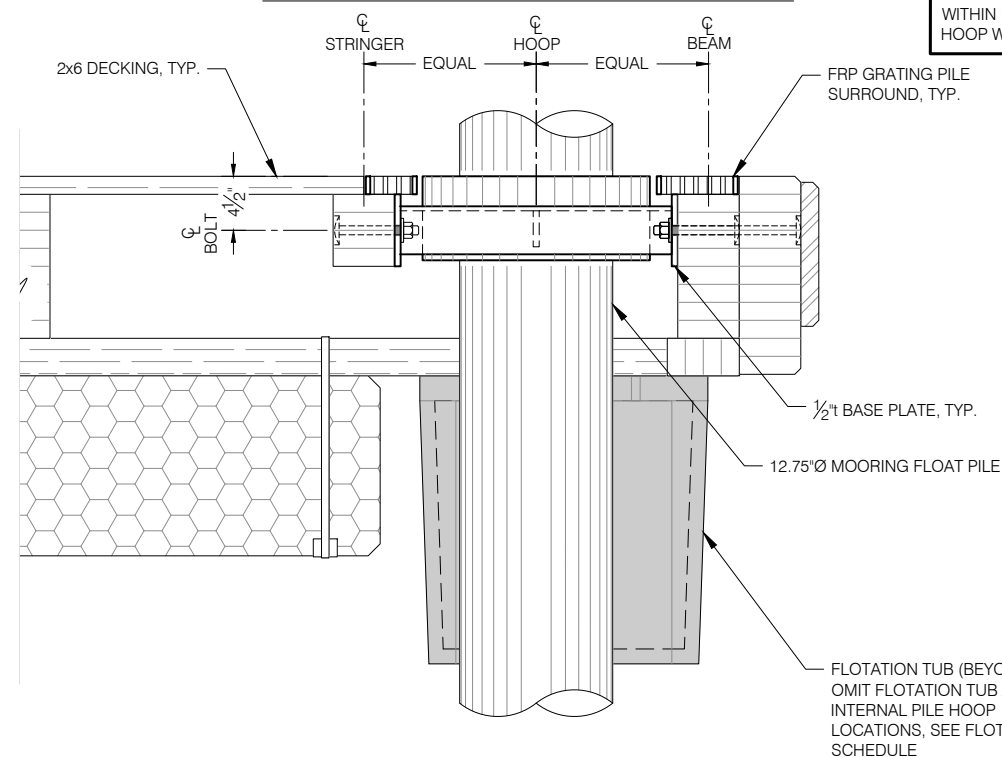
6 1/2" BOLT
6 1/2" BOLT

3/4" BOLT

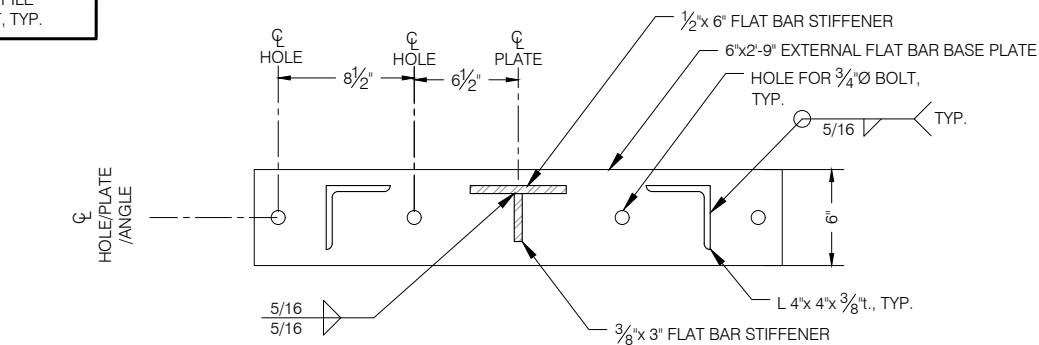
PILE
SYMM. ABOUT

D

SPACE DECK BOARDS AS SHOWN, WHOLE
BOARDS ONLY. DO NOT RIP BOARDS TO FIT.



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



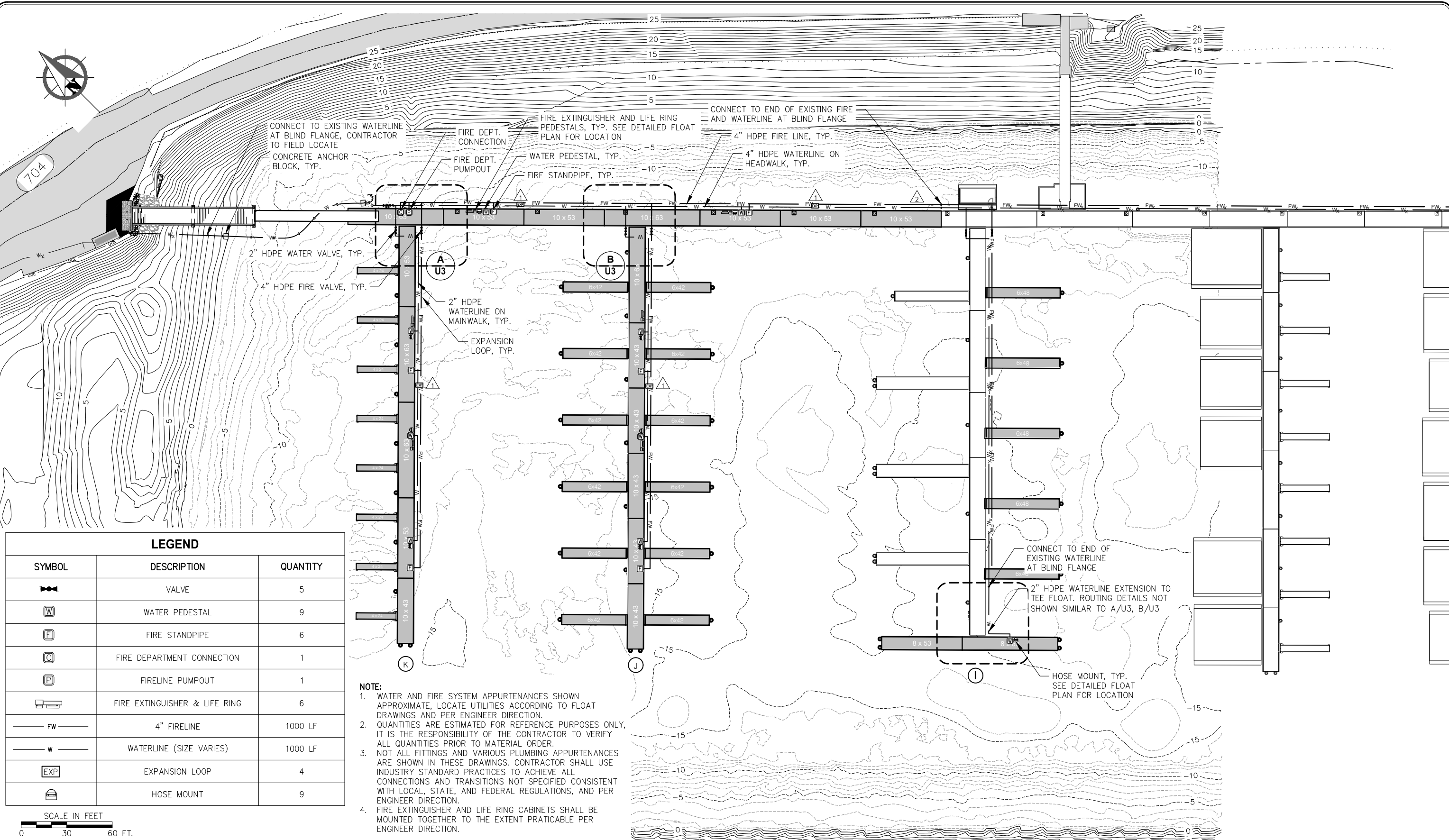
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

025	DESIGN:	MS	DATE:	FEBRUARY 1, 2025
	CHECKED:	CU	CONTRACT NO.:	DH25-022
	APPROVED:	CU	SHEET:	50 of 86

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F28 - INTERNAL Pile Hoop Details

N:\24xxx\242069 Aurora Harbor Phase IV.G Drawings\Civil\8.01 Utility Site Plan and Profile.dwg, 11/15/2024 10:37 AM



LEGEND		
SYMBOL	DESCRIPTION	QUANTITY
	VALVE	5
	WATER PEDESTAL	9
	FIRE STANDPIPE	6
	FIRE DEPARTMENT CONNECTION	1
	FIRELINE PUMPOUT	1
	FIRE EXTINGUISHER & LIFE RING	6
	4" FIRELINE	1000 LF
	WATERLINE (SIZE VARIES)	1000 LF
	EXPANSION LOOP	4
	HOSE MOUNT	9

SCALE IN FEET
0 30 60 FT.

- NOTE:
- WATER AND FIRE SYSTEM APPURTENANCES SHOWN APPROXIMATE, LOCATE UTILITIES ACCORDING TO FLOAT DRAWINGS AND PER ENGINEER DIRECTION.
 - QUANTITIES ARE ESTIMATED FOR REFERENCE PURPOSES ONLY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO MATERIAL ORDER.
 - 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.
 - FIRE EXTINGUISHER AND LIFE RING CABINETS SHALL BE MOUNTED TOGETHER TO THE EXTENT PRATICABLE PER ENGINEER DIRECTION.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
	3/13/25	DELETE (2) VALVES	JG	BI	JD
	3/13/25	RELOCATE EXPANSION LOOPS	JG	BI	JD

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



UTILITY SITE PLAN AURORA HARBOR REBUILD - PHASE IV			
DESIGN:	JG	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JD	FILE NO.	SHEET: 51 of 86

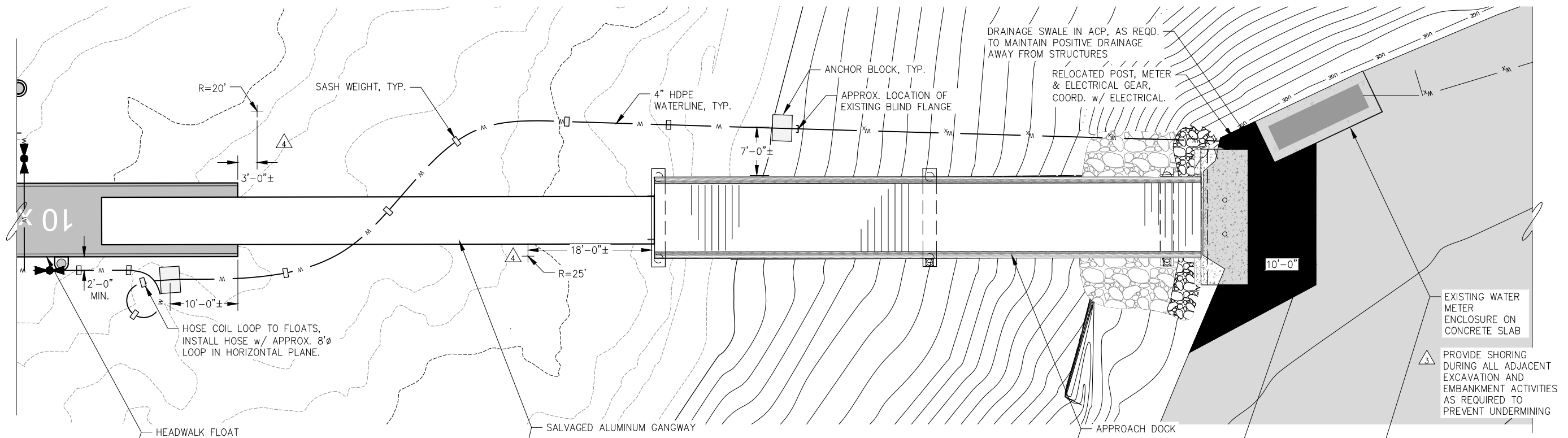
U1

N:\24xxx\242069 Aurora Harbor Phase IV.G. Drawings\Civil\8.01 Utility Site Plan and Profile.dwg, 11/15/2024 10:37 AM

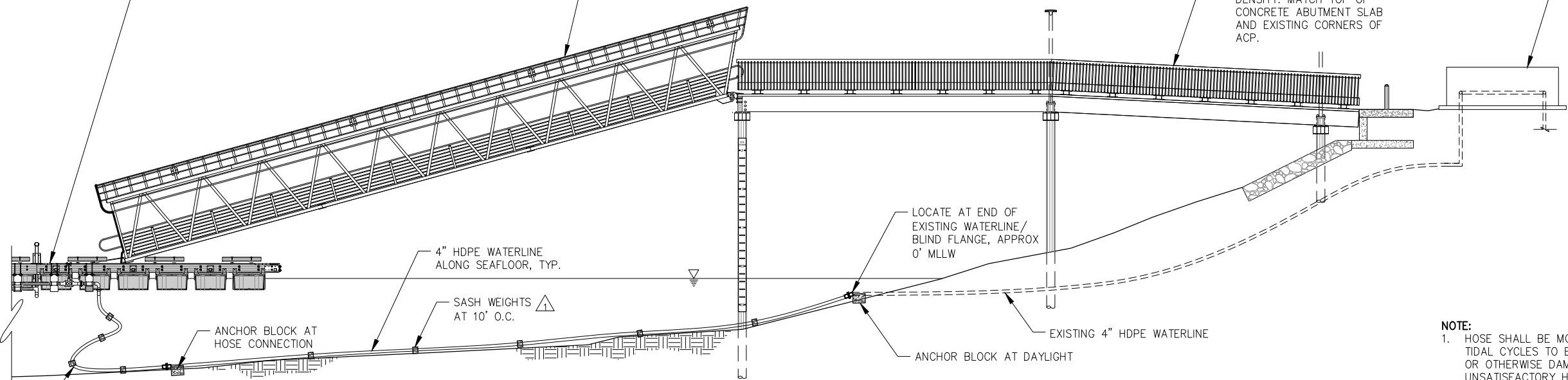


4"Ø, 50' LONG FLEXIBLE HOSE COIL LOOP ON SEAFLOOR BENEATH FLOAT CONNECTION w/ (4) SASH WEIGHTS EVENLY SPACED ON HOSE.

SCALE IN FEET
0 6 12 FT



WATER SERVICE - PLAN

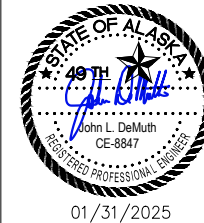


WATER SERVICE - PROFILE

- NOTE:**
- HOSE SHALL BE MONITORED THROUGH MULTIPLE TIDAL CYCLES TO ENSURE NO BINDING, STRETCHING OR OTHERWISE DAMAGING CONDITIONS EXIST. UNSATISFACTORY HOSES SHALL BE RECONFIGURED OR REPLACED TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE OWNER.
 - NO PART OF THE SEAFLOOR HDPE OR HOSE WATERLINE SHALL BE UNDERNEATH THE FLOAT.

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
1	3/13/25	CHANGE SASH WEIGHT SPACING TO 10' O.C.	JG	BI	JD
2	3/13/25	CHANGE HOSE LENGTH TO 50'	JG	BI	JD
3	3/13/25	ADD NOTE	JG	BI	JD
4	3/13/25	ADD LAYOUT DIMENSIONS	JG	BI	JD

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

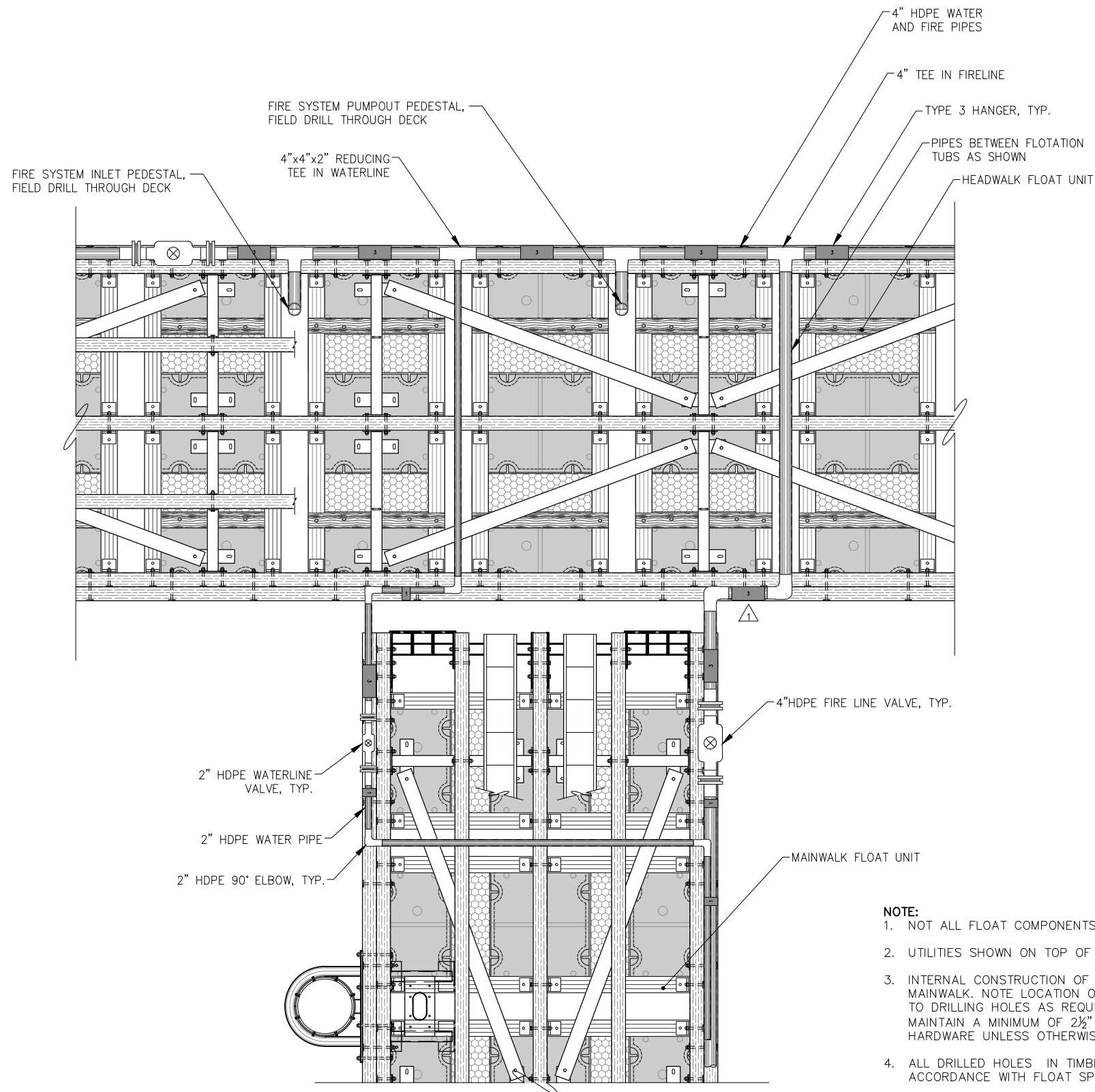


UPLANDS UTILITY PLAN AND PROFILE
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JG	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JD	FILE NO.:	SHEET: 52 of 86

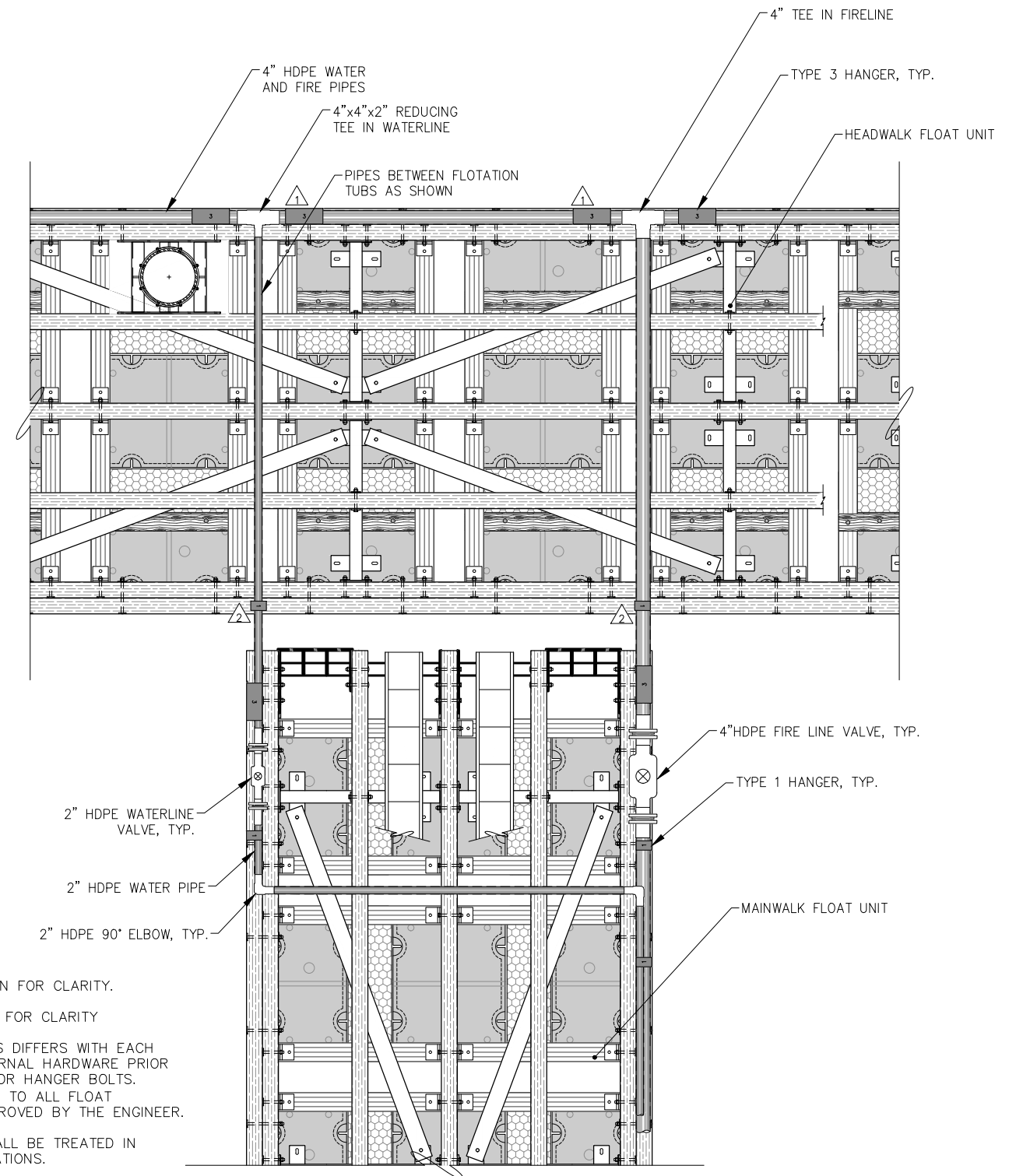
U2

N:\24xxx\242069 Aurora Harbor Phase IV.G. Drawings\Civil\8.03 Utility Routing Details.dwg, 11/15/2024 10:37 AM



A
U1 HEADWALK/ MAINWALK K INTERSECTION UTILITY ROUTING
DETAIL

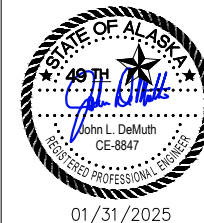
- NOTE:**
1. NOT ALL FLOAT COMPONENTS SHOWN FOR CLARITY.
 2. UTILITIES SHOWN ON TOP OF FLOAT FOR CLARITY
 3. INTERNAL CONSTRUCTION OF FLOATS DIFFERS WITH EACH MAINWALK. NOTE LOCATION OF INTERNAL HARDWARE PRIOR TO DRILLING HOLES AS REQUIRED FOR HANGER BOLTS. MAINTAIN A MINIMUM OF 2½" CLEAR TO ALL FLOAT HARDWARE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
 4. ALL DRILLED HOLES IN TIMBER SHALL BE TREATED IN ACCORDANCE WITH FLOAT SPECIFICATIONS.



B
U1 HEADWALK/ MAINWALK J INTERSECTION UTILITY ROUTING
DETAIL

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
△	3/13/25	CHANGE HANGER TO TYPE 3	JG	BI	JD
△	3/13/25	ADD TYPE 1 HANGER	JG	BI	JD

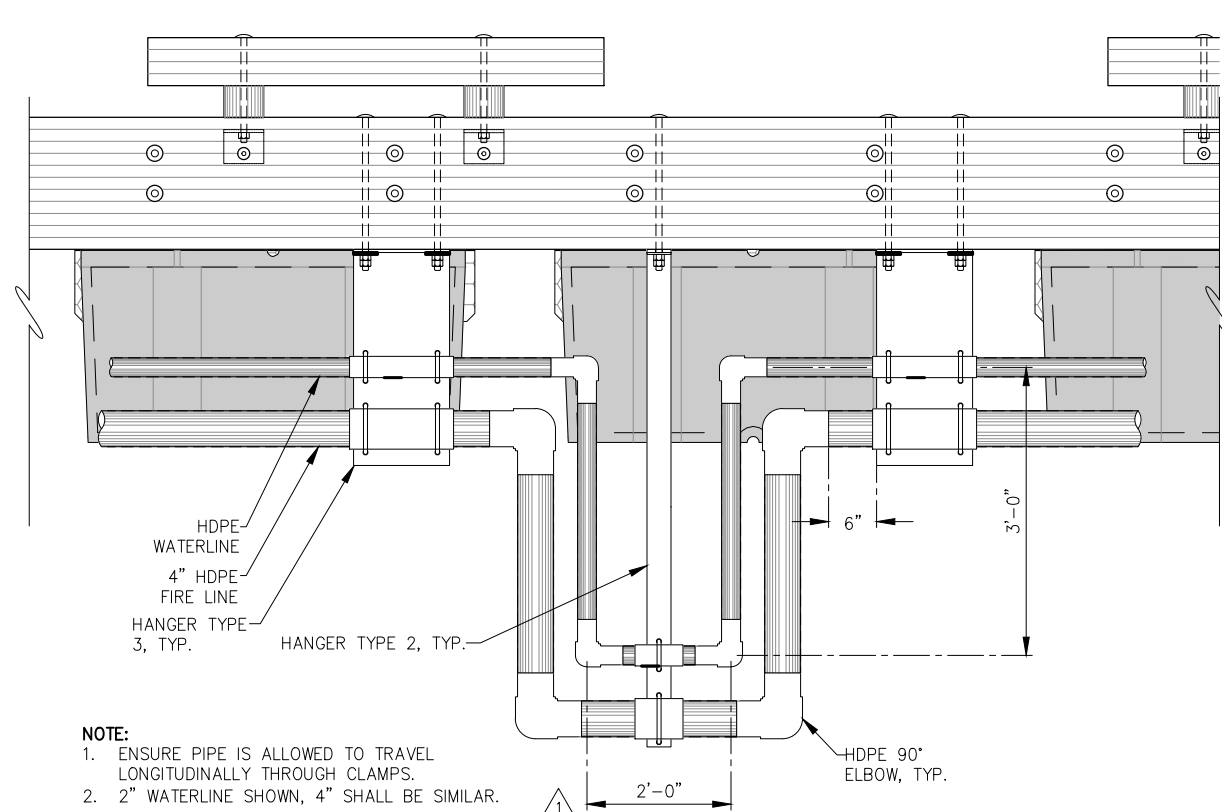
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



UTILITY ROUTING DETAILS			
AURORA HARBOR REBUILD - PHASE IV			
DESIGN:	JG	DATE:	JANUARY 31, 2025
CHECKED:	BI	CONTRACT NO.:	DH25-022
APPROVED:	JD	FILE NO.	SHEET: 53 of 86

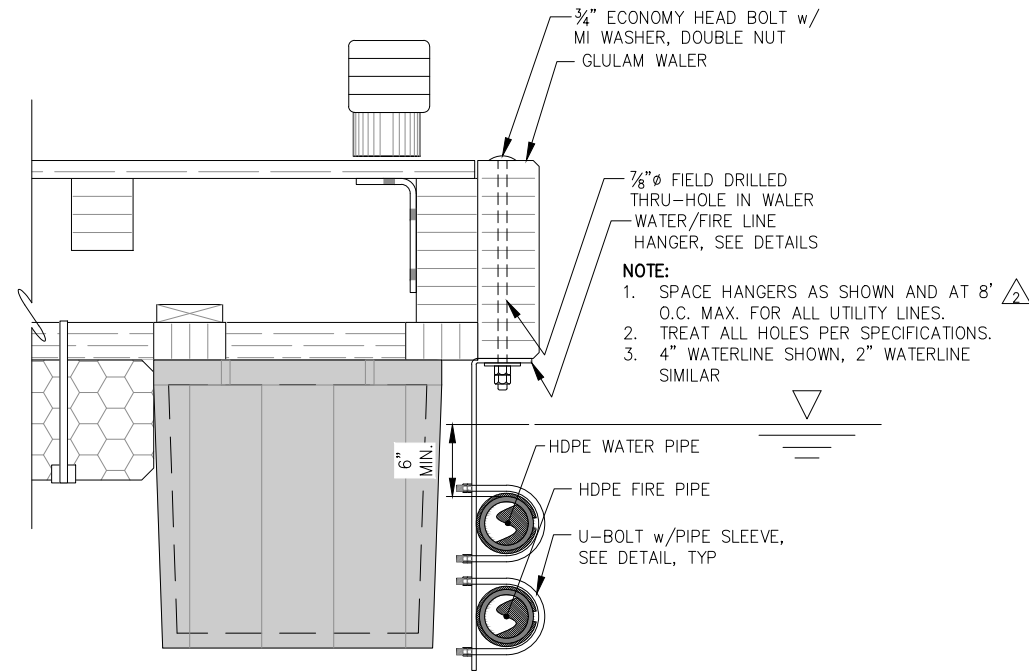
U3

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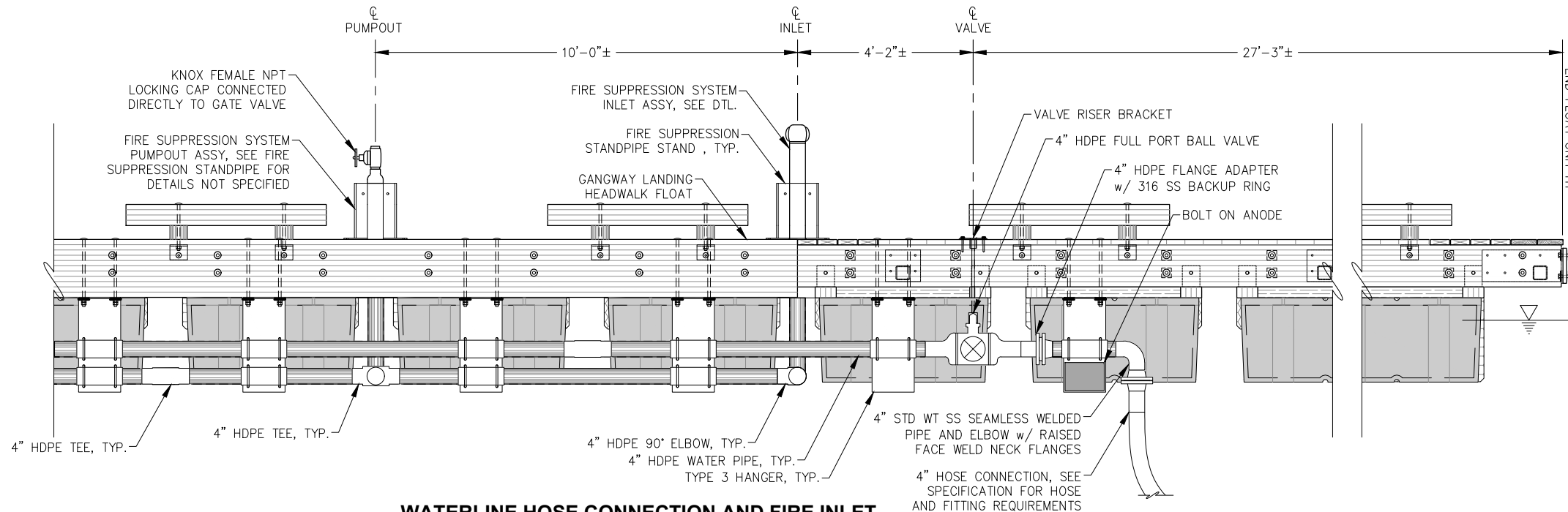


- NOTE:**
1. ENSURE PIPE IS ALLOWED TO TRAVEL LONGITUDINALLY THROUGH CLAMPS.
 2. 2" WATERLINE SHOWN, 4" SHALL BE SIMILAR.

**EXPANSION LOOP
DETAIL**



**PIPE MOUNTING
TYPICAL DETAIL**

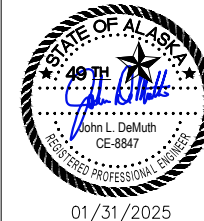


- NOTE:**
1. HANGER ASSEMBLIES SHOWN ON THIS DETAIL SHALL BE CLAMPED TO RESTRICT PIPE MOVEMENT.
 2. HOLES THROUGH TIMBER FOR HANGER BOLTS AND RISER BRACKETS TO BE FIELD DRILLED, TAKE CARE TO AVOID FLOAT HARDWARE, TREAT ALL TIMBER CUTS AND PENETRATIONS PER SPECIFICATIONS.
 3. ALL SUBMERGED STEEL SHALL BE 316 SS UNO.
 4. SS PIPE TO FLANGE JOINTS SHALL BE FACTORY WELDED w/316 SS ROD, PROVIDE SPOOLS PREFABRICATED AS SHOWN.
 5. SEE SPECIFICATIONS FOR HOSE AND FITTING REQUIREMENTS.

**WATERLINE HOSE CONNECTION AND FIRE INLET
DETAIL**

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
△	3/13/25	CHANGE DIMENSION	JG	BI	JD
△	3/13/25	CHANGE SPACING TO 8' O.C.	JG	BI	JD

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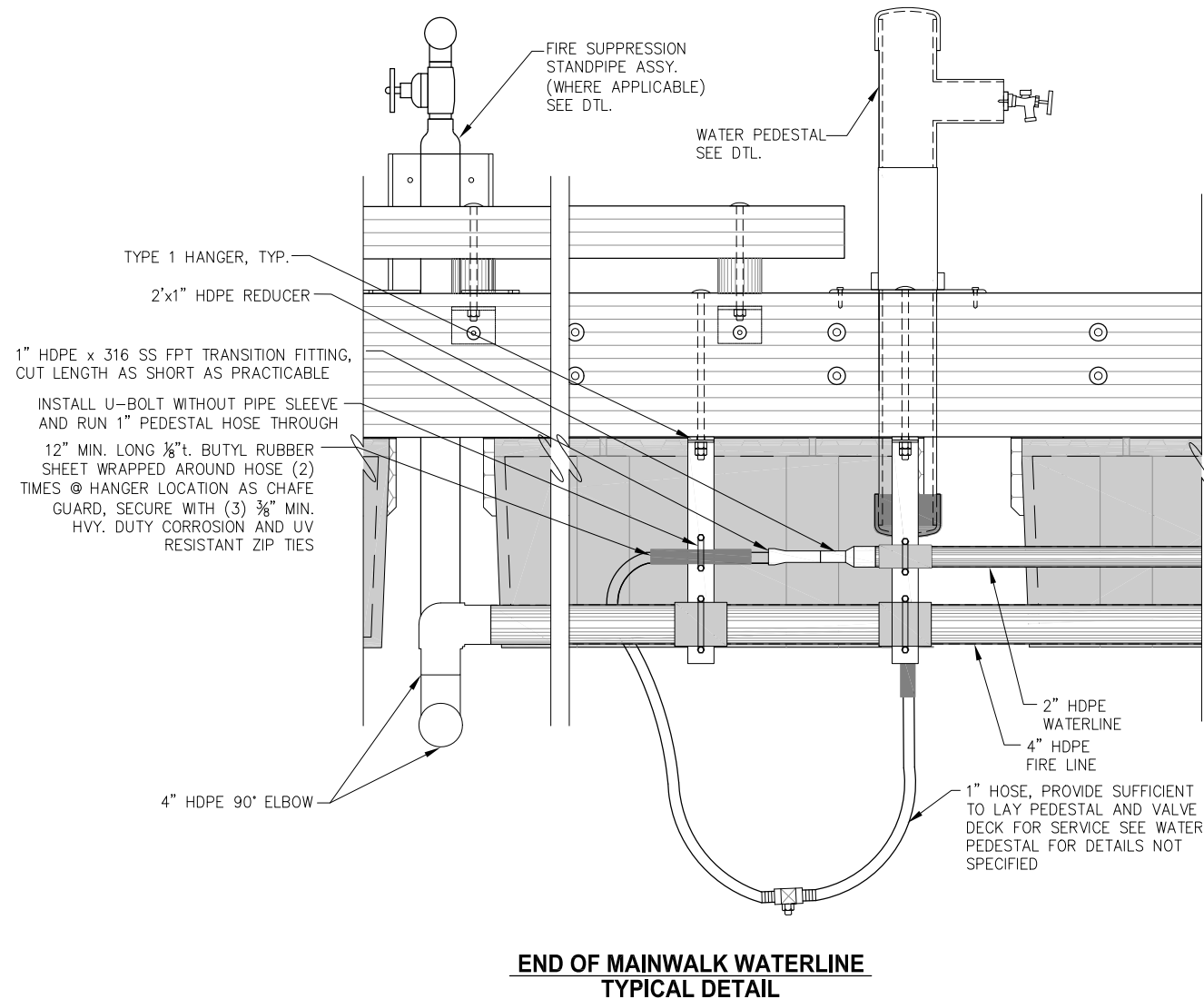
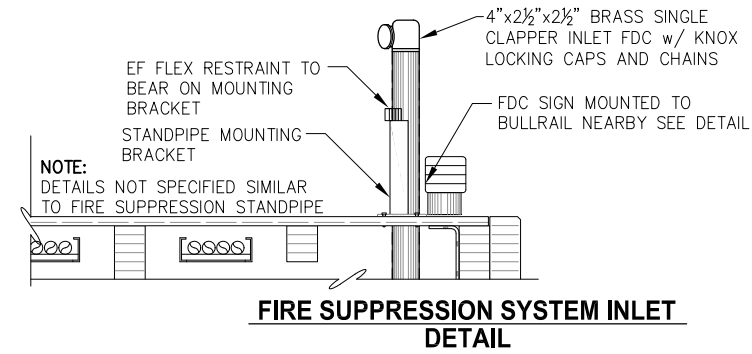
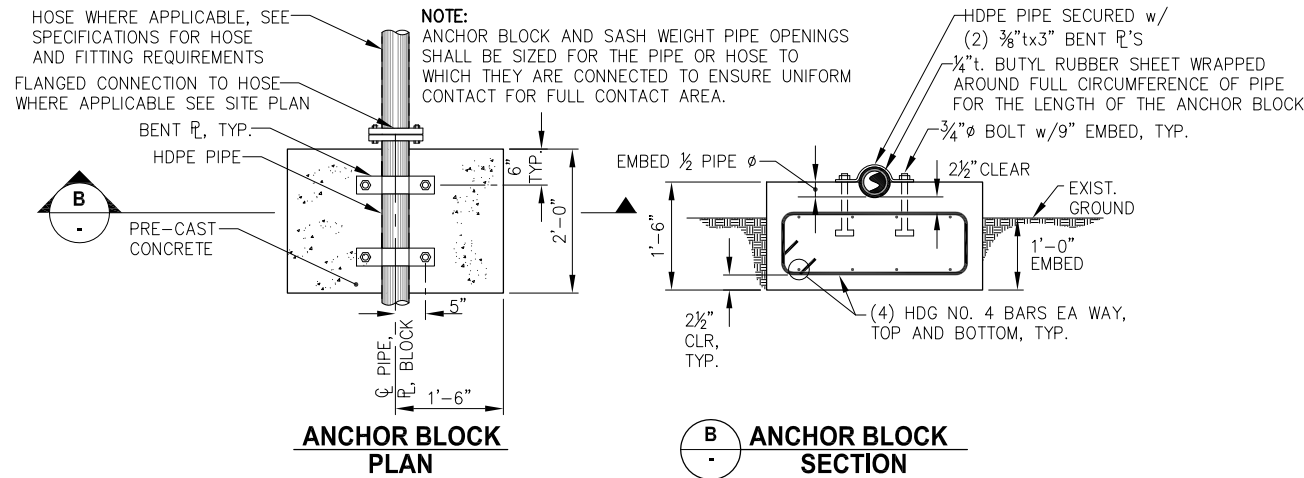
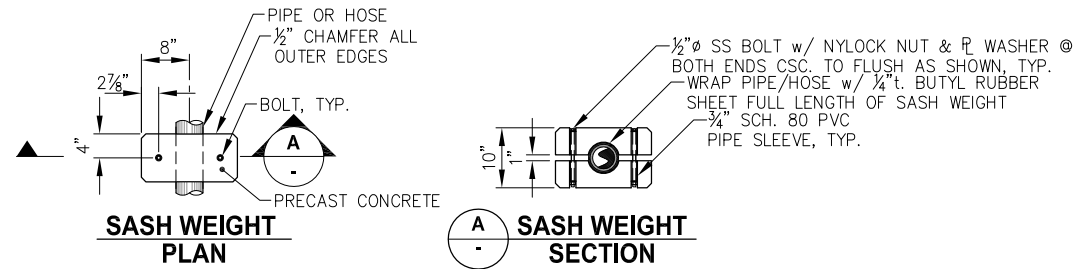
FLOAT MOUNTED UTILITY DETAILS

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JG	DATE:	JANUARY 31, 2025
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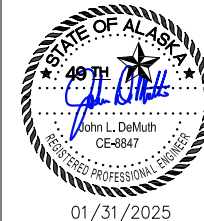
U4

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REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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PHONE: 907-586-0292



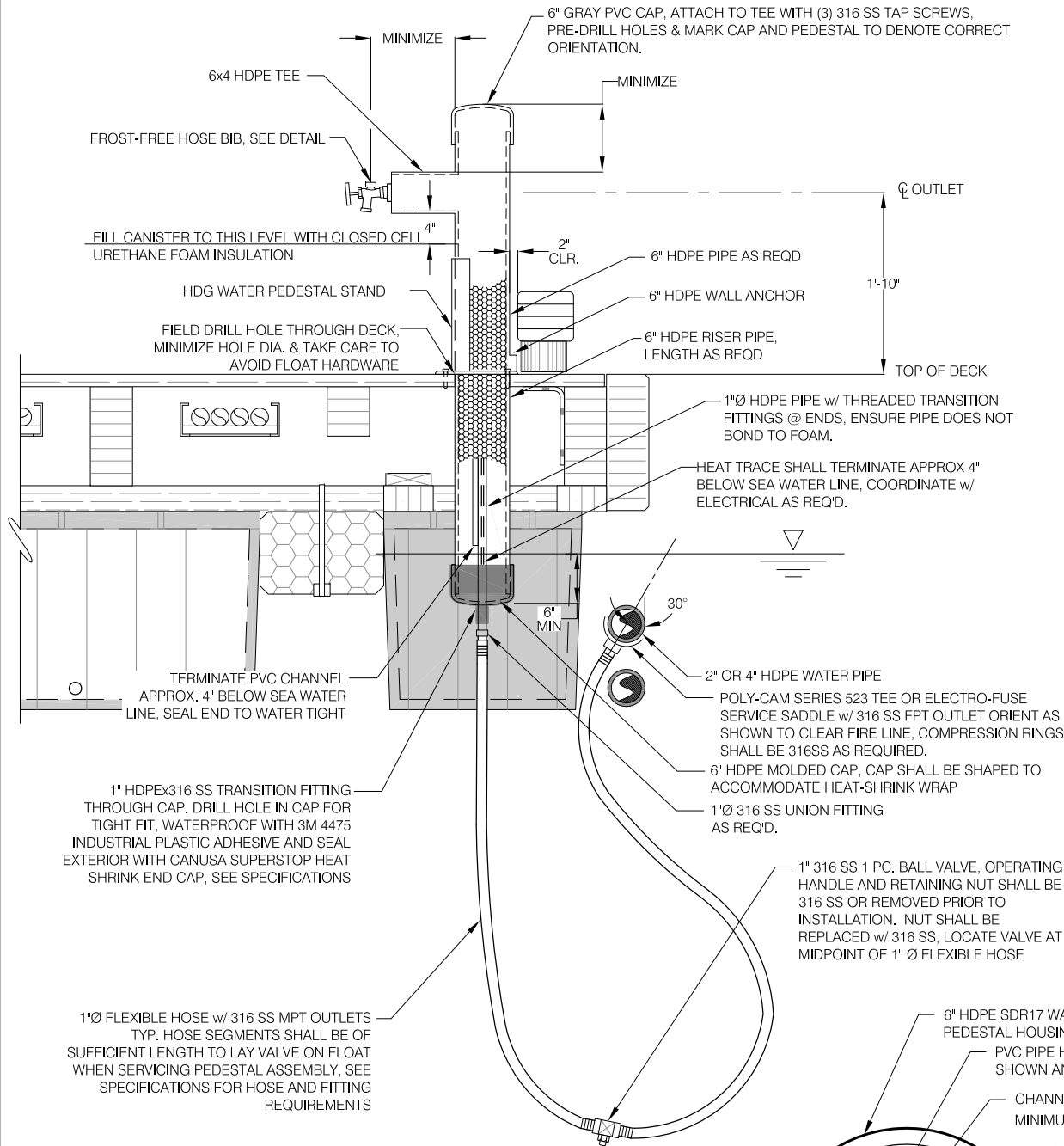
FLOAT MOUNTED UTILITY DETAILS

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JG	DATE:	JANUARY 31, 2025
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U5

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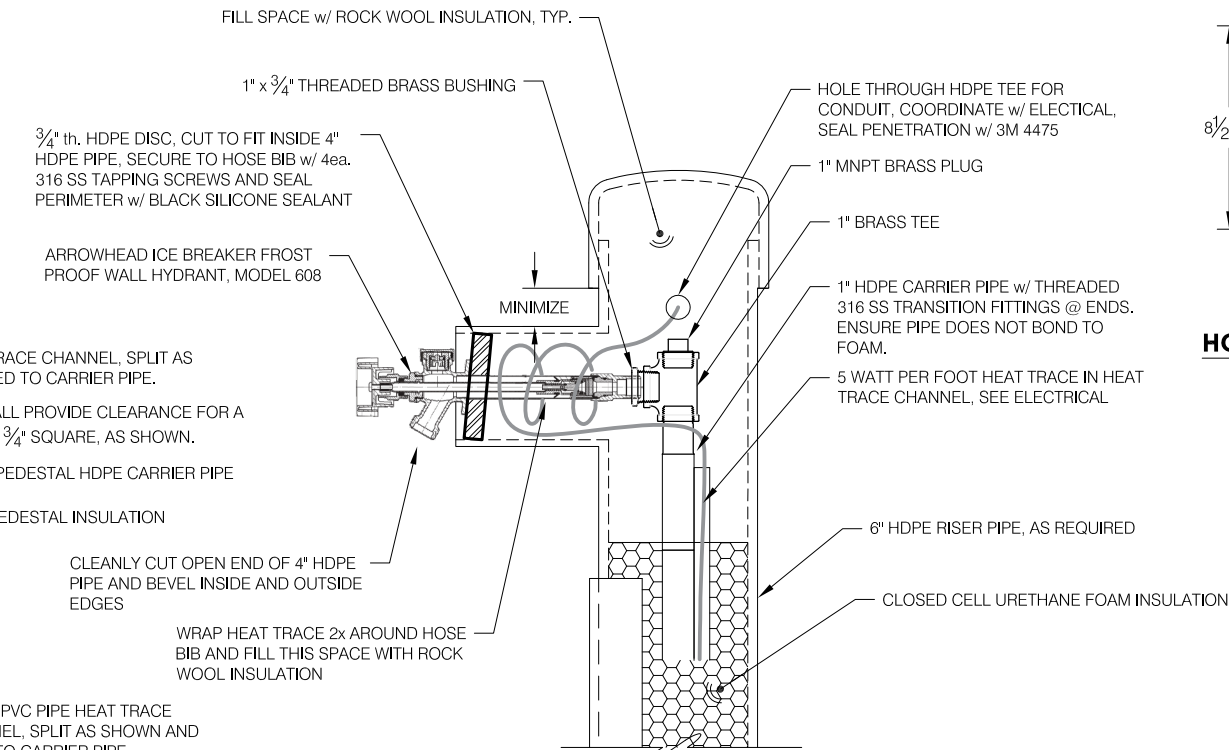
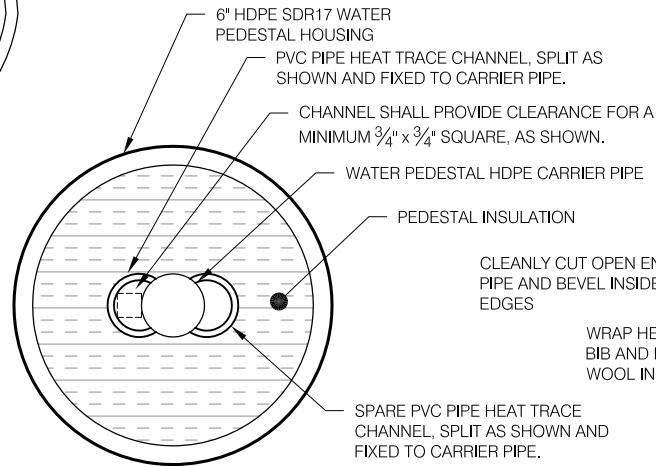


WATER PEDESTAL TYPICAL INSTALLATION

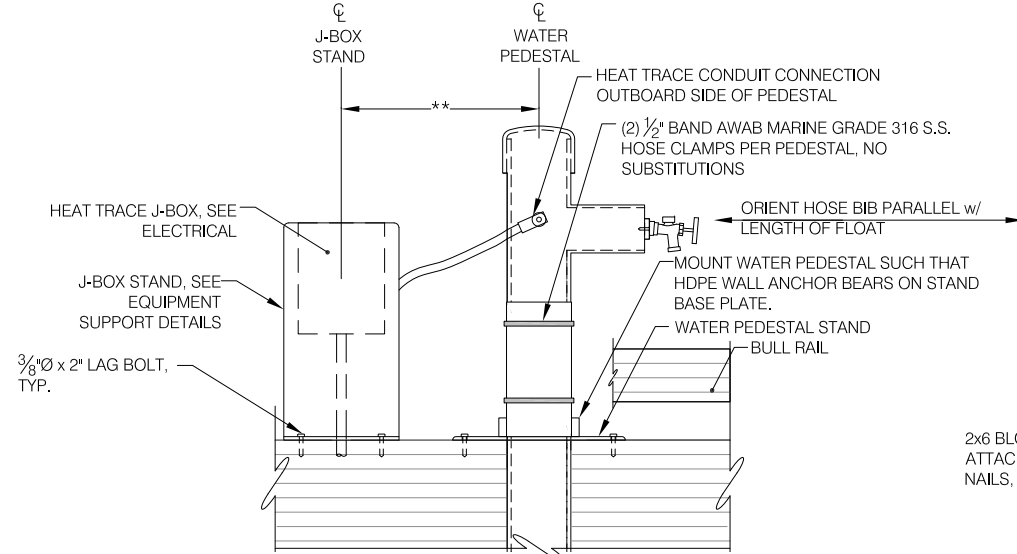
WATER PEDESTAL NOTES:

- 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 SHALL BE CONSTRUCTED OF 316 SS, UNO.
- LOCATE PEDESTALS PER FLOAT PLAN, FINAL LAYOUT AND ORIENTATION OF PEDESTAL SHALL BE FILED DETERMINED BY ENGINEER.

INSULATED WATER PEDESTAL - SECTION



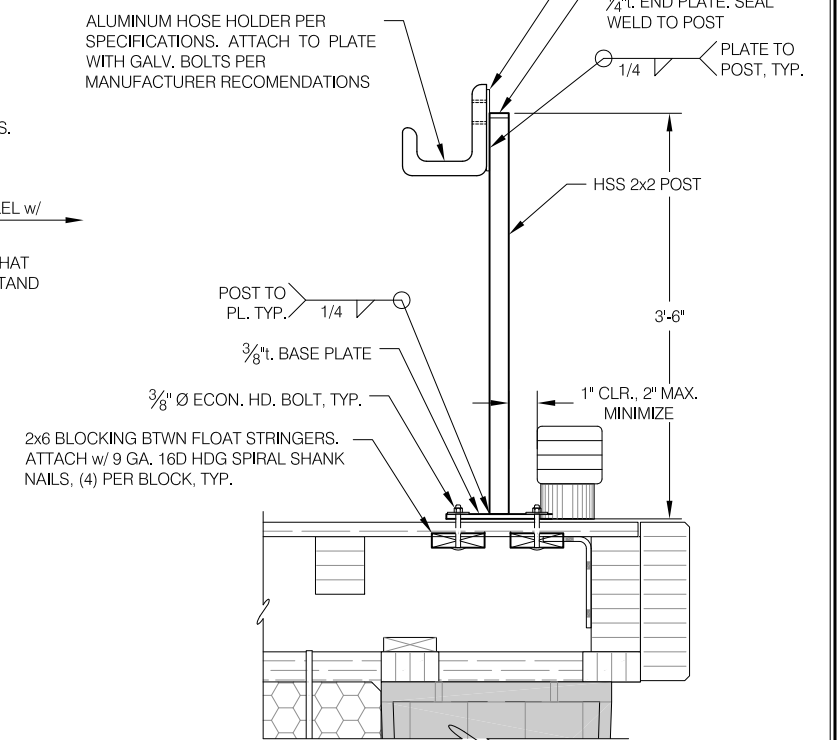
WATER PEDESTAL PIPING DETAILS



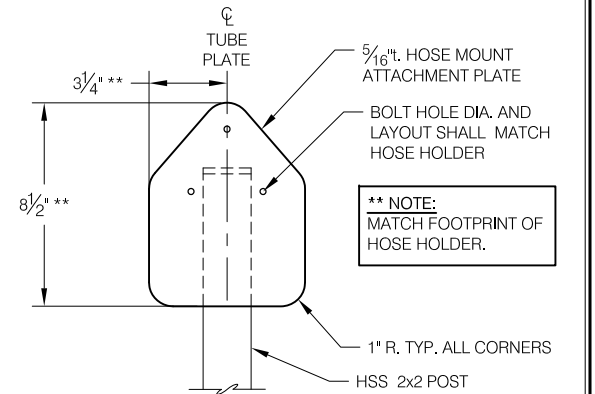
NOTE:

- TRIM WALL ANCHOR BEARING RING TO FLUSH WITH PIPE AROUND MOUNTING BRACKET VERTICAL PLATE.
- ** 1'-6" MINIMUM 5'-0" MAX, LOCATE PER ENGINEER DIRECTION.

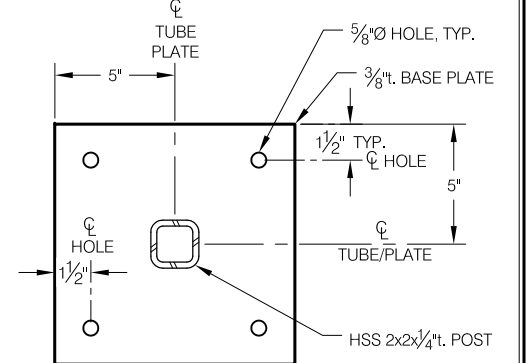
WATER PEDESTAL HEAT TRACE TYPICAL INSTALLATION



HOSE MOUNT MOUNT - ELEVATION



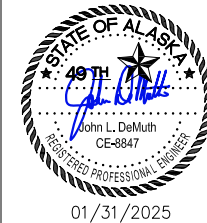
HOSE MOUNT ATTACH. PLATE - ELEV.



HOSE MOUNT BASE PLAN - PLAN

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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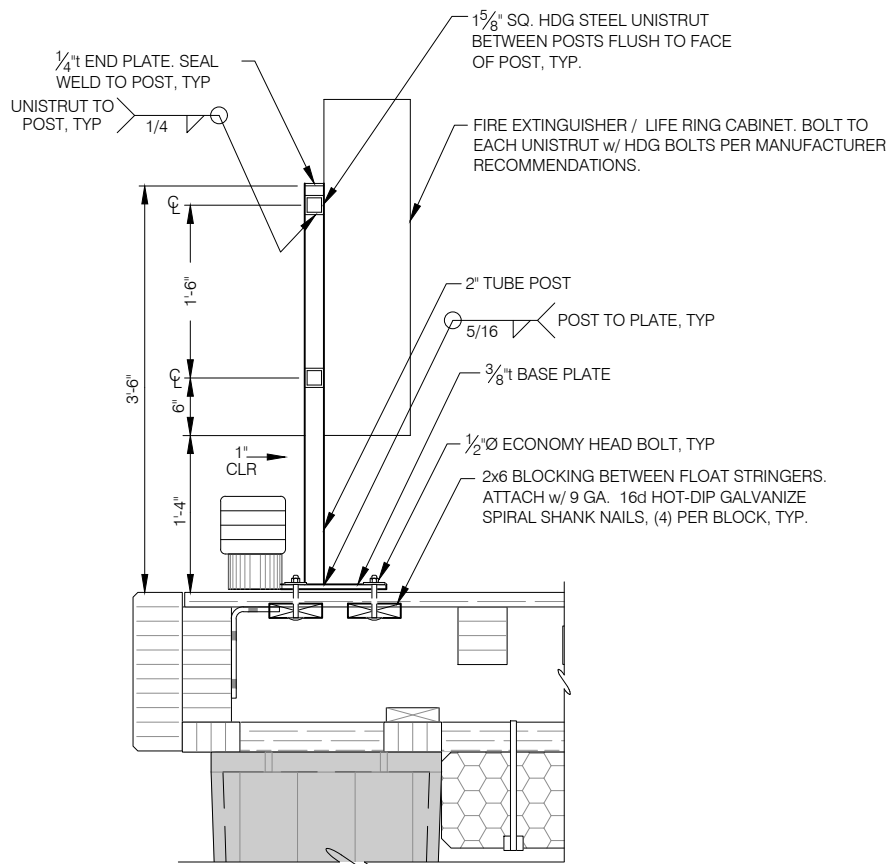
FLOAT MOUNTED UTILITY DETAILS

AURORA HARBOR REBUILD - PHASE IV

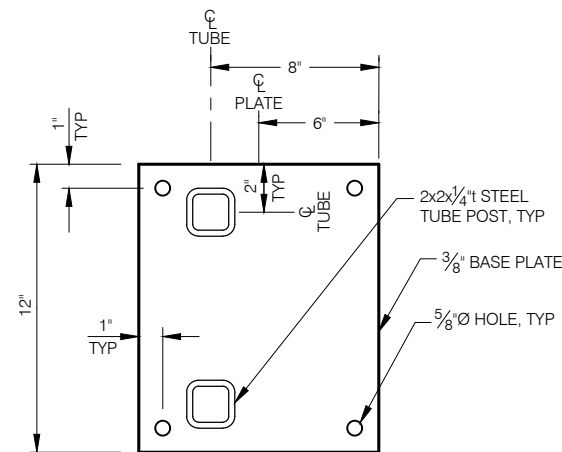
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CHECKED:	BI	CONTRACT NO.:	DH25-022
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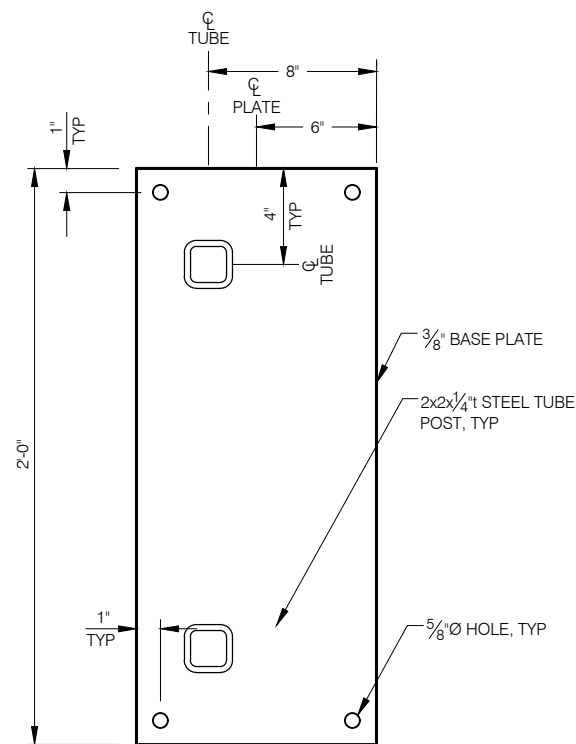


FIRE EXTINGUISHER/LIFE RING CABINET STAND

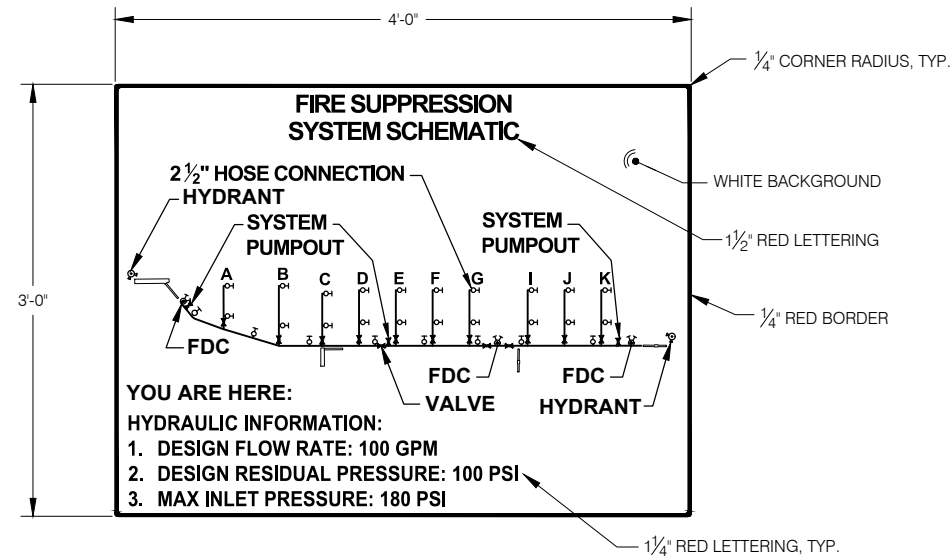


FIRE EXTINGUISHER BASE PLATE - PLAN

- NOTES:**
1. ALL FABRICATED STEEL AND HARDWARE SHALL BE HOT DIP GALVANIZED EXCEPT AS NOTED.
 2. EASE ALL EDGES OF FABRICATED STEEL PIECES.
 3. ALL HOT DIP GALVANIZED PARTS SHALL BE GALVANIZED AFTER FABRICATION.

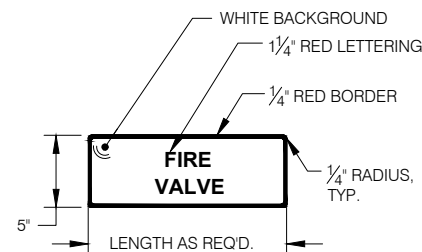


LIFE RING BASE PLATE - PLAN



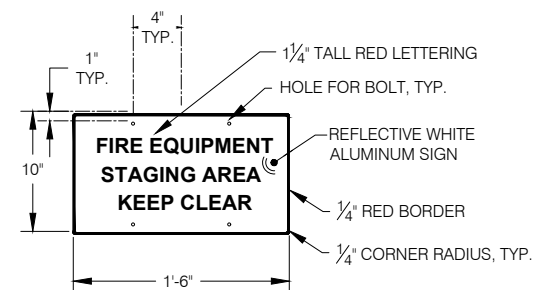
NOTE:
PROVIDE (4) TO BE MOUNTED NEAR EVERY GANGWAY. REMOVE AND REPLACE EXISTING SIGNS. CONTRACTOR SHALL APPLY 2 EA. 1" DIA. ROUND RED WEATHER RESISTANT MARK TO THE SIGN TO INDICATE SIGN PLACEMENT LOCATION. CONTRACTOR SHALL BE PREPARED TO MOUNT SIGN TO TIMBER, STEEL OR CONCRETE. MOUNTING HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR.

FIRE SUPPRESSION SYSTEM SIGNAGE



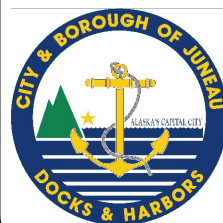
NOTE: TYP. OF (2) MOUNT ON WALER ADJACENT TO VALVE w/ (4) 1/4" X 3" SS SCREWS W/WASHERS. FINAL LOCATION PER ENGINEER DIRECTION.

VALVE SIGNAGE



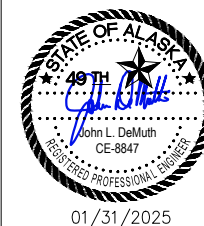
NOTE: TYP. OF (7), MOUNT ON FIRE PEDESTAL STAND w/ (4) 1/4" 316SS BOLTS w/ NUTS AND CUT WASHER.

STAGING AREA SIGNAGE



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
1	3/13/25	CHANGE SIGN QUANTITY	JG	BI	JD

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PHONE: 907-586-0292



**SIGNAGE AND APPURTENANCE
SUPPORT DETAILS**
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	JG	DATE:	JANUARY 31, 2025
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APPROVED:	JD	FILE NO.	SHEET: 58 of 86

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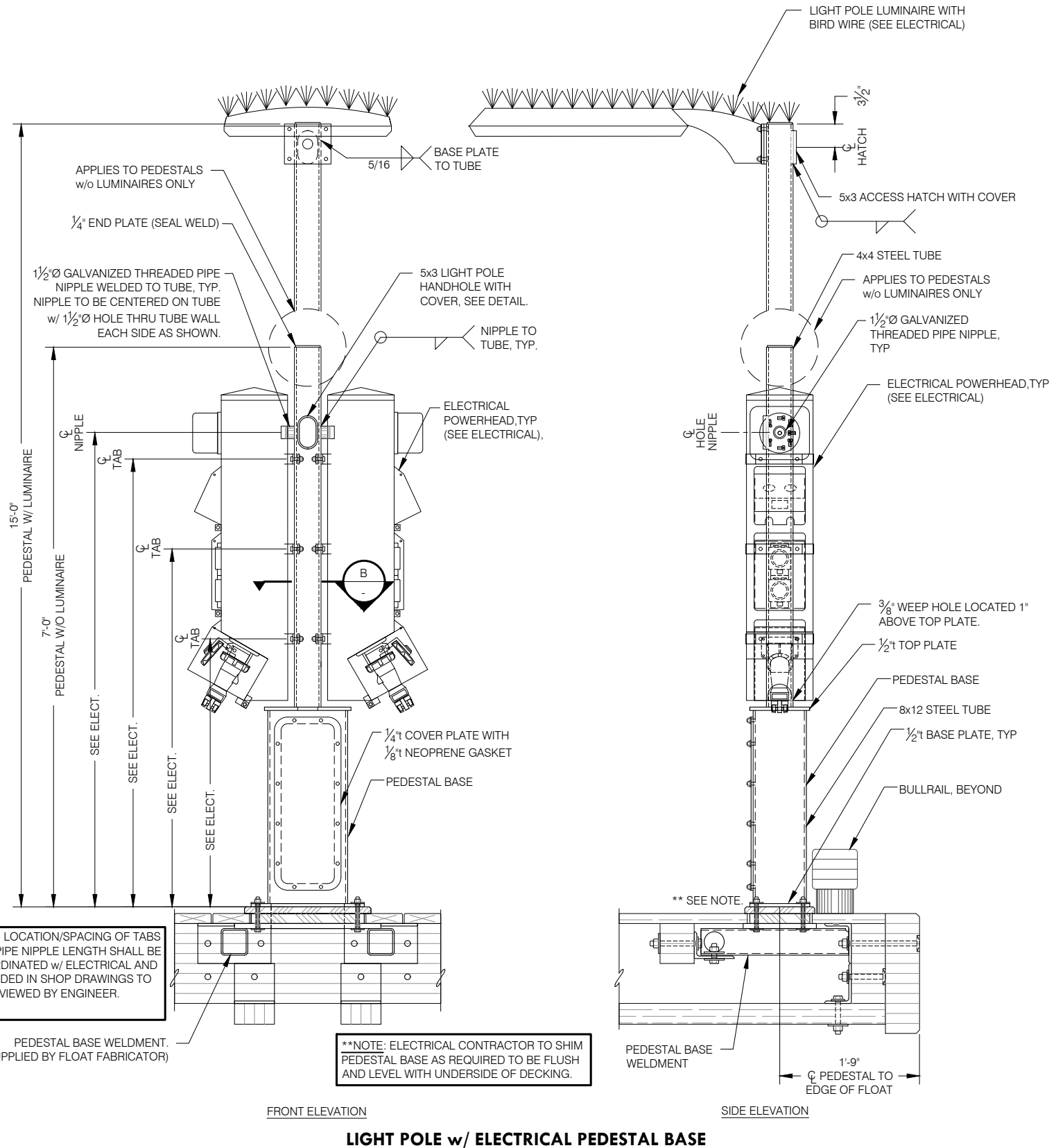
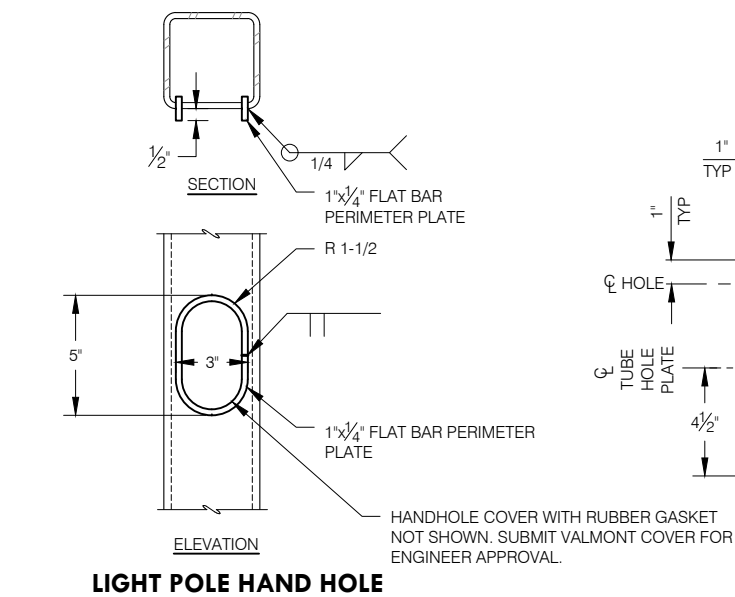
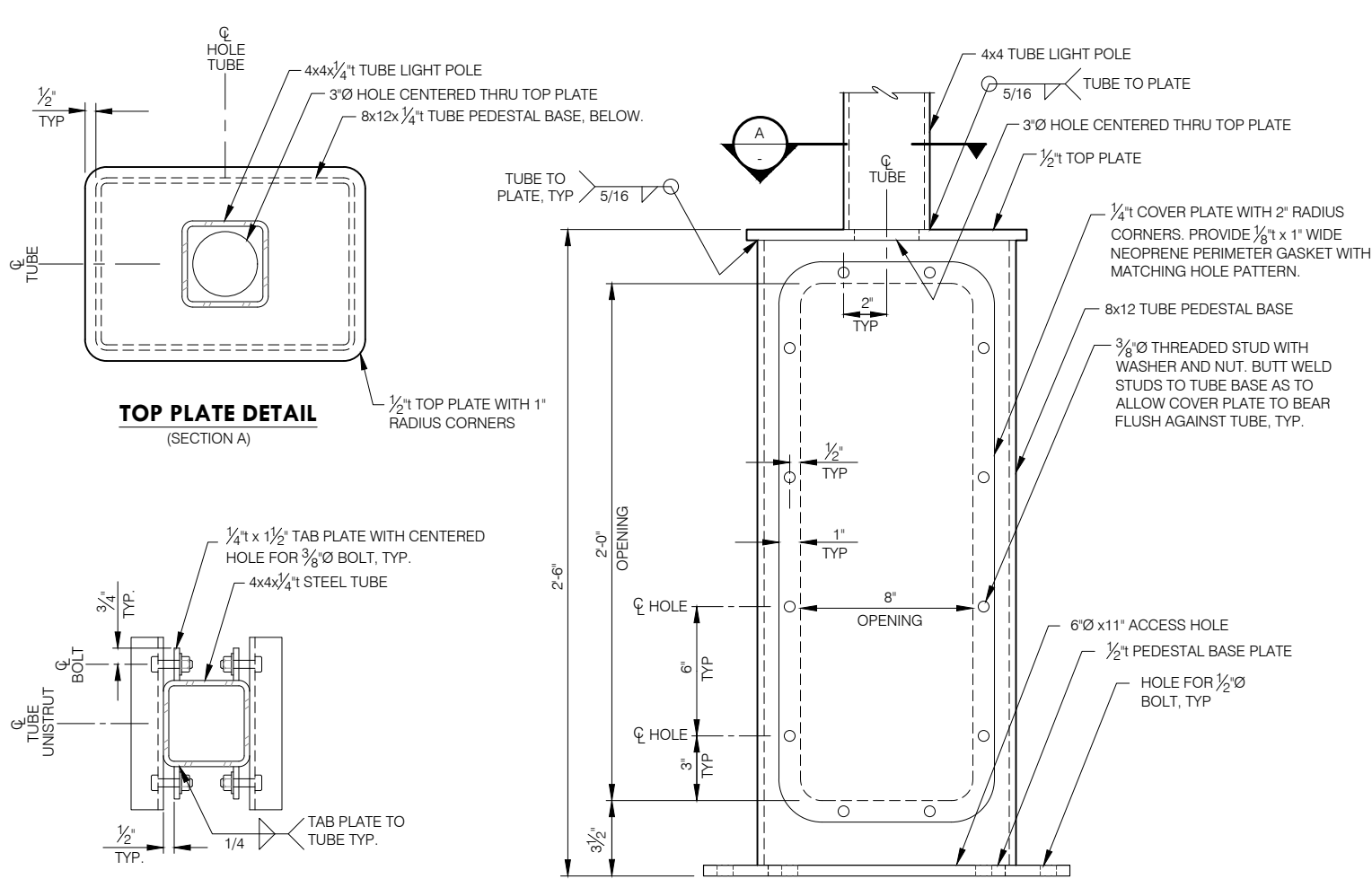
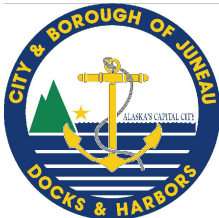
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U9

HEAT TRACE JUNCTION BOX STANDS

(BY ELECTRICAL)



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ELECTRICAL SUPPORT ASSEMBLIES
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	FEBRUARY 1, 2025
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ES1



NOTE:
USE LAG w/ WASHER, TYP. TO INSTALL CABLE
SUPPORT TO WALER AT CABLE PASSAGE
LOCATIONS. SEE GLULAM WALER
MODIFICATION DETAIL.

NOTE:
CONTRACTOR MAY SUBMIT ALTERNATIVE
DESIGN FOR CABLE SUPPORTS FOR
ENGINEERS CONSIDERATION.



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ELECTRICAL SUPPORT ASSEMBLY DETAILS

AURORA HARBOR REBUILD - PHASE IV

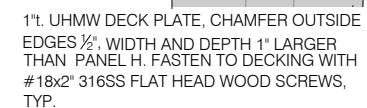
DESIGN:	MS	DATE:	FEBRUARY 1, 2025
CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	61 of 86

ES2



* NOTE:
LOCATE HORIZ. SUPPORT AS
REQUIRED FOR ELECTRICAL
PANELS.

NOTE:
LOCATION AND QUANTITY OF HSS
HORIZONTAL SUPPORTS SHALL MATCH
PANEL H. HSS HORIZONTAL SUPPORTS
MAY REQUIRE FASTENERS OR STRUT
(NOT SHOWN) TO SUPPORT PANEL H.



PANEL J/K ELEVATION

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

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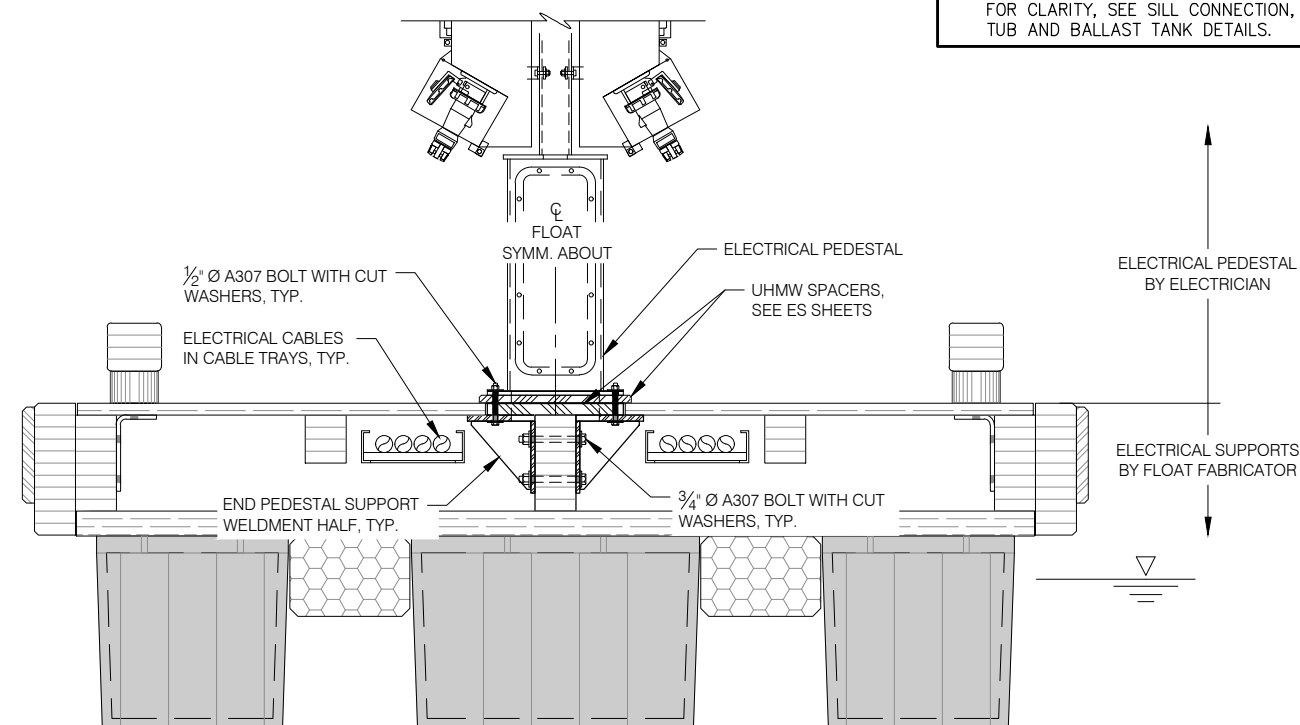
ELECTRICAL SUPPORT POST DETAILS

AURORA HARBOR REBUILD - PHASE IV

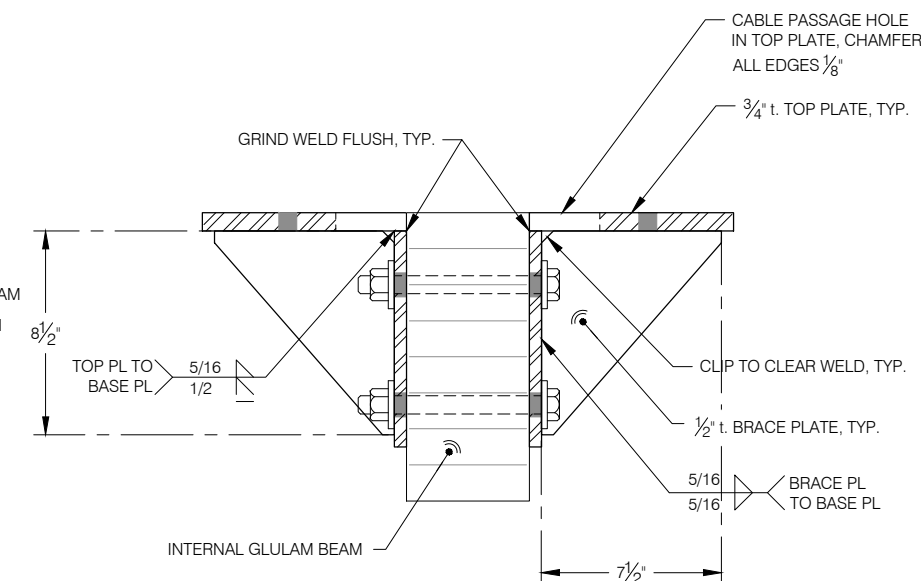
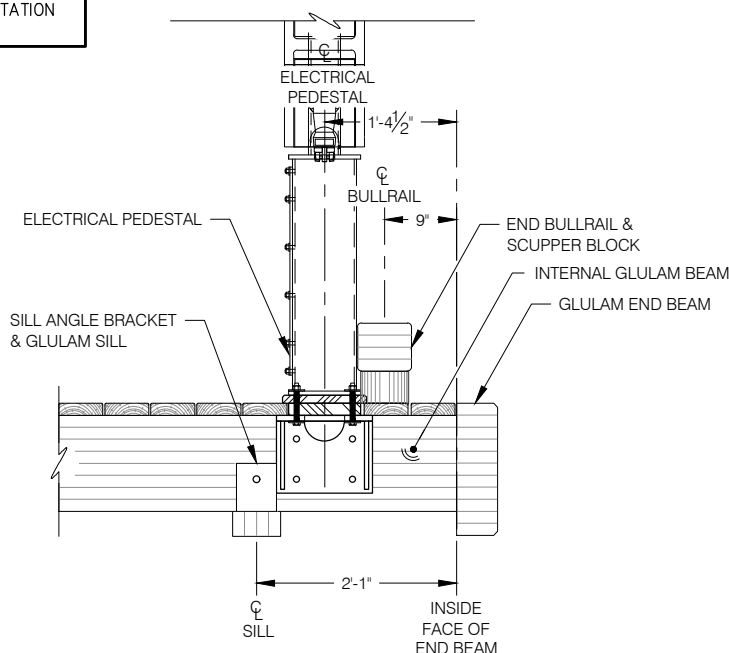
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CHECKED:	CU	CONTRACT NO.:	DH25-022
APPROVED:	CU	SHEET:	62 of 86

ES3

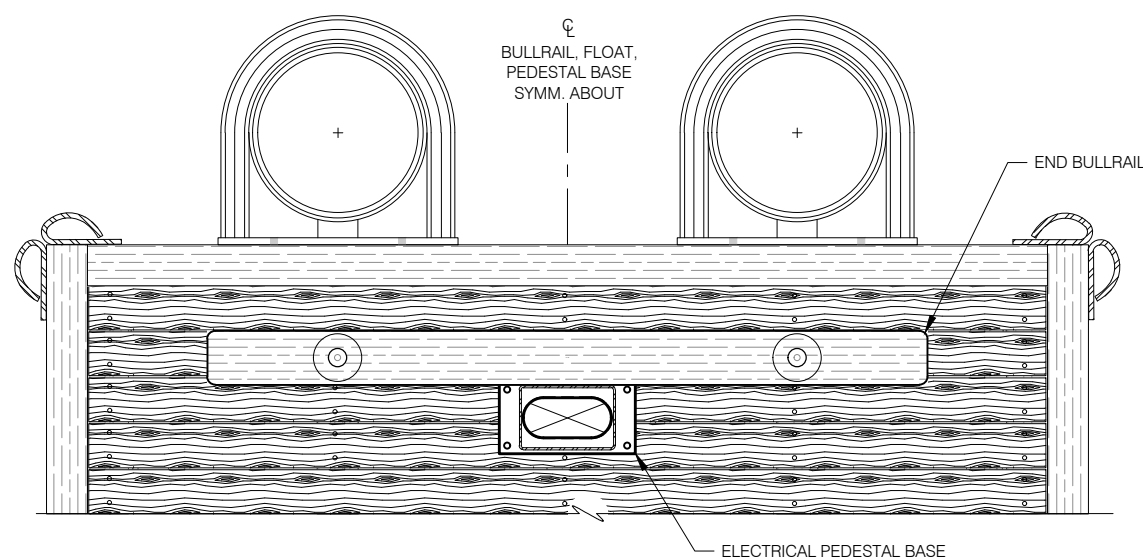
- SILL CONNECTION ANGLES AND TUB/TANK CONNECTION HARDWARE NOT SHOWN IN SECTIONS FOR CLARITY, SEE SILL CONNECTION, FLOTATION TUB AND BALLAST TANK DETAILS.



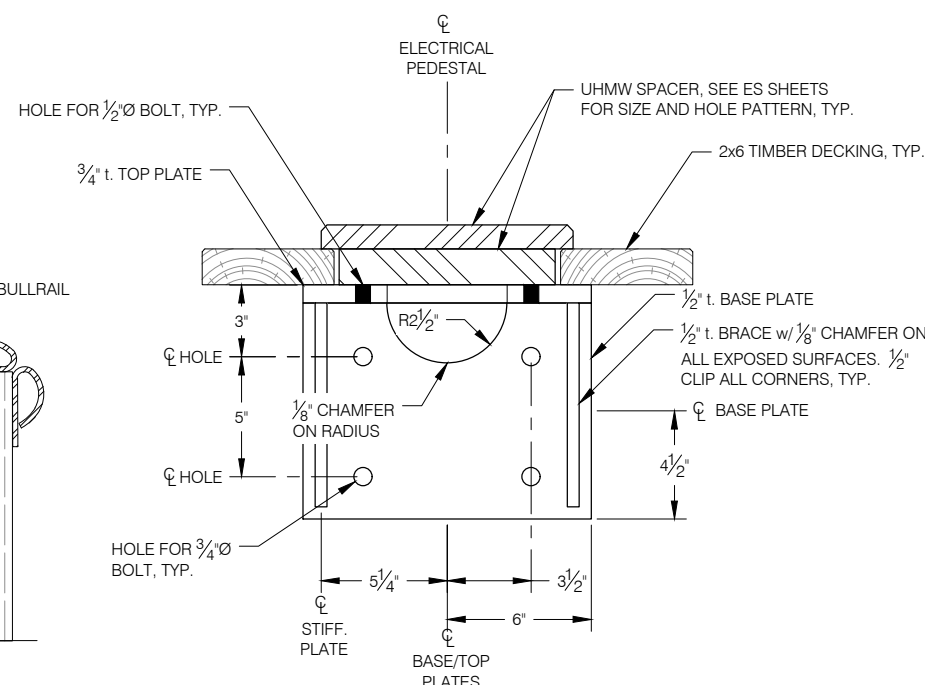
FLOAT END ELEVATION AT ELECTRICAL PEDESTAL



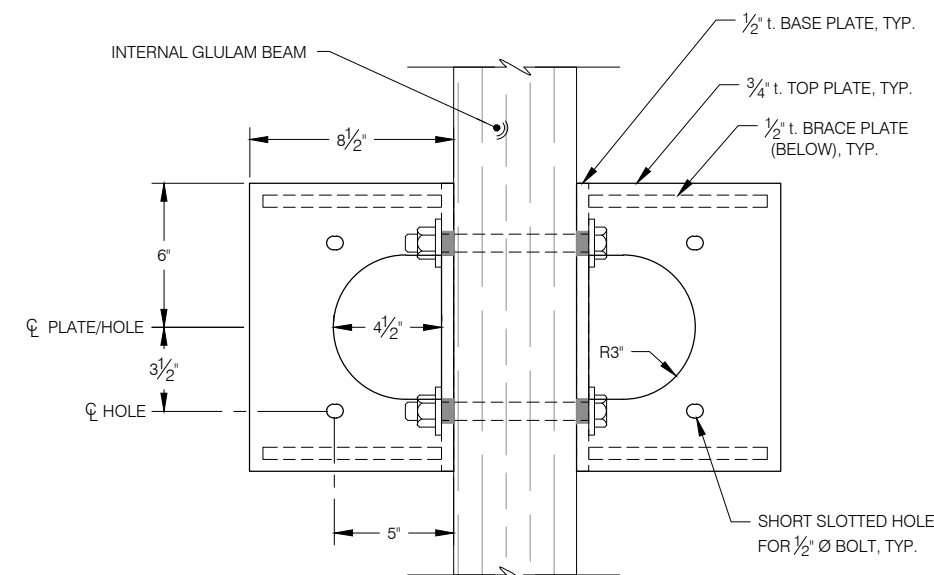
WELDMENT SECTION



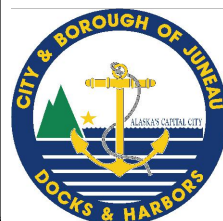
FLOAT END PLAN AT ELECTRICAL PEDESTAL



WELDMENT ELEVATION

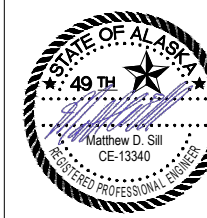


WELDMENT PLAN



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP
ADD. 5	03/19/2025	COMPLETE NEW DRAWING	MDS	CU	CU

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ELECTRICAL PEDESTAL MOUNT
MAINWALK ENDS ONLY
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	MS	DATE:	MARCH 19, 2025
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ES4

ES4 - EPED BRACKET END OF FLOAT

CITY AND BOROUGH OF JUNEAU

AURORA HARBOR REBUILD - PHASE IV

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
E1	GENERAL NOTES, INDEX, & LEGEND
E2	SITE PLAN – POWER
E3	SITE PLAN – LIGHTING
E4	SITE PLAN – HEAT TRACE
E5	SINGLE LINE DIAGRAM – OVERALL
E6	SINGLE LINE DIAGRAM – PANELS
E7	PANEL ELEVATION
E8	PANEL SCHEDULES
E9	GANGWAY OVERALL ELEVATIONS
E10	FLOAT TO GANGWAY ELEVATION
E11	GANGWAY TO APPROCH DOCK ELEVATION
E12	CABLE ROUTING GANGWAY TO HEADWALK FLOAT TO FLOAT K
E13	CABLE ROUTING HEADWALK TO FLOAT J
E14	CABLE ROUTING FLOAT H TO NEW TEE FLOAT
E15	ELECTRICAL BUILDING FLOOR PLAN
E16	10’ FLOAT SECTIONS
E17	POWERHEAD AND PEDESTAL DETAILS
E18	POST MOUNTED PEDESTAL SUPPORT BASE DETAILS
E19	POWERHEAD DETAILS
E20	POWERHEAD WIRING DIAGRAMS
E21	LUMINAIRE SCHEDULE
E22	GANGWAY SECTIONS
E23	HEAT TRACE JUNCTION BOX DETAIL
E24	GFPE DETAILS

GENERAL NOTES (APPLICABLE ALL SHEETS):

- ALL WORK IS NEW UNLESS OTHERWISE NOTED.
- PERFORM ALL WORK PER THE 2020 NATIONAL ELECTRICAL CODE (NEC) AND OTHER APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND STANDARDS. PROVIDE EQUIPMENT AND AN INSTALLATION THAT COMPLIES WITH ARTICLE 555 OF THE NEC.
- MOUNT ALL OF THE ELECTRICAL EQUIPMENT IN THE LOCATIONS SHOWN ON THE CIVIL DRAWINGS. LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE.
- THE CIVIL ASSEMBLIES TO BE USED IN MOUNTING ELECTRICAL EQUIPMENT ARE SHOWN ON THE CIVIL DRAWINGS ES SERIES (ELECTRICAL SUPPORT ASSEMBLIES). SEE THESE DRAWINGS FOR ALL INFORMATION ABOUT THESE ASSEMBLIES. COORDINATE THE DETAILS OF THESE ASSEMBLIES WITH THE MANUFACTURERS OF THE ELECTRICAL EQUIPMENT AND FLOATS. MOUNT THE ELECTRICAL SUPPORT ASSEMBLIES AS SHOWN ON THE CIVIL ES SERIES DRAWINGS. MOUNT THE ELECTRICAL EQUIPMENT AS SHOWN ON THE ELECTRICAL DRAWINGS. STUDY THE CIVIL DRAWINGS (ALL SERIES) TO UNDERSTAND HOW TO ROUTE CONDUIT AND CABLE AND HOW TO MOUNT ELECTRICAL EQUIPMENT. COORDINATE WITH ALL OTHER TRADES TO PERFORM THE ELECTRICAL WORK AND TO ALLOW THEM TO PERFORM THEIR WORK.
- ALL CONDUIT SHALL BE SCHEDULE 80 PVC. UNLESS NOTED OTHERWISE.

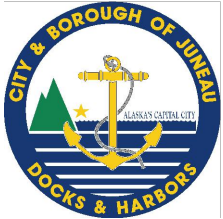
- PROVIDE MOUNTING EQUIPMENT AND HARDWARE AS REQUIRED TO MOUNT ELECTRICAL EQUIPMENT. SIZE MOUNTING BOLTS, BRACKETS, HARDWARE, ETC. FOR A SAFETY FACTOR OF 5 MINIMUM. ALL EQUIPMENT AND MATERIALS SHALL NOT MOVE WHEN PULLED OR PUSHED BY HAND (EXCEPT CABLES AND FLEXIBLE CONDUIT). SECURE ALL CONDUIT AND CABLES WITHIN 12 INCHES OF END OF CONDUIT AND CABLES AS REQUIRED PER NEC.
- FIELD TREAT ALL HOT DIPPED GALVANIZED MATERIALS THAT ARE CUT, DRILLED, SCRATCHED OR DAMAGED. SEE CIVIL FOR FIELD TREATMENT.
- ALL CONDUCTORS SHALL BE COPPER, ALL INSULATION SHALL BE 600V RATED, TYPE XHHW FOR CONDUCTORS NOT IN A CABLE. ALL CABLES SHALL BE THE TYPE SPECIFIED, NO SUBSTITUTIONS. USE STAINLESS STEEL STRAPS TO SECURE CONDUIT, UNLESS OTHERWISE NOTED. PROVIDE HEAT SHRINK OVER ALL CRIMP CONNECTIONS WHEN TERMINATING A CABLE. NO SPLICES IN ANY CABLES OR CONDUCTORS. SEE ADDITIONAL REQUIREMENTS ON SHEETS E17–E20 FOR POWERHEADS.
- IF GALVANIZED THREADS ARE CHASED IN ORDER TO BE USABLE, TREAT CHASED THREADS WITH BRAKE CLEANER, THEN COAT WITH MARINE TRAILER WHEEL BEARING GREASE BEFORE APPLYING A STAINLESS STEEL WASHER AND NUT.
- USE 316 STAINLESS STEEL BOLTS, WASHERS, ETC. TO MOUNT ELECTRICAL EQUIPMENT AND STRUT CHANNEL. ALL FASTENERS AND OTHER EXPOSED HARDWARE SHALL BE 316 STAINLESS STEEL.
- SEAL ALL PENETRATIONS IN ELECTRICAL EQUIPMENT WITH UL LISTED HARDWARE FOR SUCH USE. USE RUBBER OR SILICONE WASHERS IN ADDITION TO STAINLESS STEEL WASHERS. SEE NOTE 26 FOR MORE ON SEALING REQUIREMENTS.
- USE 316 STAINLESS STEEL STRUT CHANNEL (UNISTRUT) TO SUPPORT CABLES, PANELS, POWERHEADS, AND ALL OTHER ELECTRICAL EQUIPMENT UNLESS OTHERWISE NOTED. TRIM STRUT CHANNEL 1/4” SHORT OF EDGE OF EQUIPMENT AND POSTS. SAND END OF STRUT CHANNEL SMOOTH. MOUNT ALL PANELS TO GALVANIZED TUBES THAT ARE PART OF ELECTRICAL EQUIPMENT SUPPORTS. SEE CIVIL. USE CABLE SUPPORTS THAT COMPLY WITH 555.13(4). USE CUSHION STRAPS WHEN SUPPORTING CABLE TO STRUT CHANNEL.
- ROUTE CABLES IN CABLE TRAY IN FLOAT UNDER DECKING. SECURE CABLE TO CABLE TRAY WITH NM CABLE TIES EVERY 6’ AS WELL AS WHERE CABLE ENTERS AND LEAVES TRAY. DO NOT EXCEED 8 TIMES CABLE DIAMETER FOR BENDING RADIUS. USE STAINLESS STEEL CABLE GRIP CONNECTORS FOR ALL CABLE ENTERING AND LEAVING CONDUIT. SEE NOTE 18 FOR CABLE TIE REQUIREMENTS.
- ALL CABLE TERMINATIONS AND ALL ELECTRICAL CONNECTIONS SHALL BE A MINIMUM OF 12 INCHES ABOVE THE FLOAT DECKING INCLUDING WIRING TERMINATIONS, RECEPTACLES, ETC.
- ALL OUTSIDE ENCLOSURES SHALL BE NEMA 4X 316L STAINLESS STEEL. ALL INSIDE ENCLOSURES SHALL BE NEMA 1 PAINTED STEEL.
- PROVIDE OXIDE INHIBITING COMPOUND ON ALL ELECTRICAL CONNECTIONS. BURNDY PENTROX TYPE A OR E AS REQUIRED.
- ALL LUGS AND ELECTRICAL TERMINALS SHALL BE COPPER OR TIN PLATED HIGH CONDUCTIVE ALUMINUM.
- SECURE CABLE TO CABLE TRAY WITH 500 LB MINIMUM TY–WRAPS WHEN TRANSITIONING BETWEEN FLOAT SECTIONS TO KEEP CABLE FROM CHAFING. PANDUIT MLT 316 SS SERIES OR EQUAL. ALLOW SLACK IN CABLE AT FLOAT TRANSITIONS.

- ALL CONDUIT SHALL BE SCHEDULE 80 PVC, HEAVY DUTY FIBERGLASS, OR GALVANIZED RIGID STEEL AS NOTED. COMPLY WITH NOTE 27..
- CABLE ROUTING AT ALL TRANSITIONS BETWEEN UPLANDS, GANGWAY, AND FLOATS SHALL BE INSTALLED SO THAT IT WILL NOT BE DAMAGED AT THE MINIMUM AND MAXIMUM TIDAL POSITIONS ON SKID PLATES AND HINGED FLOAT CONNECTIONS.
- BUILD THE PROJECT AS DESIGNED. DO NOT ASSUME THE DESIGN WILL BE CHANGED AT CONTRACTOR’S REQUEST.
- NOT ALL CABLES IN FLOAT ARE SHOWN FOR CLARITY. REVIEW CIVIL DRAWINGS TO UNDERSTAND HOW TO ROUTE CABLES IN THE FLOAT. ROUTE CABLES TO AVOID STRUCTURAL MEMBERS IN A MANNER THAT USES THE HIGHEST POSSIBLE BENDING RADIUS OF THE CABLE.
- IF EQUIPMENT TO BE INSTALLED ON THE PROJECT HAS NOT ARRIVED AND TEMPORARY MEANS OF COVERING OR PROTECTING INFRASTRUCTURE IS NECESSARY, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROVISIONS AND TEMPORARY MEANS OF PROTECTION. AT ALL TIMES THE JOB SITE SHALL REMAIN IN A SAFE AND WORKMANLIKE CONDITION.
- PROVIDE A SUBMITTAL REGISTRY WITH A FULL LIST OF PROJECT SUBMITTALS WHERE REQUIRED PER SECTION. INCLUDE IN THE REGISTRY DATE OF EACH SUBMISSION, RESPONSES PROVIDE BY THE ENGINEER, ETC. CONTRACTOR IS FULLY RESPONSIBLE TO PROVIDE SUBMITTALS PRIOR TO COMMENCEMENT OF ANY APPLICABLE WORK WITHIN THE SECTIONS. CONTRACTOR SHALL NOT COMMENCE WORK UNTIL SUBMITTALS ARE APPROVED IN WRITING.
- ALL JUNCTION BOXES AND ENCLOSURES ON THE PROJECT SHALL BE PROVIDED WITH VENT DRAIN TO CONTINUOUSLY DRAIN ACCUMULATED WATER AND TO HELP AIR PRESSURIZATION WITHIN ENCLOSURE. STAINLESS STEEL, HOFFMAN AVDR4SS4 OR EQUAL.
- ALL JUNCTION BOXES AND ENCLOSURES WITH PENETRATIONS EXPOSED TO OUTSIDE AIR AND MOISTURE SHALL BE SEALED WITH FOAM TO ELIMINATE ALL GAPS AND CRACKS. PROVIDE IN SUBMITTALS FOR REVIEW. PROVIDE LOCKTITE TITE FOAM OR EQUAL.
- ALL CABLE CLAMPS PROVIDED ON THIS PROJECT SHALL INCLUDE INSULATED INNER MATERIAL TO PROTECT CABLE JACKETS.
- ALL JUNCTION BOXES AND ENCLOSURES SHALL COME EQUIPPED WITH A MOUNTING BACK PLANE IN THE BOX TO SECURE DISTRIBUTION BLOCKS ON. GROUND ALL THE BACK PLANES AND CONNECTED COMPONENTS.
- ALL CABLES TRANSITIONING THROUGH THE FLOATS SHALL HAVE CHAFING PROTECTION ADDED BETWEEN THE CABLES AND THE ADJACENT FLOAT CABLE GUARDS OR MATERIAL THE CABLES REST ON AND WILL RUB AGAINST. USE 24” SECTIONS OF RUBBER CABLE JACKET THAT WAS STRIPED FOR TERMINATING CABLE FOR THIS PROTECTION. SECURE TO PROTECTED CABLES WITH NM CABLE TIES 6” ON CENTER. SEE DETAIL ON SHEET E10.
- THE POWER PEDESTALS ON AURORA HARBOR PHASE IV SHALL MATCH IN PERFORMANCE, FEATURES, FUNCTION, AND AESTHETIC TO THE PEDEESTALS PROVIDED AS PART OF AURORA HARBOR PHASE III PROJECT COMPLETED IN 2024. BASIS OF DESIGN PEDESTALS ARE BY ARC INDUSTRIES, MODEL SERIES: ARCMP–PM–SSXXXXXX–RH/LH–WT.

LEGEND

CL	CENTER–LINE
	CIRCUIT BREAKER (AMPS/POLES)
CBJ	CITY & BOROUGH OF JUNEAU
CIVIL	CIVIL PROJECT DRAWINGS
CONDS.	CONDUCTORS
	CONTACTOR
CT	CURRENT TRANSFORMER
	DISCONNECT
F	FIRE PEDESTAL
GRS	GALVANIZED RIGID STEEL
GND	GROUND
	GROUND BUS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GFPE	GROUND FAULT PROTECTION OF EQUIPMENT
GFPR	GROUND FAULT PROTECTION RELAY
XN	X FLOAT NORTH
XS	X FLOAT SOUTH
HW	HEADWALK
HT	HEAT TRACE
	HEAVY DUTY DISCONNECT (AMPS/POLES AS SHOWN)
	HOME RUN
LTG	LIGHTING
	LIGHTING CONTACTOR
	LUMINAIRE
MW	MAINWALK
NEC	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
NM	NON METALLIC
	PHOTO ELECTRIC CELL
	RECEPTACLE, 120V, 20A INDUSTRIAL SPEC GRADE, WHITE WITH STAINLESS COVER PLATE
AJ–## OR AK–##	STALL NUMBERS (01–26)
UNISTRUT	SUPPORT CHANNEL UNISTRUT BRAND OR EQUAL
(TYP)	TYPICAL
UHMW–PE	ULTRA HIGH DENSITY MOLECULAR WEIGHT
AEL&P	UTILITY
	UTILTIY METER
	WATER PEDESTAL

GENERAL NOTES & LEGEND



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292

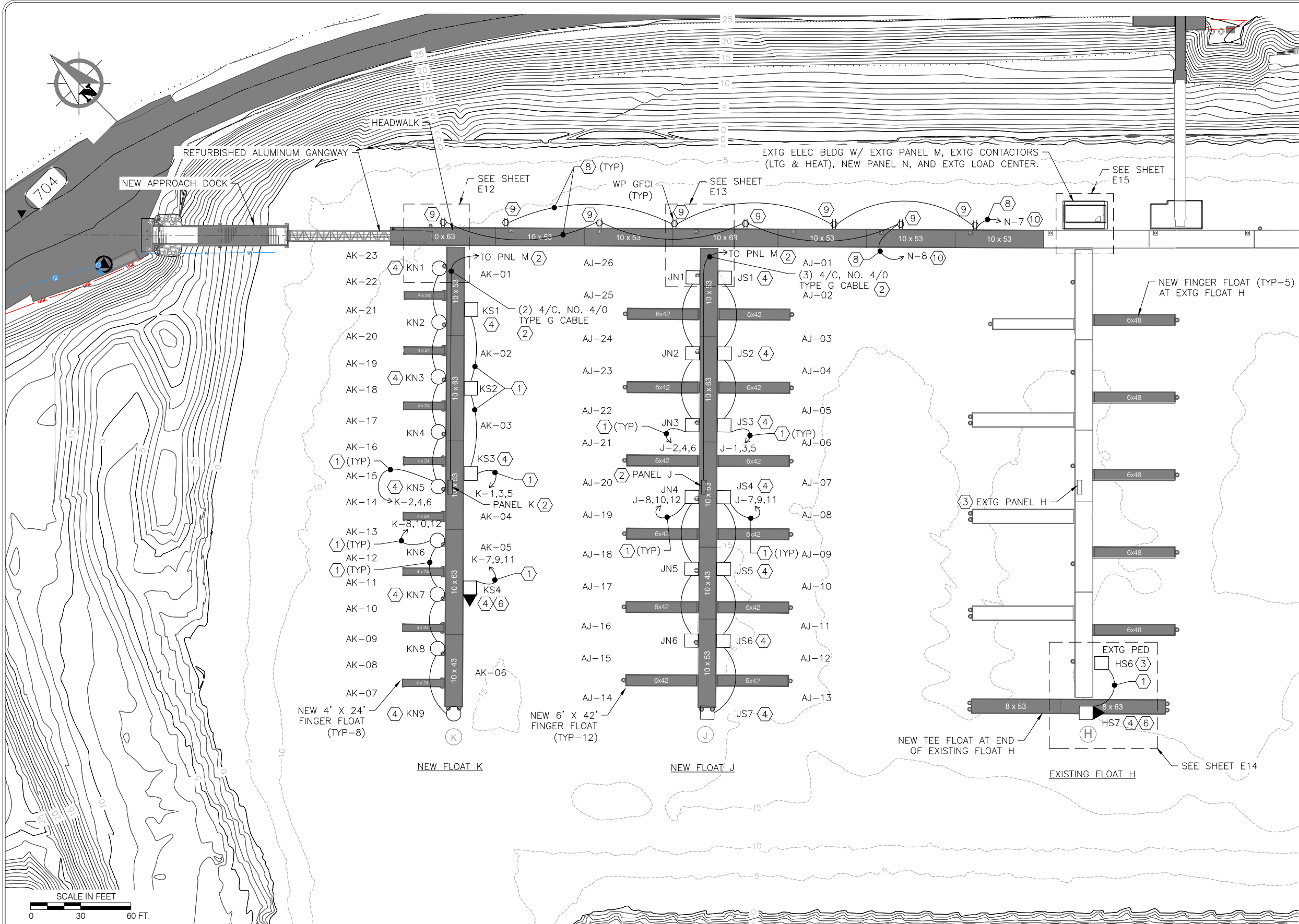


GENERAL NOTES, INDEX, & LEGEND

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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E1



PEDESTAL SCHEDULE 57		
TYPE	SYMBOL	POWERHEAD CONFIGURATION
A		(1) 100A, 208V, 3 PHASE 50A, 208V, 1 PHASE 30A, 120V, 1 PHASE
		(1) 50A, 208V, 1 PHASE 30A, 120V, 1 PHASE
B		(1) 50A, 208V, 1 PHASE 30A, 120V, 1 PHASE
		(1) 50A, 208V, 1 PHASE 30A, 120V, 1 PHASE
C		(1) 30A, 120V, 1 PHASE
		(1) 30A, 120V, 1 PHASE

- SHEET NOTES:
- 4/C 4/0, TYPE G CABLE (POWER). ROUTE CABLE IN CABLE TRAY INSIDE FLOAT SECTIONS.
 - POWER NEW MAINWALK PANELS FROM EXTG PANEL M. SEE SINGLE LINE DIAGRAMS ON SHEETS E5 & E6. ROUTE CABLE IN CABLE TRAY INSIDE FLOAT SECTIONS.
 - PROVIDE A NEW 100A PEDESTAL ON NEW TEE FLOAT AT THE END OF EXISTING FLOAT H. POWER FROM EXTG ADJACENT PEDESTAL HS6 FROM PEDESTAL POWER BUS.
 - PEDESTALS JS1-JS7, KN1, KN3, KN5, KN7, KN9, KS1-KS3, AND HS7 INCLUDE POST TOP LUMINAIRES.
 - EACH SYMBOL IN THE SCHEDULE REPRESENTS TWO POWERHEADS MOUNTED BACK TO BACK. SEE SHEET E20 FOR WIRING DIAGRAMS AND E17 & E1 FOR PED DETAILS.
 - PEDESTAL INCLUDES A SINGLE 3 ϕ , 100A, RECEPTACLE, ARROW INDICATES WHICH POWERHEAD HAS THE 100A RECEPTACLE.
 - COORDINATE WITH POWERHEAD FABRICATOR DURING SHOP DRAWINGS FOR LOCATION OF ACCESS PANEL ON EACH POWERHEAD TO ENSURE IT FACES CENTER OF THE ADJACENT FLOAT. SEE SHEET E19. BASIS OF DESIGN PEDESTALS PER NOTE 30, SHEET E1.
 - 3/C NO. 8, TYPE G CABLE (POWER). ROUTE CABLE IN CABLE TRAY INSIDE FLOAT SECTIONS.
 - PROVIDE HEADWALK LIGHT POLES WITH INTEGRAL 120V, 20A DUPLEX RECEPTACLES WITH WEATHER PROOF COVERS. CIRCUIT THE RECEPTACLES FROM NEW DEDICATED CIRCUIT BREAKERS IN NEW PANEL N. SEE LIGHT POLE DETAILS ON SHEET E16.
 - TO NEW PANEL N IN THE EXISTING ELECTRICAL BUILDING, SEE SHEET E5 FOR SINGLE LINE DIAGRAM AND E15 FOR BUILDING FLOOR PLAN.
 - CABLE ROUTING ON THIS SHEET IS DIAGRAMMATICAL. SEE SHEETS E12 TO E15 FOR INNER FLOAT CABLE ROUTING INFO.
 - LOCATE PEDESTALS PER CIVIL DRAWINGS. SEE SHEET E17-E20 FOR PEDESTAL DETAILS.

SITE PLAN - ELECTRICAL



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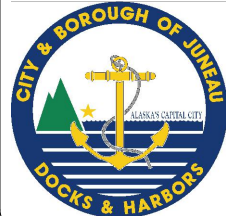
CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



SITE PLAN - POWER
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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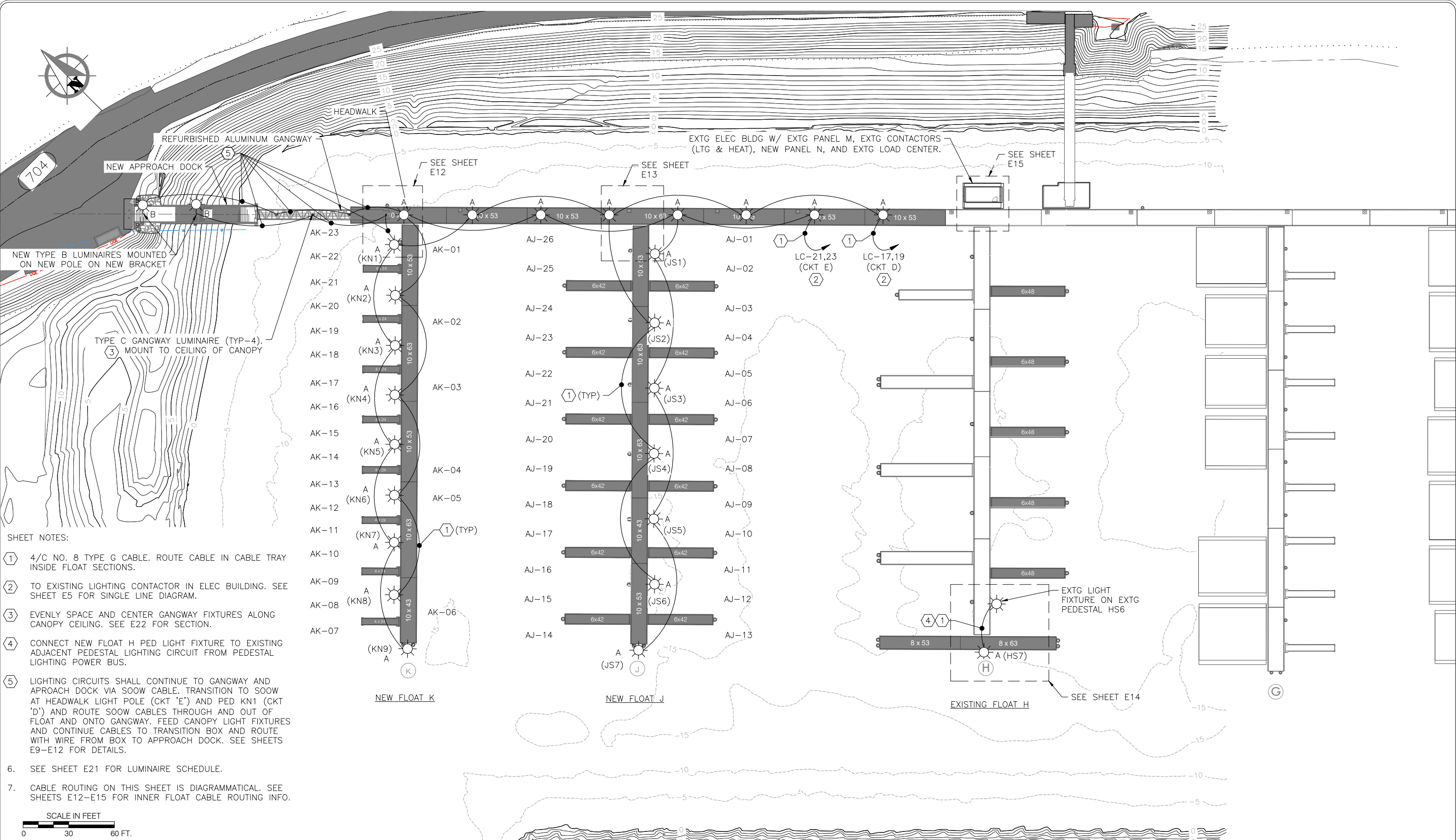
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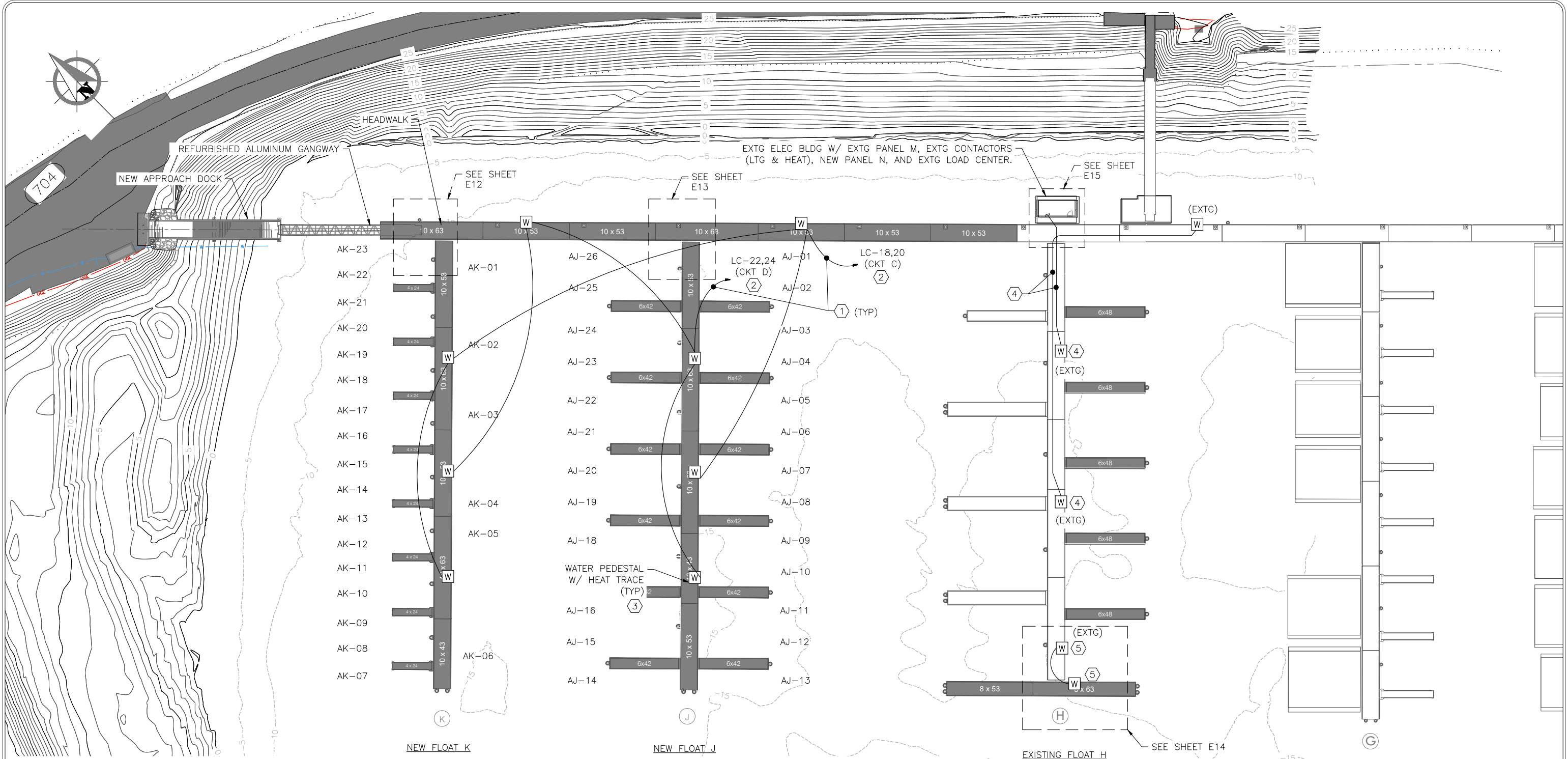
SITE PLAN - LIGHTING
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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E3

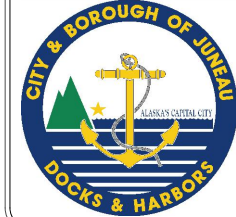


- SHEET NOTES:
- 4/C NO. 8 TYPE G CABLE. ROUTE CABLE IN CABLE TRAY INSIDE FLOAT SECTIONS.
 - TO EXISTING LIGHTING CONTACTOR IN ELEC BUILDING. SEE SHEET E5 FOR SINGLE LINE DIAGRAM.
 - EVENLY SPACE AND CENTER GANGWAY FIXTURES ALONG CANOPY CEILING. SEE E22 FOR SECTION.
 - CONNECT NEW FLOAT H PED LIGHT FIXTURE TO EXISTING ADJACENT PEDESTAL LIGHTING CIRCUIT FROM PEDESTAL LIGHTING POWER BUS.
 - LIGHTING CIRCUITS SHALL CONTINUE TO GANGWAY AND APPROACH DOCK VIA SOOW CABLE. TRANSITION TO SOOW AT HEADWALK LIGHT POLE (CKT 'E') AND PED KN1 (CKT 'D') AND ROUTE SOOW CABLES THROUGH AND OUT OF FLOAT AND ONTO GANGWAY. FEED CANOPY LIGHT FIXTURES AND CONTINUE CABLES TO TRANSITION BOX AND ROUTE WITH WIRE FROM BOX TO APPROACH DOCK. SEE SHEETS E9-E12 FOR DETAILS.
 - SEE SHEET E21 FOR LUMINAIRE SCHEDULE.
 - CABLE ROUTING ON THIS SHEET IS DIAGRAMMATICAL. SEE SHEETS E12-E15 FOR INNER FLOAT CABLE ROUTING INFO.



- SHEET NOTES:
- 1 4/C NO. 8 TYPE G CABLE. ROUTE CABLE WITHIN EXISTING AND NEW FLOATS ALONG CABLE TRAY AS REQUIRED.
 - 2 TO EXTG HEAT TRACE CONTACTOR IN ELEC BUILDING. SEE SHEET E5 FOR SINGLE LINE DIAGRAM.
 - 3 SEE SHEET E23 FOR INSTALLATION DETAILS OF HEAT TRACE AT WATER PEDESTALS AND ADJACENT JUNCTION BOXES.
 - 4 THERE ARE TWO EXISTING HEAT TRACE CABLES IN FLOAT H. HEAT TRACE CABLES ARE DAMAGED WITHIN THE FLOAT. DISCONNECT AND REMOVE BOTH CABLES AND REPLACE IN KIND. REPLACE SEGMENTS BETWEEN BUILDING AND WATER PEDESTAL JUNCTION BOX AND BETWEEN WATER PEDESTAL JUNCTION BOXES. VERIFY PROPER FUNCTIONALITY AFTER INSTALL. THE EXISTING WATER PEDESTAL JUNCTION BOXES HAVE A SIMILAR ARRANGEMENT AS TO DETAILS ON SHEET E23. COORDINATE TEMPORARY DECK REMOVAL AND DISPOSAL AS REQUIRED WITH OWNER.
 - 5 POWER NEW FLOAT H HEAT TRACE FROM EXISTING HEAT TRACE JUNCTION BOX. ROUTE CABLE WITHIN EXISTING AND NEW FLOATS ALONG CABLE TRAY AS REQUIRED.
 - 6 CABLE ROUTING ON THIS SHEET IS DIAGRAMMATICAL. SEE SHEETS E12 TO E15 FOR INNER FLOAT CABLE ROUTING INFO.
- SCALE IN FEET
0 30 60 FT.

SITE PLAN - ELECTRICAL



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JUNEAU, ALASKA 99801
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SITE PLAN - HEAT TRACE
AURORA HARBOR REBUILD - PHASE IV

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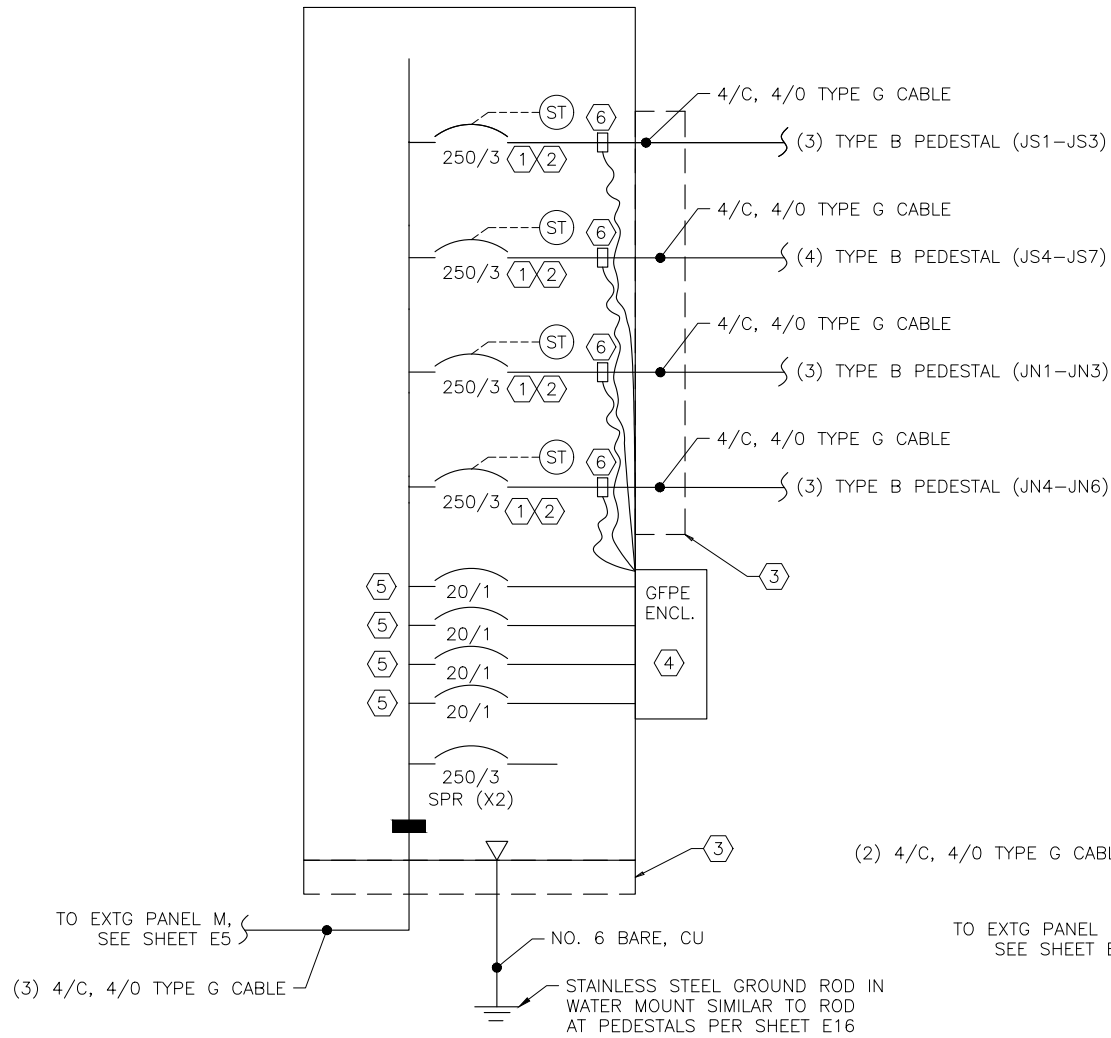
E4

- 1 EXISTING SPARE 100% RATED BREAKER WITH INTEGRAL SHUNT TRIP RELAY. RELAY CONTROLLED BY EXTERNAL GFPE RELAY WITH ADJUSTABLE TRIP. SEE KEYNOTE 3, THIS SHEET. USE FOR NEW FLOAT PANELS.
- 2 EXISTING SPARE BREAKER WITH CLASS A GFCI PROTECTION.
- 3 EXTG GROUND FAULT PROTECTION EQUIPMENT (GFPE) RELAYS HOUSED IN EXISTING ENCLOSURE MOUNTED NEXT TO PANEL. USE SPARE GFPE RELAYS TO MONITOR PANEL J & K FEEDER CIRCUITS. PROVIDE NECESSARY WIRING BETWEEN GFPE UNITS AND SHUNT TRIP MODULES ON THE DESIGNATED BREAKERS RELAYS POWERED FROM DEDICATED 120V, 20/1 BREAKERS IN PANEL N. SEE SHEET E24 FOR MORE DETAILS ON RELAYS, AND DETAIL 4 ON E24 FOR CTS AND CT RELAY WIRING INFORMATION.
- 4 PROVIDE CT (1 PER CIRCUIT BREAKER), CT WIRING, AND SHUNT TRIP WIRING TO GFPE RELAY IN BOX. MOUNT CTS IN PANEL DIAGRAM. SHUNT TRIP WIRING NOT SHOWN HERE, PROVIDE AS REQUIRED.
- 5 EXISTING 20/3 BREAKERS TO BE DISCONNECTED FROM GFPE. RELAYS AND UPLANDS BREAKER. LEAVE ALL BUT ONE AS SPARE. USE ONE AS MAIN BREAKER TO NEW PANEL N. ALL GFPE RELAYS TO BE POWERED VIA DEDICATED 20/1 BREAKERS IN PANEL N.
- 6 EXISTING 600A BREAKER, WITH SHUNT TRIP, AND ADJUSTABLE 'LSI' FUNCTIONS. SQ-D 1-LINE PG. PROVIDE BREAKER SETTINGS PER ENGINEER DIRECTION.

7. EXISTING 400A BREAKER, WITH SHUNT TRIP, AND ADJUSTABLE 'LI' FUNCTIONS, SQ-D 1-LINE LG. PROVIDE BREAKER SETTINGS PER ENGINEER DIRECTION.
8. PROVIDE NEW BREAKER FOR NEW CIRCUITS TO LIGHTING CONTACTOR.
9. PROVIDE NEW BREAKER FOR NEW CIRCUIT TO HEAT TRACE CONTACTOR.
10. REWORK EXISTING CURRENT TRANSDUCER AND SHUNT TRIP WIRING AT EXISTING BREAKERS AS REQUIRED TO ENSURE PROPER FUNCTIONALITY. TEST ALL GFPE RELAYS AT PANEL M PRIOR TO SUBSTANTIAL COMPLETION.
11. TYPE G CABLE IS FINELY STRANDED AND MAY NOT PROPERLY SECURE DOWN WITHIN THE CIRCUIT BREAKER CONNECTIONS ON THE PROJECT. CONTRACTOR SHALL PROVIDE FEMALE-TO-MALE FERRULE CRIMP CONNECTORS AS REQUIRED TO ENSURE PROPER TORQUE IS ACHIEVED AT BREAKER LUGS. FOLLOW MANUFACTURER WRITTEN TORQUING INSTRUCTIONS.
12. 120V CIRCUITS ARE CURRENTLY FED INTO THE GFPE RELAYS VIA SINGLE POLES OF THE 20/3 BREAKERS IN PANEL M. DISCONNECT THOSE CONDUCTORS AND REMOVE. FEED THE EXISTING AND NEW GFPE RELAYS FROM NEW DEDICATED 20/1 BREAKERS IN NEW PANEL N. LEAVE THE 20/3 BREAKERS AS SPARES.
13. SPLICE AND EXTEND THE 1200A UPLANDS CIRCUIT BREAKER SHUNT TRIP WIRING WITHIN PANEL M AND CONTINUE TO THE NEW 20/1 DEDICATED CIRCUIT BREAKER IN PANEL N AS REQUIRED.
14. SEE NOTE 3, SHEET E8.

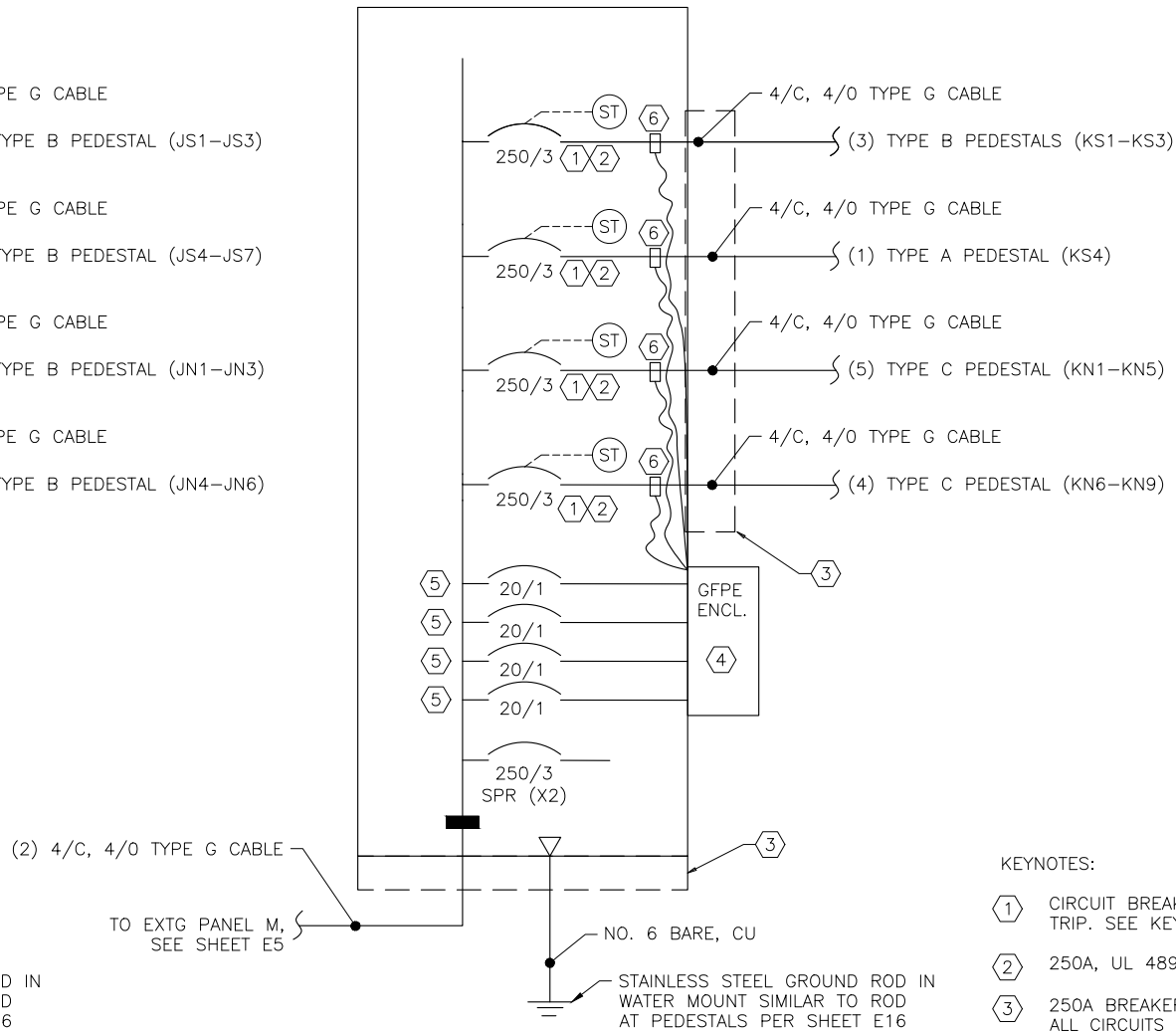


PANEL J
120/208V, 3PH, 4W, 600A IN NEMA 4X SS
ENCLOSURE. PROVIDE WITH BREAKERS
SHOWN, GROUND & NEUTRAL KITS, AND
BLANK FILLER PLATES AS REQUIRED. SQ-D
HCP I-LINE SERIES OR EQUAL



① SINGLE LINE DIAGRAM PANEL J

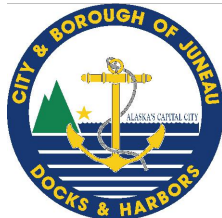
PANEL K
120/208V, 3PH, 4W, 600A IN NEMA 4X SS
ENCLOSURE. PROVIDE WITH BREAKERS
SHOWN, GROUND & NEUTRAL KITS, AND
BLANK FILLER PLATES AS REQUIRED. SQ-D
HCP I-LINE SERIES OR EQUAL



② SINGLE LINE DIAGRAM PANEL K

KEYNOTES:

- ① CIRCUIT BREAKER WITH INTEGRAL SHUNT TRIP RELAY. RELAY CONTROLLED BY EXTERNAL GFPE RELAY WITH ADJUSTABLE TRIP. SEE KEYNOTE 4, THIS SHEET.
- ② 250A, UL 489 LISTED 100% CIRCUIT BREAKER, 25 KAIC MINIMUM WITH SHUNT TRIP.
- ③ 250A BREAKER, 25 KAIC MINIMUM WITH SHUNT TRIP, ADJUSTABLE 'LI' FUNCTIONS SQ-D I-LINE LJ SERIES OR EQUAL. ALL CIRCUITS FROM THE MAINWALK PANELS ROUTED INTO THE FLOAT SHALL PASS THROUGH THE ENCLOSURE BELOW THE PANEL. SEE SHEET E7 FOR ENCLOSURE DETAILS.
- ④ GROUND FAULT EQUIPMENT PROTECTION (GFPE) RELAYS SHALL BE HOUSED IN ENCLOSURE MOUNTED NEXT TO PANEL ON RACK. PROVIDE NECESSARY WIRING BETWEEN GFPE UNITS AND SHUNT TRIP MODULES ON THE DESIGNATED BREAKERS. EACH GFPE POWERED FROM DEDICATED 120V, 20/1 BREAKERS IN PANEL, PER KEYNOTE 5. SEE DETAIL 1, SHEET E7, FOR MORE INFORMATION.
- ⑤ 20A BREAKER, 25 KAIC MINIMUM. SQ-D I-LINE BG SERIES OR EQUAL.
- ⑥ PROVIDE CT, CT WIRING, AND SHUNT TRIP WIRING TO GFPE RELAY IN BOX. MOUNT CTS IN SS ENCLOSURE ADJACENT TO PANEL. SEE DETAIL 4, SHEET E24 FOR WIRING DIAGRAM. SHUNT TRIP WIRING NOT SHOWN HERE.
7. TYPE G CABLE IS FINELY STRANDED AND MAY NOT PROPERLY SECURE DOWN WITHIN THE CIRCUIT BREAKER CONNECTIONS ON THE PROJECT. CONTRACTOR SHALL PROVIDE FEMALE-TO-MALE FERRULE CRIMP CONNECTORS AS REQUIRED TO ENSURE PROPER TORQUE IS ACHIEVED AT BREAKER LUGS.



REVISIONS					
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PHONE: 907-586-0292

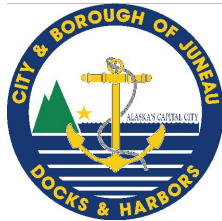


SINGLE LINE DIAGRAM - PANELS

AURORA HARBOR REBUILD - PHASE IV

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REVISIONS					
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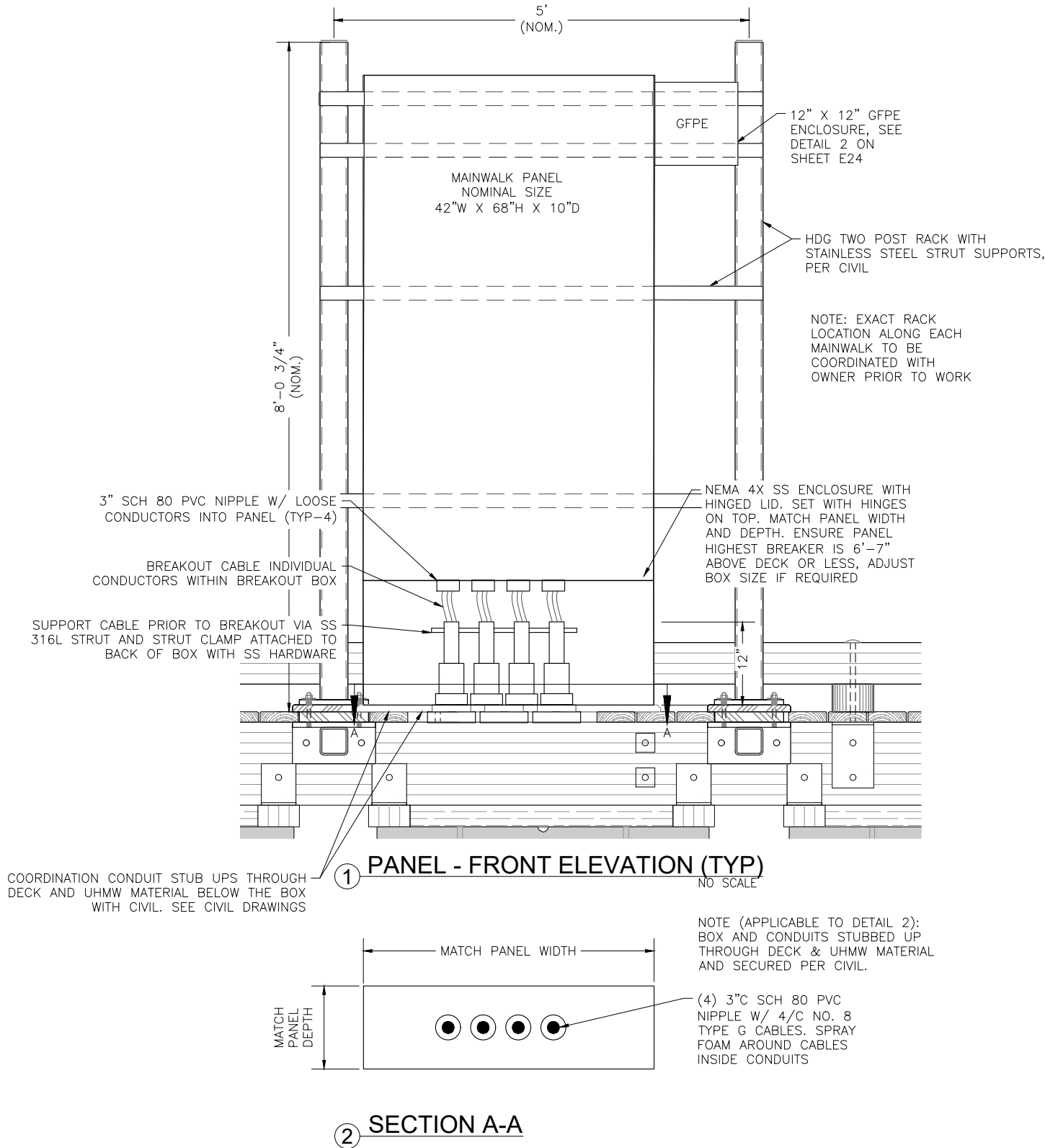
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JUNEAU, ALASKA 99801
PHONE: 907-586-0292

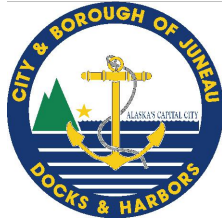


PANEL ELEVATION
AURORA HARBOR REBUILD - PHASE IV

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E7





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DOCKS & HARBORS
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JUNEAU, ALASKA 99801
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PANEL SCHEDULES

AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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E8

EXTG PANEL M (NOTE 3)			SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
			1200A	120/208V, 3ϕ, 4W			SURFACE		MLO	ELECTRICAL FLOAT BUILDING	
CKT NO.	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO.	
			CKT	Aϕ	Bϕ	Cϕ	CKT				
1	PANEL H	600/3	56.8	56.8			0.0	20/3	SPARE	2	
3	—	—	56.8		56.8		0.0	—	—	4	
5	—	—	56.8			56.8	0.0	—	—	6	
7	NEW PANEL J	600/3	51.0	51.0			0.0	20/3	SPARE	8	
9	—	—	51.0		51.0		0.0	—	—	10	
11	—	—	51.0			51.0	0.0	—	—	12	
13	NEW PANEL K	400/3	30.0	30.0			0.0	20/3	SPARE	14	
15	—	—	30.0		30.0		0.0	—	—	16	
17	—	—	30.0			30.0	0.0	—	—	18	
19	PEDESTALS HN1 & HN2	250/3	12.5	12.5			0.0	20/3	SPARE	20	
21		—	12.5		12.5		0.0	—	—	22	
23		—	12.5			12.5	0.0	—	—	24	
25	PANEL LC	100/2	5.8	5.8			0.0	20/3	SPARE	26	
27		—	5.8		5.8		0.0	—	—	28	
29	SPARE	250/3	0.0			0.0	0.0	—	—	30	
31		—	0.0	0.0			0.0	30/3	SPARE	32	
33		—	0.0		0.0		0.0	—	—	34	
35	SPACE (X3)		0.0			0.0	0.0	—	—	36	
37			0.0				0.0		SPACE (X15)	38	
TOTAL CONNECTED LOAD = 319.7 KVA/ 888 AMPS (NOTE 1)			156.1	150.3	150.3						

EXTG PANEL LC		SIZE	VOLTS, PHASE			MOUNTING	MAIN	LOCATION	
		225A	120/240V, 1ϕ, 3W			SURFACE	100/2	ELECTRICAL FLOAT BUILDING	
CKT NO.	DESCRIPTION	C/B SIZE	KVA				C/B SIZE	DESCRIPTION	CKT NO.
			CKT	Aϕ	Bϕ	CKT			
1	LTG CONTACTOR CKT A (GFCI)	30/2	0.3	0.5		0.2	30/2	HEAT TRACE CONTACTOR CKT A (GFCI)	2
3	—	—	0.3		0.5	0.2	—	—	4
5	LTG CONTACTOR CKT B (GFCI)	30/2	0.3	0.5		0.2	30/2	HEAT TRACE CONTACTOR CKT B (GFCI)	6
7	—	—	0.3		0.5	0.2	—	—	8
9	LTG CONTACTOR CKT C (GFCI)	30/2	0.3	2.8		2.5	30/2	ELEC BLDG UNIT HEATER	10
11	—	—	0.3		2.8	2.5	—	—	12
13	ELEC BLDG NORTH RECS	20/1	0.8	1.6		0.8	20/1	ELEC BLDG SOUTH RECS	14
15	ELEC BLDG INTERIOR LIGHTS	20/1	0.2		0.4	0.2	20/1	ELEC BLDG VENT FAN	16
17	NEW LTG CONTACTOR CKT D (GFCI)	30/2	0.3	0.5		0.2	30/2	NEW HEAT TRACE CONTACTOR CKT C (GFCI)	18
19	—	—	0.3		0.5	0.2	—	—	20
21	NEW LTG CONTACTOR CKT E (GFCI)	30/2	0.3	0.5		0.2	30/2	NEW HEAT TRACE CONTACTOR CKT D (GFCI)	22
23	—	—	0.3		0.5	0.2	—	—	24
TOTAL CONNECTED LOAD = 11.6 KVA/ 48 AMPS				6.4	5.2	NOTE: ALL BREAKERS SHALL BE MINIMUM 10KAIC RATED			

NOTES:

1. TOTAL LOAD CALCULATED AS 70% OF COMBINED PHASE LOAD PER NEC.
2. TYPE G CABLE IS FINELY STRANDED AND MAY NOT PROPERLY SECURE DOWN WITHIN THE CIRCUIT BREAKER CONNECTIONS ON THE PROJECT. CONTRACTOR SHALL PROVIDE FEMALE-TO-MALE FERRULE CRIMP CONNECTORS AS REQUIRED TO ENSURE PROPER TORQUE IS ACHIEVED AT BREAKER LUGS.
3. PANEL M INTERIOR LAYOUT IS TIGHT WITH SEVERAL OF THE EXISTING BREAKER CIRCUITS ROUTED AROUND THE SIDES OF THE ENCLOSURE AS THEY EXIT THE PANEL. AT CONTRACTOR OPTION, COORDINATE WITH OWNER TO DE-ENERGIZE PANEL M AND FLIP THE INTERIOR BREAKER BACK PANEL TO BETTER ARRANGE BREAKERS RELATIVE TO THEIR RESPECTIVE EXIT CONDUITS FROM THE PANEL. CONTRACTOR RESPONSIBLE TO DISCONNECT AND RECONNECT ALL EXISTING FEEDERS, CUTTING SHORTER THE CONDUCTORS AS APPLICABLE. THIS EFFORT WILL NOT COST THE PROJECT ADDITIONAL CHARGES AND IS AFFORDED ONLY TO CONVENIENCE THE CONTRACTOR. OTHERWISE, CONNECT NEW CIRCUITS TO THE EXISTING SPARE BREAKERS AS REQUIRED WORKING AROUND THE EXISTING FEEDERS AS REQUIRED.

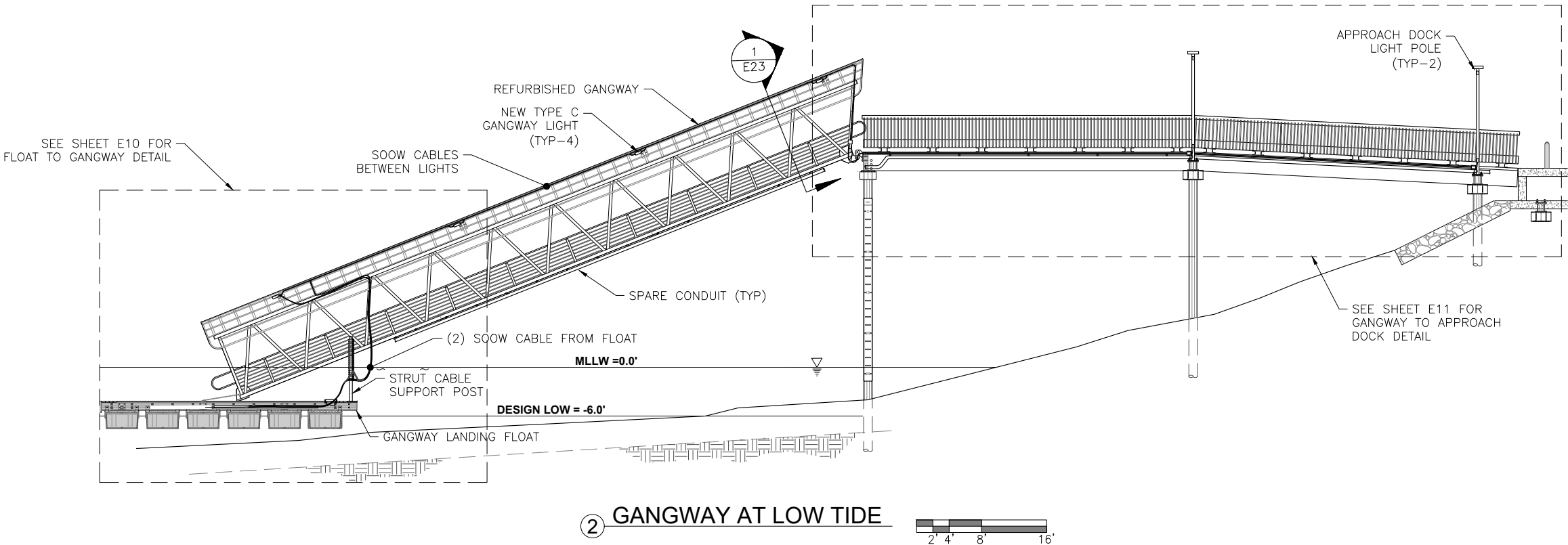
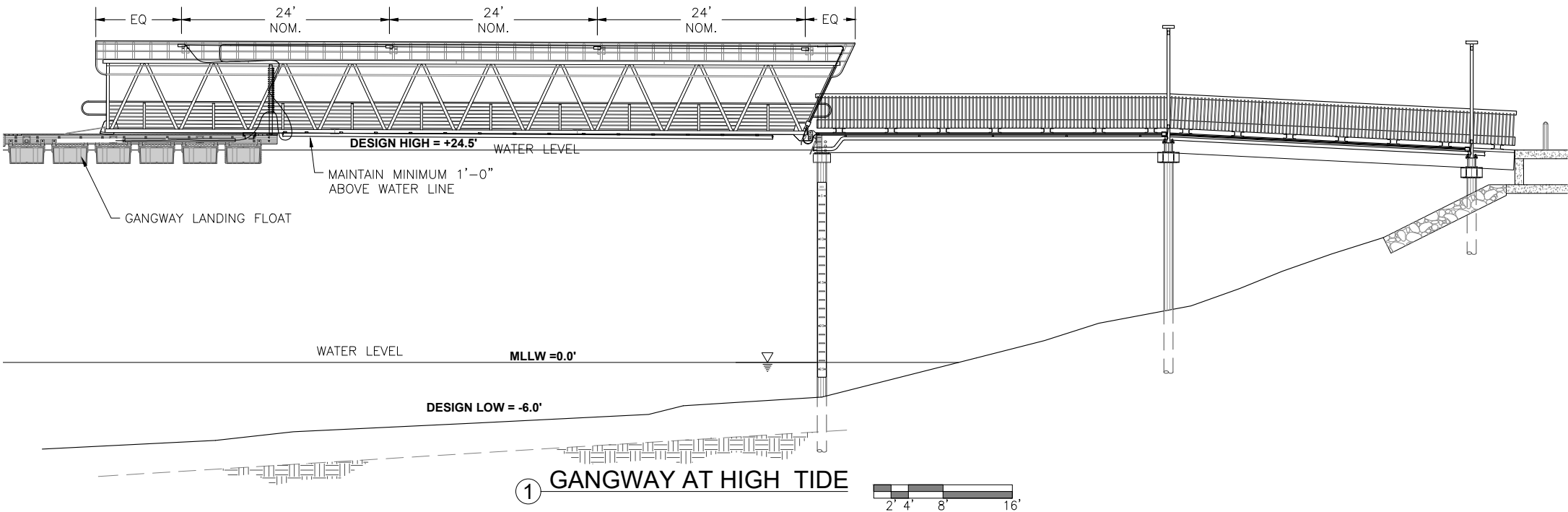
NEW PANEL J			SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
			600A	120/208V, 3ϕ, 4W			SURFACE		MLO	MAINWALK J	
CKT NO.	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO.	
			CKT	Aϕ	Bϕ	Cϕ	CKT				
1	PEDESTALS JS1-JS3	250/3	16.8	33.6			16.8	250/3	PEDESTALS JN1-JN3	2	
3	—	—	16.8		33.6		16.8	—	—	4	
5	—	—	16.8			33.6	16.8	—	—	6	
7	PEDESTALS JS4-JS7	250/3	22.5	39.3			16.8	250/3	PEDESTALS JN4-JN6	8	
9	—	—	22.5		39.3		16.8	—	—	10	
11	—	—	22.5			39.3	16.8	—	—	12	
13	SPARE	250/3	0.0	0.0			0.0	250/3	SPARE	14	
15	—	—	0.0		0.0		0.0	—	—	16	
17	—	—	0.0			0.0	0.0	—	—	18	
19	GFPE POWER PEDS JS1-JS3	20/1	0.0	0.0			0.0	20/1	GFPE POWER PEDS JN1-JN3	20	
21	GFPE POWER PEDS JS4-JS7	20/1	0.0		0.0		0.0	20/1	GFPE POWER PEDS JN4-JN6	22	
23	SPARE	20/1	0.0			0.0	0.0	20/1	SPARE	24	
TOTAL CONNECTED LOAD = 153.1 KVA/ 425 AMPS (NOTE 1)				72.9	72.9	72.9					

NEW PANEL K			SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
			600A	120/208V, 3ϕ, 4W			SURFACE		MLO	MAINWALK K	
CKT NO.	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO.	
			CKT	Aϕ	Bϕ	Cϕ	CKT				
1	PEDESTALS KS1–KS3	250/3	18.75	27.4			8.6	250/3	PEDESTALS KN1–KN5	2	
3	–	–	18.75		27.4		8.6	–	–	4	
5	–	–	18.75			27.4	8.6	–	–	6	
7	PEDESTALS KS4	250/3	13.9	21.7			7.8	250/3	PEDESTALS KN6–KN9	8	
9	–	–	13.9		21.7		7.8	–	–	10	
11	–	–	13.9			21.7	7.8	–	–	12	
13	SPARE	250/3	0.0	0.0			0.0	250/3	SPARE	14	
15	–	–	0.0		0.0		0.0	–	–	16	
17	–	–	0.0			0.0	0.0	–	–	18	
19	GFPE POWER PEDS KS1–KS2	20/1	0.0	0.0			0.0	20/1	GFPE POWER PEDS KN1–KN5	20	
21	GFPE POWER PEDS KS3	20/1	0.0		0.0		0.0	20/1	GFPE POWER PEDS KN6–KN9	22	
23	SPARE	20/1	0.0			0.0	0.0	20/1	SPARE	24	
TOTAL CONNECTED LOAD = 103.0 KVA/ 286 AMPS (NOTE 1)				49.1	49.1	49.1					

NEW PANEL N		SIZE	VOLTS, PHASE			MOUNTING	MAIN	LOCATION	
		125A	120/240V, 1ϕ, 3W			SURFACE	100/2	FLOAT BUILDING	
CKT NO.	DESCRIPTION	C/B SIZE	KVA				C/B SIZE	DESCRIPTION	CKT NO.
			CKT	Aϕ	Bϕ	CKT			
1	GFPE PWR – PANEL H	20/1	0.1	0.2		0.1	20/1	GFPE PWR – 1200A DISC	2
3	GFPE PWR – PANEL K	20/1	0.1		0.2	0.1	20/1	GFPE PWR – PANEL J	4
5	PFPE PWR – PANEL LC	20/1	0.1	0.2		0.1	20/1	PFPE PWR – AH21–24	6
7	HEADWALK REC CKT A (GFCI)	20/1	0.8		1.6	0.8	20/1	HEADWALK REC CKT B (GFCI)	8
9	SPARE	20/1	0.0	0.0		0.0	20/1	SPARE	10
11	SPARE	20/1	0.0		0.0	0.0	20/1	SPARE	12
TOTAL CONNECTED LOAD = 2.2 KVA/ 9 AMPS				0.4	1.8	NOTE: ALL BREAKERS SHALL BE MINIMUM 10KAIC RATED			

NOTES:

1. SEE SHEETS E10-E11 AND E12-E15 FOR GANGWAY DETAILS AND CABLE PENETRATION LOCATION IN FLOAT.
2. PROVIDE SCHEDULE 80 PVC CONDUIT ALONG BOTTOM OF GANGWAY. PUT BELL ENDS ON CONDUIT.
3. ROUTE CABLES FROM ELECTRICAL BUILDING IN CABLE TRAY BELOW DECK. LIGHTING CIRCUITS THAT FEED THE COVERED GANGWAY AND APPROACH DOCK LIGHTS SHALL TRANSITION TO TYPE SOOW CABLE PRIOR TO EXITING THE FLOAT AND FEEDING THE LIGHTS. TRANSITION TO SOOW AT HEADWALK LIGHT POLE (CKT 'E') AND PED KN1 (CKT 'D'). ROUTE CABLE THROUGH FLOAT AND OUT THE FLOAT OPENING. SUPPORT CABLES PRIOR TO CONNECTION TO GANGWAY VIA A POST AT THE END OF THE FLOAT. SEE SHEET E10 FOR DETAILS. PROVIDE SUFFICIENT SLACK IN CABLE TO ACCOMMODATE FOR GANGWAY MOVEMENT DUE TO TIDES. DO NOT LET CABLES HIT MARINE STRUCTURES OR WATER AT ANY TIDE LEVEL.
4. SOOW CABLES WITH LIGHTING CIRCUITS SHALL BE ROUTED BETWEEN LIGHT FIXTURES ALONG CANOPY AND CONNECTED TO A BOX AT NORTH END OF THE GANGWAY. TRANSITION TO LFNC CONDUIT WITH CONDUCTORS TO THE APPROACH DOCK AT THE BOX AND TRANSITION TO SCHE 80 PVC ALONG APPROACH DOCK TO THE LIGHT POLES. SEE SHEETS E11 FOR DETAILS.
5. ALLOW CABLE TO HAVE SUFFICIENT SLACK FOR GANGWAY MOVEMENT AT ALL TIDES. PROVIDE CABLE GRIPS AT ALL TRANSITIONS. CONTRACTOR TO PROVIDE CABLE GRIPS AS REQUIRED TO SUPPORT CABLES AS THEY FLEX THROUGH TIDE CYCLES. HAVE GANGWAY FABRICATOR PROVIDE SUPPORT CHANNEL AT APPROACH DOCK END OF GANGWAY SOLELY TO ATTACH CABLE GRIPS TO, SEE DETAIL 2, SHEET E11. CABLE AT FLOAT END OF GANGWAY SHALL HAVE DUAL STAINLESS STEEL CABLE GRIP SUPPORTS TO PREVENT CABLES FROM 'WALKING' OVER TIME, SEE SHEET E10.
6. VERIFY WITH CIVIL CONTRACTOR TO PROVIDE ALUMINUM SUPPORT CHANNEL TO BOTTOM OF GANGWAY FOR CONDUIT INSTALLATION. PROVIDE SUPPORT PER NEC.



GANGWAY ELEVATION



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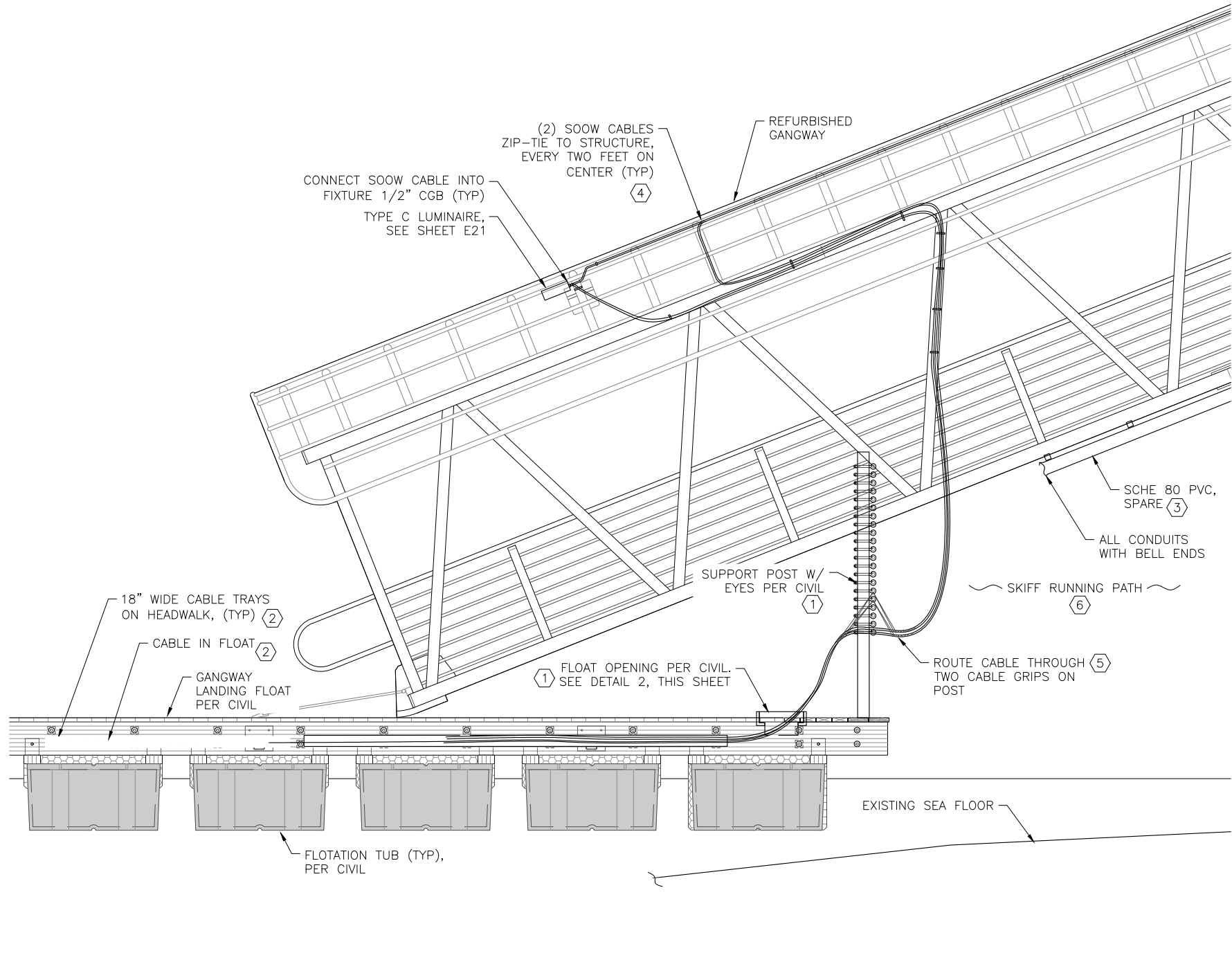


GANGWAY OVERALL ELEVATIONS

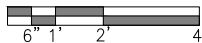
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E9

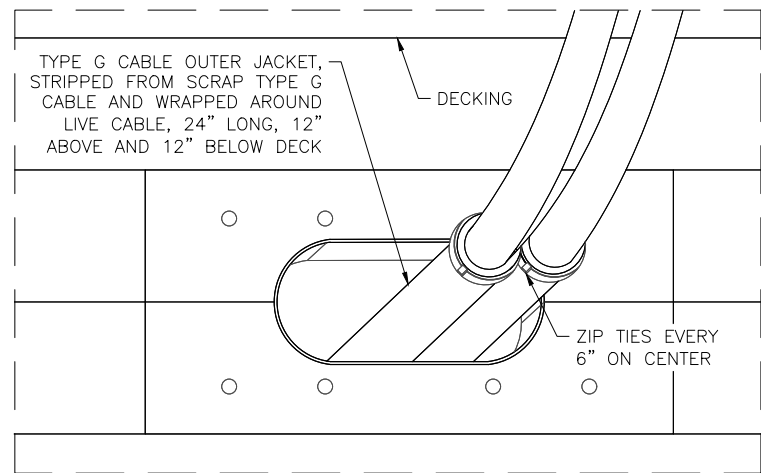


1 FLOAT TO GANGWAY ELEVATION



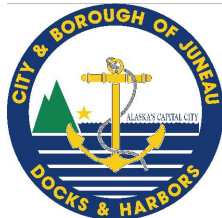
NOTES:

- 1 SEE CIVIL DRAWINGS FOR POST AND OPENING LOCATIONS AND DETAILS. LOCATIONS SHOWN ARE APPROXIMATE.
- 2 ROUTE CABLE IN CABLE TRAY TO OPENING IN DECK THEN TO POST. PROVIDE SUFFICIENT SLACK IN CABLE TO ACCOMMODATE FOR GANGWAY MOVEMENT DUE TO TIDES. DO NOT LET CABLES HIT MARINE STRUCTURES OR WATER AT ANY TIDE LEVEL.
- 3 REPLACE EXISTING CONDUIT ON BOTTOM OF GANGWAY WITH NEW (4) 4" CONDUIT UNDER GANGWAY FOR FUTURE USE. STOP CONDUITS 36" FROM END OF GANGWAY, BOTH ENDS.
- 4 ROUTE (2) 3 NO. 12 & 1 NO. 12 GND TYPE SOOW CABLES FROM FLOAT LIGHTING CIRCUITS TO LUMINAIRES ON GANGWAY. CIRCUIT PER SHEET E3.
- 5 TRANSITION THE TWO GANGWAY SOOW CABLES THROUGH FLOAT ONTO SUPPORT POST AND CONTINUE UP TO GANGWAY. SECURE CABLES TO POSTS WITH CABLE CLAMPS AND PROVIDE SS CABLE GRIPS.
- 6 IT IS ANTICIPATED THAT SKIFFS WILL USE THE PATH UNDER GANGWAY WHEN COMING AND GOING. CONTRACTOR TO ENSURE LIGHTING CABLES AT GANGWAY ARE POSITIONED TO MINIMIZE INTERFERENCE WITH BOATERS TRAVERSING THIS AREA.



2 CHAFING PROTECTION DETAIL
NO SCALE

GANGWAY ELEVATION



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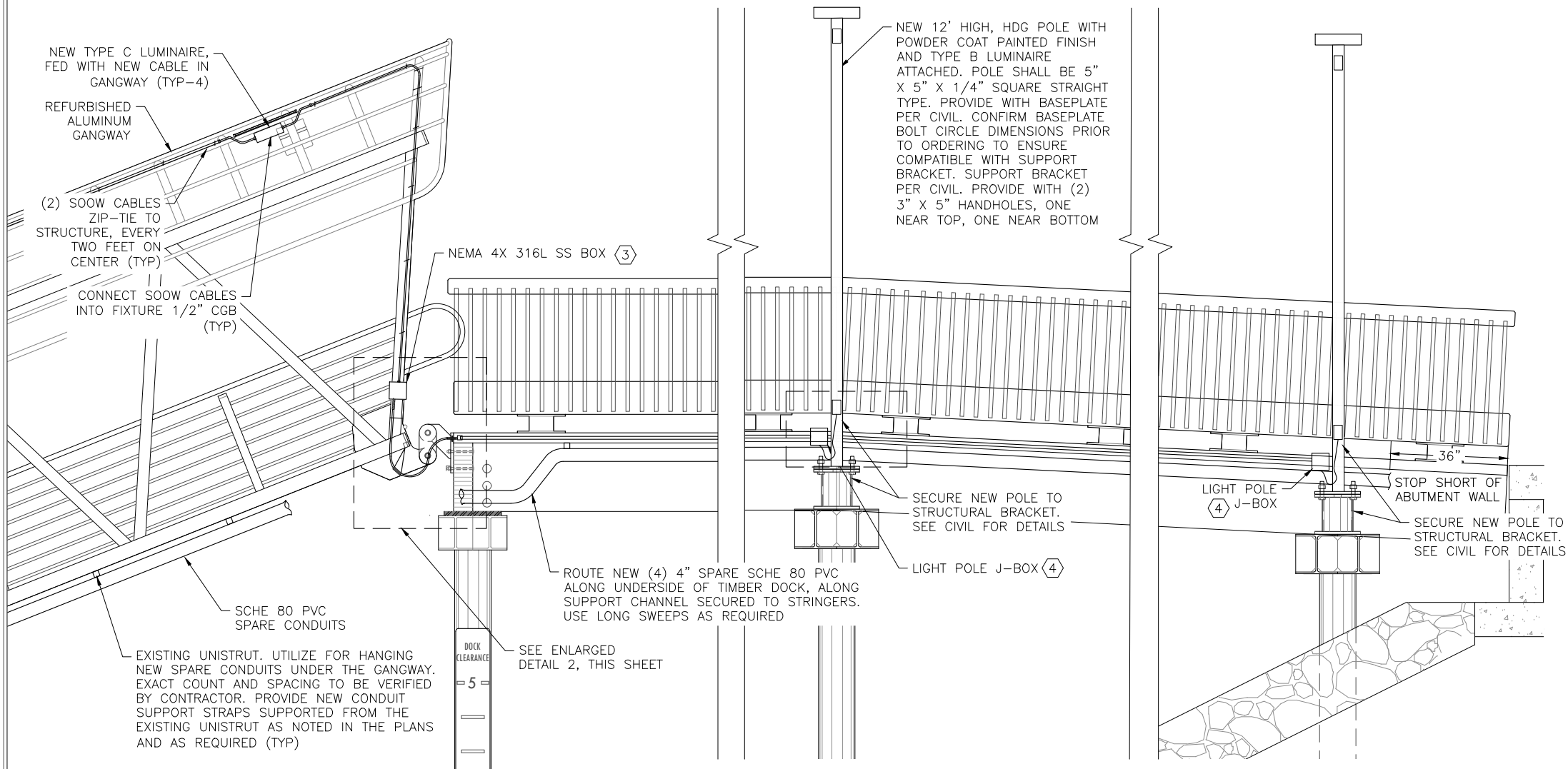
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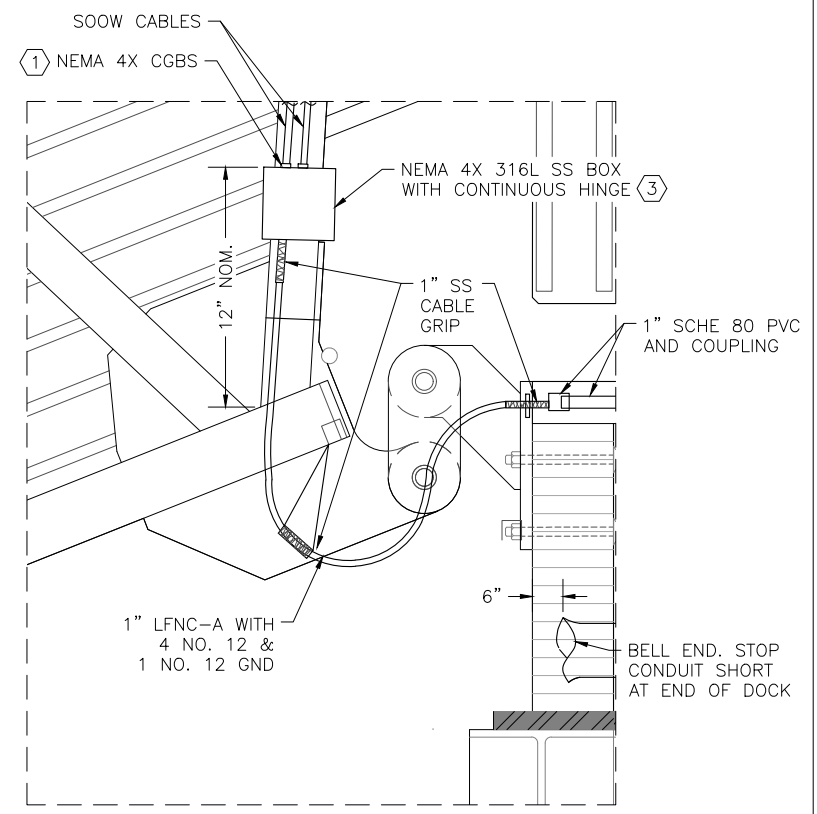
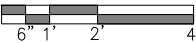
FLOAT TO GANGWAY ELEVATION
AURORA HARBOR REBUILD - PHASE IV

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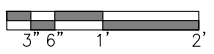
E10



① GANGWAY TO APPROACH DOCK ELEVATION

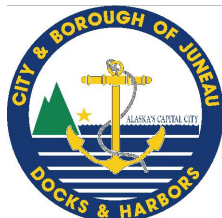


② CABLE GRIP DETAIL



- NOTES:
- ① NEMA 4X CGB, NON-ARMORED, ALUMINUM. PROVIDE CORRECT SIZE PER APPROVED SOOW CABLES. EATON CGB SERIES OR EQUAL.
 - 2. SEE SHEET E21 FOR LUMINAIRE SCHEDULE.
 - ③ TRANSITION FROM TWO GANGWAY SOOW CABLES TO ONE LFNC-A CONDUIT WITH BOTH CIRCUITS AT J-BOX AT NORTH END OF GANGWAY. 6" X 6" X 6" SS NEMA 4X BOX WITH CONTINUOUS HINGE. SECURE BOX TO GANGWAY OUTER FACE WITHIN BOX, PROVIDE SQUARE-D POWER DISTRIBUTION BLOCKS TO TRANSITION FROM SOOW CABLE CONDUCTORS TO XHHW-2 CONDUCTORS. CONTINUE CONDUCTORS LOOSE IN LFNC-A CONDUIT TO PVC CONDUIT MOUNTED TO APPROACH DOCK TO LIGHT POLE. PROVIDE BOX VENT IN GANGWAY BOX PER NOTE 25, SHEET E1.
 - ④ SEE SHEET ### FOR DETAILS.

GANGWAY ELEVATION



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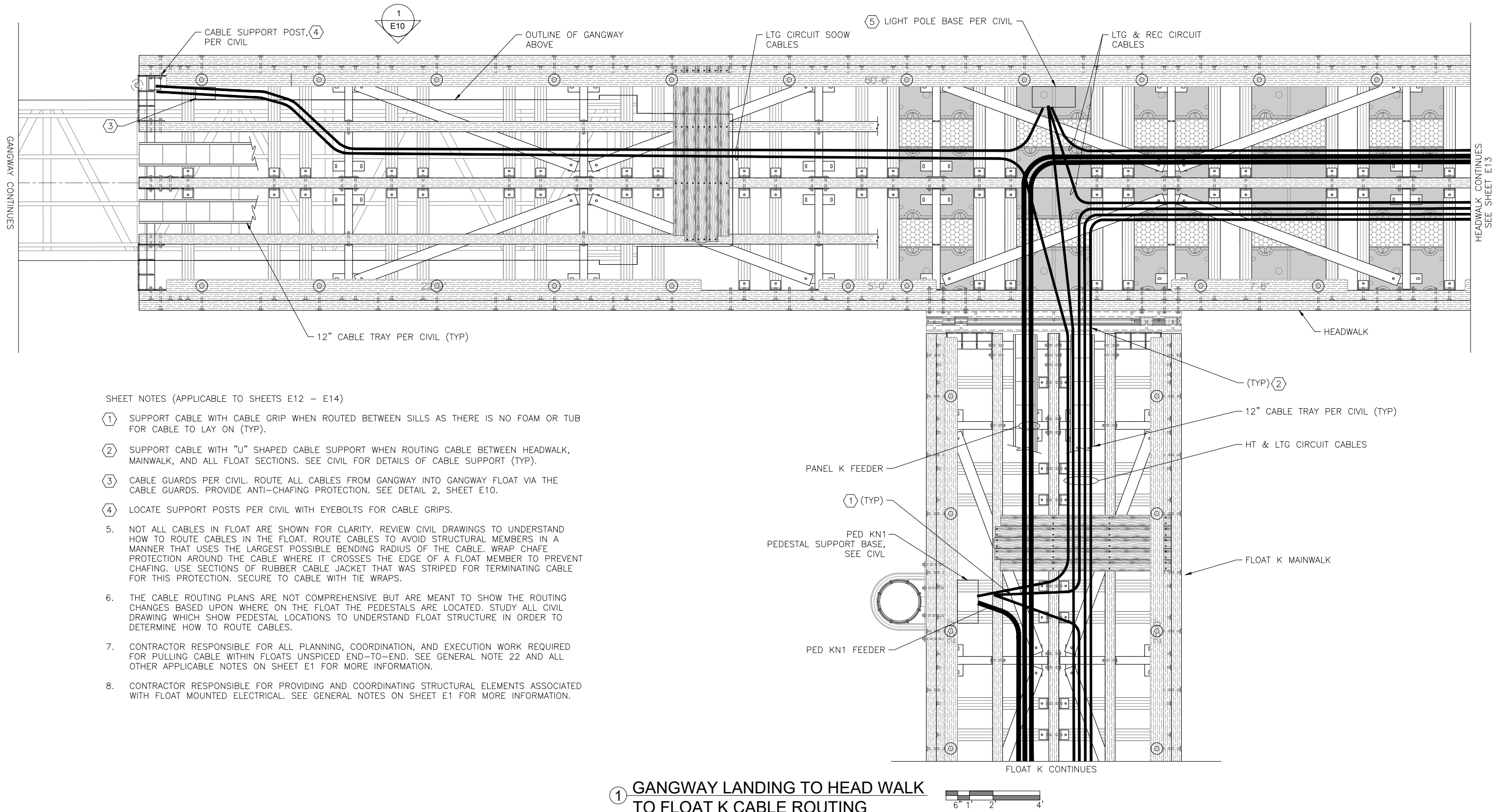


GANGWAY TO APPROCH DOCK ELEVATION

AURORA HARBOR REBUILD - PHASE IV

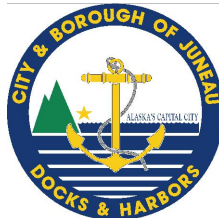
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E11



SHEET NOTES (APPLICABLE TO SHEETS E12 - E14)

- 1 SUPPORT CABLE WITH CABLE GRIP WHEN ROUTED BETWEEN SILLS AS THERE IS NO FOAM OR TUB FOR CABLE TO LAY ON (TYP).
- 2 SUPPORT CABLE WITH "U" SHAPED CABLE SUPPORT WHEN ROUTING CABLE BETWEEN HEADWALK, MAINWALK, AND ALL FLOAT SECTIONS. SEE CIVIL FOR DETAILS OF CABLE SUPPORT (TYP).
- 3 CABLE GUARDS PER CIVIL. ROUTE ALL CABLES FROM GANGWAY INTO GANGWAY FLOAT VIA THE CABLE GUARDS. PROVIDE ANTI-CHAFING PROTECTION. SEE DETAIL 2, SHEET E10.
- 4 LOCATE SUPPORT POSTS PER CIVIL WITH EYEBOLTS FOR CABLE GRIPS.
5. NOT ALL CABLES IN FLOAT ARE SHOWN FOR CLARITY. REVIEW CIVIL DRAWINGS TO UNDERSTAND HOW TO ROUTE CABLES IN THE FLOAT. ROUTE CABLES TO AVOID STRUCTURAL MEMBERS IN A MANNER THAT USES THE LARGEST POSSIBLE BENDING RADIUS OF THE CABLE. WRAP CHAFE PROTECTION AROUND THE CABLE WHERE IT CROSSES THE EDGE OF A FLOAT MEMBER TO PREVENT CHAFING. USE SECTIONS OF RUBBER CABLE JACKET THAT WAS STRIPED FOR TERMINATING CABLE FOR THIS PROTECTION. SECURE TO CABLE WITH TIE WRAPS.
6. THE CABLE ROUTING PLANS ARE NOT COMPREHENSIVE BUT ARE MEANT TO SHOW THE ROUTING CHANGES BASED UPON WHERE ON THE FLOAT THE PEDESTALS ARE LOCATED. STUDY ALL CIVIL DRAWING WHICH SHOW PEDESTAL LOCATIONS TO UNDERSTAND FLOAT STRUCTURE IN ORDER TO DETERMINE HOW TO ROUTE CABLES.
7. CONTRACTOR RESPONSIBLE FOR ALL PLANNING, COORDINATION, AND EXECUTION WORK REQUIRED FOR PULLING CABLE WITHIN FLOATS UNSPICED END-TO-END. SEE GENERAL NOTE 22 AND ALL OTHER APPLICABLE NOTES ON SHEET E1 FOR MORE INFORMATION.
8. CONTRACTOR RESPONSIBLE FOR PROVIDING AND COORDINATING STRUCTURAL ELEMENTS ASSOCIATED WITH FLOAT MOUNTED ELECTRICAL. SEE GENERAL NOTES ON SHEET E1 FOR MORE INFORMATION.



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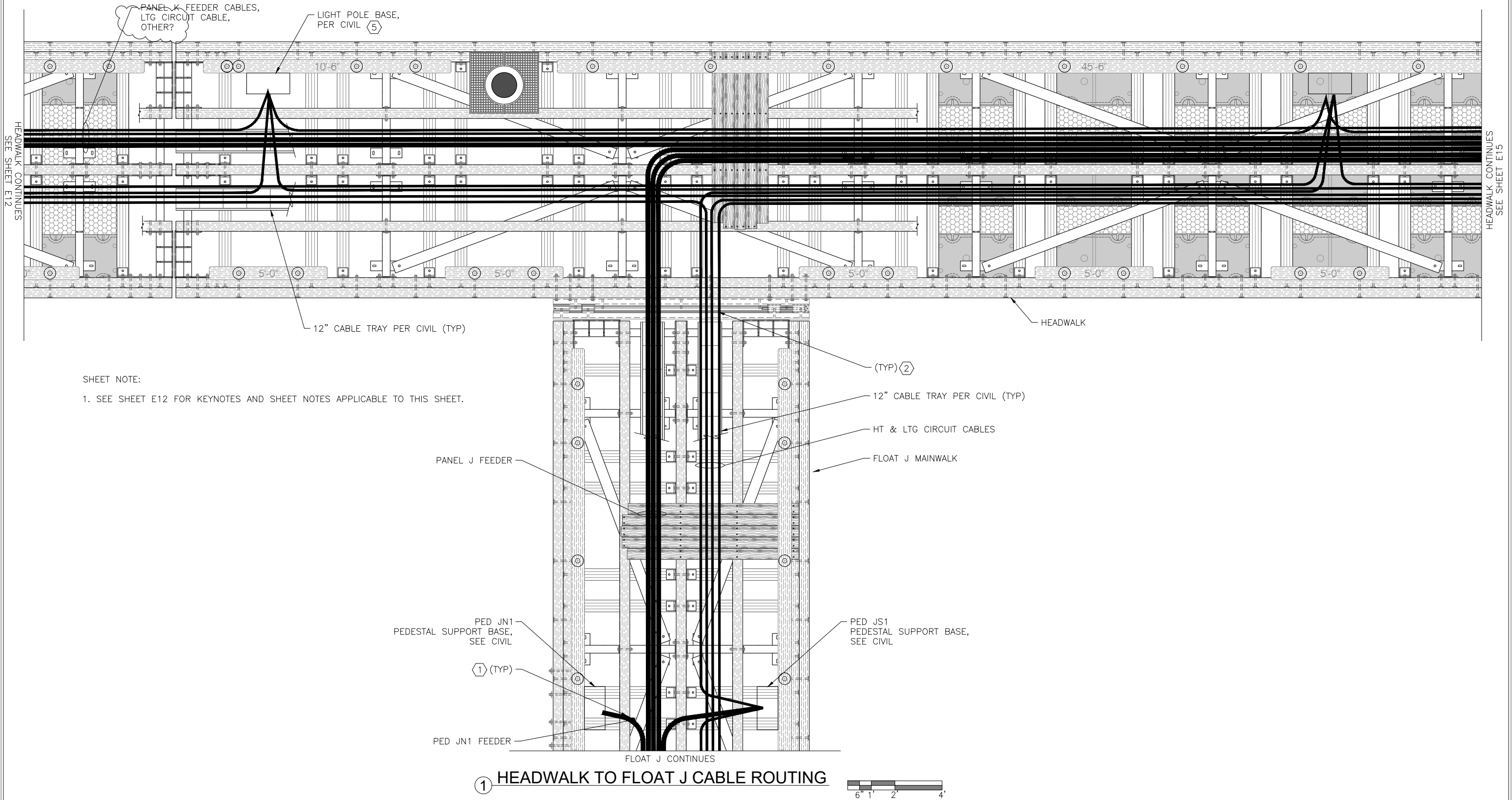


CABLE ROUTING GANGWAY TO HEADWALK
FLOAT TO FLOAT K
AURORA HARBOR REBUILD - PHASE IV

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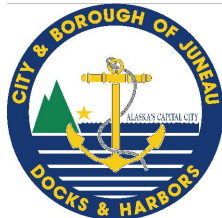
E12

GANGWAY LANDING TO HEADWALK FLOAT PLAN



SHEET NOTE:

1. SEE SHEET E12 FOR KEYNOTES AND SHEET NOTES APPLICABLE TO THIS SHEET.



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CABLE ROUTING HEADWALK TO FLOAT J

AURORA HARBOR REBUILD - PHASE IV

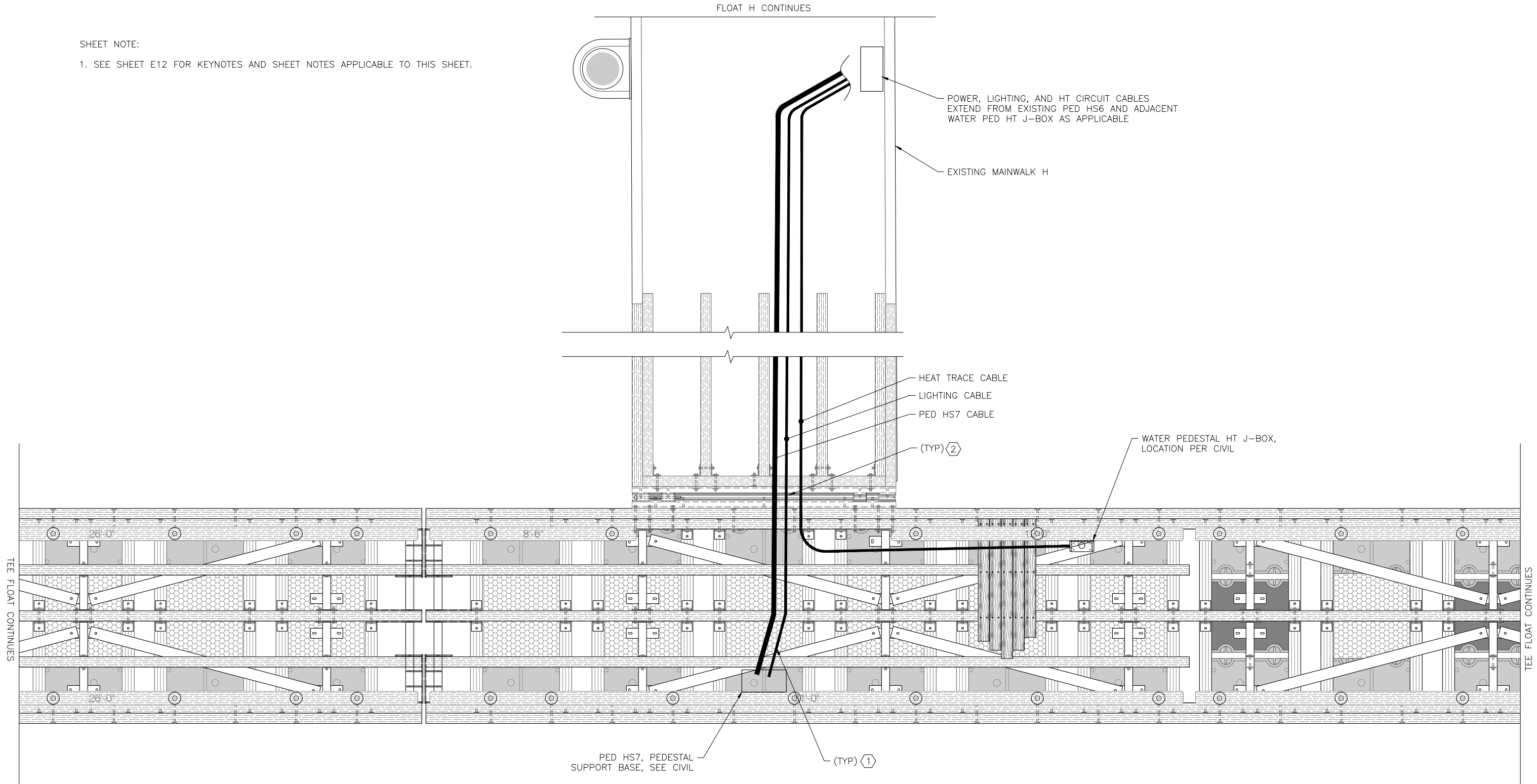
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E13

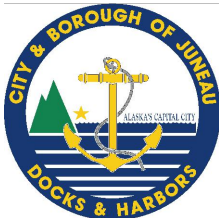
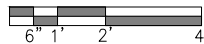
GANGWAY LANDING TO HEADWALK FLOAT PLAN

SHEET NOTE:

1. SEE SHEET E12 FOR KEYNOTES AND SHEET NOTES APPLICABLE TO THIS SHEET.



① FLOAT H TO NEW TEE FLOAT
CABLE ROUTING



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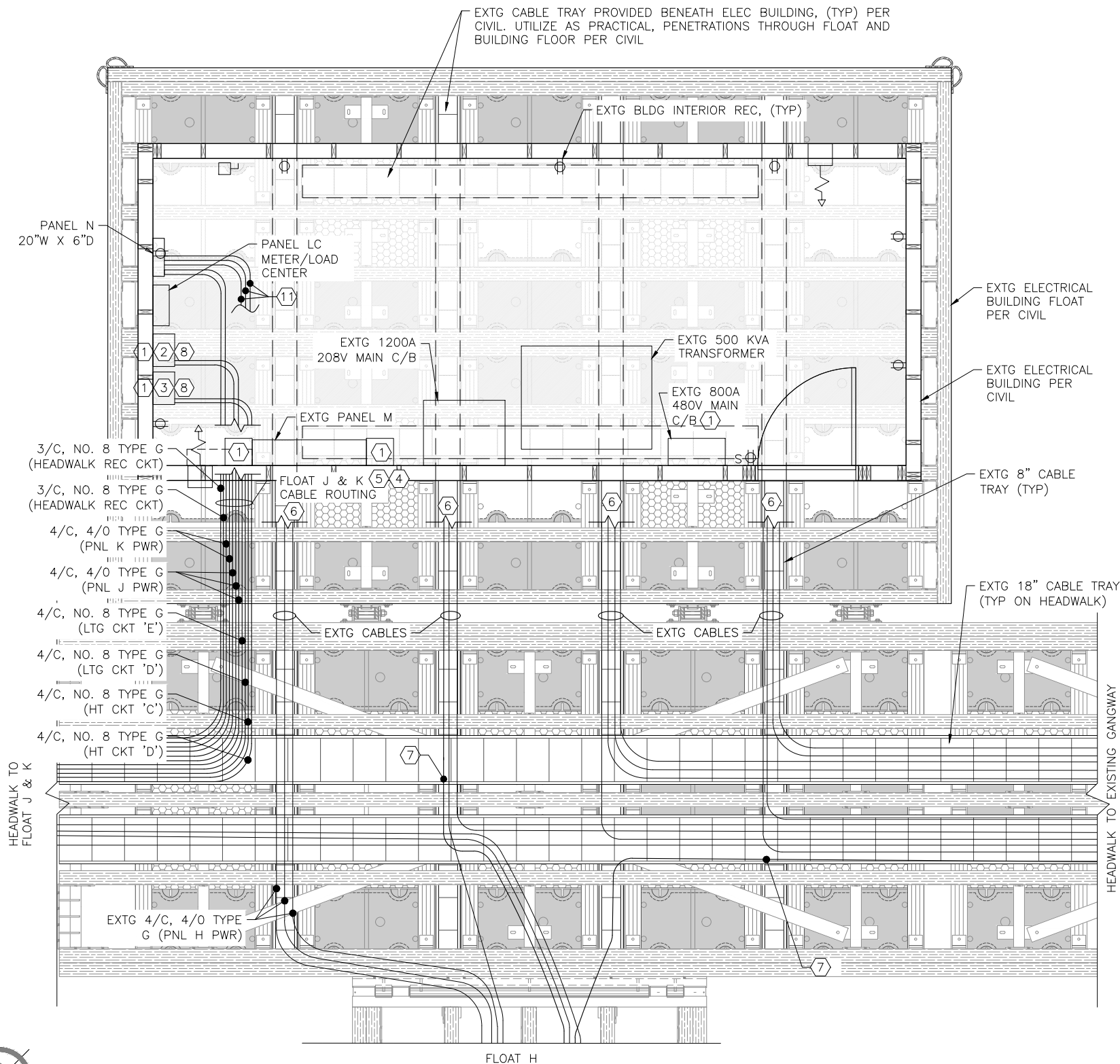
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CABLE ROUTING FLOAT H TO NEW TEE FLOAT
AURORA HARBOR REBUILD - PHASE IV

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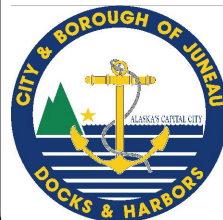
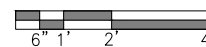
E14



SHEET NOTES:

- EXISTING WIREWAY OR ENCLOSURE USED AS TYPE G CABLE BREAKOUT BOX. SECURE CABLE TO STRUT AT 12" AFF AND SEPARATE OUT CONDUCTORS PRIOR TO PANEL ENTRY.
- EXISTING LIGHTING CONTACTOR, SEE SHEET E5 FOR FULL DESCRIPTION. POWER NEW LIGHTING CIRCUITS FROM SPARE POSITIONS
- EXISTING HEAT TRACE CONTACTOR, SEE SHEET E5 FOR FULL DESCRIPTION. POWER NEW HEATING CIRCUITS FROM SPARE POSITIONS.
- SUPPORT CABLES WITH "U" SHAPED CABLE SUPPORT WHEN ROUTING CABLE BETWEEN HEADWALK, MAINWALK, AND ALL FLOAT SECTIONS. SEE CIVIL FOR DETAILS OF CABLE SUPPORT (TYPICAL).
- PATH FOR PANELS J AND K FEEDER CABLES.
- CABLES IN HEADWALK CONTINUE UNDER FLOOR TO SOURCES WITHIN ELECTRICAL BUILDING. PATHS WITHIN BUILDING NOT SHOWN. COORDINATE ALL PENETRATIONS WITH FLOAT CONTRACTOR. THE ARRANGEMENT OF CABLES IN EACH TRAY, IN ALL FLOATS, AND INSIDE BUILDING ARE GRAPHICAL ONLY. CONTRACTOR RESPONSIBLE FOR FINAL ARRANGEMENTS AS REQUIRED THAT MEET CODE. UTILIZE DESIGNATED CABLE TRAYS AND ELECTRICAL PATHWAYS AS MUCH AS POSSIBLE. WHERE REQUIRED, CABLES WILL TRANSITION OUT OF CABLE TRAYS AND WILL BE ROUTED DIRECTLY ALONG FLOTATION TUBS, ACROSS STRUCTURAL MEMBERS, AND THROUGH OPENINGS WITHIN STRUCTURES. PATHS SHOWN ON THE ELECTRICAL SHEETS ARE NOT ANTICIPATED TO BE FOLLOWED PRECISELY. ADJUSTMENTS IN ROUTING FOR BEST FINAL FIT, FOR MAINTAINING MINIMUM BENDING RADII, ETC. ARE EXPECTED.
- EXISTING HEAT TRACE CABLE IS DAMAGED WITHIN THE FLOAT. IT IS UNCLEAR WHICH OF THE TWO CABLES IS DAMAGED. DISCONNECT AND REMOVE BOTH CABLES AND REPLACE IN KIND. SEE SHEET E4 FOR MORE COMPLETE DETAILS. CONNECT THE NEW CABLES AT EXISTING HEAT TRACE CONTACTOR IN BUILDING AND BETWEEN EXISTING WATER PEDESTAL BUS BARS. THE EXISTING WATER PEDESTAL JUNCTION BOXES HAVE A SIMILAR ARRANGEMENT AS TO DETAILS ON SHEET E4. CONTRACTOR RESPONSIBLE FOR LOCATING, REMOVING, AND REPLACING EXISTING HEAT TRACE CABLE SEGMENTS.
- CONTRACTOR TO PROVIDE ALL NECESSARY ADDITIONAL CONDUIT STUB UPS TO ROUTE HEAT TRACE AND LIGHTING CONTRACTOR CABLES.
- CONTRACTOR RESPONSIBLE FOR ALL PLANNING, COORDINATION, AND EXECUTION WORK REQUIRED FOR PULLING CABLES WITHIN FLOATS UNSPICED END-TO-END. SEE GENERAL NOTES ON SHEET E1 FOR MORE INFORMATION.
- CONTRACTOR RESPONSIBLE FOR PROVIDING AND COORDINATING STRUCTURAL ELEMENTS ASSOCIATED WITH FLOAT MOUNTED ELECTRICAL. SEE GENERAL NOTES ON SHEET E1 FOR MORE INFORMATION.
- 3/4" CONDUIT WITH CONDUCTORS TO NEW PANEL N FROM EXISTING PANEL M AND EXISTING GFPE RELAY ENCLOSURE. SEE SHEET E5 FOR DETAILS. ROUTE ALONG WALLS AND CEILING WITHIN FLOAT BUILDING.
- ALL CABLES ARE NEW ON THIS SHEET UNLESS NOTED OTHERWISE.

1 ELECTRICAL BUILDING FLOOR PLAN



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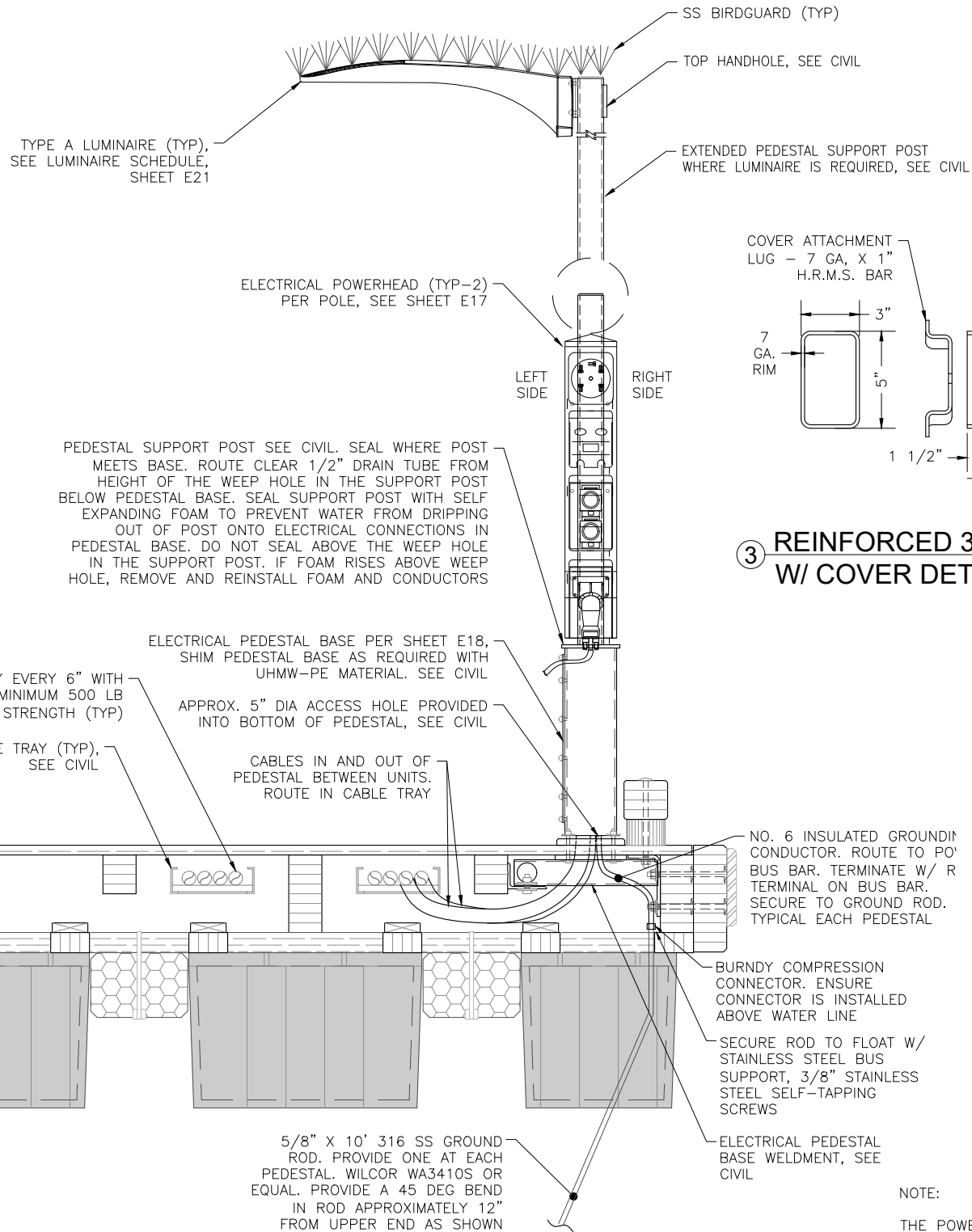


ELECTRICAL BUILDING FLOOR PLAN

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E15

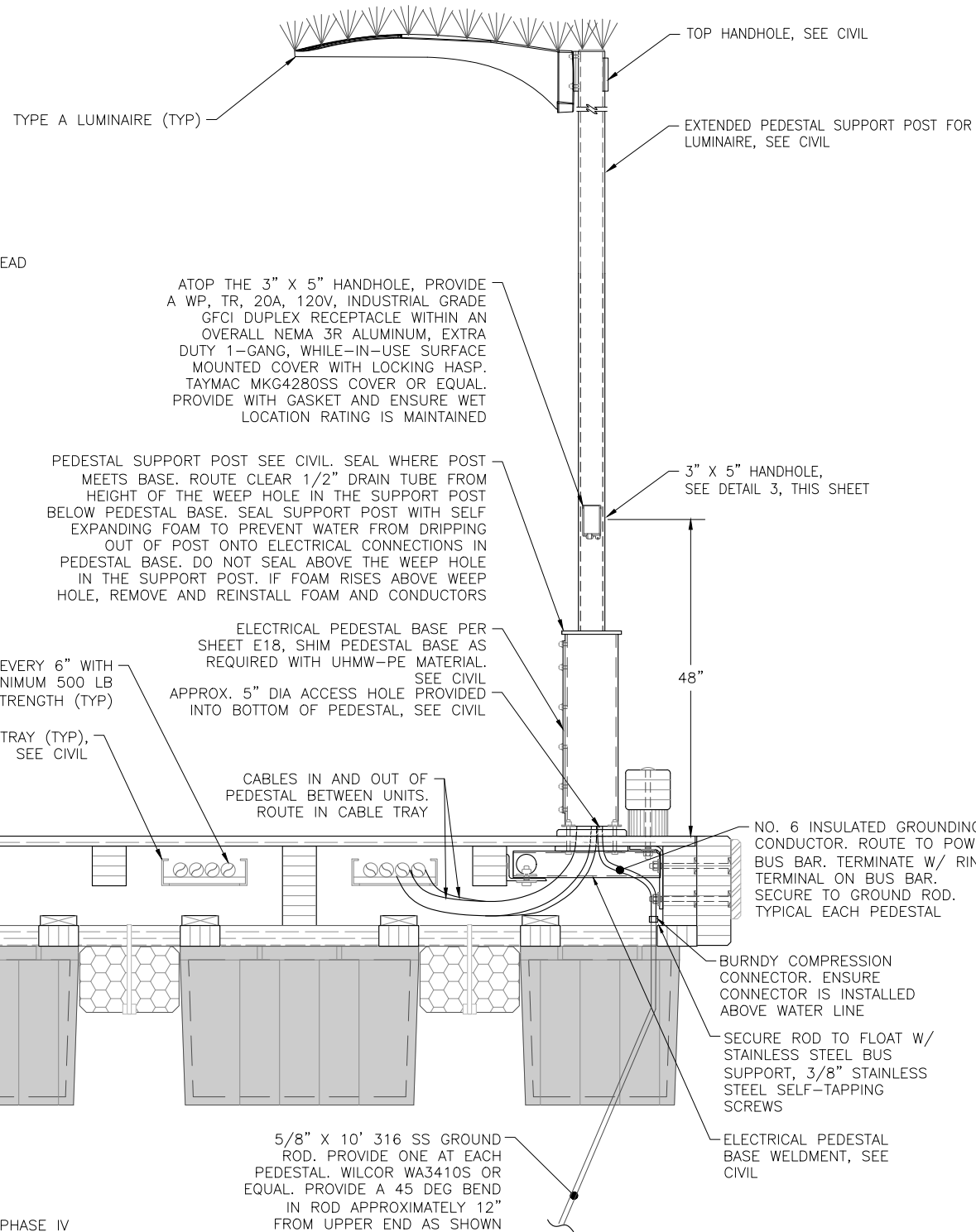


1 10' MODULE FLOAT SECTION W/ POWERHEADS
NO SCALE

3 REINFORCED 3" X 5" HAND HOLE
W/ COVER DETAIL

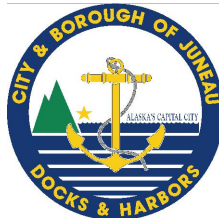
NOTE:

THE POWER PEDESTALS ON AURORA HARBOR PHASE IV SHALL MATCH IN PERFORMANCE, FEATURES, FUNCTION, AND AESTHETIC TO THE PEDESTALS PROVIDED AS PART OF AURORA HARBOR PHASE III PROJECT COMPLETED IN 2024. BASIS OF DESIGN PEDESTALS ARE BY ARC INDUSTRIES, MODEL SERIES: ARCMP-PM-SSXXXXXX-RH/LH-WT.



2 10' MODULE FLOAT SECTION W/O POWERHEADS
NO SCALE

10' FLOAT SECTIONS



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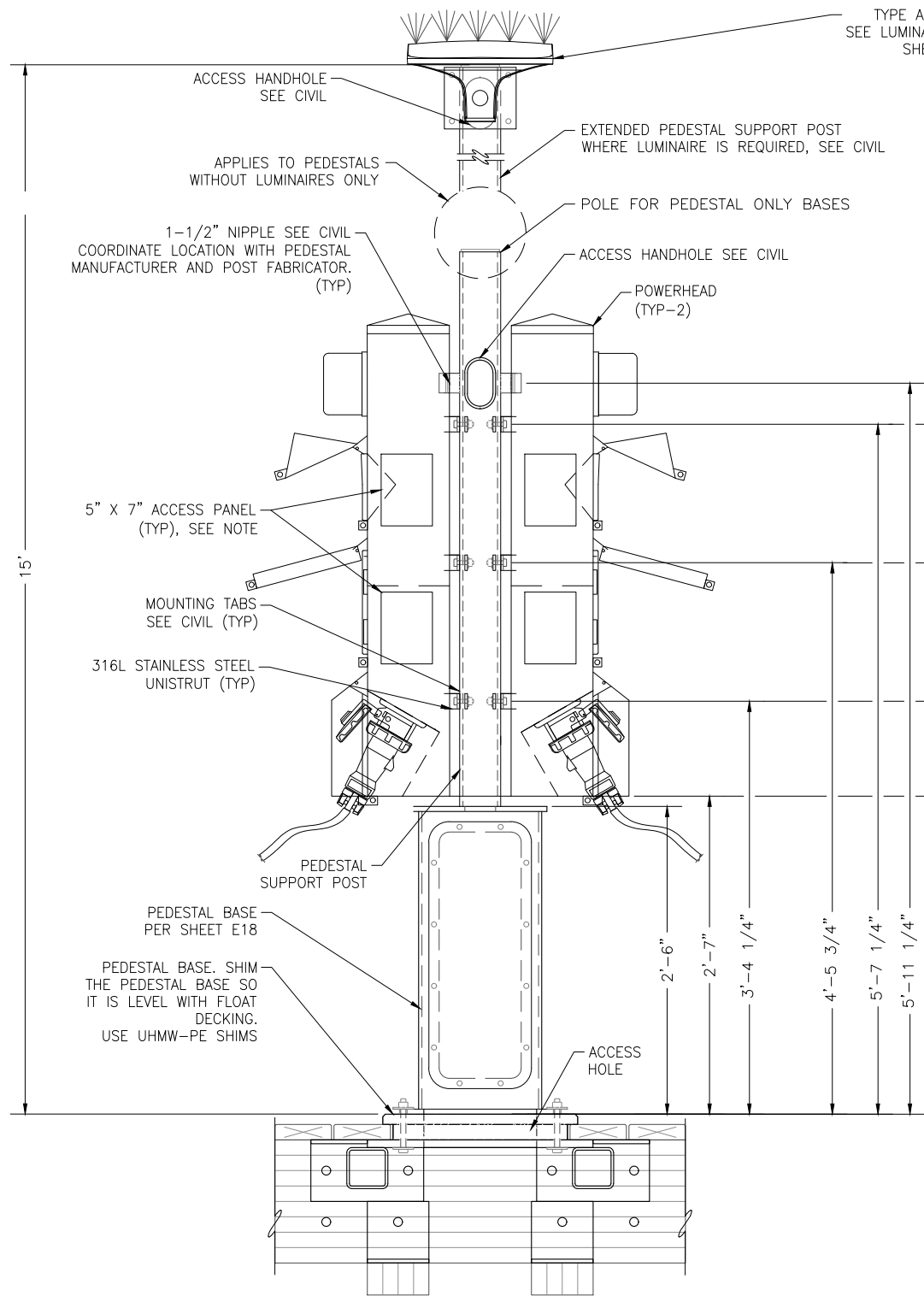
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JUNEAU, ALASKA 99801
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10' FLOAT SECTIONS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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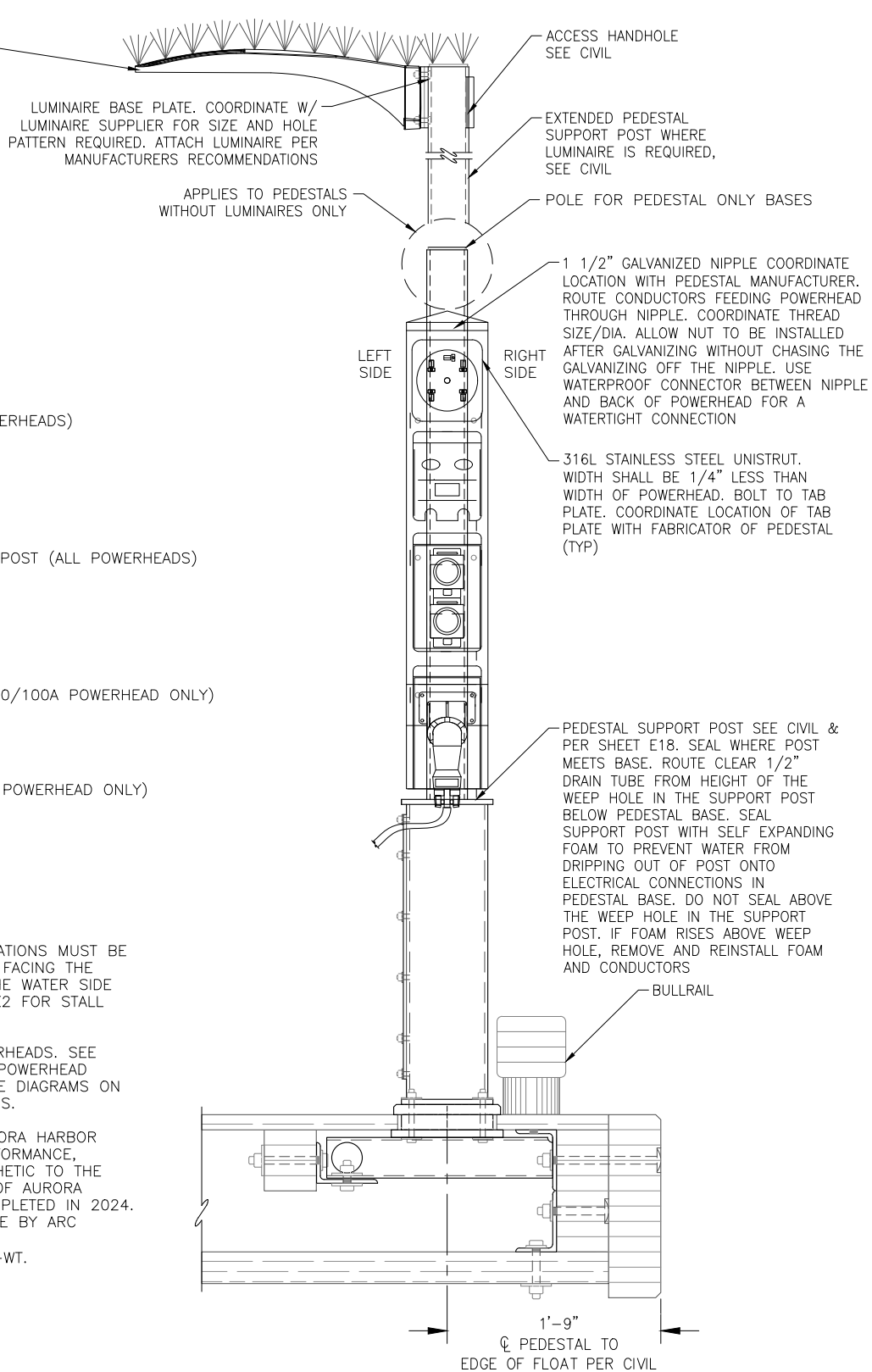
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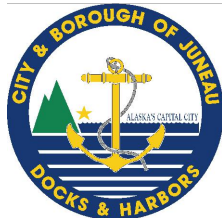
1 LIGHT POLE W/ PEDESTAL BASE
FRONT ELEVATION
NO SCALE

NOTES:

1. POWERHEAD ACCESS PANEL LOCATIONS MUST BE CORRECT AND COORDINATED SO FACING THE ADJACENT BULLRAIL AND NOT THE WATER SIDE OF THE PEDESTAL, SEE SHEET E2 FOR STALL NUMBERS.
2. EACH PEDESTAL HAS TWO POWERHEADS. SEE SCHEDULE ON SHEET E19 FOR POWERHEAD CONFIGURATION. SEE SINGLE LINE DIAGRAMS ON SHEET E20 FOR WIRING DIAGRAMS.
3. THE POWER PEDESTALS ON AURORA HARBOR PHASE IV SHALL MATCH IN PERFORMANCE, FEATURES, FUNCTION, AND AESTHETIC TO THE PEDESTALS PROVIDED AS PART OF AURORA HARBOR PHASE III PROJECT COMPLETED IN 2024. BASIS OF DESIGN PEDESTALS ARE BY ARC INDUSTRIES, MODEL SERIES: ARCMP-PM-SSXXXXXX-RH/LH-WT.



2 LIGHT POLE W/ PEDESTAL BASE
SIDE ELEVATION
NO SCALE



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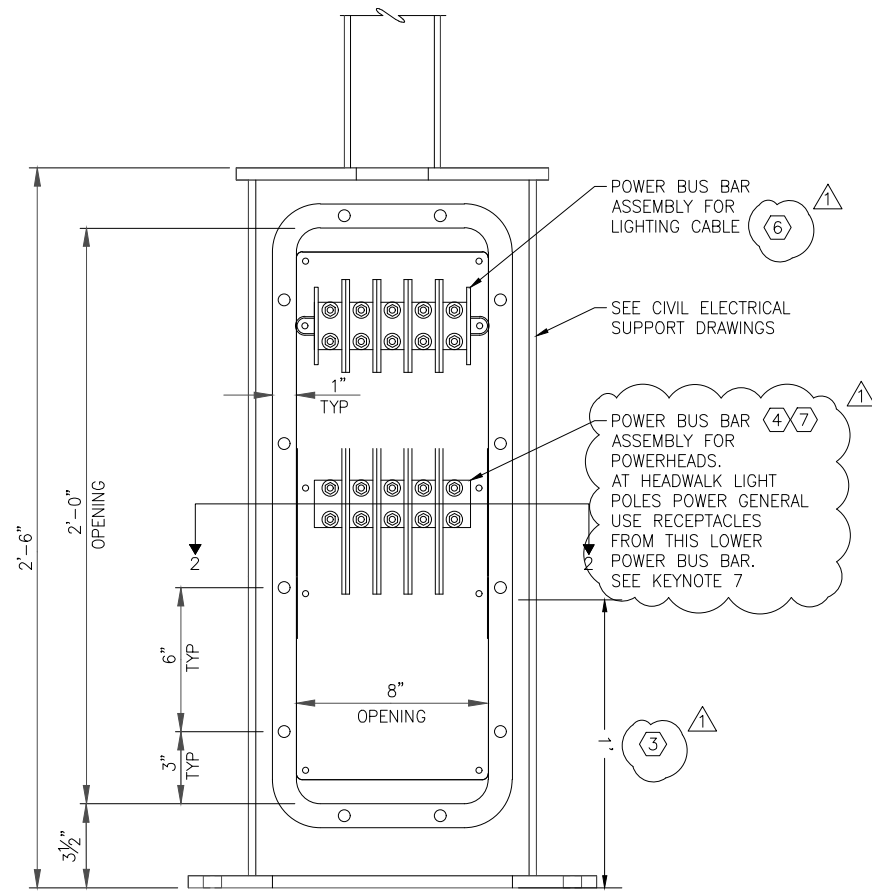


POWERHEAD AND PEDESTAL DETAILS

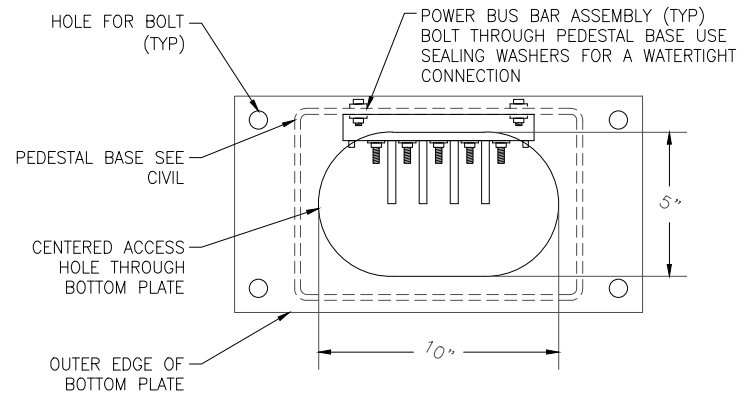
AURORA HARBOR REBUILD - PHASE IV

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① PEDESTAL & POLE BASE - FRONT VIEW
NO SCALE



② PEDESTAL & POLE BASE - TOP VIEW
NO SCALE

SHEET NOTES:

1. PROVIDE SIZE AND QUANTITY OF POWER DISTRIBUTION BLOCKS AS REQUIRED. ALL BLOCKS SHALL BE TINNED COPPER WITH BRONZE HARDWARE AND NON-METALLIC, HD PLASTIC DIVIDERS BETWEEN PHASES.
2. MOUNT POWER BUS BAR ASSEMBLY IN PEDESTAL BASE BY USING STAINLESS BOLTS, RUBBER WASHERS, STAINLESS WASHERS AND SEALANT FOR A WATERTIGHT INSTALLATION.

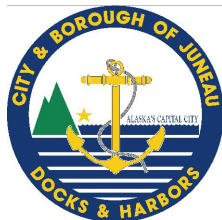
③ LOCATE BLOCKS MINIMUM 12" ABOVE DECK PER NEC.

④ PROVIDE COPPER BUS BARS FOR POWERHEADS RATED AT 250 AMPS, 600V. PROVIDE (2) COPPER OR BRONZE STUDS PER POLE SIZED FOR NO. 4/0 LOOP FEED. USE COMPRESSION RING TERMINALS (BURNDY OR EQUAL) TO SECURE CABLE TO STUDS. USE ANTI-OXIDATION COMPOUND, BRONZE WASHERS AND NUTS. APPLY COLORED HEAT SHRINK OVER COMPRESSION CONNECTION 2" LONG MINIMUM. COLOR PER VOLTAGE AND CONDUCTOR TYPE (BLACK, RED, BLUE FOR A,B,C PHASE, WHITE FOR NEUTRAL, GREEN FOR GROUND). SIZE AND CONFIGURATION AS REQUIRED. LABEL CONDUCTORS FEEDING POWERHEAD ON LEFT SIDE OF POST WITH "L", RIGHT SIDE WITH "R". CONDUCTORS SHALL BE TINNED COPPER WITH XHHW INSULATION (TYPICAL). COAT CONDUCTORS WITH ANTI-OXIDATION COMPOUND. TORQUE PER MANUFACTURER'S RECOMMENDATION. USE SAME METHOD FOR CONDUCTORS FEEDING POWERHEADS. NO ALUMINUM LUGS, NO STAINLESS STUDS, WASHERS, NUTS, OR BOLTS MAY BE USED WITH THE BUS BARS AND THE TERMINATION OF THE CONDUCTORS.

5. ALL PEDESTALS SHALL HAVE 30 MILLI-AMP GFI PROTECTION BUILT INTO EACH CIRCUIT BREAKER IN THE PEDESTALS (POWERHEAD).

⑥ PROVIDE BUS BARS FOR LIGHTING IN SAME MANNER AS POWERHEADS. SIZE STUDS FOR NO. 8 LOOP FEED. ATTACH CONDUCTORS IN SAME MANNER. BUS BAR TO BE RATED AT 50A, 600V.

⑦ AT HEADWALK LIGHT POLES WITH GENERAL USE RECEPTACLES, FEED THE POLE MOUNTED RECEPTACLE WITH 3/C NO. 10 TYPE SOOW CORD, ROUTED LOOSE FROM RECEPTACLE INSIDE POLE DOWN TO THE LOWER POWER BUS BAR ASSEMBLY. IN THESE LOCATIONS BUS BAR MAY BE RATED AT 50A, 600V, PROVIDED IN SAME MANNER AS KEYNOTE 6, THIS SHEET. ROUTE SOURCE RECEPTACLE CIRCUIT IN AND OUT OF PEDESTAL USING THE BUS BAR. AT THE START OF THE SOOW CORD PROVIDE AN INLINE 20A FUSE IN FINGER-SAFE, WATER PROOF FUSE HOLDER.



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①	3/19/25	ADDENDUM			

CITY AND BOROUGH OF JUNEAU
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**POST MOUNTED PEDESTAL
SUPPORT BASE DETAILS**
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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NOTE:

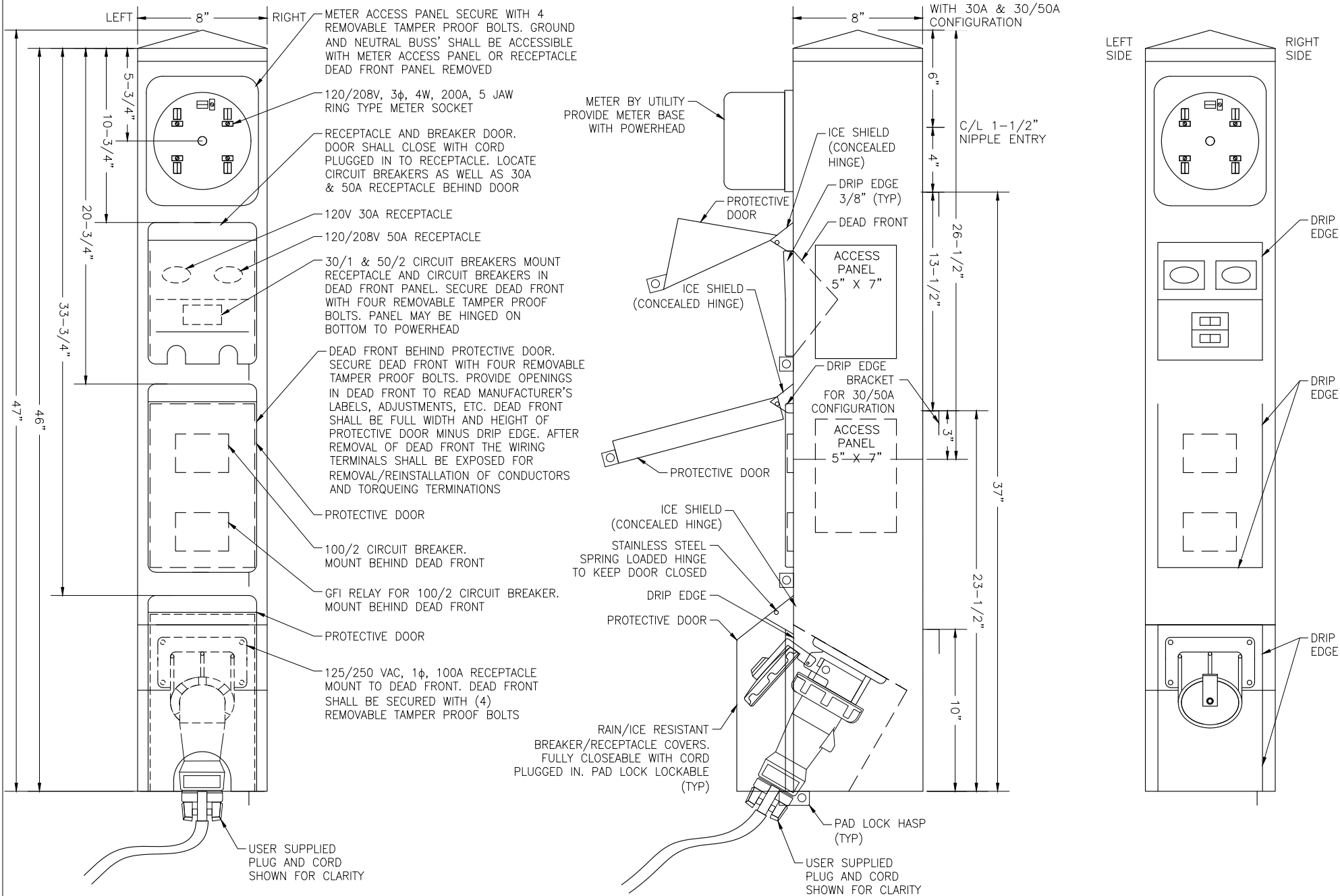
1. ALL POWERHEAD ACCESS PANELS MUST BE CORRECT AND COORDINATED SO AS TO FACE THE ADJACENT BULLRAIL AND NOT THE WATER SIDE OF THE PEDESTAL. EACH ACCESS PANEL SHALL INCLUDE A PHENOLIC LABEL ON THE PANEL ITSELF, MULTI-LINE SENTENCES CONSISTING OF 1/2" HIGH CAPITAL LETTERS, WHITE LETTERS ON BLACK BACKGROUND, AFFIXED WITH STAINLESS STEEL RIVETS. LABELS TO INCLUDE PEDESTAL ID (I.E. 'PED JS1', 'PED JS2', 'PED JN1', ETC.), DEVICE SERVED AND VOLTS & AMPS INFORMATION.
2. THE POWER PEDESTALS ON AURORA HARBOR PHASE IV SHALL MATCH IN PERFORMANCE, FEATURES, FUNCTION, AND ASETHTIC TO THE PEDESTALS PROVIDED AS PART OF AURORA HARBOR PHASE III PROJECT COMPLETED IN 2024. BASIS OF DESIGN PEDESTALS ARE BY ARC INDUSTRIES, MODEL SERIES: ARCMP-PM-SSXXXXXX-RH/LH-WT.

EXAMPLE PEDESTAL ON K FLOAT,
NORTH SIDE, NO. 3, I.E. 'KN3':

LABEL 1 (FOR TOP ACCESS PANEL):
PED KN3
120/280V 30A REC
120/208V 50A REC

LABEL 2 (FOR BOTTOM ACCESS PANEL):
PED KN3
120/208V 100A REC

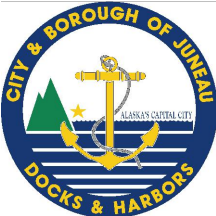
H FLOAT POWERHEAD SCHEDULE				
PED	POWERHEAD	REC VOLT/AMP	ACCESS PANEL(S)	STALL
HS7	AH-13	208V/100A 208V/50A 120V/30A	RIGHT SIDE	AH-13
	AH-014	208V/50A 120V/30A	LEFT SIDE	AH-14



J FLOAT POWERHEAD SCHEDULE				
PED	POWERHEAD	REC VOLT/AMP	ACCESS PANEL(S)	STALL
JS1	AJ-01	208V/50A 120V/30A	RIGHT SIDE	AJ-01
	AJ-02	208V/50A 120V/30A	LEFT SIDE	AJ-02
JS2	AJ-03	208V/50A 120V/30A	RIGHT SIDE	AJ-03
	AJ-04	208V/50A 120V/30A	LEFT SIDE	AJ-04
JS3	AJ-05	208V/50A 120V/30A	RIGHT SIDE	AJ-05
	AJ-06	208V/50A 120V/30A	LEFT SIDE	AJ-06
JS4	AJ-07	208V/50A 120V/30A	RIGHT SIDE	AJ-07
	AJ-08	208V/50A 120V/30A	LEFT SIDE	AJ-08
JS5	AJ-09	208V/50A 120V/30A	RIGHT SIDE	AJ-09
	AJ-10	208V/50A 120V/30A	LEFT SIDE	AJ-10
JS6	AJ-11	208V/50A 120V/30A	RIGHT SIDE	AJ-11
	AJ-12	208V/50A 120V/30A	LEFT SIDE	AJ-12
JS7	AJ-13	208V/50A 120V/30A	RIGHT SIDE	AJ-13
	AJ-14	208V/50A 120V/30A	LEFT SIDE	
JN6	AJ-15	208V/50A 120V/30A	RIGHT SIDE	AJ-15
	AJ-16	208V/50A 120V/30A	LEFT SIDE	AJ-16
JN5	AJ-17	208V/50A 120V/30A	RIGHT SIDE	AJ-17
	AJ-18	208V/50A 120V/30A	LEFT SIDE	AJ-18
JN4	AJ-19	208V/50A 120V/30A	RIGHT SIDE	AJ-19
	AJ-20	208V/50A 120V/30A	LEFT SIDE	AJ-20
JN3	AJ-21	208V/50A 120V/30A	RIGHT SIDE	AJ-21
	AJ-22	208V/50A 120V/30A	LEFT SIDE	AJ-22
JN2	AJ-23	208V/50A 120V/30A	RIGHT SIDE	AJ-23
	AJ-24	208V/50A 120V/30A	LEFT SIDE	AJ-24
JN1	AJ-25	208V/50A 120V/30A	RIGHT SIDE	AJ-25
	AJ-26	208V/50A 120V/30A	LEFT SIDE	AJ-26

K FLOAT POWERHEAD SCHEDULE				
PED	POWERHEAD	REC VOLT/AMP	ACCESS PANEL(S)	STALL
KS1	AK-01	208V/50A 120V/30A	RIGHT SIDE	AK-01
	AK-02	208V/50A 120V/30A	LEFT SIDE	AK-02
KS2	AK-02	208V/50A 120V/30A	RIGHT SIDE	AK-02
	AK-03	208V/50A 120V/30A	LEFT SIDE	AK-03
KS3	AK-03	208V/50A 120V/30A	RIGHT SIDE	AK-03
	AK-04	208V/50A 120V/30A	LEFT SIDE	AK-04
KS4	AK-05	208V/50A 120V/30A	RIGHT SIDE	AK-05
	AK-06	208V/100A 208V/50A 120V/30A	LEFT SIDE	AK-06
KN9	AK-7W	120V/30A	RIGHT SIDE	
	AK-07	120V/30A	LEFT SIDE	AK-07
KN8	AK-08	120V/30A	RIGHT SIDE	AK-08
	AK-09	120V/30A	LEFT SIDE	AK-09
KN7	AK-10	120V/30A	RIGHT SIDE	AK-10
	AK-11	120V/30A	LEFT SIDE	AK-11
KN6	AK-12	120V/30A	RIGHT SIDE	AK-12
	AK-13	208V/50A 120V/30A	LEFT SIDE	AK-13
KN5	AK-14	120V/30A	RIGHT SIDE	AJ-15
	AK-15	120V/30A	LEFT SIDE	AJ-15
KN4	AK-16	120V/30A	RIGHT SIDE	AJ-16
	AK-17	120V/30A	LEFT SIDE	AJ-17
KN3	AK-18	120V/30A	RIGHT SIDE	AJ-18
	AK-19	120V/30A	LEFT SIDE	AJ-19
KN2	AK-20	120V/30A	RIGHT SIDE	AJ-20
	AK-21	120V/30A	LEFT SIDE	AJ-21
KN1	AK-22	120V/30A	RIGHT SIDE	AJ-22
	AK-23	120V/30A	LEFT SIDE	AJ-23

POWERHEAD DETAILS



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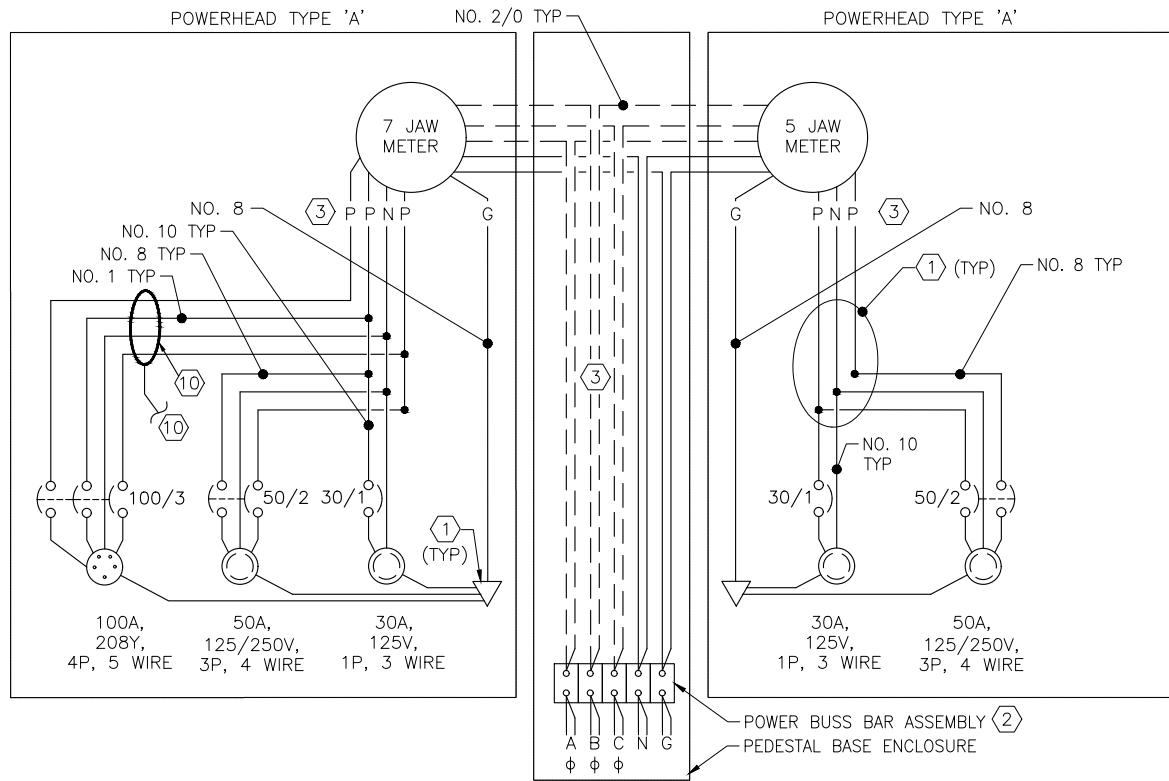


POWERHEAD DETAILS

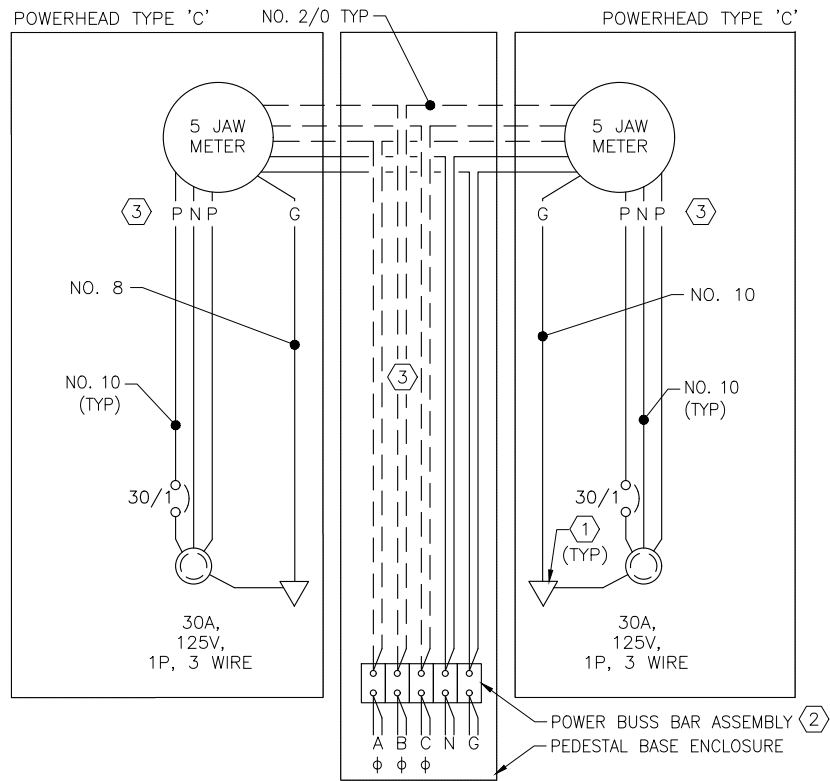
AURORA HARBOR REBUILD - PHASE IV

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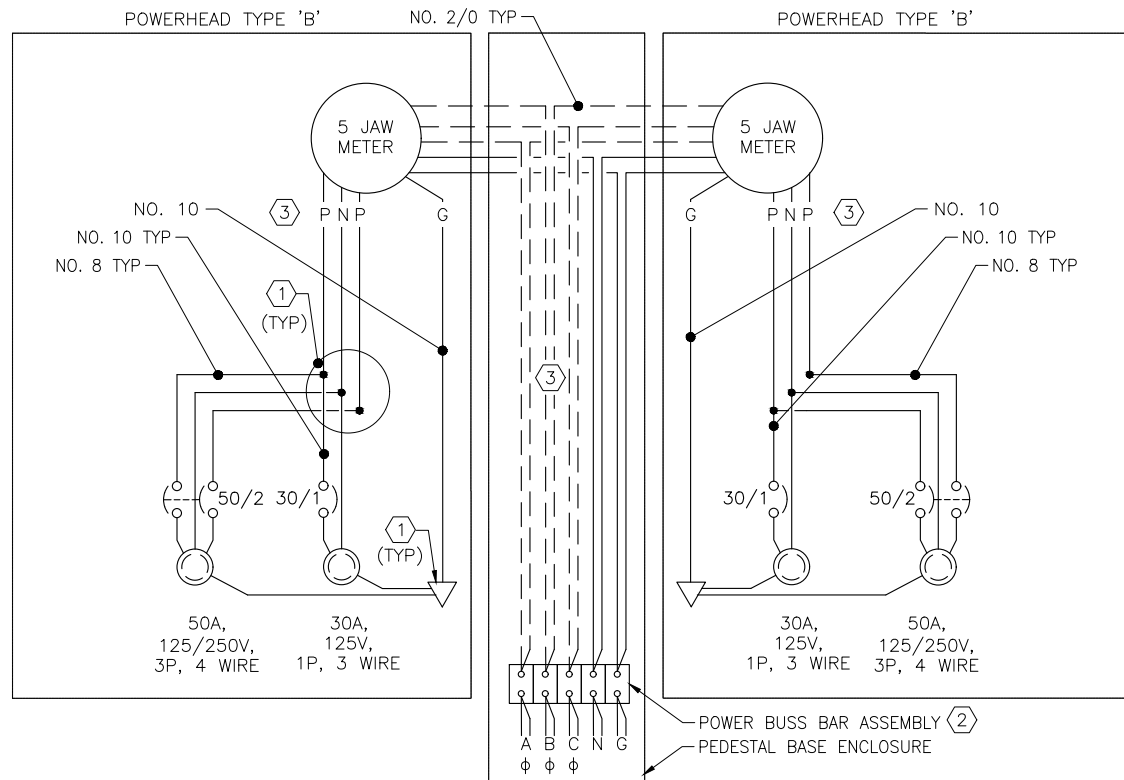
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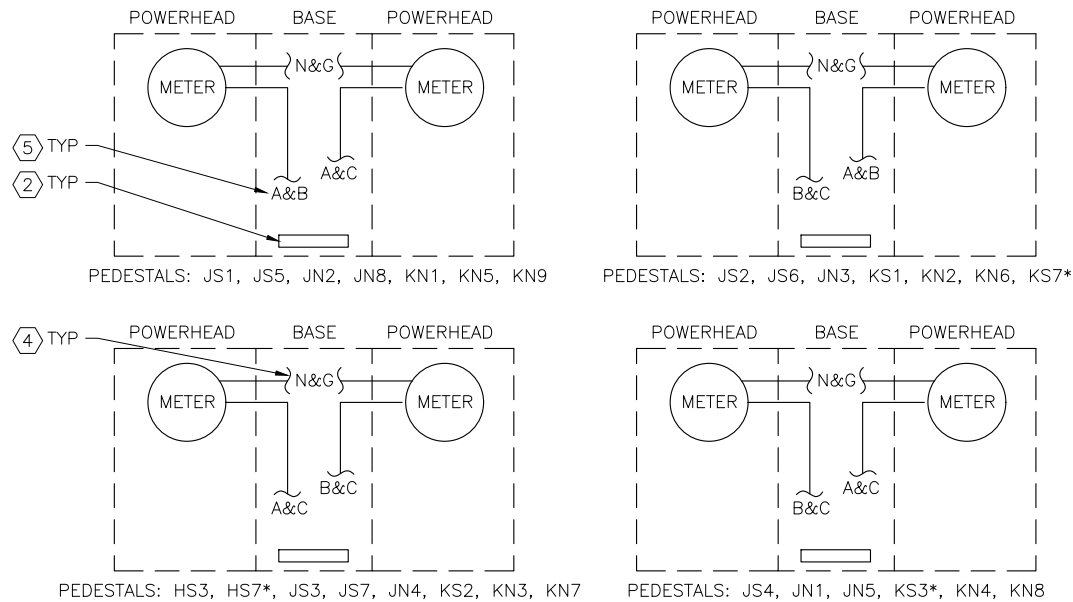
1 WIRING DIAGRAM - DUAL 100A/50A/30A PEDESTAL (TYPE A - KS3 & HS7 PEDESTALS)



2 WIRING DIAGRAM - DUAL 30A PEDESTAL (TYPE C - KN1-HN9 PEDESTALS)



3 WIRING DIAGRAM - DUAL 50A/30A PEDESTAL (TYPE B - JN1-JN6, JS1-JS7, KS1-KS3 PEDESTALS)

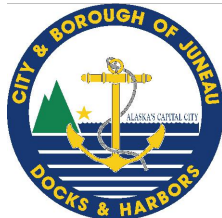


4 POWERHEAD PHASE ARRANGEMENTS

SHEET NOTES:

- 1 PROVIDE A POWER BUS BAR ASSEMBLY (AMP RATED AS REQUIRED) FOR THESE CONNECTIONS INCLUDING GROUND. COMPLY WITH REQUIREMENTS SHOWN ON SHEET E16 FOR BUS BARS AND WIRING TYPICAL ALL POWERHEADS.
- 2 EACH POWER PEDESTAL TO BE FED WITH 3-PHASE CIRCUIT, COMMON CIRCUITING OF PEDESTALS PER POWER SITE PLAN AND PANEL SCHEDULES.
- 3 FROM THE POWER BUS BAR AT EACH PEDESTAL THE POWERHEADS ARE TO BE CIRCUITED FOR SINGLE PHASE LOADS TO THE PEDESTAL METERS. PHASE ARRANGEMENTS TO USE FOR EACH POWERHEAD AS SHOWN ON DETAIL 4, THIS SHEET. SPECIFIC ARRANGEMENTS CALLED OUT IN ORDER TO BALANCE THE SINGLE PHASE LOADS ACROSS THE 3-PHASE CIRCUITS AT SOURCE PANEL AS MUCH AS PRACTICAL.
- 4 NEUTRAL AND GROUND CIRCUIT CONNECTIONS FROM PEDESTAL POWER BUS BARS TO METER BASES SHALL BE MADE IN ALL PEDESTALS.
- 5 PHASES TO CONNECT FROM PEDESTAL POWER BUS BAR ASSEMBLY IN BASE UP TO POWERHEAD METERS.
6. ALL TYPICAL PEDESTAL WIRE SIZES SHOWN ARE MINIMUM. AT CONTRACTOR OPTION CONDUCTORS CAN ALL BE SIZED UP TO MATCH LARGEST IN THE POWERHEAD. ENSURE ALL BREAKERS AND LUGS WILL ACCOMMODATE INTERNAL CONDUCTOR SIZES.
7. ALL PEDESTALS SHALL HAVE 30 MILLI-AMP GFI PROTECTION BUILT INTO EACH CIRCUIT BREAKER IN THE PEDESTALS. (POWERHEAD).
8. ALL WIRING TERMINATED ON POWER BUS BAR ASSEMBLIES ON THE LOADSIDE OF THE METER (BETWEEN THE METERS AND CIRCUIT BREAKERS) SHALL BE PER NOTE 4 ON SHEET E16 (I.E. RING TERMINALS, HEAT SHRINK, ETC.) THIS INCLUDES NEUTRALS AND GROUNDS. THE POWER BUS BAR ASSEMBLY SHALL BE EASILY ACCESSIBLE FROM THE ADJACENT ACCESS PANEL.
9. THE POWER PEDESTALS ON AURORA HARBOR PHASE IV SHALL MATCH IN PERFORMANCE, FEATURES, FUNCTION, AND AESTHETIC TO THE PEDESTALS PROVIDED AS PART OF AURORA HARBOR PHASE III PROJECT COMPLETED IN 2024. BASIS OF DESIGN PEDESTALS ARE BY ARC INDUSTRIES, MODEL SERIES: ARCMP-PM-SSXXXXXX-RH/LH-WT.
- 10 PROVIDE SEPARATE CT AND RELAY AS REQUIRED FOR SHUNT TRIP CONTROL OF THE 100A RECEPTACLE.

* HS7 AND KS3 SLIPS WITH 100A, 3-PHASE RECEPTACLE WITH A, B, C PHASES.



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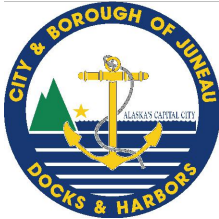


POWERHEAD WIRING DIAGRAMS

AURORA HARBOR REBUILD - PHASE IV

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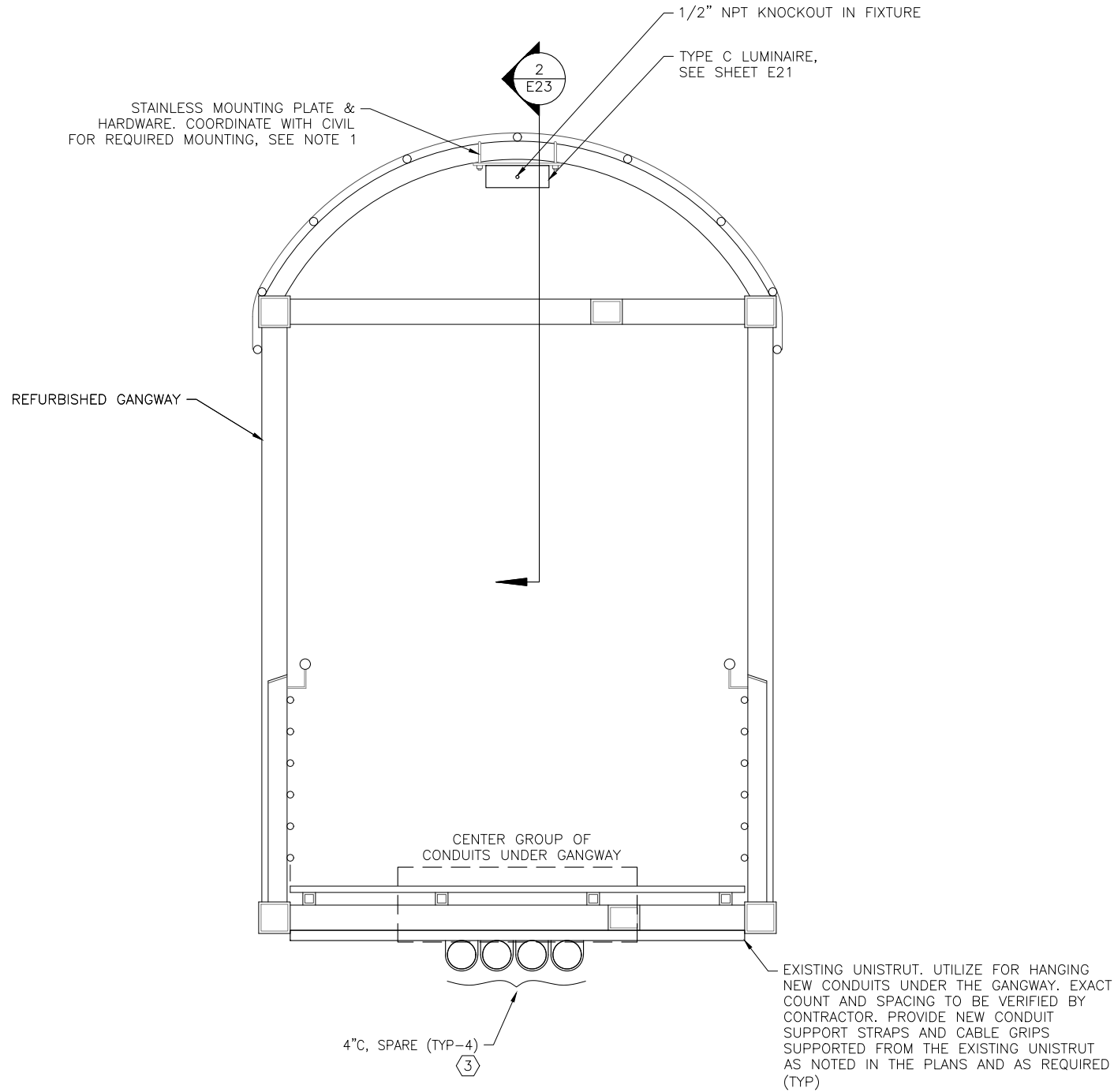
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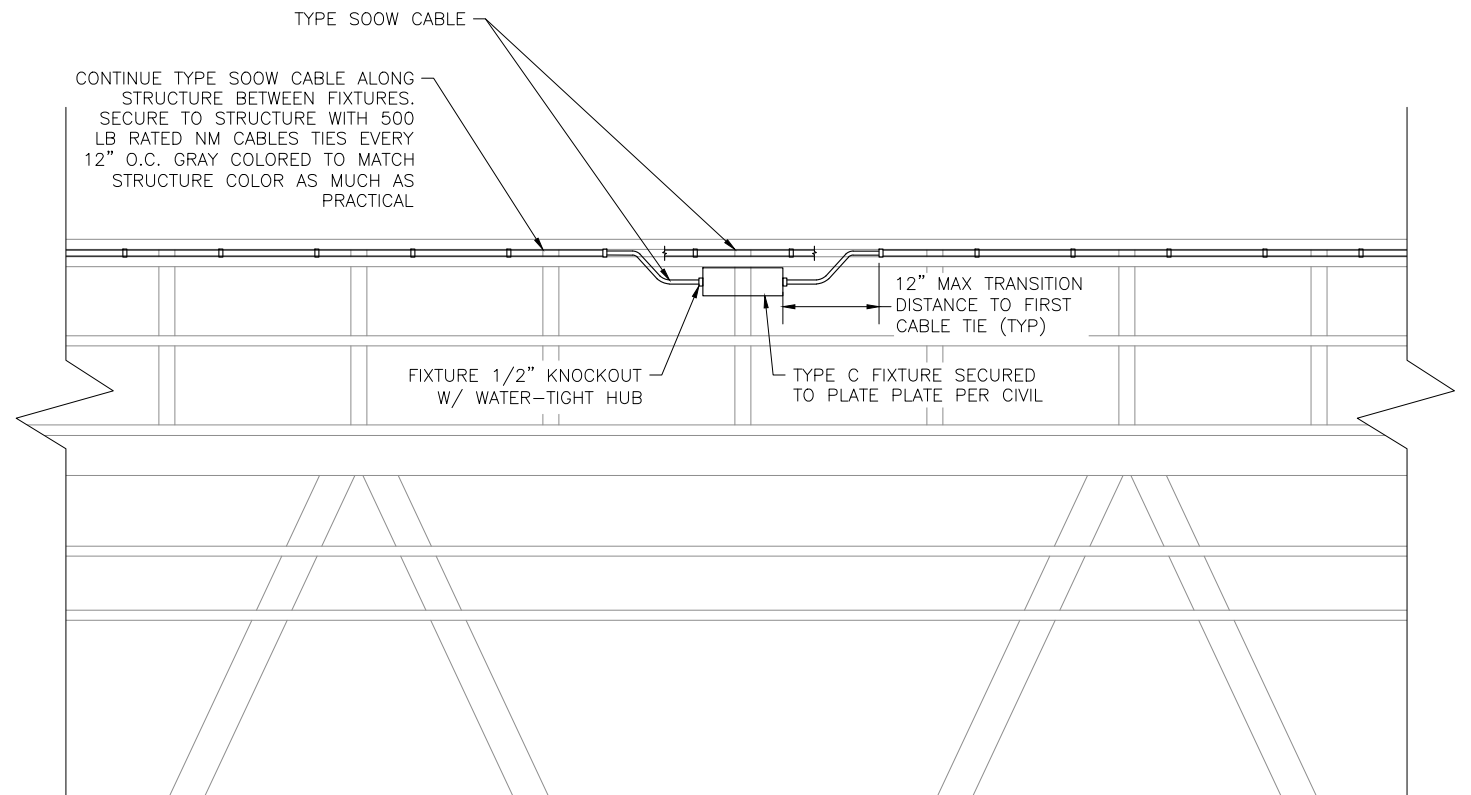
LUMINAIRE SCHEDULE
AURORA HARBOR REBUILD - PHASE IV

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LUMINAIRE SCHEDULE					
TYPE	DESCRIPTION	MANUFACTURER	LED CCT & LUMENS	SPARES	REMARKS
A	POLE MOUNT, CUTOFF LED LUMINAIRE FLOAT. NO LIGHT ABOVE 65' ABOVE NADIR	LITHONIA D--SERIES SIZE 0, DSX0 LED P3 30K 70CRI T3LG MVOLT EGS DBLXD (NO SUBSTITUTIONS)	3000K (7,600 LUMENS)	1	POLE MOUNT TO NEW SQUARE POLE. PROVIDE WITH NIXALITE BIRD CONTROL. ATTACH WITH MANUFACTURER RECOMMENDED ADHESIVE. NO HOLES IN HOUSING. CONTROL FROM EXISTING LIGHTING CONTACTOR. BLACK. USE ON FLOAT. TYPE 3 LOW GLARE DISTRIBUTION. NO LIGHT ABOVE 65' ABOVE NADIR. WITH CUSTOM GLARE SHIELD.
B	POLE MOUNT AT APPROACH DOCK	LITHONIA D--SERIES SIZE 0, DSX0 LED P3 30K 70CRI T3LG MVOLT EGSR DBLXD (NO SUBSTITUTIONS)	3000K (7,600 LUMENS)	1	POLE MOUNT TO NEW SQUARE POLE ON EXISTING STRUCTURE BRACKET, PROVIDE WITH NIXALITE BIRD CONTROL, ATTACH WITH MANUFACTURER RECOMMENDED ADHESIVE. NO HOLE IN HOUSING. CONTROL FROM EXISTING LIGHTING CONTACTOR. BLACK. TYPE 3 LOW GLARE DISTRIBUTION.
C	10" X 10" NOM. SURFACE MOUNT CANOPY LED, W/ FIELD ADJUSTABLE CCT AND LUMEN OUTPUT, SET FOR 3000K, 5,300 LUMENS, NOM. W/ UNIVERSAL VOLTAGE DRIVER AND 1/2" KNOCKOUTS FOR SURFACE FEED IN AND OUT ALL SIDES. SEALED, IP65 RATED, DIE--CAST ALUMINUM HOUSING W/ IV--RESISTANT POLYCARBONATE LENS, BRONZE FINISH	LUMARK CLCS17S (NO SUBSTITUTIONS)	3000K, 5300 LUMENS (FIELD SELECT)	1	SURFACE MOUNT TO GANGWAY CEILING STRUCTURE MOUNTING PLATE. COORDINATE SIZE WITH STRUCTURAL. FEED IN AND OUT W/ SOOW CABLE W/ WATERPROOF CONNECTORS. SEE SHEET E23 FOR GANGWAY SECTION.
NOTE: THE PART NUMBERS IN THE LUMINAIRE SCHEDULE MAY NOT BE COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL PARTS AND ACCESSORIES NECESSARY TO COMPLY WITH THE FEATURES SHOWN IN THE LUMINAIRE SCHEDULE (INCLUDING THE MOUNTING) AND AS SHOWN ON THE OTHER PLAN SHEETS, AND IN THE SPECIFICATIONS.					



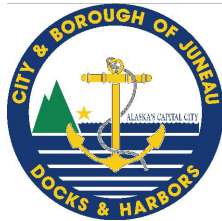
1 GANGWAY SECTION ELECTRICAL
NO SCALE



2 TYPE C FIXTURE SECTION
NO SCALE

NOTES:

1. MOUNT LUMINAIRE TO 1/4" ALUMINUM PLATE. SIZE AS REQUIRED. SUPPORT PLATE TO GANGWAY WITH STAINLESS STEEL U-BOLTS. WRAP U-BOLTS WITH ELECTRICAL TAPE. ADD UHMW WASHERS BETWEEN WASHERS AND PLATE.
2. PROVIDE ALL NEW SCHEDULE 80 PVC CONDUIT MOUNTED TO SUPPORT CHANNEL UNDER REFURBISHED GANGWAY PER CIVIL.
3. PROVIDE SPARE CONDUITS STARTING 36" FROM EXISTING UPLAND ABUTMENT TO END OF APPROACH DOCK AND FROM TOP OF GANGWAY TO BOTTOM OF GANGWAY.

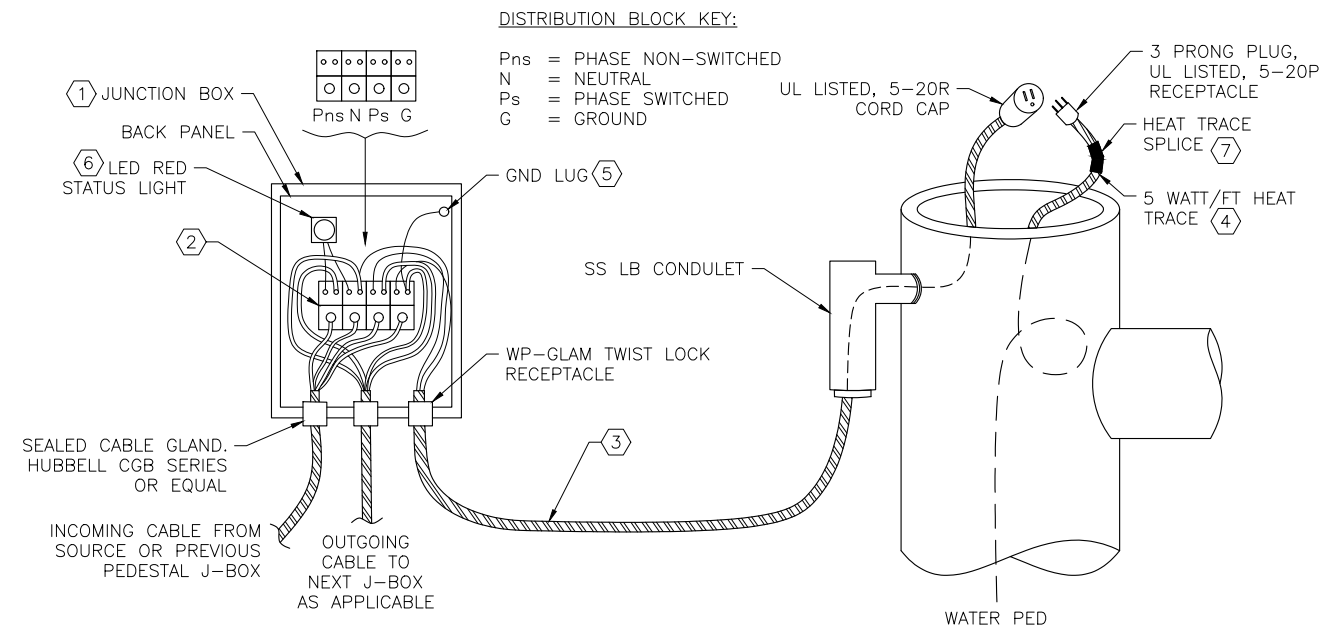


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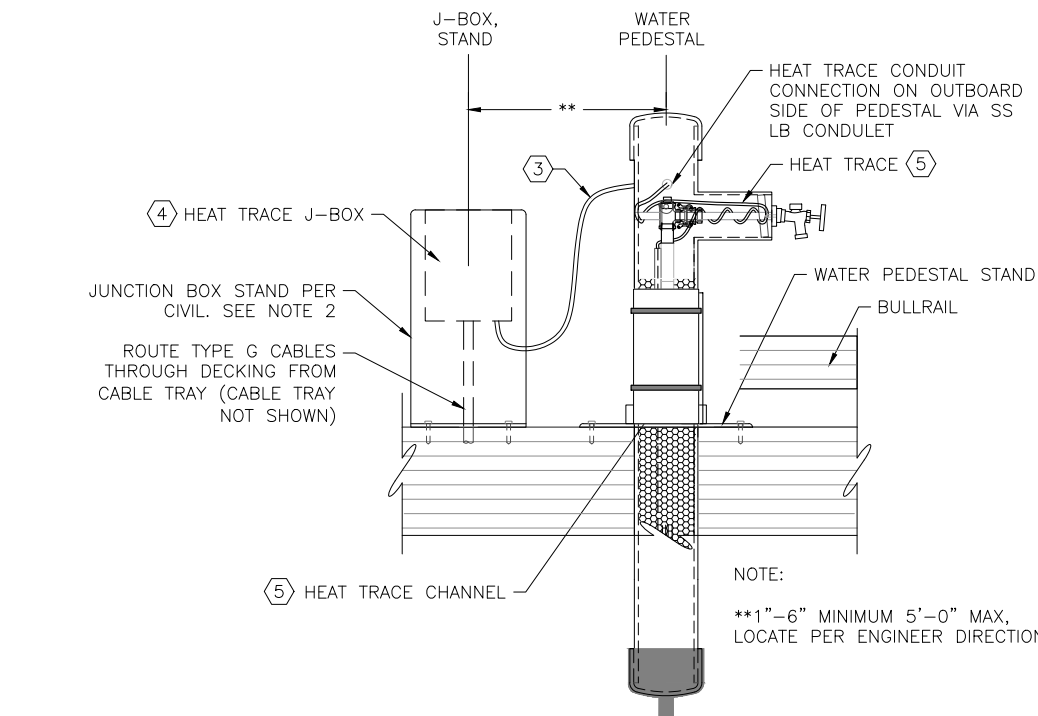
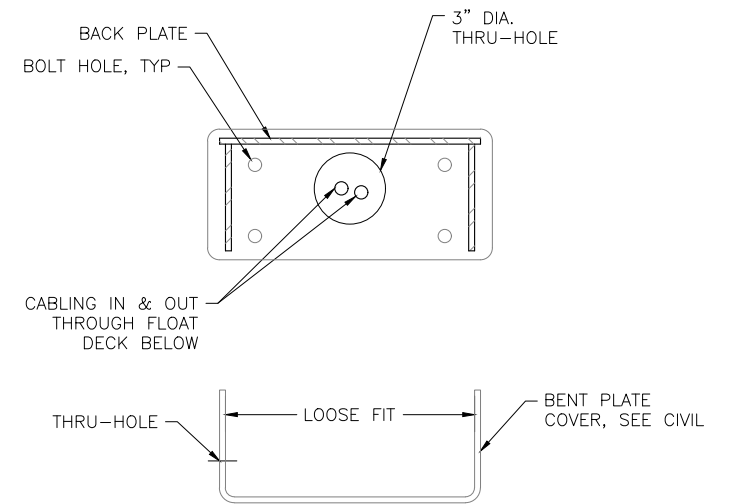
GANGWAY SECTIONS					
AURORA HARBOR REBUILD - PHASE IV					
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1 HEAT TRACE JUNCTION BOX DETAIL

NOTES (APPLICABLE TO DETAIL 1):

- 10" X 8" X 4" STAINLESS STEEL JUNCTION BOX WITH CONDUCTIVE BACK PANEL. HOFFMAN A1008CHNFSS6 WITH A10P8G BACK PANEL OR EQUAL.
- TERMINATE CABLES FROM THE FLOAT IN JUNCTION BOX ON TERMINAL BLOCKS MOUNTED TO BACK PANEL. SQUARE D 9080 SERIES BLOCKS OR EQUAL. PROVIDE BLOCKS WITH CLEAR COVERS. SEE DISTRIBUTION BLOCK KEY, THIS DETAIL, FOR CIRCUIT INFORMATION.
- (1) 3/C NO. 10 TYPE SOOW CORD WITH TWIST LOCK PLUG CONNECTED TO JUNCTION BOX RECEPTACLE. ROUTE CABLE LOOSE FROM JUNCTION BOX TO THE LB CONDUIT ON THE WATER PEDESTAL. SPLICE THE HEAT TRACE TO THE CORD WITHIN THE LB CONDUIT.
- SELF REGULATING, 5 WATT/SF, 120V HEAT TRACE. THERMON 5-FLEX-1-FOJ OR EQUAL. WRAP HEAT TRACE ON FULL LENGTH OF HORIZONTAL WATER PIPE AND DOWN VERTICAL SECTION TO 1" ABOVE WATER LINE.
- CONNECT GROUND WIRE TO JUNCTION BOX BACK PANEL GROUND LUG VIA RING TERMINAL. WRAP WITH 3M 1755 COTTON FRICTION TAPE, SCOTCH 130C, AND SCOTCH 88. USE TWO HALF-LAPPED LAYERS OF EACH TAPE AND COVER WITH HEAT SHRINK TUBING.
- PROVIDE PUSH-TO-TEST LED PILOT LIGHT AT JUNCTION BOX. SQUARE D 9001SKT38LRR31 OR EQUAL. MOUNT TO EXTERIOR OF JUNCTION BOX. MOUNT TO COVER OF BOX.
- PROVIDE CRIMPS AND HEAT SHRINK KIT TO MATE HEAT TRACE CABLE TO RECEPTACLE CONNECTED TO 3/C NO. 10 ON SOOW CORD. HEAT SHRINK KIT PER HEAT TRACE MANUFACTURER.

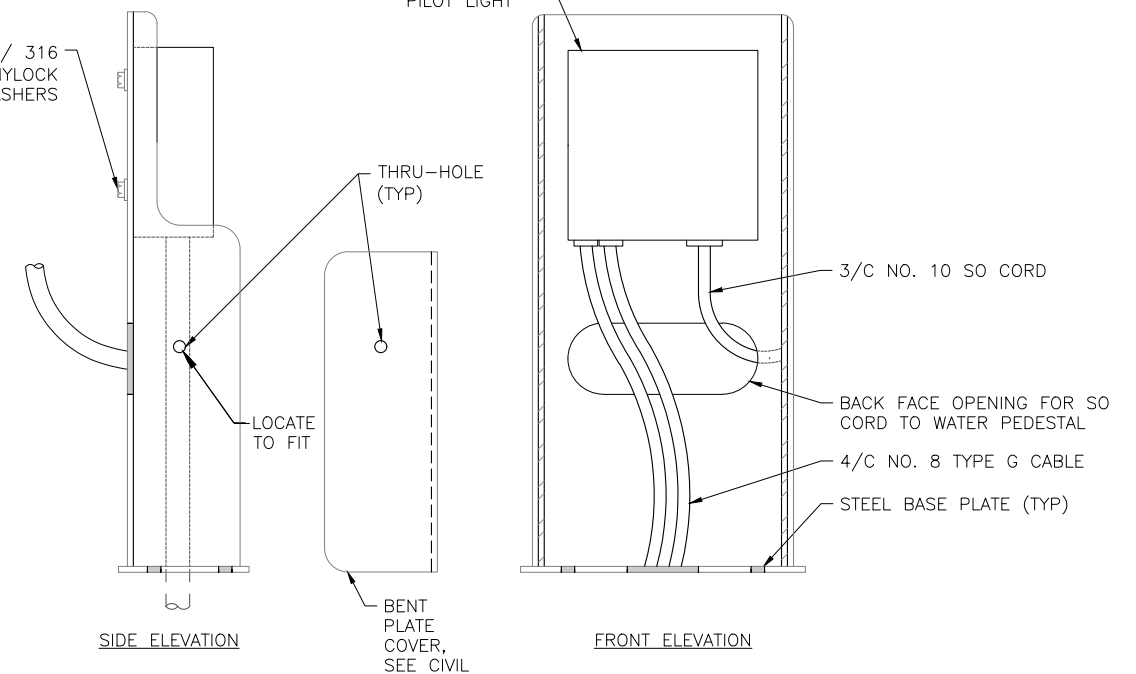


2 HEAT TRACE JUNCTION BOX DETAIL

NOTES (APPLICABLE TO DETAIL 2):

- LOCATION AND ORIENTATION OF JUNCTION BOX STAND AND WATER PEDESTAL ARE AS SHOWN IN CIVIL DRAWINGS.
- JUNCTION BOX STAND SHALL BE MOUNTED ADJACENT TO WATER PEDESTAL WITHOUT CONFLICTING WITH CLEAR SPACE IN FRONT OF FLOAT APPURTENANCES. COORDINATE ALL LOCATIONS WITH ENGINEER. DO NOT MOUNT UNDER WATER SPIGOT. SEE CIVIL FOR JUNCTION BOX LOCATION AND ORIENTATION.
- ROUTE SO CORD EXPOSED BETWEEN JUNCTION BOX AND WATER PEDESTAL. PROVIDE A SLACK CONNECTION WITH SMALL LOOP.
- PROVIDE JUNCTION BOX WITHIN JUNCTION BOX STAND. ALL CABLING TO TERMINATE WITHIN JUNCTION BOX ON POWER DISTRIBUTION BLOCKS. MOUNT JUNCTION BOX BEHIND REMOVABLE COVER. PROVIDE A RED LABEL THAT READS: "HEAT TRACE POWER ON. CHECK WATER TEMPERATURE TO VERIFY HEAT TRACE IS WORKING PROPERLY."
- ROUTE HEAT TRACE AROUND HOSE BIB AND DOWN VERTICAL SECTION.
- PROVIDE 50' OF HEAT TRACE WITH (2) OF EACH KIT AS HEAT TRACE SPARES FOR WATER SYSTEM. PROVIDE AND INSTALL HEAT TRACE FOR ALL SPARE WATER PEDESTALS, SEE CIVIL.
- SEE DETAIL 1, THIS SHEET FOR COMPLETE INFORMATION OF HEAT TRACE ELECTRICAL.

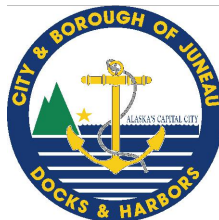
MOUNT J-BOX W/ 316 SS BOLTS W/ NYLOCK NUTS & CUT WASHERS



NOTES (APPLICABLE TO DETAIL 3):

- SEE SHEET E5 FOR DESCRIPTIONS OF ELECTRICAL EQUIPMENT ASSOCIATED WITH THE HEAT TRACE.
- SEE DETAIL 1, THIS SHEET FOR MORE INFORMATION ON JUNCTION BOX AND ELECTRICAL FOR THE HEAT TRACE SYSTEM.

3 HEAT TRACE JUNCTION BOX DETAIL



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



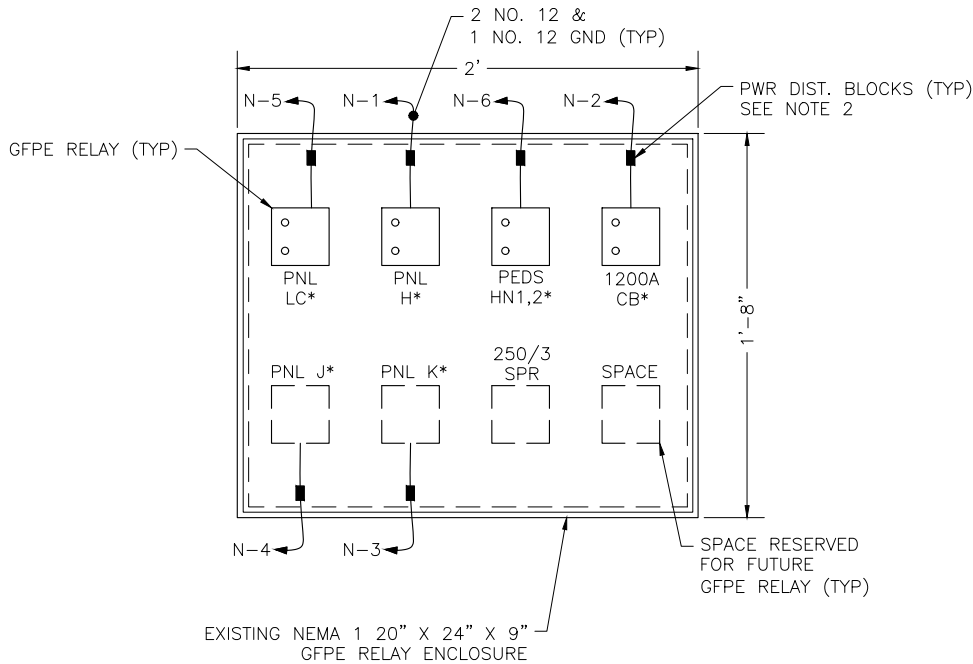
HEAT TRACE JUNCTION BOX DETAIL

AURORA HARBOR REBUILD - PHASE IV

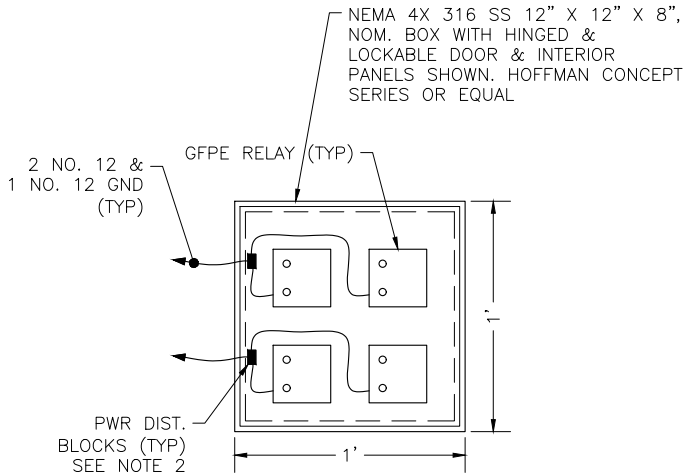
DESIGN:	BM	DATE:	FEBRUARY 1, 2025
CHECKED:	MM	CONTRACT NO.:	DH25-022
APPROVED:	MM	FILE NO.	SHEET: 85 of 86

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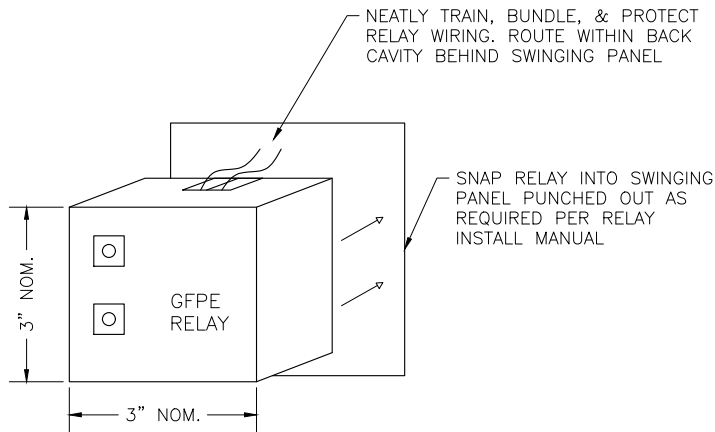
TRENCH AND GFPE BOX DETAILS



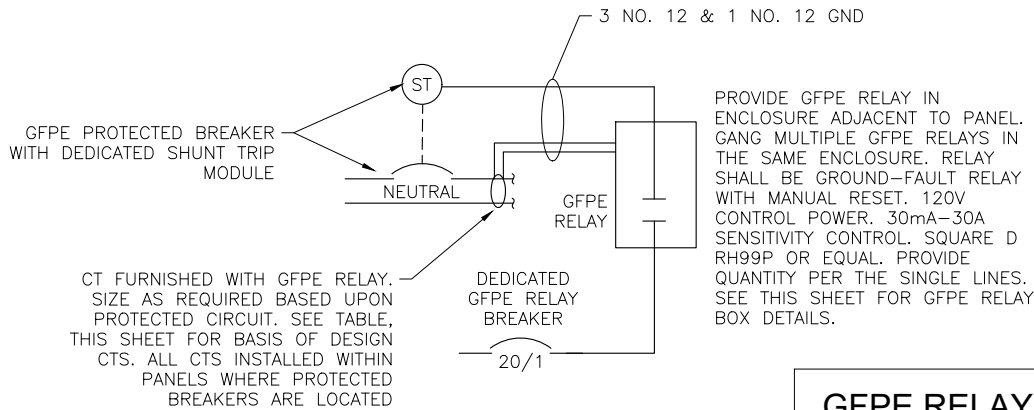
① **EXISTING GFPE BOX AT PANEL M**
NO SCALE



② **GFPE BOX AT PANEL (TYP)**
APPLIES TO GFPE BOX AT PANEL J & K
NO SCALE



③ **RELAY DETAIL**
(TYP-ALL GFPE RELAY PANELS)



④ **GFPE BREAKER DETAIL (TYP)**
NOTE: DETAIL IS TYPICAL WIRING FOR ALL GFPE PROTECTED RELAYS NOTED IN THE PLANS. ONE GFPE RELAY PER PROTECTED CIRCUIT BREAKER.

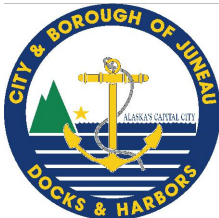
SHEET NOTES:

1. PROVIDE GFPE RELAYS WITHIN ENCLOSURES. EACH ENCLOSURE TO INCLUDE LOCKABLE OUTER HINGED DOOR, INTERIOR HINGED DEADFRONT (FOR GFPE MOUNTING) AND BACK PANEL INSIDE.
2. PROVIDE POWER DISTRIBUTION BLOCKS FOR FEEDING MULTIPLE RELAYS, THE 120V CONTROL POWER AND FOR TRANSITIONING FROM TYPE G TO XHHW-2 CONDUCTORS AS REQUIRED.
3. ALL DIMENSIONS SHOWN ARE MINIMUM. CONTRACTOR TO PROVIDE LARGER ENCLOSURES IF NECESSARY.
4. ARRANGEMENT OF RELAYS IS GRAPHICAL IN NATURE ONLY. MAINTAIN 2" SEPARATION ALL SIDES. COORDINATE LOCATION OF ALL ELEMENTS AS REQUIRED FOR FINAL FIT.
5. ALL RELAY WIRING SHALL ENTER ENCLOSURES VIA INSULATED CONDUIT NIPPLES, NOT SHOWN IN THESE DETAILS.
6. GROUND ENCLOSURE AND BACK PANEL TO CONDUIT AS REQUIRED.
7. PROVIDE PHENOLIC LABELS ON THE FRONT OF EACH ENCLOSURE.

GFPE RELAY CT SIZING & QUANTITY TABLE

I-NOM.	INSIDE DIA.	BOD MODEL	QNTY
630A	11.81" (CIRCLE)	VERIS #E683L502	1
400A	7.87" (CIRCLE)	VERIS #E683J502	1
250A	4.7" (CIRCLE)	VERIS #E683G502	8

TABLE NOTES:
1. ALL VALUES ARE MINIMUMS
2. I-NOM=NOMINAL CURRENT RATING, BOD=BASIS OF DESIGN
3. VENDOR TO ENSURE CT IS COMPATIBLE WITH PAIRED GFPE



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU
DOCKS & HARBORS
155 HERITAGE WAY
JUNEAU, ALASKA 99801
PHONE: 907-586-0292



GFPE DETAILS
AURORA HARBOR REBUILD - PHASE IV

DESIGN:	BM	DATE:	FEBRUARY 1, 2025
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APPROVED:	MM	FILE NO.	SHEET: 86 of 86

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