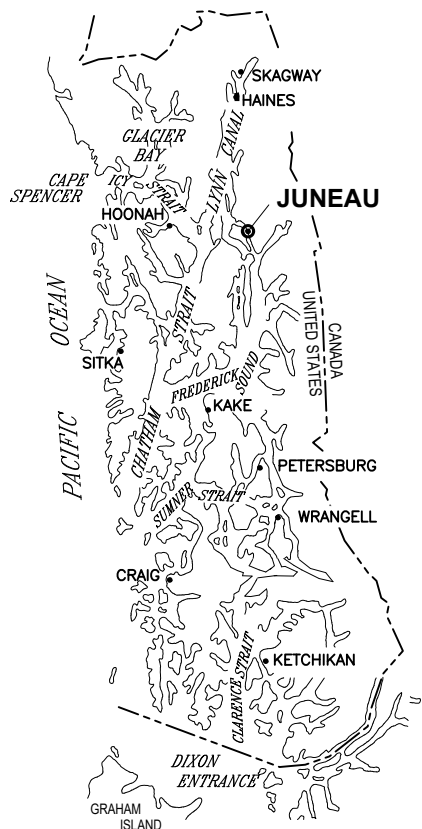


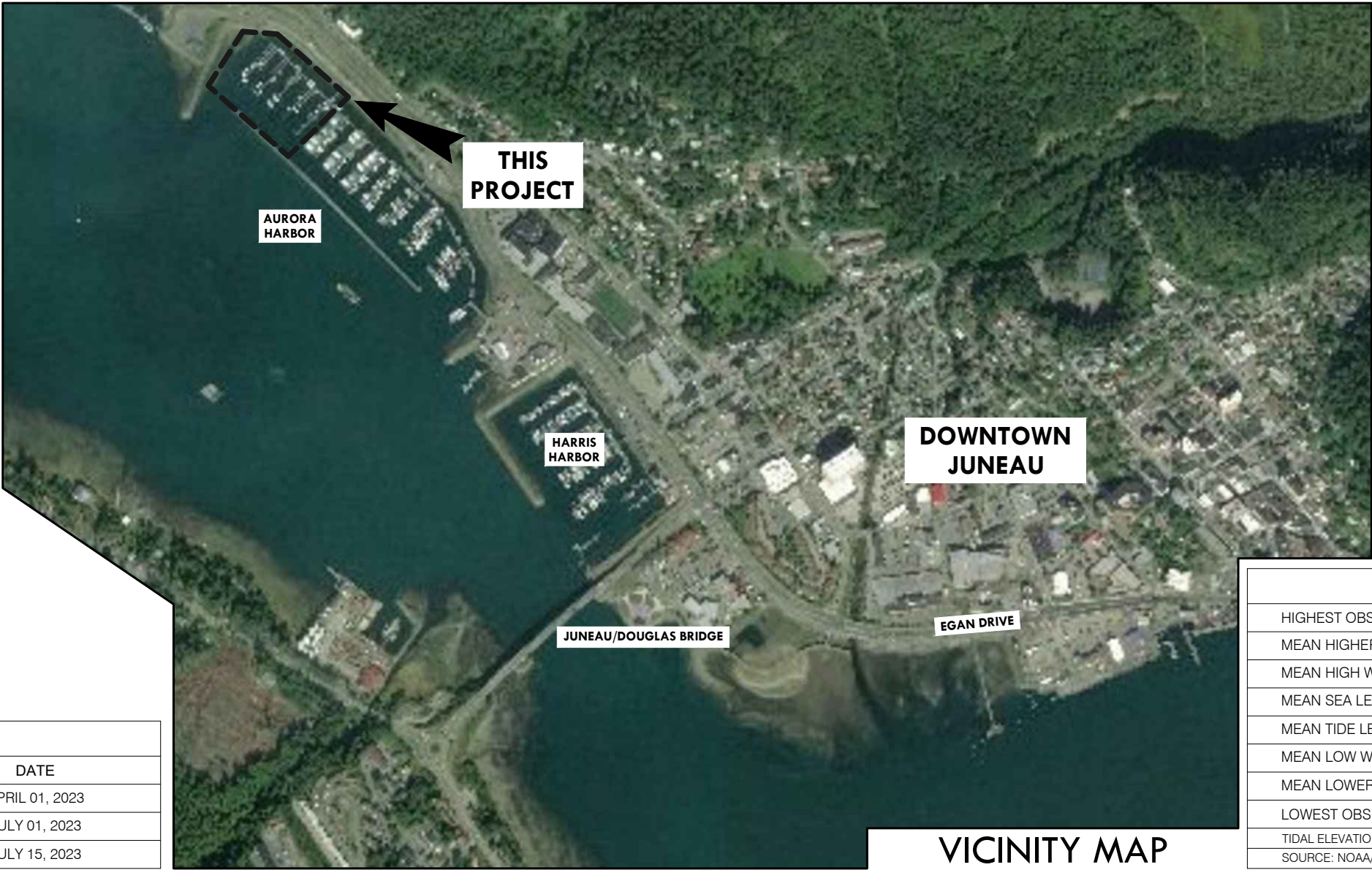
CITY AND BOROUGH OF JUNEAU, ALASKA

AURORA HARBOR REBUILD - PHASE III

CBJ CONTRACT - DH 23-014



SOUTHEAST ALASKA

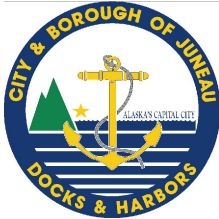


LOCATION MAP

PROJECT SCHEDULE	
MILESTONE	DATE
EARLIEST FIELD START	APRIL 01, 2023
SUBSTANTIAL COMPLETION	JULY 01, 2023
FINAL COMPLETION	JULY 15, 2023

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)	1.60 Ft
MEAN LOWER LOW WATER (MLLW)	0.0 FT
LOWEST OBSERVED WATER LEVEL	-6.12
TIDAL ELEVATION SHOWN RELATIVE TO MLLW = 0.0 FEET	
SOURCE: NOAA/ NOS/CO-OPS STATION ID: 9452210 JUNEAU, ALASKA	

G1 - COVER SHEET



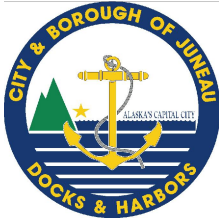
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



COVER SHEET, VICINITY MAP AND TIDAL DATA AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539
G1			

G1 – COVER SHEET



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



DRAWING INDEX			
AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

G2

GENERAL		
SHEET NO.	DWG. NO.	TITLE
	G1	COVER SHEET, VICINITY MAP AND TIDAL DATA
	G2	DRAWING INDEX
	G3	EXISTING CONDITIONS AND SALVAGE PLAN
	G4	GENERAL SITE PLAN

SALVAGED MATERIALS		
SHEET NO.	DWG. NO.	TITLE
	S1	GANGWAY SALVAGE PLAN, ELEVATION AND DETAILS
	S2	GANGWAY LANDING FLOAT SALVAGE PLAN, ELEVATION AND DETAILS

MOORING FLOATS		
SHEET NO.	DWG. NO.	TITLE
	F1	OVERALL FLOAT PLAN AND PILE LAYOUT
	F2	FLOAT PILE PLAN AND DETAILS
	F3	HEADWALK DETAILED FLOAT PLAN
	F4	MAINWALK DETAILED FLOAT PLAN
	F5	TEE FLOAT DETAILED FLOAT PLAN
	F6	FLOTATION SCHEDULE
	F7	TYPICAL 10x42 MODULE PLAN & ELEVATION
	F8	TYPICAL 10x54 MODULE PLAN & ELEVATION
	F9	TYPICAL 10x64 MODULE PLAN & ELEVATION
	F10	8X60 FINGER FLOAT PLAN & ELEVATION
	F11	6x48 FINGER GLOAT PLAN & ELEVATION
	F12	16x25 ELECTRICAL EQUIPMENT FLOAT
	F13	TYPICAL 8' & 10' FLOAT SECTIONS
	F14	TYPICAL 6' FLOAT SECTIONS & DETAILS
	F15	END CONNECTION PLANS & ELEVATIONS

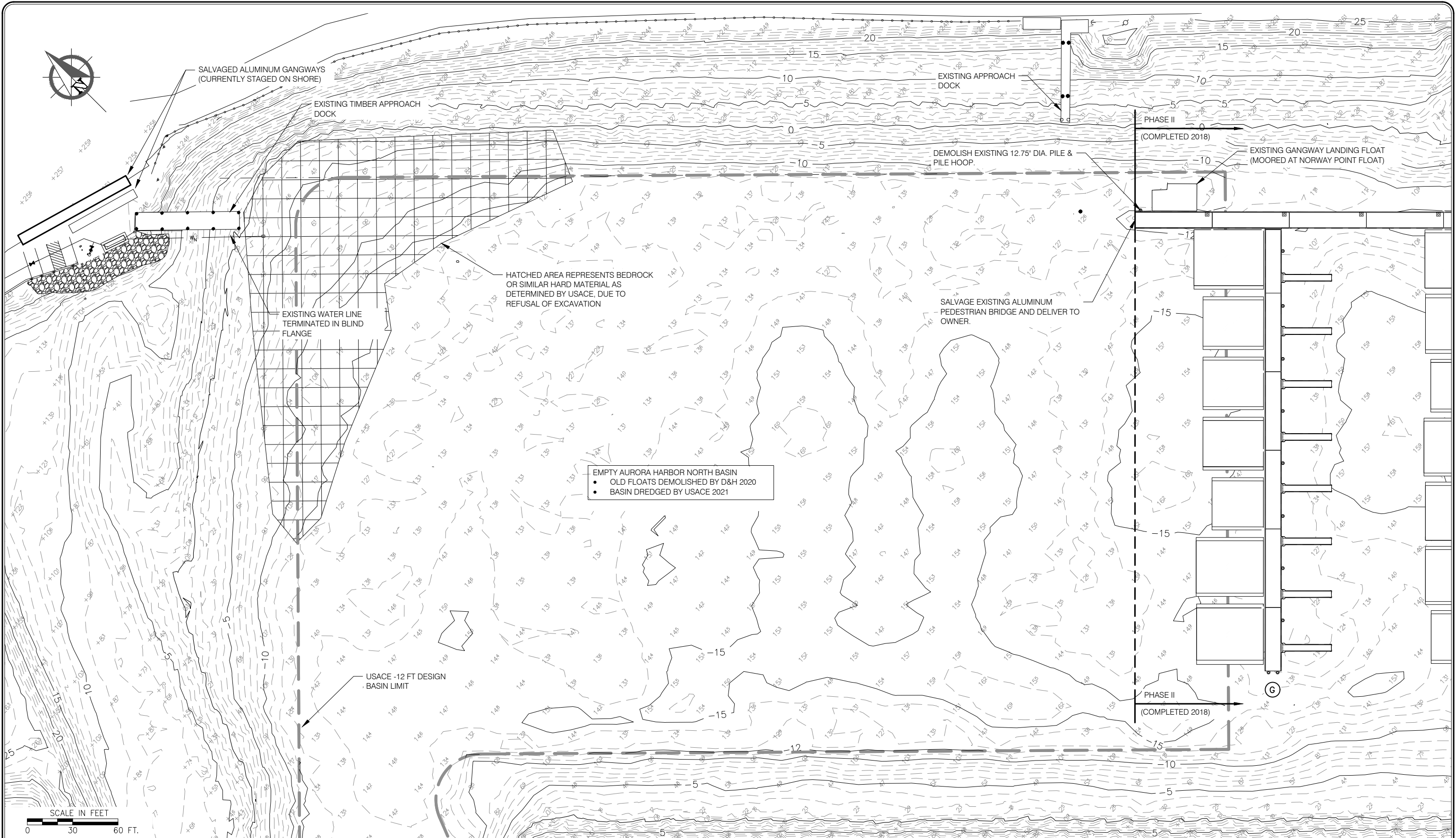
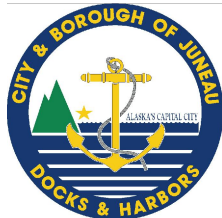
MOORING FLOATS (CONT.)		
SHEET NO.	DWG. NO.	TITLE
	F16	PILE HOOP DETAILS
	F17	FLOAT APPURTENANCE SUPPORT DETAILS
	F18	SIGNAGE

UTILITIES		
SHEET NO.	DWG. NO.	TITLE
	U1	WATER AND FIRE SCHEMATIC SITE PLAN
	U2	WATER AND FIRE SYSTEMS ROUTING
	U3	FLOAT MOUNTED UTILITY DETAILS
	U4	WATER AND FIRE SYSTEMS DETAILS

ELECTRICAL SUPPORT ASSEMBLIES		
SHEET NO.	DWG. NO.	TITLE
	ES1	ELECTRICAL SUPPORT ASSEMBLIES
	ES2	ELECTRICAL SUPPORT ASSEMBLY DETAILS
	ES3	ELECTRICAL SUPPORT ASSEMBLY DETAILS

ELECTRICAL		
SHEET NO.	DWG. NO.	TITLE
	E1	GENERAL SITE PLAN - ELECTRICAL
	E2	SINGLE LINE DIAGRAM - OVERALL
	E3	SINGLE LINE DIAGRAM - PANEL H
	E4	POWERHEAD AND PEDESTAL DETAILS
	E5	POST MOUNTED PEDESTAL SUPPORT BASE DETAILS
	E6	ELECTRICAL SUPPORT DETAILS
	E7	FLOOR PLAN





REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

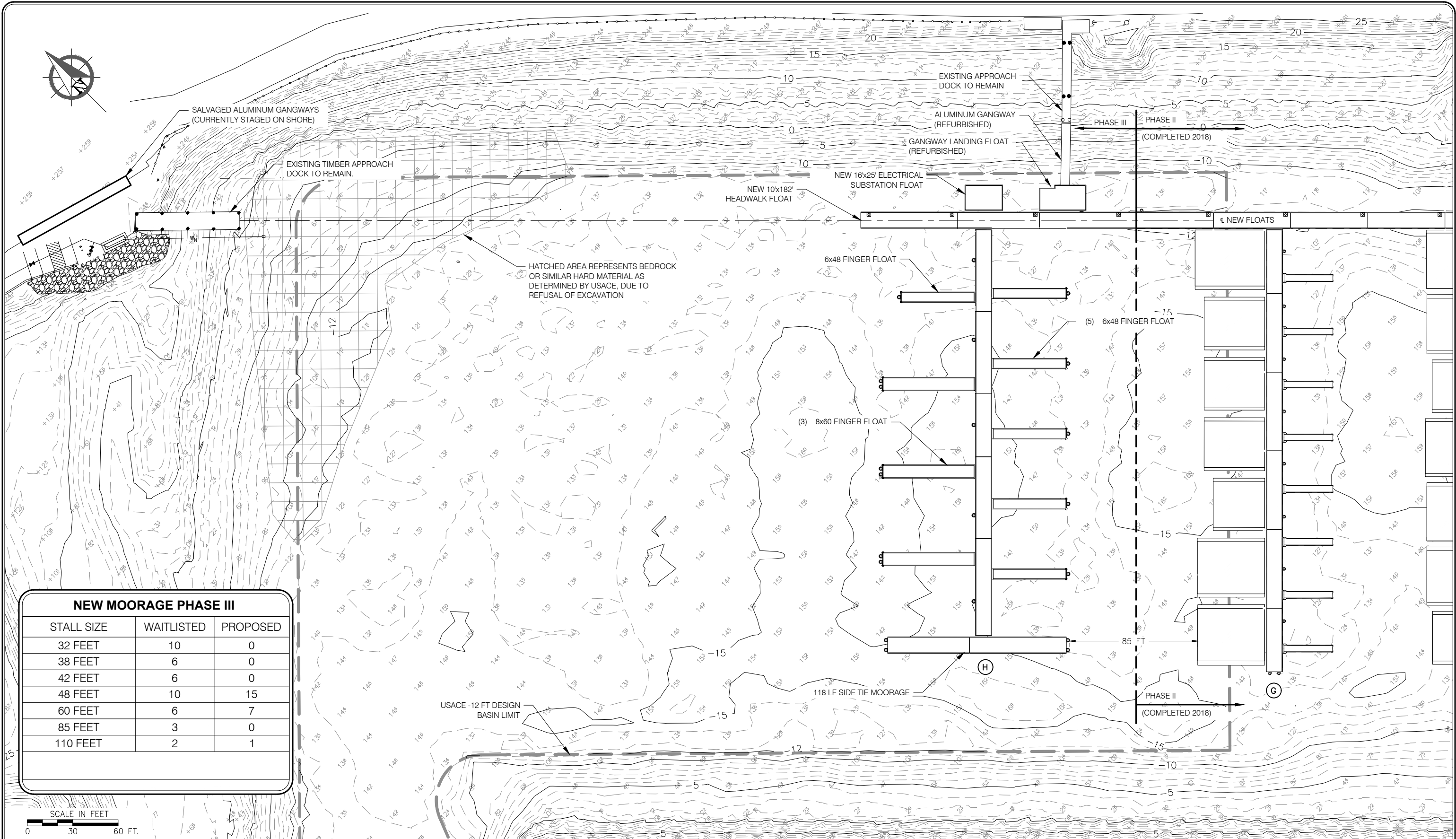
35%  
REVIEW

EXISTING CONDITIONS AND SALVAGE PLAN

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

G3



NEW MOORAGE PHASE III		
STALL SIZE	WAITLISTED	PROPOSED
32 FEET	10	0
38 FEET	6	0
42 FEET	6	0
48 FEET	10	15
60 FEET	6	7
85 FEET	3	0
110 FEET	2	1



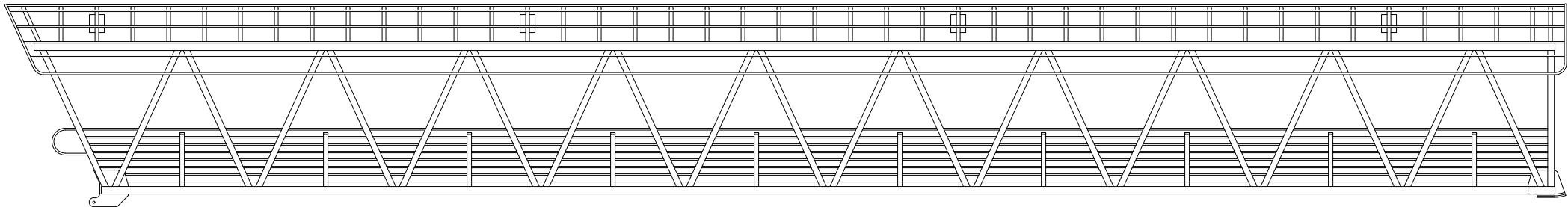
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

35%  
REVIEW

GENERAL SITE PLAN			
AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539





SALVAGED GANGWAY ELEVATION

- SALVAGE NOTES:
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE SALVAGED GANGWAY FROM THE UPLANDS ADJACENT TO THE AURORA HARBOR BASIN.
  - THE CONTRACTOR SHALL DEMOLISH THE EXISTING XX FOOT LONG BY XX FOOT WIDE FRP GRATING WALKING SURFACE AND REPLACE WITH FIBERGRATE MODEL #XXXX. CONTRACTOR SHALL UTILIZE MANUFACTURER SUPPLIED 316 STAINLESS FASTENERS TO FASTEN THE GRATING TO THE GANGWAY.
  - THE CONTRACTOR SHALL ADDITIONALLY DEMOLISH THE EXISTING FRP TRACTION PLATES ON BOTH END TRANSITIONS AND REPLACE WITH NEW FRP TRACTION PLATES. CONTRACTOR SHALL UTILIZE MANUFACTURER-SUPPLIED 316 STAINLESS FASTENERS TO FASTEN THE TRACTION PLATES TO THE END TRANSITIONS.
  - THE CONTRACTOR SHALL DEMOLISH THE EXISTING LIGHTS MOUNTED ON THE GANGWAY AND REPLACE IN ACCORDANCE WITH THE LIGHTING SCHEDULE. SEE ELECTRICAL.
  - THE CONTRACTOR SHALL FURNISH AND INSTALL REPLACEMENT GANGWAY HINGE BOLTS, WASHERS AND UHMW BUSHINGS.
  - THE CONTRACTOR SHALL DEMOLISH AND INSTALL NEW UHMW SKID PLATES ON THE SALVAGED GANGWAY

SALVAGED GANGWAY PHOTO

SALVAGED GANGWAY DETAIL 1

SALVAGED GANGWAY DETAIL 2



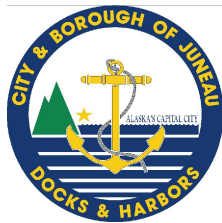
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
**DOCKS & HARBORS DEPT.**  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

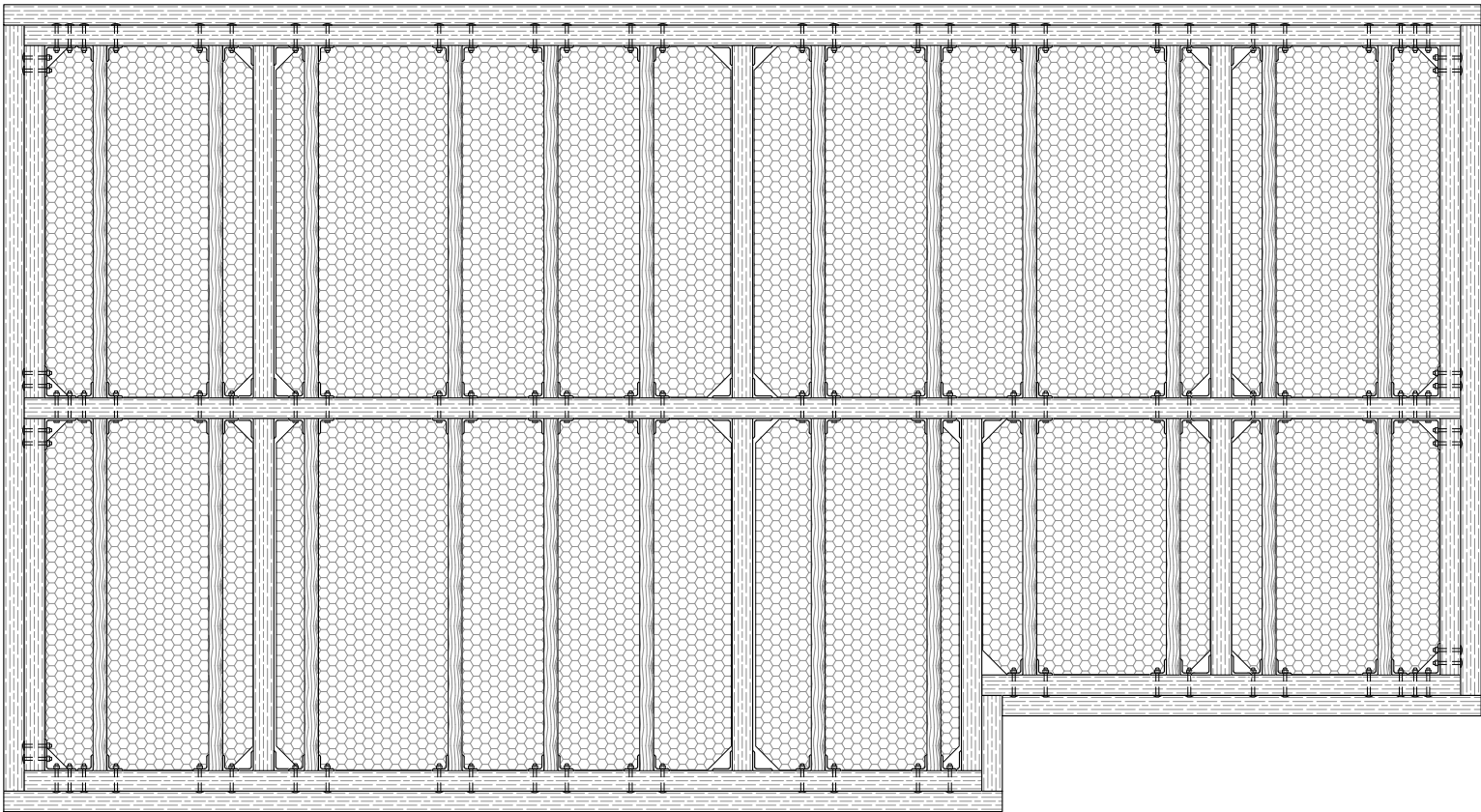


**GANGWAY SALVAGE PLAN, ELEVATION  
AND DETAILS**  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539



HINGE DETAIL



SALVAGED GANGWAY LANDING FLOAT

SALVAGE NOTES:

THE GANGWAY LANDING FLOAT IS CURRENTLY IN THE WATER, AND TIED UP AT THE NORWAY POINT FLOAT. THE CONTRACTOR SHALL REMOVE THE FLOAT FROM THE WATER, AND TRANSPORT THE FLOAT TO A LOCATION SUITABLE FOR MAKING THE REPAIRS DESCRIBED BELOW:

THE EXISTING DECKING SHALL BE REMOVED WITHIN THE REGION SHOWN ON THE DRAWING, ALONG WITH ALL OF THE COATED FLOTATION BILLETS, AND FLOTATION BILLET BLOCKING. NEW COATED FLOTATION BILLETS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN THE SIZES SHOWN.

NEW HINGES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS DETAILED.

EXISTING GANGWAY BEARING PLATES, HANDRAILS AND SKID PLATES SHALL BE SALVAGED AND REINSTALLED ON THE FLOAT.

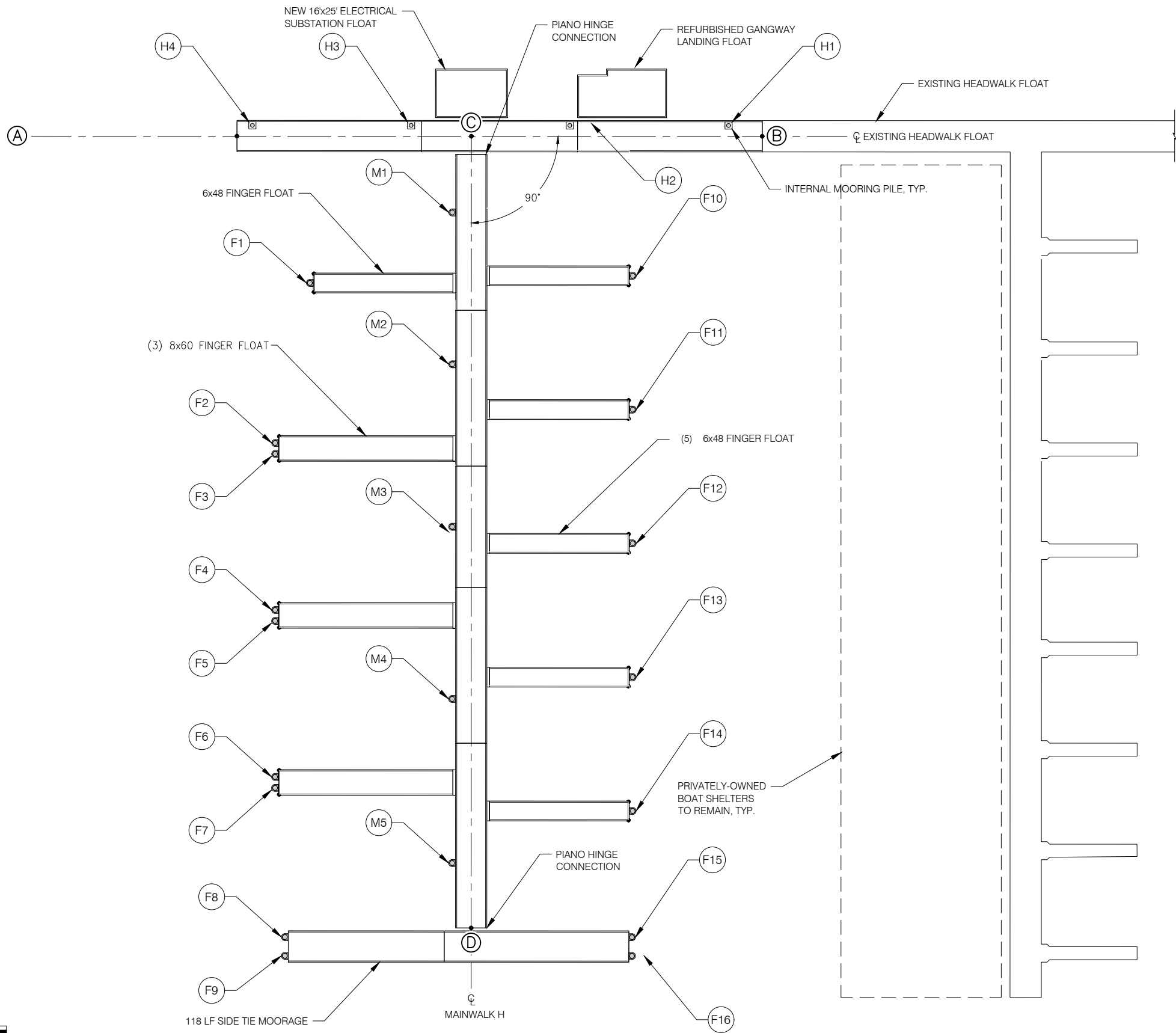
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



GANGWAY LANDING FLOAT SALVAGE PLAN ELEVATION AND DETAILS AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F1 – Overall Float Plan and Pile Layout



FLOAT LAYOUT TABLE	
POINT NO.	POINT DESCRIPTION
A	CENTERLINE EXISTING APPROACH DOCK
B	CENTERLINE EXISTING FLOAT MODULE
C	INTERSECTION OF HEADWALK AND CENTERLINE MAINWALK H
D	CENTERLINE OF MAINWALK H

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.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



OVERALL FLOAT PLAN AND PILE LAYOUT

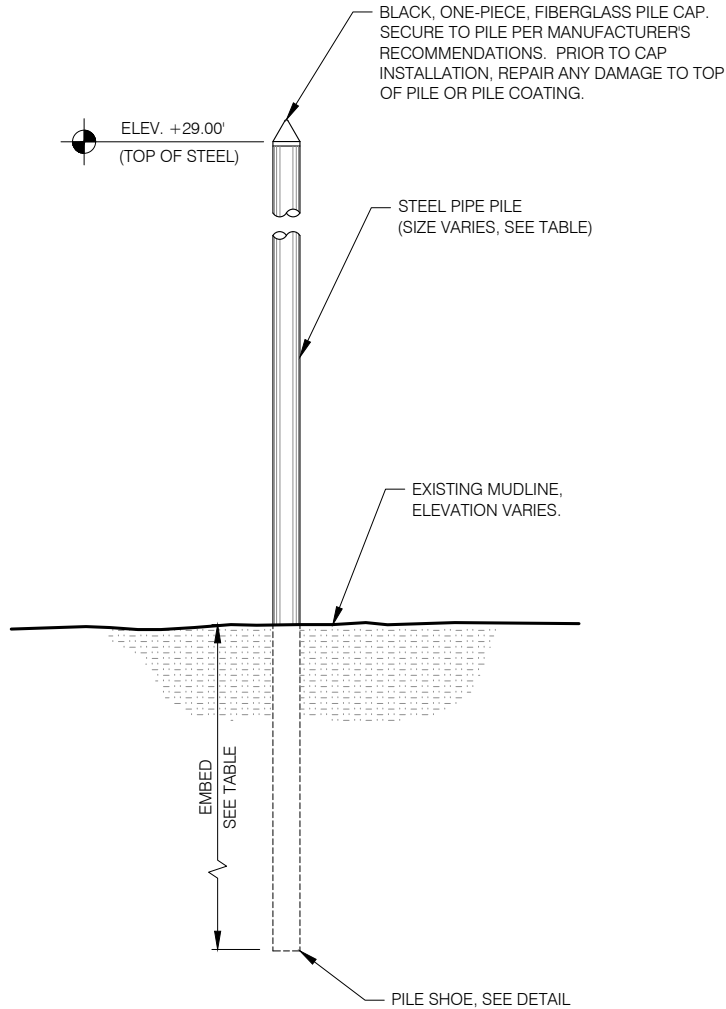
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

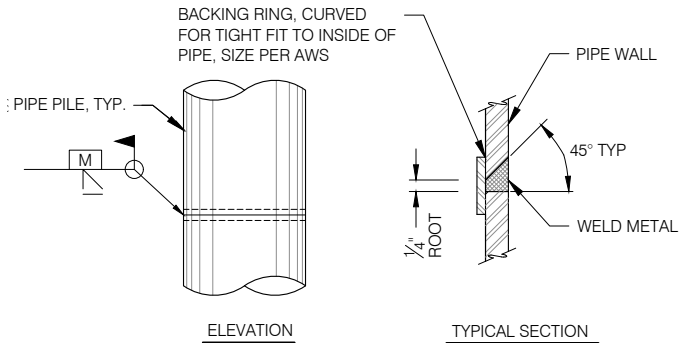
F1

FLOAT PILE SCHEDULE			
PILE #	LOCATION	MIN. PILE LENGTH (FT)	PILE SIZE
1	H1	70'	12.75"Ø x 0.500"t.
2	H2	70'	12.75"Ø x 0.500"t.
3	H3	70'	12.75"Ø x 0.500"t.
4	H4	70'	12.75"Ø x 0.500"t.
5	M1	80'	16"Ø x 0.500"t.
6	M2	80'	16"Ø x 0.500"t.
7	M3	80'	16"Ø x 0.500"t.
8	M4	80'	16"Ø x 0.500"t.
9	M5	80'	16"Ø x 0.500"t.
10	F1	80'	16"Ø x 0.500"t.
11	F2	80'	16"Ø x 0.500"t.
12	F3	80'	16"Ø x 0.500"t.
13	F4	80'	16"Ø x 0.500"t.
14	F5	80'	16"Ø x 0.500"t.
15	F6	80'	16"Ø x 0.500"t.
16	F7	80'	16"Ø x 0.500"t.
17	F8	80'	16"Ø x 0.500"t.
18	F9	80'	16"Ø x 0.500"t.
19	F10	80'	16"Ø x 0.500"t.
20	F11	80'	16"Ø x 0.500"t.
21	F12	80'	16"Ø x 0.500"t.
22	F13	80'	16"Ø x 0.500"t.
23	F14	80'	16"Ø x 0.500"t.
24	F15	80'	16"Ø x 0.500"t.
25	F16	80'	16"Ø x 0.500"t.

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

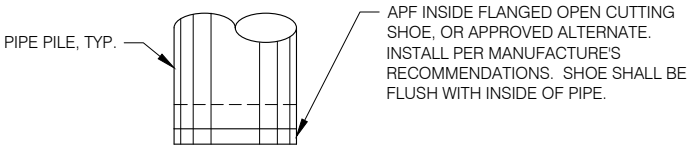


PILE INSTALLATION DETAIL



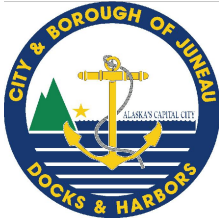
TYPICAL SPLICE DETAIL

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



PILE SHOE DETAIL

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



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



FLOAT PILE SCHEDULE AND DETAILS  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539





REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

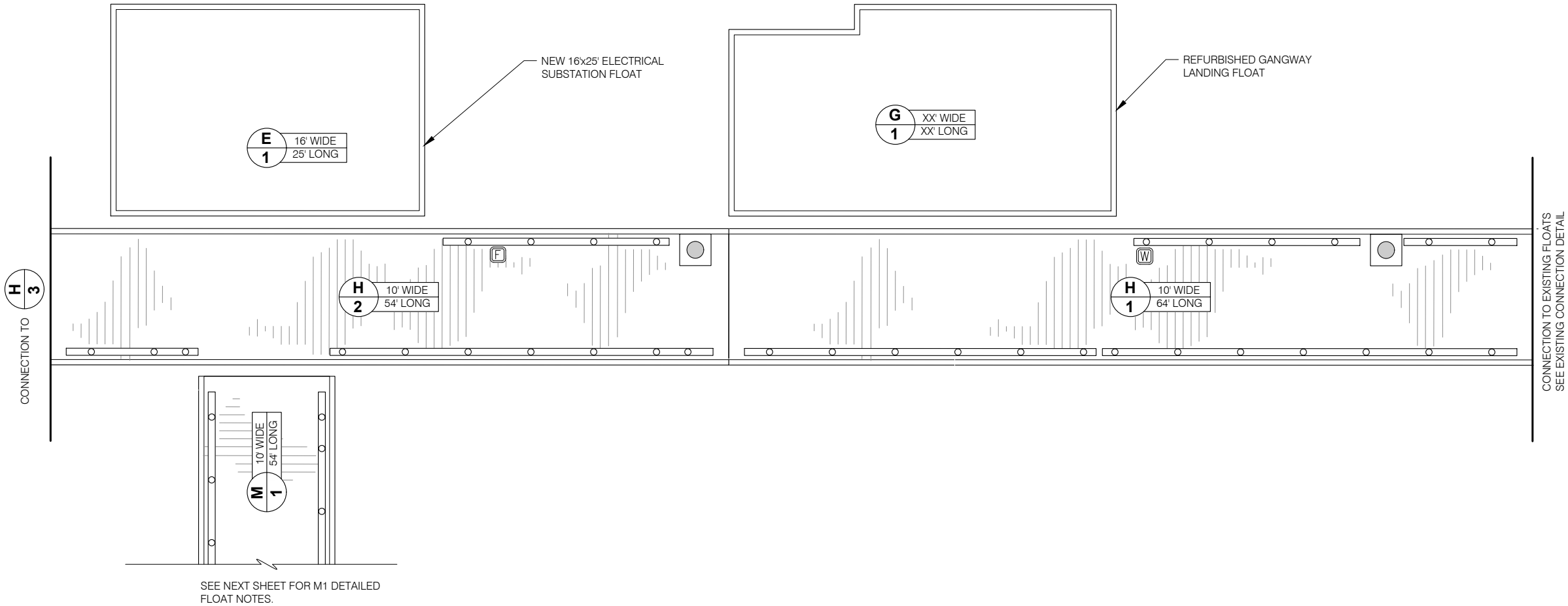


HEADWALK DETAILED FLOAT PLAN

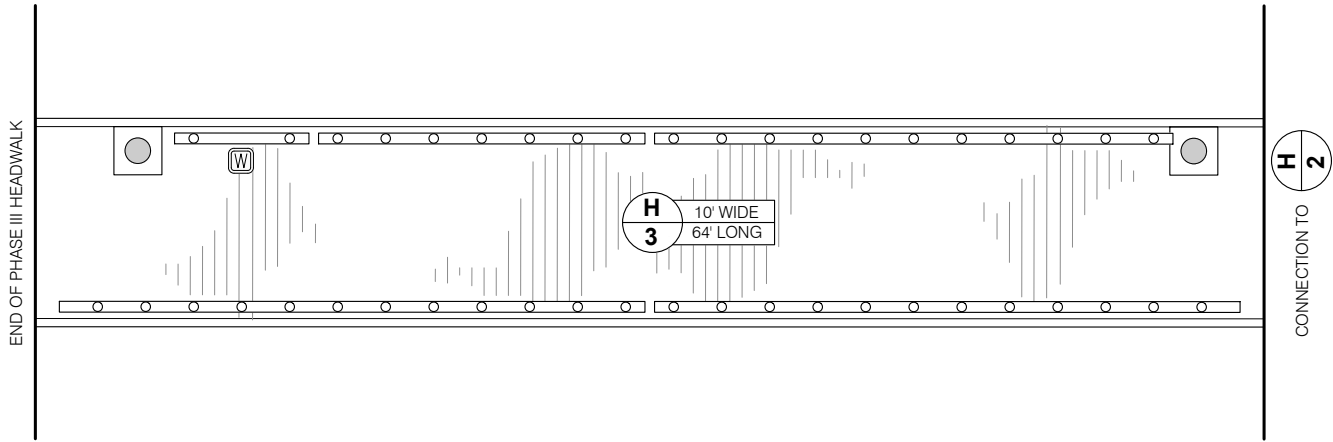
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

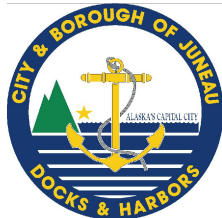
F3



- 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.
- BULLRAIL NOTE:  
SEE BULLRAIL STANDARD DETAILS FOR SCUPPER BLOCK LOCATION, TYP. OVERALL LENGTH AS SHOWN ON INDIVIDUAL FLOAT UNIT PLANS.
- NOTE:  
HOSE MOUNT, LIFE RING AND FIRE EXTINGUISHER CABINET LOCATIONS SHOWN ARE APPROXIMATE. FIELD LOCATE PER OWNER/ENGINEER DIRECTION.



- LEGEND:
- [Symbol] = LIGHT POLE w/ ELECTRICAL PEDESTAL
  - [Symbol] = LIGHT POLE ONLY
  - [Symbol] = ELECTRICAL PEDESTAL ONLY
  - [Symbol] = FIRE HOSE CONNECTION
  - [Symbol] = FIRE DEPARTMENT CONNECTION
  - [Symbol] = FIRE LINE PUMPOUT
  - [Symbol] = WATER PEDESTAL
  - [Symbol] = HEAT TRACE
  - [Symbol] = HOSE MOUNT
  - [Symbol] = LIFE RING
  - [Symbol] = FIRE EXTINGUISHER



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

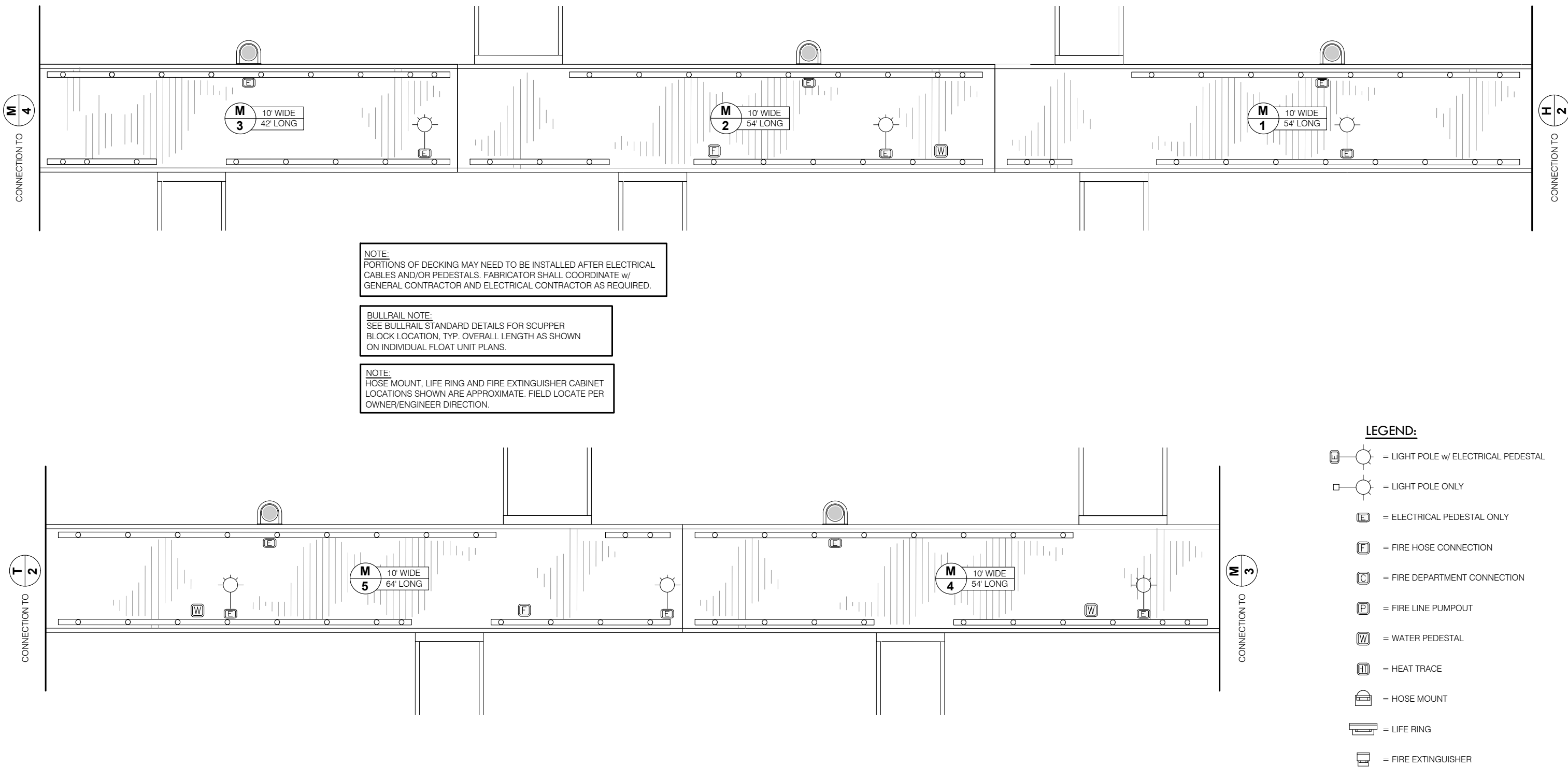


MAINWALK DETAILED FLOAT PLAN

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F4





REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

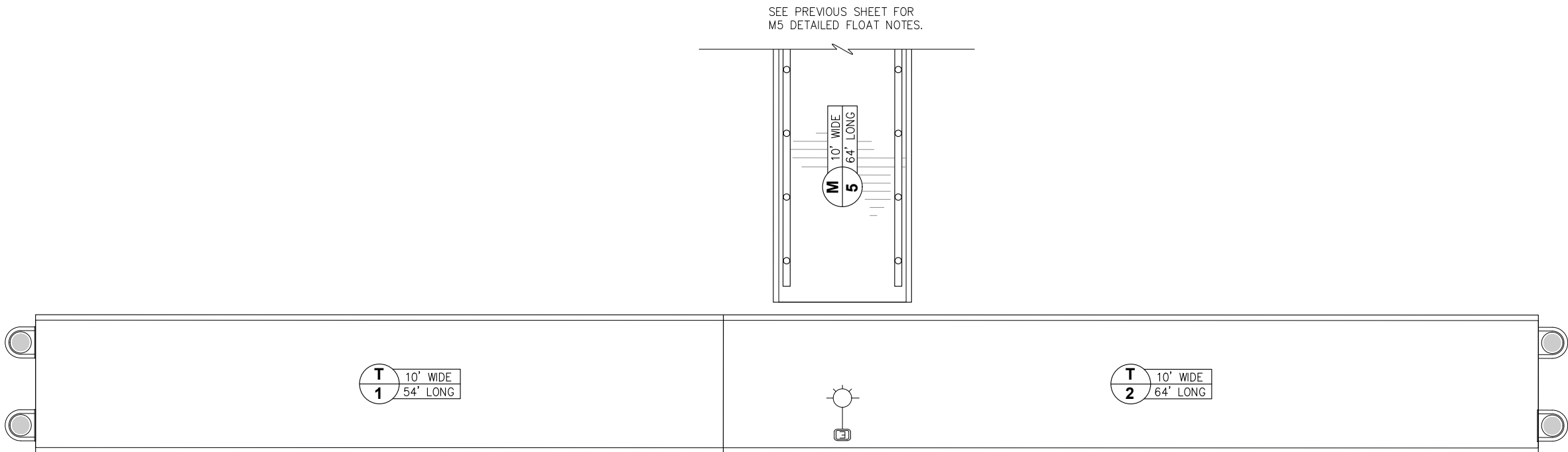


TEE FLOAT DETAILED FLOAT PLAN

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F5



**BULLRAIL NOTE:**  
SEE BULLRAIL STANDARD DETAILS FOR SCUPPER BLOCK LOCATION. TYP. OVERALL LENGTH AS SHOWN ON INDIVIDUAL FLOAT UNIT PLANS.

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

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

- LEGEND:**
- [Symbol] = LIGHT POLE w/ ELECTRICAL PEDESTAL
  - [Symbol] = LIGHT POLE ONLY
  - [Symbol] = ELECTRICAL PEDESTAL ONLY
  - [Symbol] = FIRE HOSE CONNECTION
  - [Symbol] = FIRE DEPARTMENT CONNECTION
  - [Symbol] = FIRE LINE PUMPOUT
  - [Symbol] = WATER PEDESTAL
  - [Symbol] = HEAT TRACE
  - [Symbol] = HOSE MOUNT
  - [Symbol] = LIFE RING
  - [Symbol] = FIRE EXTINGUISHER





MODULE: H1 (64)	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				16		10																																																															
POLYSTYRENE BILLET (CB)	SEE DETAILS				18		2																																																															
<table><tr><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td></tr><tr><td rowspan="3">CB</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td>18P</td><td></td></tr><tr><td>B</td><td>B</td><td>B</td><td>F</td><td>F</td><td>F</td><td>F</td><td>B</td><td>B</td><td>B</td><td>B</td><td rowspan="2">CB</td></tr><tr><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td>16P</td><td></td></tr><tr><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td></tr></table>									F	F	F	F	F	F	F	F	F	F	F	F	F	CB	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P		B	B	B	F	F	F	F	B	B	B	B	CB	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P		F	F	F	F	F	F	F	F	F	F	F	F	F
F	F	F	F	F	F	F	F	F	F	F	F	F																																																										
CB	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P																																																											
	B	B	B	F	F	F	F	B	B	B	B	CB																																																										
	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P																																																												
F	F	F	F	F	F	F	F	F	F	F	F	F																																																										

\*\* SEE NOTE 1 THIS SHEET.

MODULE: H2 (54)	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		12	8
POLYSTYRENE BILLET	SEE DETAILS		20	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F		F	F	F	F	F	F	F	F
CB	12 P	12 P	12 P	12 P	12 P	12 P	12 P	12 P	12 P	CB
	B	B	F	F	F	F	B	B		
	20 P	20 P	20 P	20 P	20 P	20 P	20 P	20 P		
F	F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: H3 (64)	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		16	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F	F	F	F
CB	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P
	B	B	B	B	F	F	F	F	B	B	B	CB
	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P
F	F	F	F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: M1(54)	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		12	8
POLYSTYRENE BILLET	SEE DETAILS		20	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F	F
CB	12 P	12 P	12 P	12 P	12 P	12 P	12 P	12 P	CB	
	B	B	F	F	F	F	B	B		
	20 P	20 P	20 P	20 P	20 P	20 P	20 P	20 P		
F	F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: M2 (54)	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		12	8
POLYSTYRENE BILLET	SEE DETAILS		20	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F
CB	12P	12P	12P	12P	12P	12P	12P	12P	CB
	B	B	F	F	F	F	B	B	
	20P	20P	20P	20P	20P	20P	20P	20P	
F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: M3 (42)	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		14	6
POLYSTYRENE BILLET	SEE DETAILS		18	6
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F
CB	14P	14P	14P	14P	14P	14P	CB
	B	B	F	F	B	B	
	18P	18P	18P	18P	18P	18P	
F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: M4 (54)	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		12	8
POLYSTYRENE BILLET	SEE DETAILS		20	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F	F
CB	12P	12P	12P	12P	12P	12P	12P	12P	CB	
	B	B	F	F	F	F	B	B		
	20P	20P	20P	20P	20P	20P	20P	20P		
F	F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: M5 (64)	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		16	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F	F	F	F
CB	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	
	B	B	B	B	F	F	F	B	B	B		CB
	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P	
F	F	F	F	F	F	F	F	F	F	F	F	

\*\* SEE NOTE 1 THIS SHEET.

FINGER 48'	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	18
BALLAST TANK	48	36	24	2
POLYSTYRENE BILLET	SEE DETAILS		19	9

F	F	F	F	F	F	F	F	F	F	F	F	F
P	P	P	P	P	P	P	P	P	P	P	P	P
F	F	F	F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

FINGER 60'	LENGTH	WIDTH	HEIGHT	QUANTITY
ITEM DESCRIPTION				
FLOTATION TUB	48	24	24	24
BALLAST TANK	48	36	24	5
POLYSTYRENE BILLET	SEE DETAILS		20	7

F	F	F	F	F	F	F	F	F	F	F	F	F
P	B	P	B	P	B	P	B	P	B	P	P	P
F	F	F	F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: T1 (54)	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		12	8
POLYSTYRENE BILLET	SEE DETAILS		20	8
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F
CB	12P	12P	12P	12P	12P	12P	12P	12P	CB
	B	B	F	F	F	F	B	B	
	20P	20P	20P	20P	20P	20P	20P	20P	
F	F	F	F	F	F	F	F	F	F

\*\* SEE NOTE 1 THIS SHEET.

MODULE: T2 (64)	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		16	10
POLYSTYRENE BILLET (CB)	SEE DETAILS		18	2

F	F	F	F	F	F	F	F	F	F	F	F	F
CB	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	18P	
	B	B	B	B	F	F	F	B	B	B		CB
	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P	16P	
F	F	F	F	F	F	F	F	F	F	F	F	

\*\* SEE NOTE 1 THIS SHEET.

- NOTES:
1.

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.
2.

BALLAST TANK WALL THICKNESS TO BE 0.375".
3.

FLOTATION TUB WALL THICKNESS TO BE 0.175"
4.

F= FLOTATION TUB  
B= BALLAST TANK  
P= POLYSTYRENE BILLET  
CB= CENTER POLYSTYRENE BILLET  
GB= GANGWAY POLYSTYRENE BILLET
5.

ORIENTATION OF FLOATS ON THIS SHEET MATCHES ORIENTATION SHOWN ON DETAILED FLOAT PLANS.

CITY AND BOROUGH OF JUNEAU

DOCKS & HARBORS DEPT.

155 SOUTH SEWARD STREET

JUNEAU, ALASKA 99801

PHONE: 907-586-0292

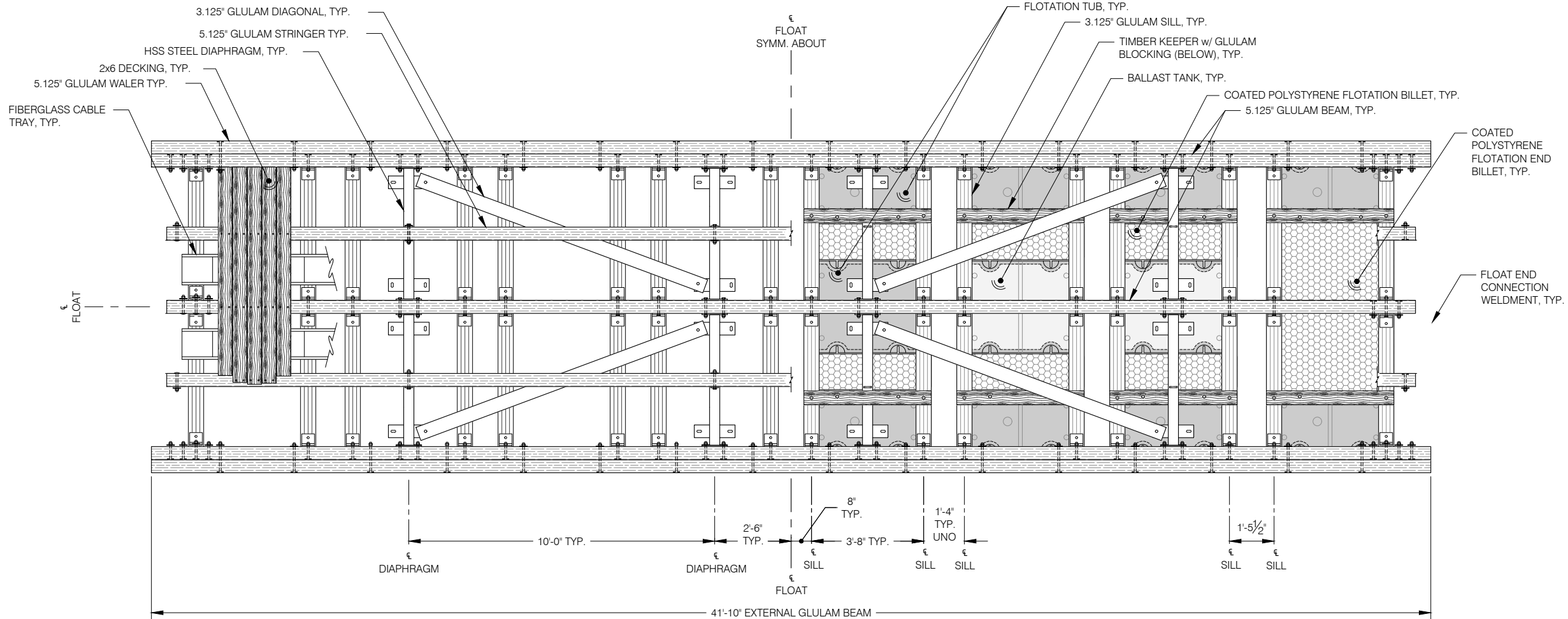
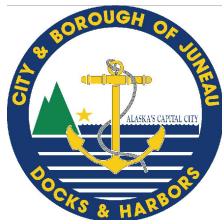


FLOTATION SCHEDULE

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F6

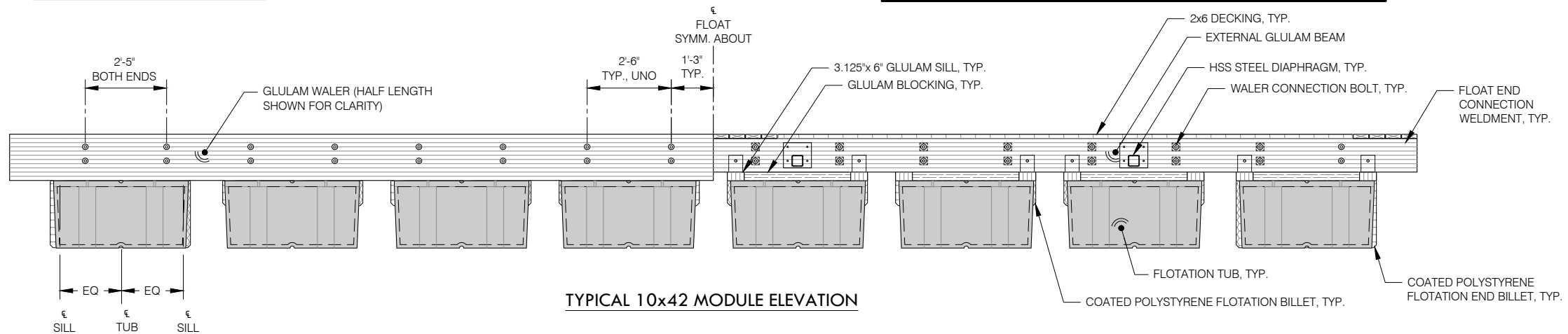


TYPICAL 10x42 MODULE PLAN

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 10x42 MODULE ELEVATION

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

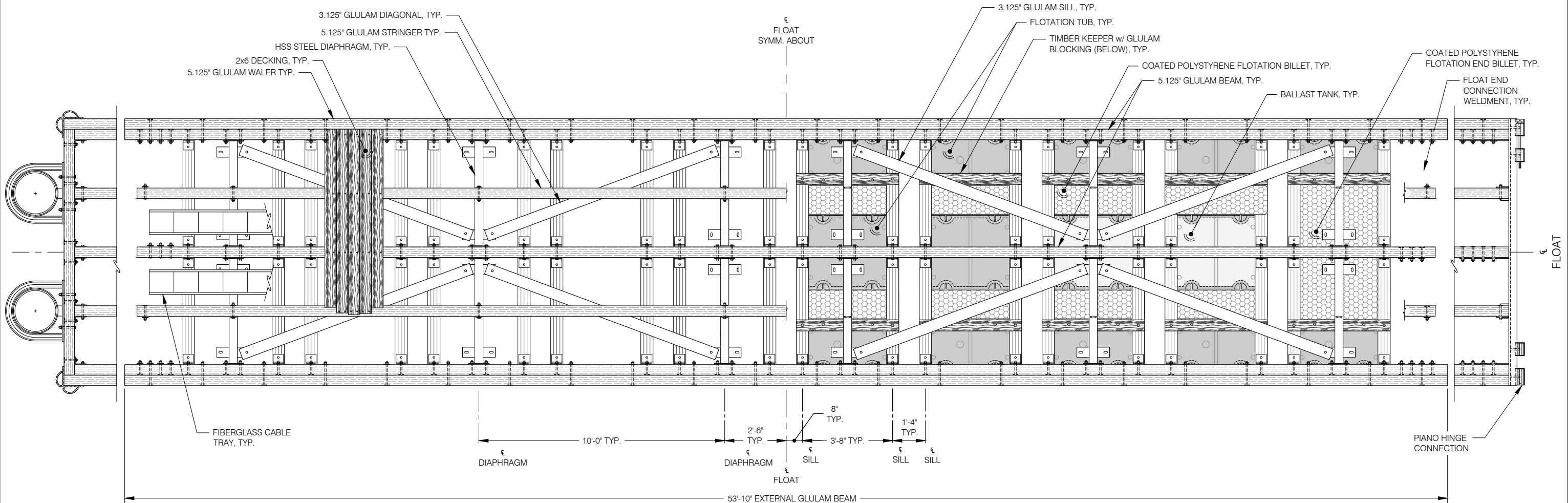


TYPICAL 10x42 MODULE PLAN & ELEVATION

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F7



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

T  
1

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

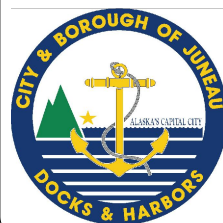
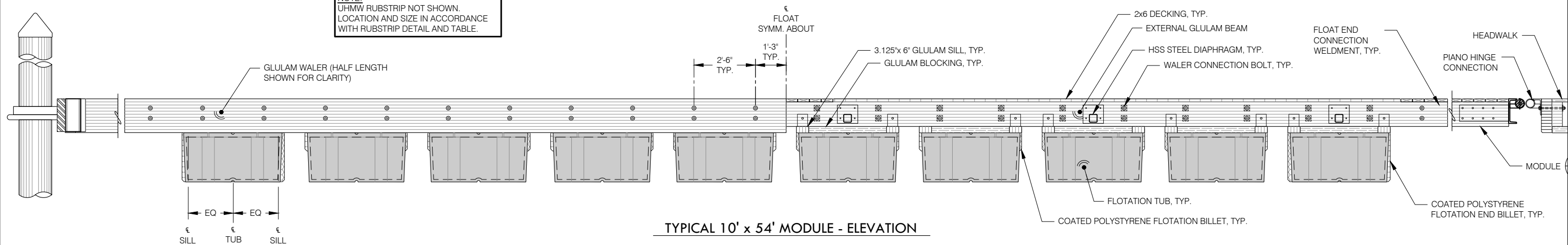
NOTE:  
UHMW RUBSTRIP NOT SHOWN.  
LOCATION AND SIZE IN ACCORDANCE  
WITH RUBSTRIP DETAIL AND TABLE.

TYPICAL 10' x 54' MODULE - PLAN

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.

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

M  
1



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

35%  
REVIEW

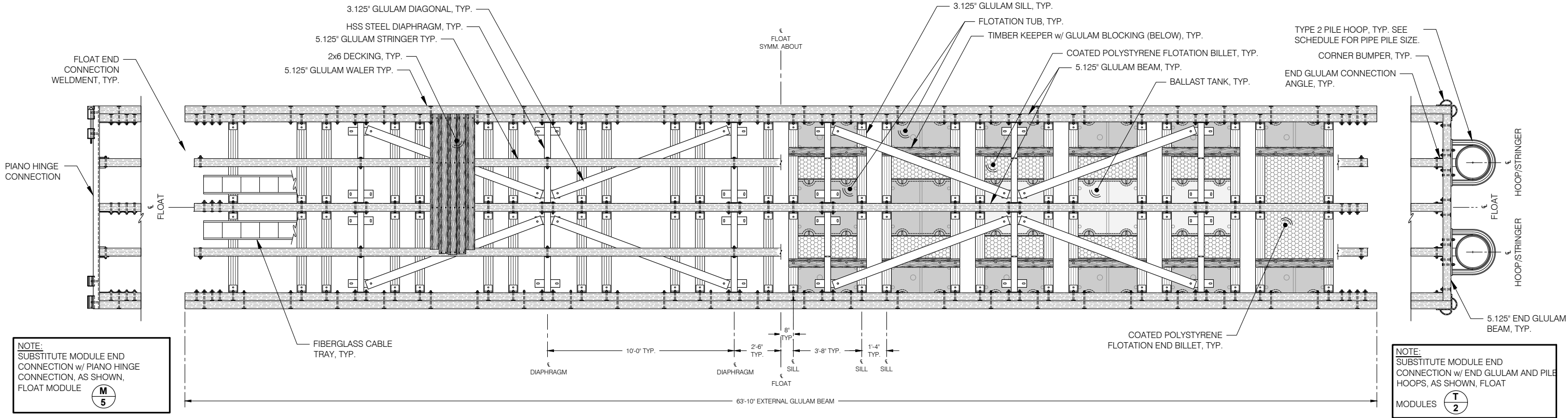
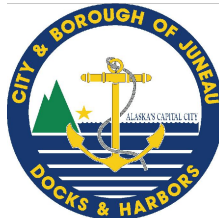
TYPICAL 10x54 MODULE PLAN & ELEVATION

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F8



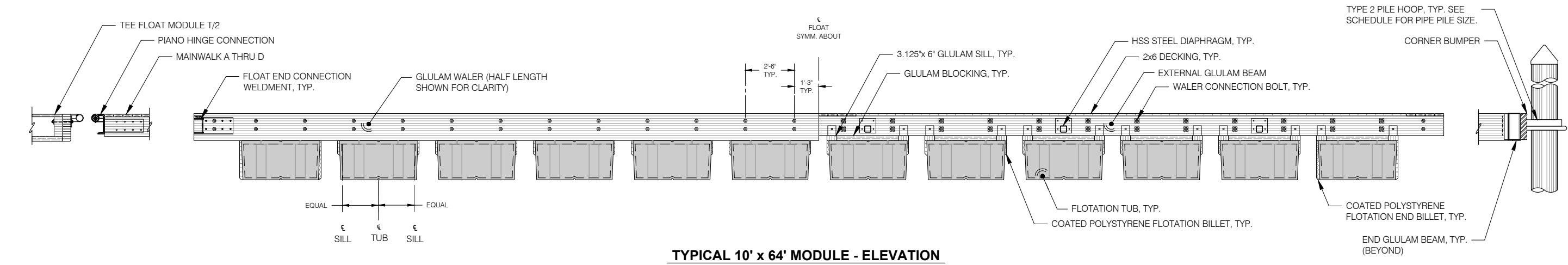


TYPICAL 10' x 64' MODULE - PLAN

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 10' x 64' MODULE - ELEVATION

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

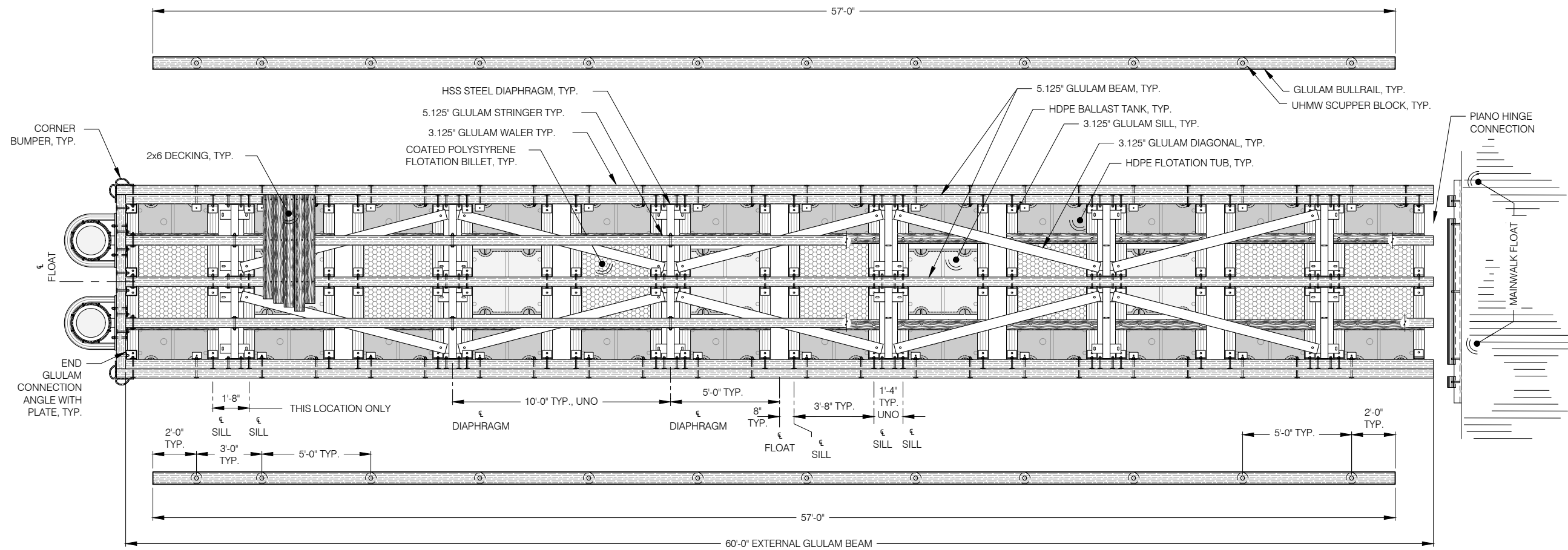
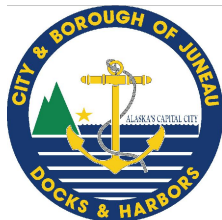


TYPICAL 10x64 MODULE PLAN & ELEVATION

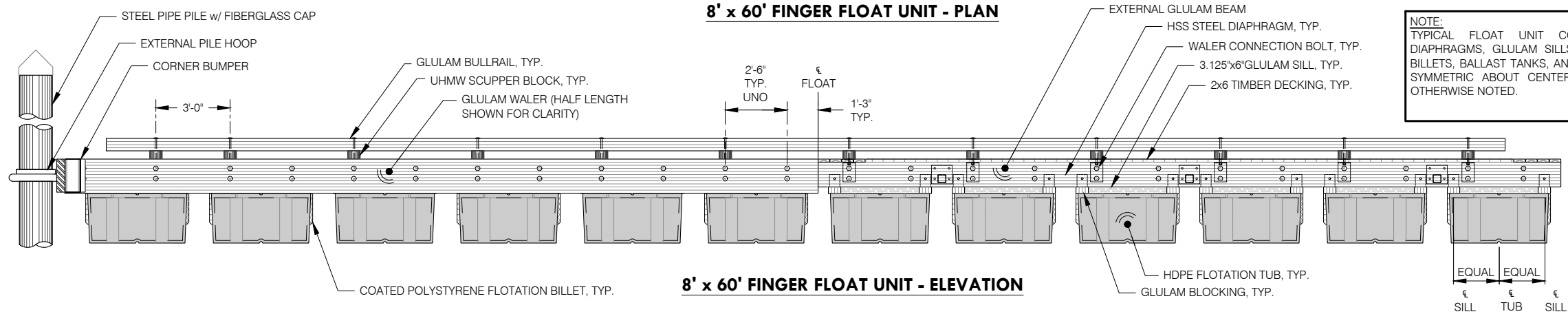
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F9



8' x 60' FINGER FLOAT UNIT - PLAN



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

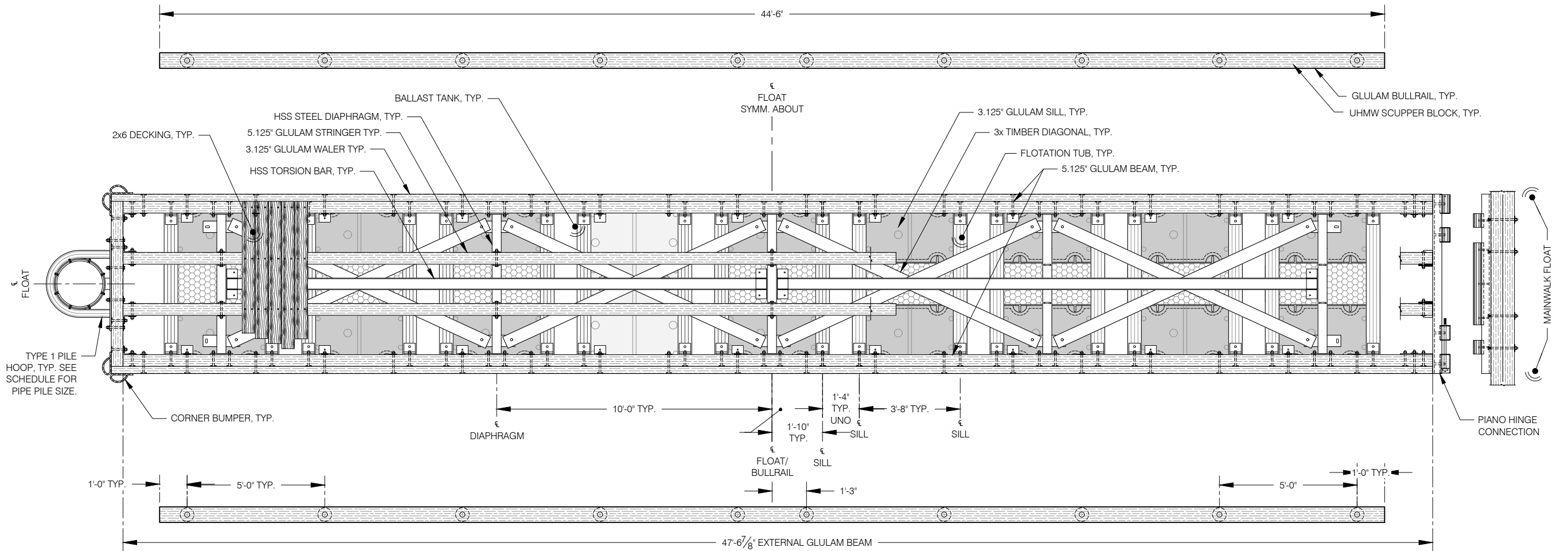
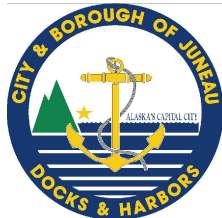
REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



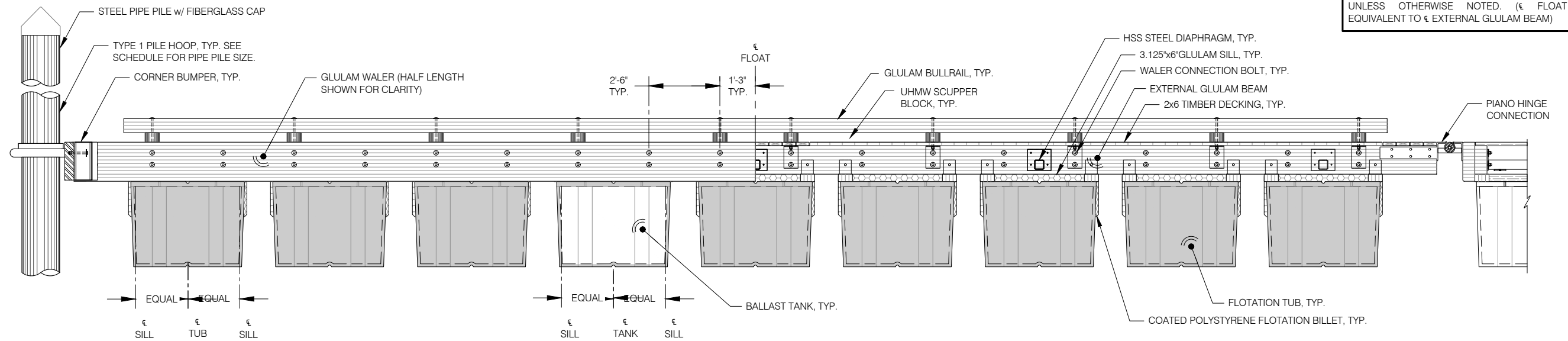
8x60 FINGER FLOAT PLAN & ELEVATION			
AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F10



6' x 48' FINGER FLOAT MODULE - PLAN

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



6' x 48' FINGER FLOAT MODULE - ELEVATION

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

35%  
REVIEW

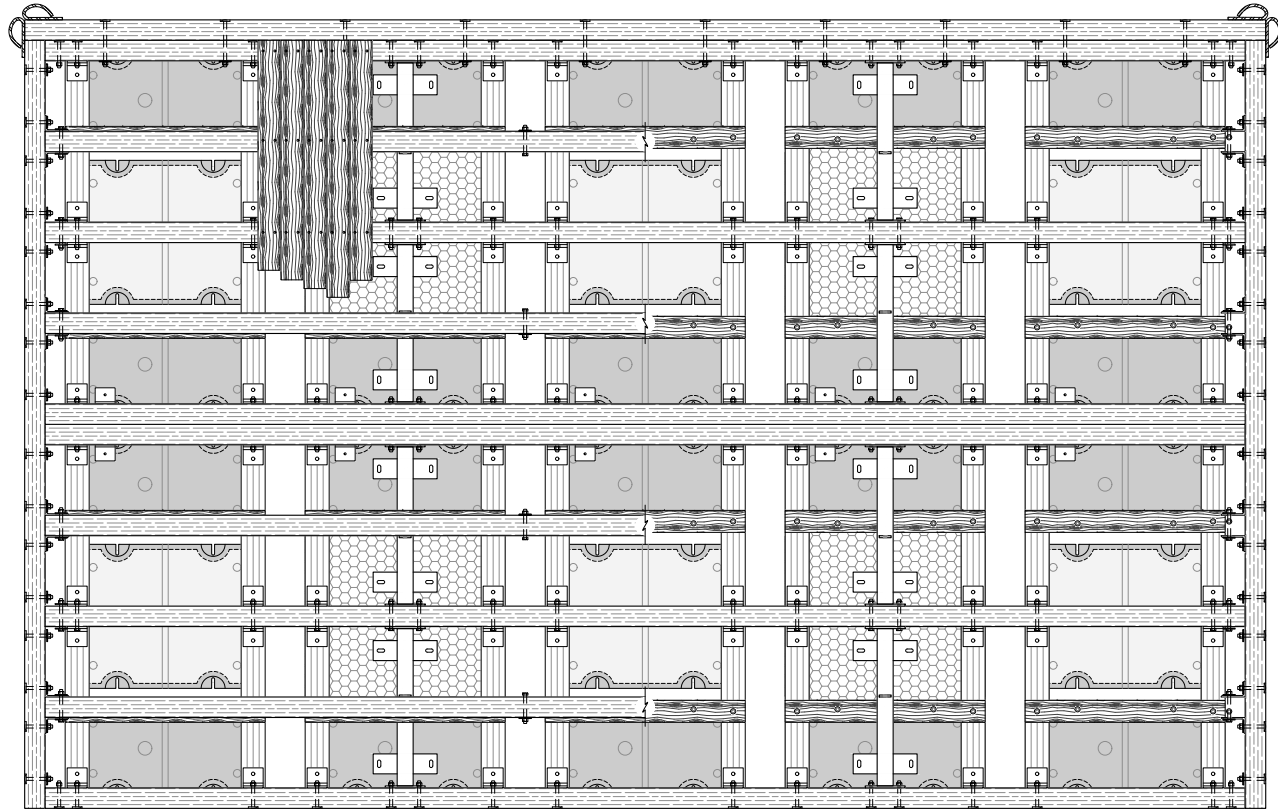
6x48 FINGER PLAN & ELEVATION

AURORA HARBOR REBUILD - PHASE III

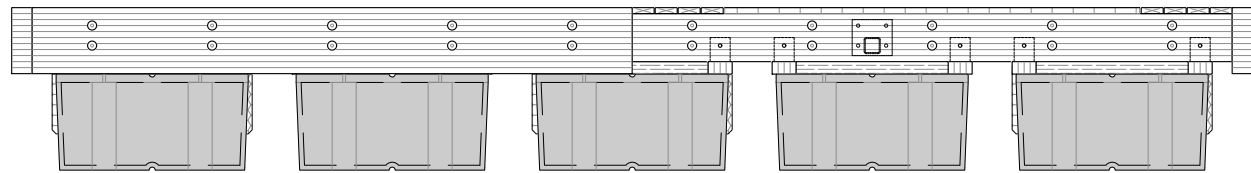
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F11

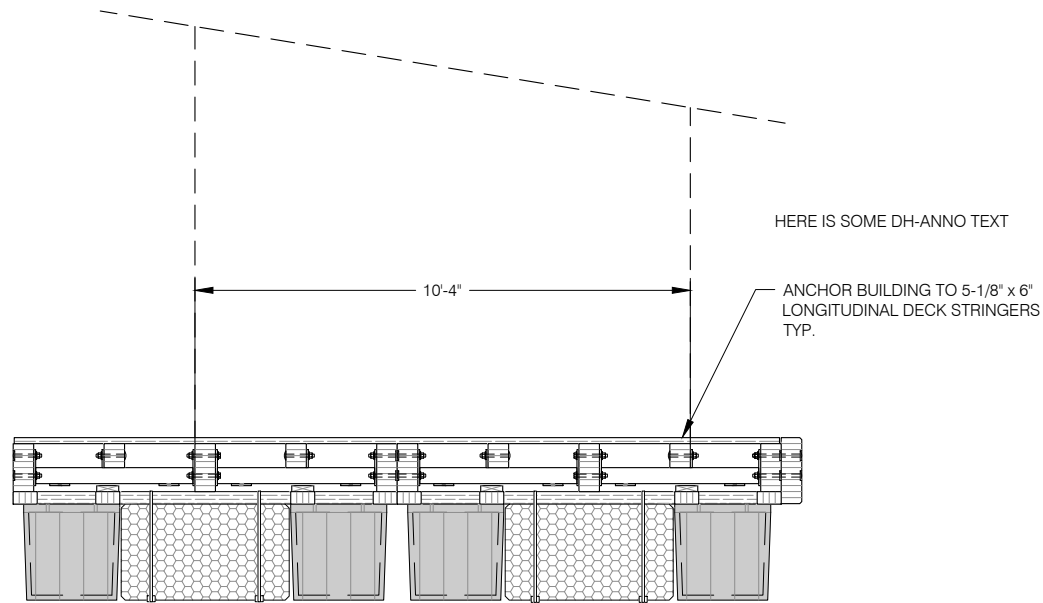




16' x 25' ELECTRICAL EQUIPMENT FLOAT - PLAN



16' x 25' ELECTRICAL EQUIPMENT FLOAT - ELEVATION



16' x 25' ELECTRICAL EQUIPMENT FLOAT - SECTION



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



16x25 ELECTRICAL EQUIPMENT FLOAT  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F12



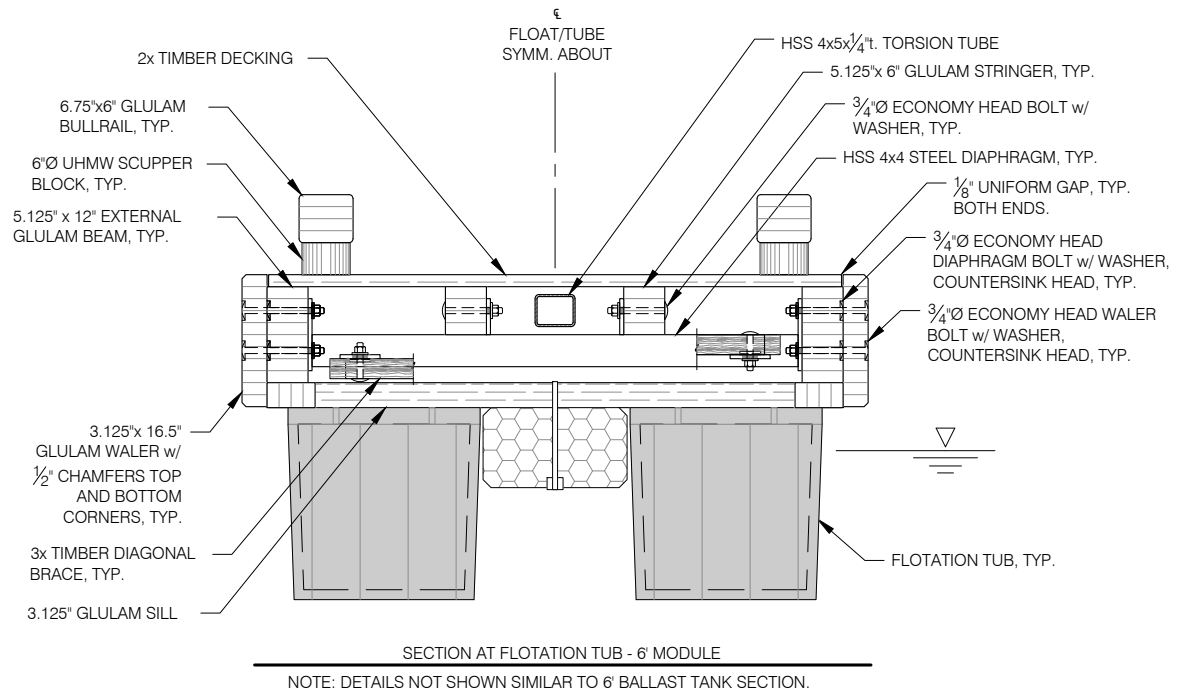
- NOTES:**
1. SECURE FIBERGLASS CABLE TRAY WITH UV AND WEATHER RESISTANT ZIP TIES OR ENGINEER APPROVED ALTERNATE.
  2. LOCATE CABLE TRAY SUPPORTS 2'-6" FROM THE END OF EACH MODULE UNLESS OTHERWISE NOTED.

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

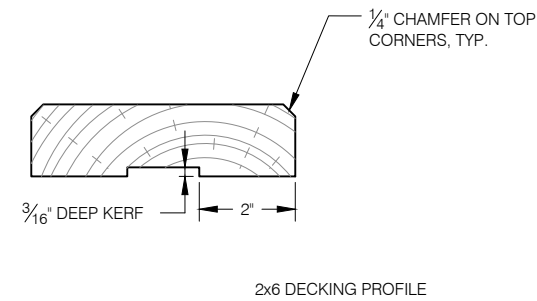
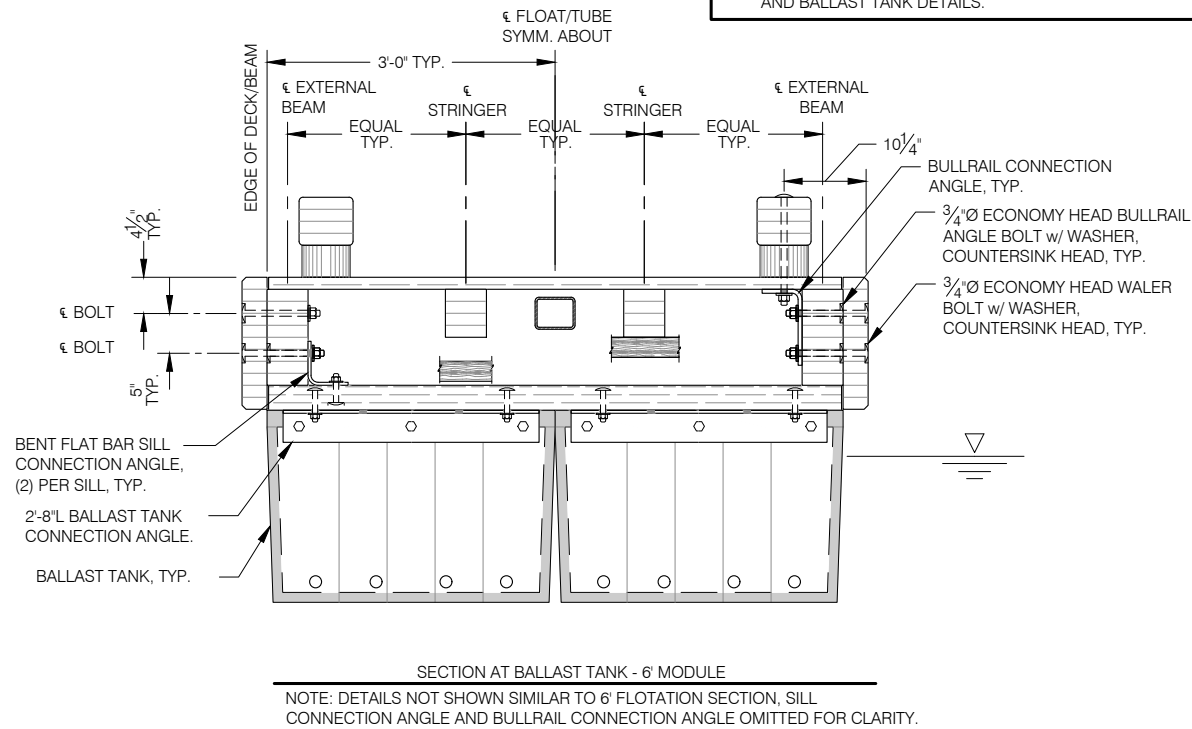
35%  
REVIEW

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

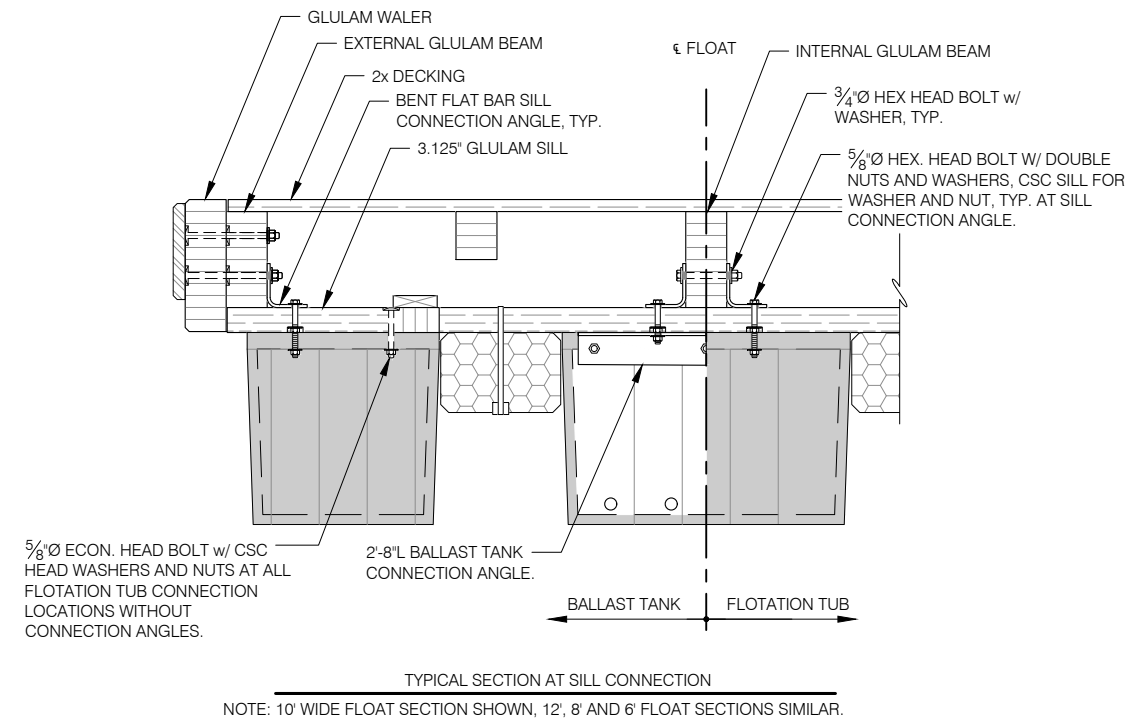
F13



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



- 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.
  - PREDRILL ALL DECKING. SIZE HOLE AS REQUIRED PER AITC TO PREVENT SPLITTING.



CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

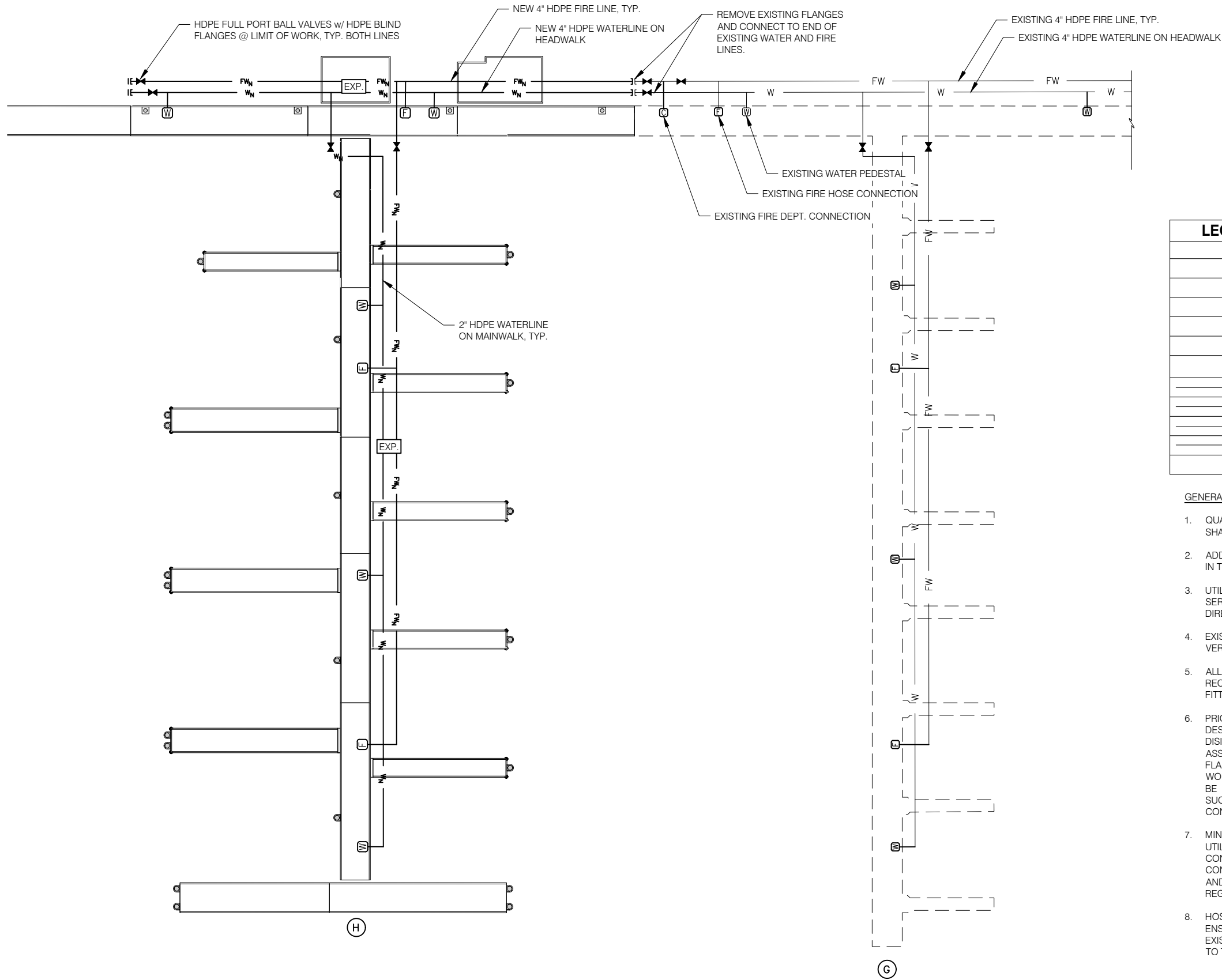
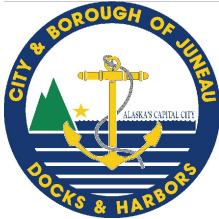


## TYPICAL 6' FLOAT SECTIONS & DETAILS

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

F14



LEGEND & ESTIMATE OF MATERIAL QUANTITIES		
SYMBOL	DESCRIPTION	QUANTITY
	VALVE	9
	WATER PEDESTAL	12
	FIRE HOSE CONNECTION	9
	FIRE LINE PUMPOUT	1
	FIRE DEPT. CONNECTION	1
	EXPANSION LOOP	6
	WATERLINE (SIZE VARIES)	1320 LF
	4" FIRE LINE	1170 LF
	EXISTING WATERLINE	N/A
	EXISTING FIRE LINE	N/A
	EXISTING VALVE	N/A

- GENERAL UTILITY NOTES:
- QUANTITIES ESTIMATED FOR REFERENCE PURPOSES ONLY, CONTRACTOR SHALL CONFIRM ALL QUANTITIES PRIOR TO MATERIAL ORDER.
  - ADDITIONAL QUANTITIES SHALL BE PROVIDED FOR SPARE PARTS AS LISTED IN THE TECHNICAL SPECIFICATIONS.
  - UTILITY LINES AND APPURTENANCES SHOWN APPROXIMATE, LOCATE SERVICES ACCORDING TO FLOAT PLAN AND DETAILS AND PER ENGINEER DIRECTION.
  - EXISTING SERVICES ARE SHOWN APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY.
  - ALL BENDS IN THE PIPE THAT EXCEED THE PIPE MANUFACTURER'S RECOMMENDED BENDING RADII SHALL BE COMPLETED WITH ELBOW FITTINGS AS REQUIRED, (INCIDENTAL).
  - PRIOR TO MAKING FINAL CONNECTIONS TO THE EXISTING WATER SYSTEM DESIGNATED TO REMAIN THE CONTRACTOR SHALL CONSTRUCT, FLUSH, DISINFECT, AND PRESSURE TEST THE NEW WATERLINE AND FLEXIBLE HOSE ASSEMBLIES. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BLIND FLANGES, TAPS, FITTINGS AND VALVES AS REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH SPECIFICATIONS. FINAL CONNECTION SHALL BE COORDINATED WITH THE ENGINEER, OWNER AND CBS WATER DEPT. SUCH THAT SYSTEM DOWN TIME IS LIMITED TO 4 HOURS MAXIMUM. FINAL CONNECTIONS SHALL BE DISINFECTED IAW AWWA C651.
  - MINOR FITTINGS AND VARIOUS SYSTEM APPURTENANCES NOT SHOWN IN UTILITY SHEETS MAY BE REQUIRED TO CONSTRUCT UTILITY SYSTEMS. CONTRACTOR SHALL USE INDUSTRY STANDARD PRACTICES TO ACHIEVE ALL CONNECTIONS NOT DETAILED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSISTENT WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS PER ENGINEER DIRECTION (INCIDENTAL).
  - HOSES SHALL BE MONITORED THROUGH MULTIPLE TIDAL CYCLES TO ENSURE NO BINDING, STRETCHING OR OTHERWISE DAMAGING CONDITIONS EXISTING UNSATISFACTORY HOSE SHALL BE RECONFIGURED OR REPLACED TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE OWNER.

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



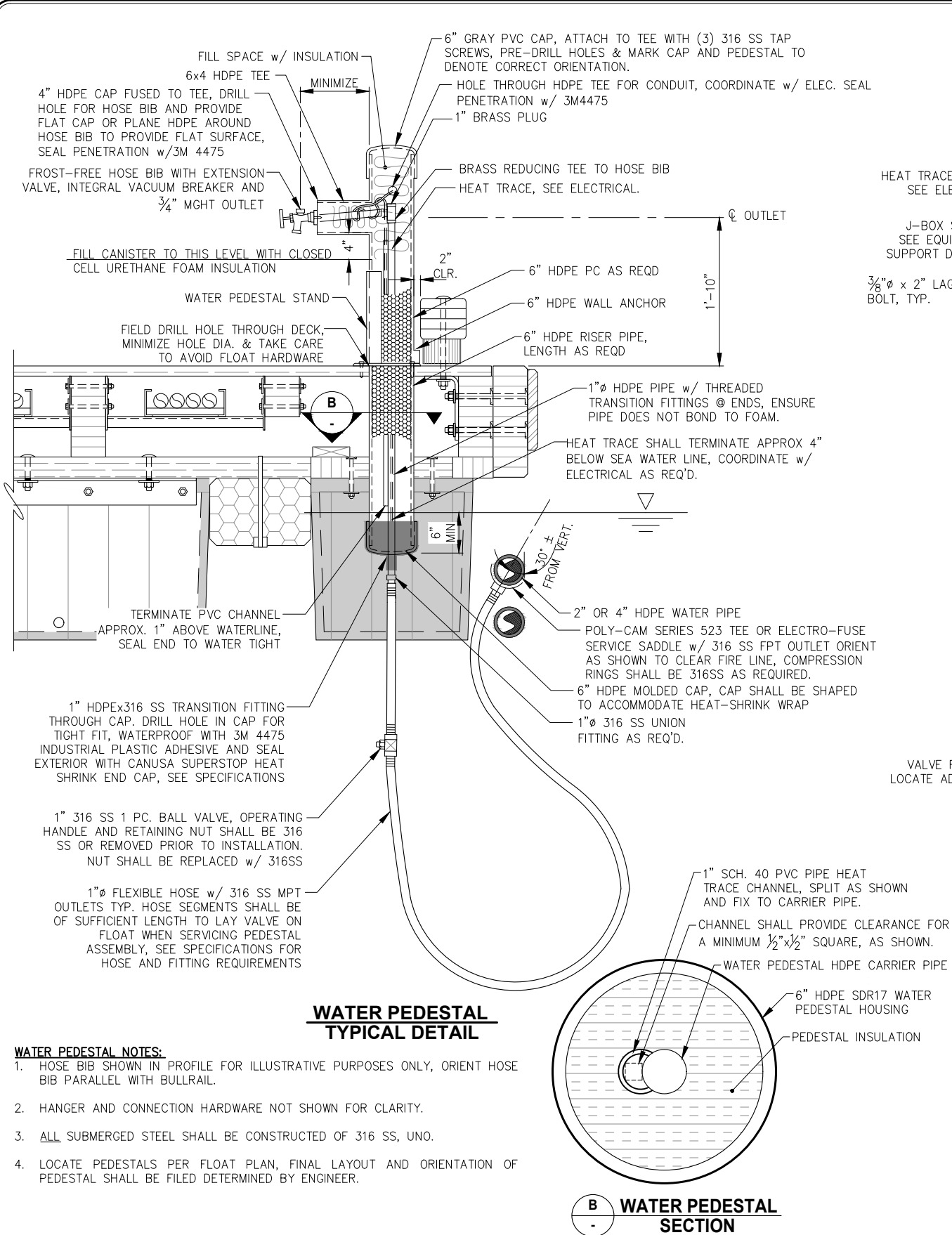
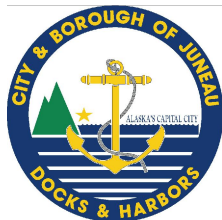
WATER AND FIRE SCHEMATIC SITE PLAN

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

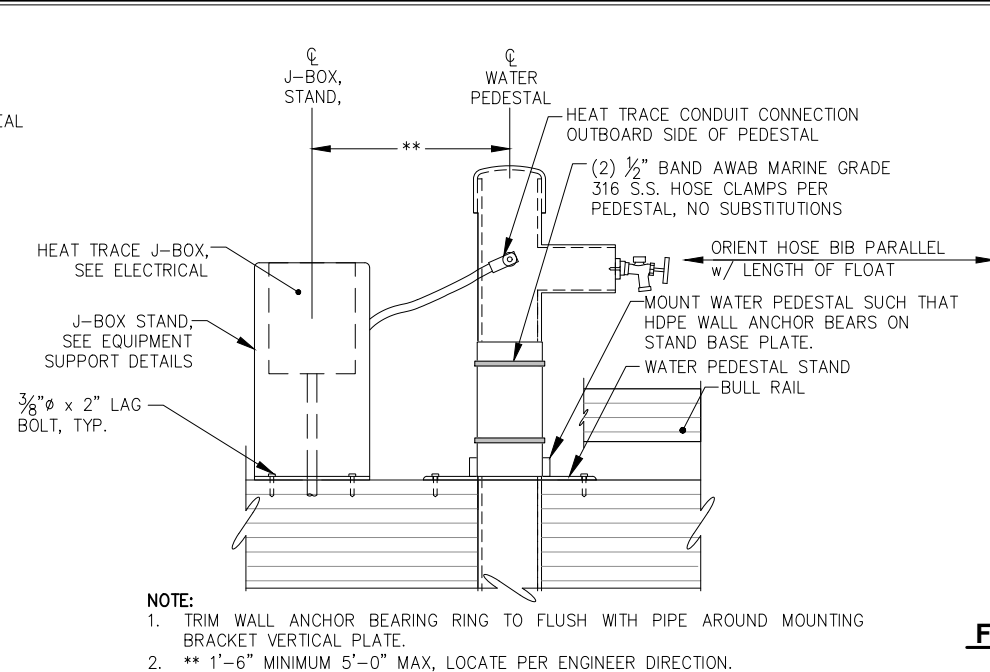
U1





**WATER PEDESTAL NOTES:**

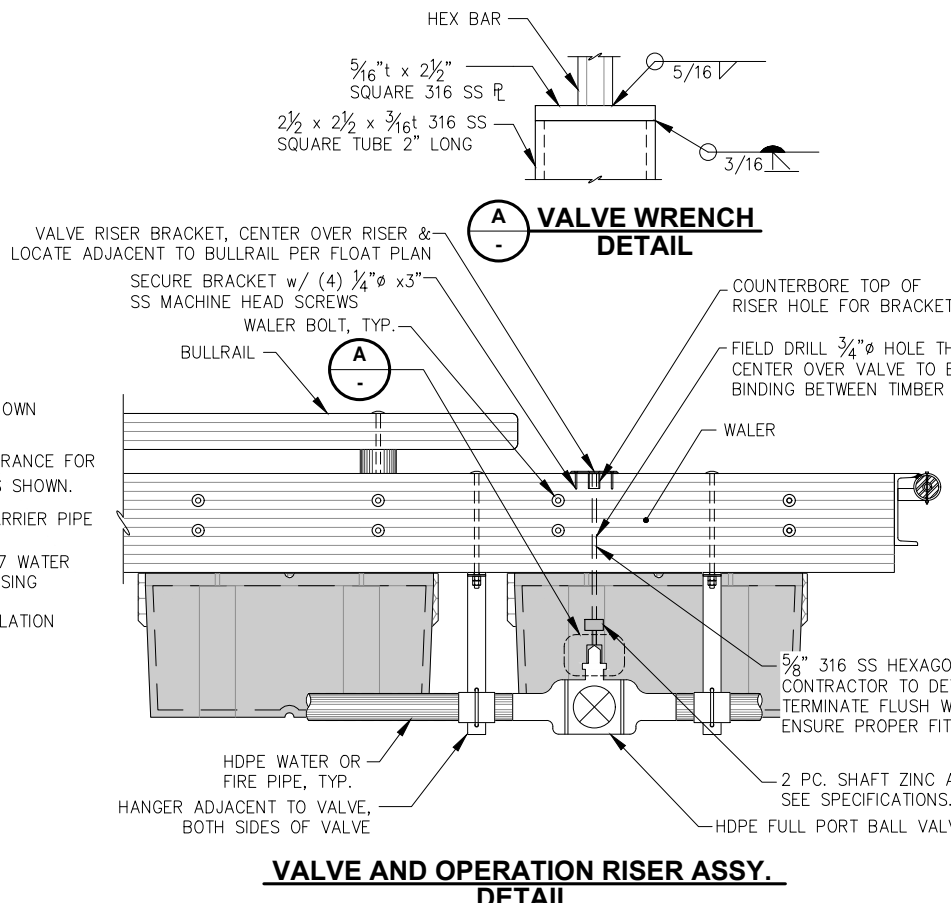
- HOSE BIB SHOWN IN PROFILE FOR ILLUSTRATIVE PURPOSES ONLY, ORIENT HOSE BIB PARALLEL WITH BULLRAIL.
- HANGER AND CONNECTION HARDWARE NOT SHOWN FOR CLARITY.
- ALL SUBMERGED STEEL SHALL BE CONSTRUCTED OF 316 SS, UNO.
- LOCATE PEDESTALS PER FLOAT PLAN, FINAL LAYOUT AND ORIENTATION OF PEDESTAL SHALL BE FILED DETERMINED BY ENGINEER.



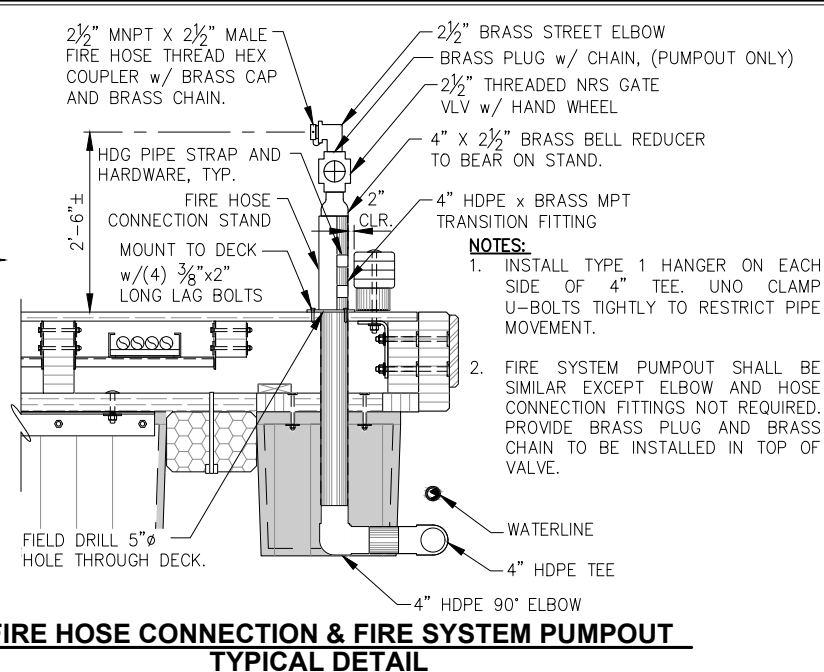
**NOTE:**

- 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 MOUNTING TYPICAL DETAIL**

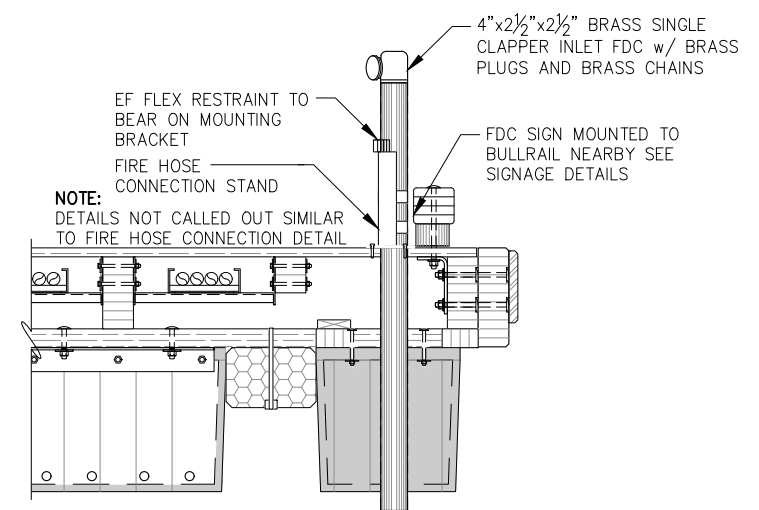


**VALVE AND OPERATION RISER ASSY. DETAIL**



**NOTES:**

- INSTALL TYPE 1 HANGER ON EACH SIDE OF 4" TEE. UNO CLAMP U-BOLTS TIGHTLY TO RESTRICT PIPE MOVEMENT.
- FIRE SYSTEM PUMPOUT SHALL BE SIMILAR EXCEPT ELBOW AND HOSE CONNECTION FITTINGS NOT REQUIRED. PROVIDE BRASS PLUG AND BRASS CHAIN TO BE INSTALLED IN TOP OF VALVE.



**FIRE DEPARTMENT CONNECTION TYPICAL DETAIL**

**NOTES:**

- VALVES SHALL BE OPERATED WITH A TEE-HANDLE SOCKET WRENCH OF ADEQUATE LENGTH TO TURN THE HANDLE ABOVE THE BULLRAIL, PROVIDE (1) SNAP-ON, OR EQUAL TEE HANDLE SOCKET WRENCHES TO OWNER AND (1) TO THE CBJ FIRE DEPARTMENT, (2) TOTAL REQ'D. VERIFY FIT UP W/ 5/8" HEXAGONAL BAR & CLEARANCE TO TRANSITION BRIDGE.
- HANGER ASSEMBLIES SHALL BE CLAMPED TO RESTRICT PIPE MOVEMENT.
- HOLES THROUGH TIMBER FOR HANGER BOLTS AND RISER BRACKETS TO BE FIELD DRILLED, TAKE CARE TO AVOID FLOAT HARDWARE, TREAT ALL TIMBER CUTS & PENETRATIONS PER SPECIFICATIONS.
- WRENCH AND RISER NOT REQUIRED AT FIRE VALVE LOCATIONS ON HEADWALK.

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

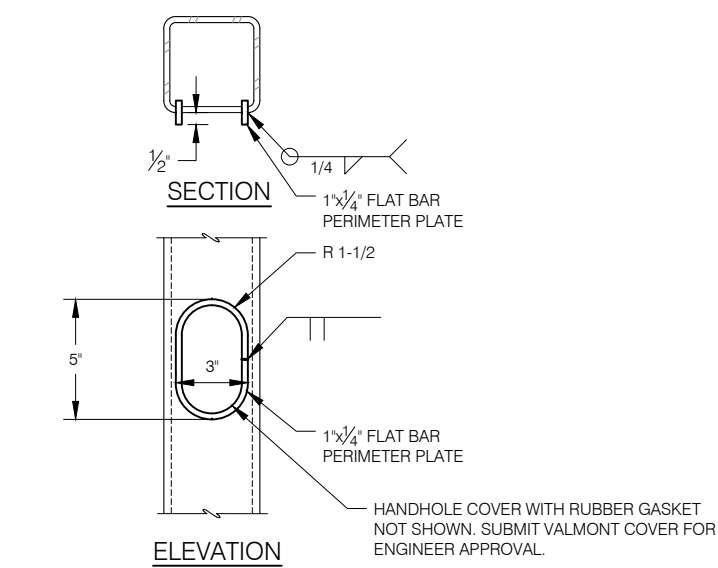
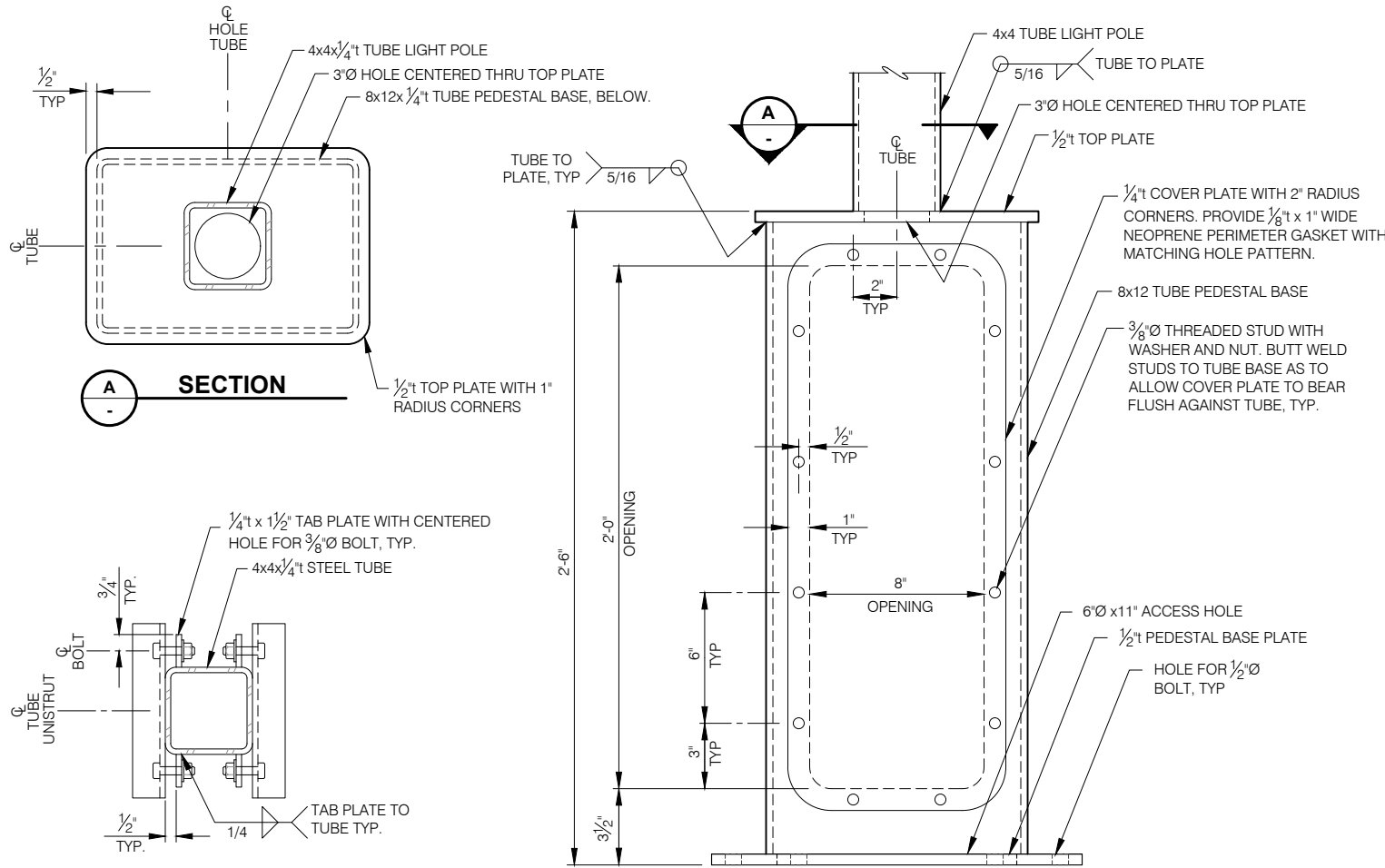
CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



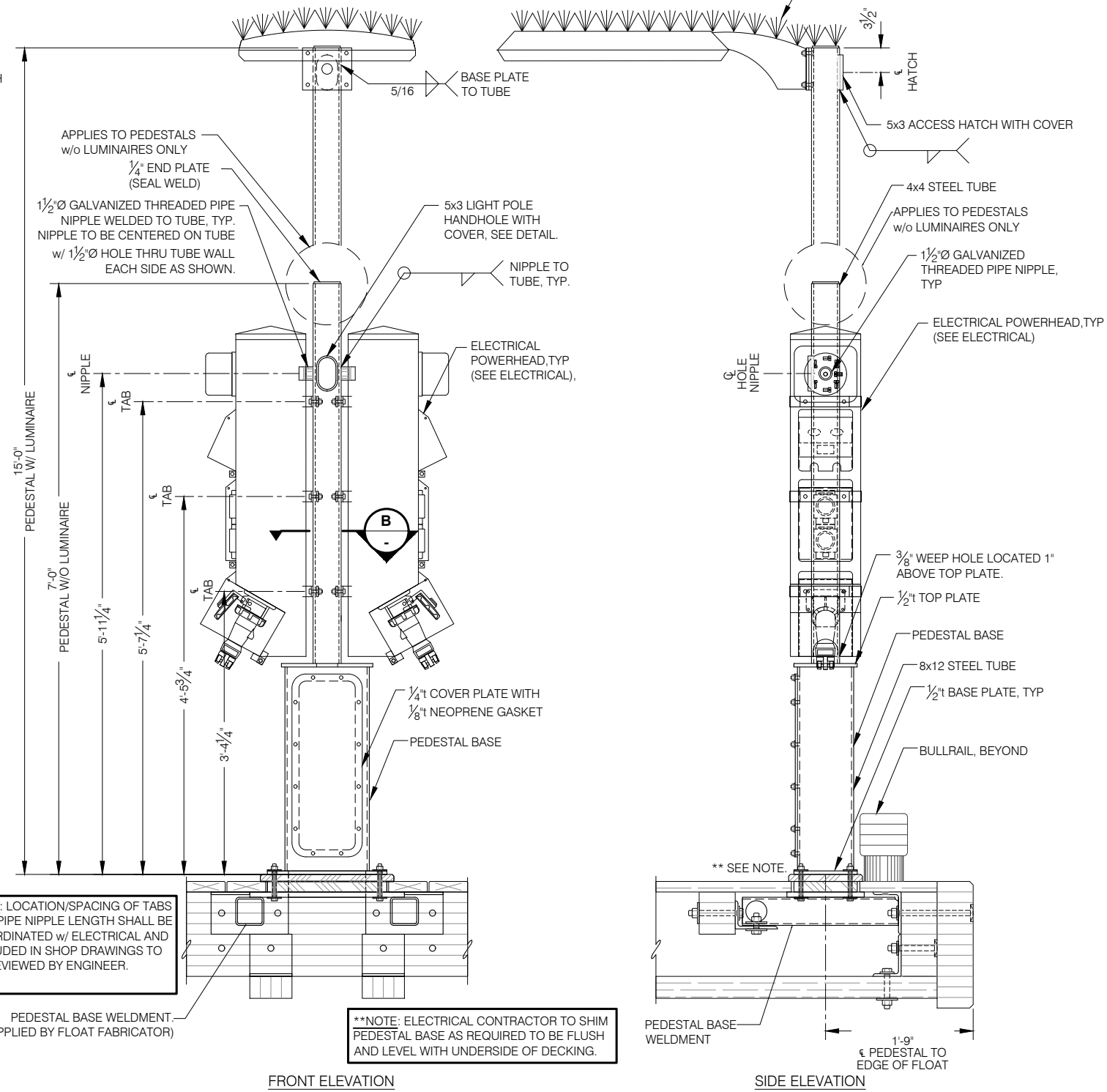
FLOAT MOUNTED UTILITY DETAILS  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539

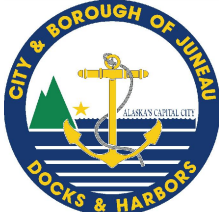
U4



**LIGHT POLE HANDHOLE**



**LIGHT POLE w/ PEDESTAL BASE**

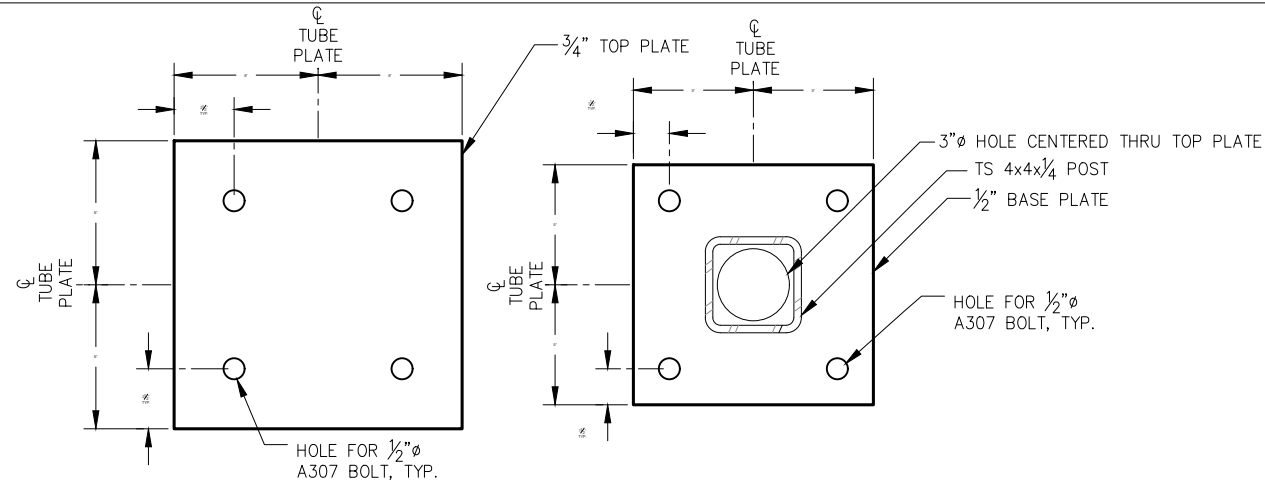


REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

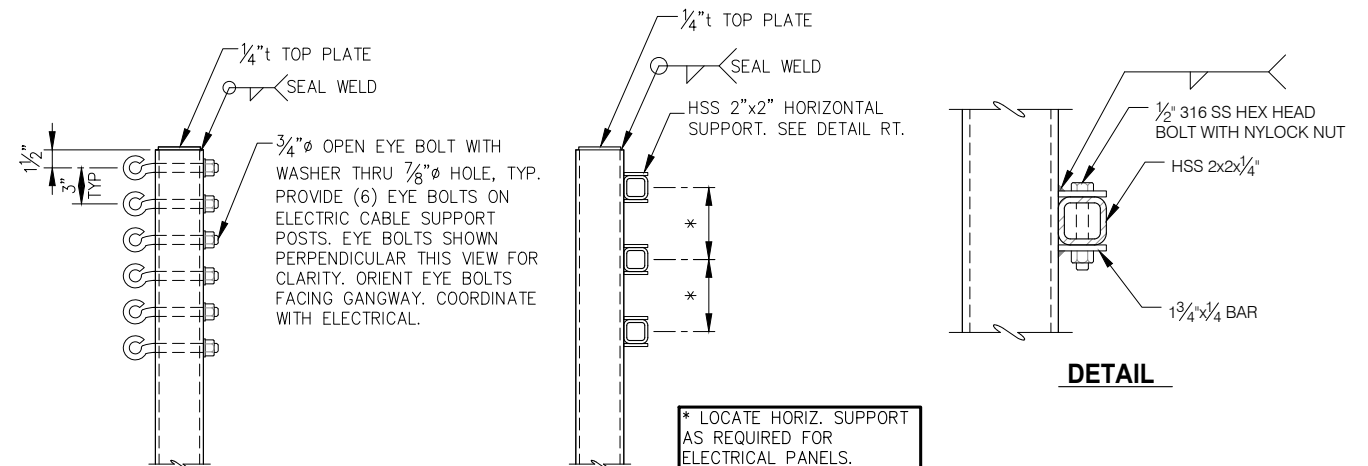
CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



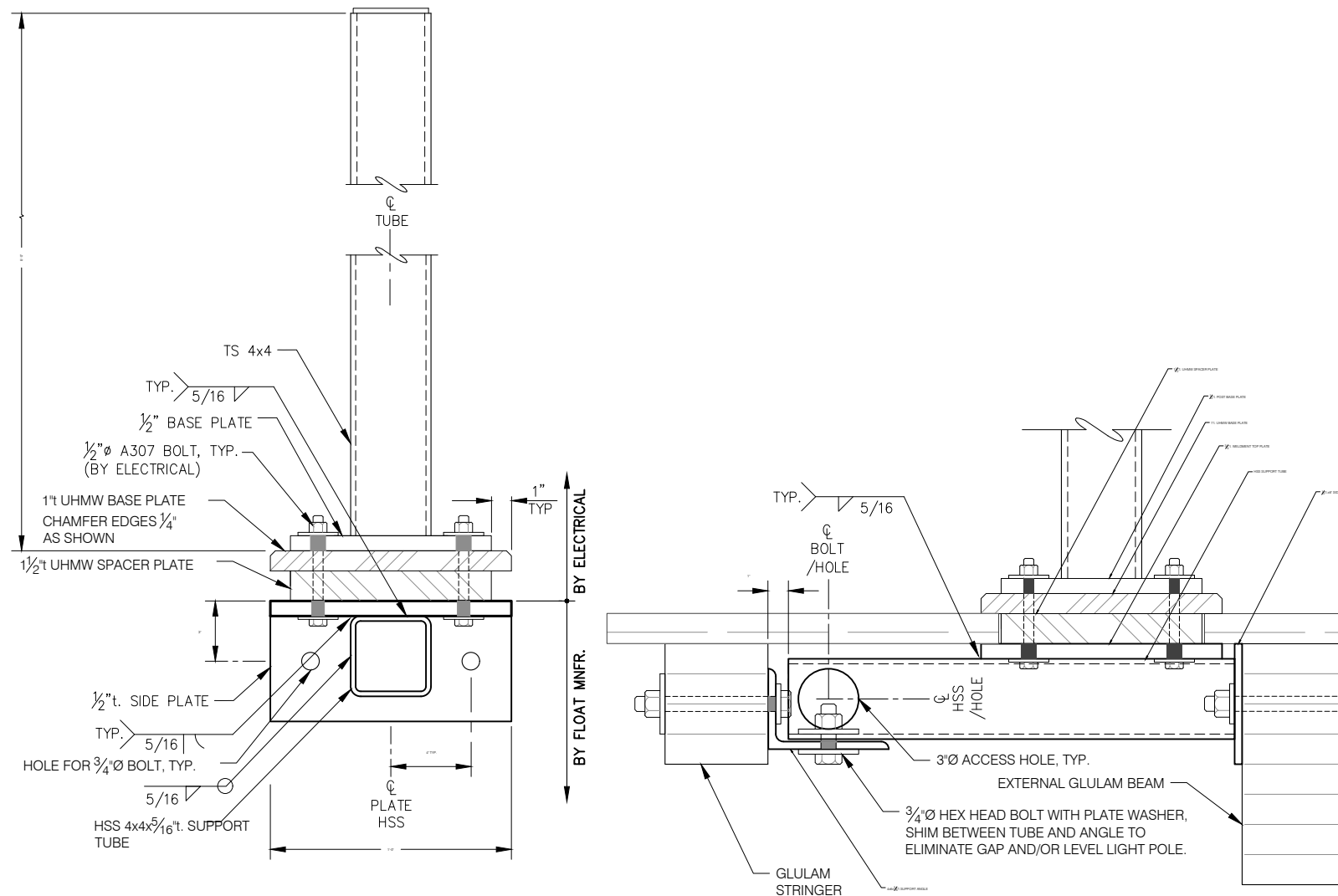
ELECTRICAL SUPPORT ASSEMBLIES			
AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539



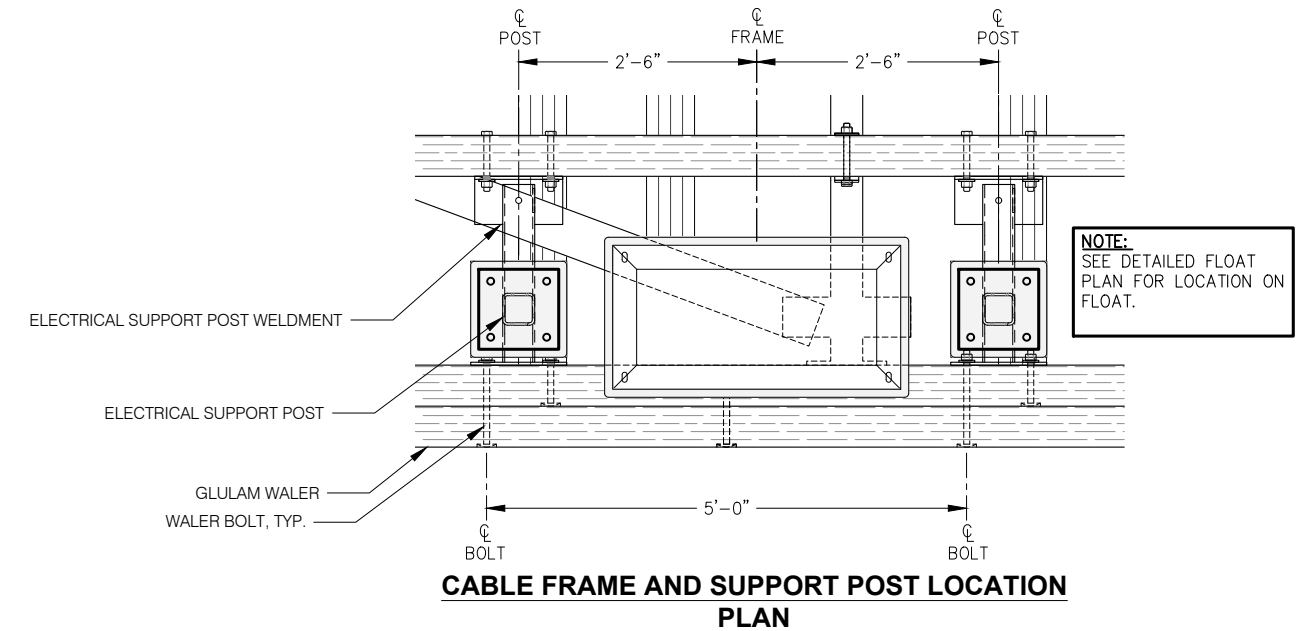
**WELDMENT TOP PLATE**  
**POST BASE PLATE**  
**ELECTRICAL SUPPORT POST PLATE DETAILS**



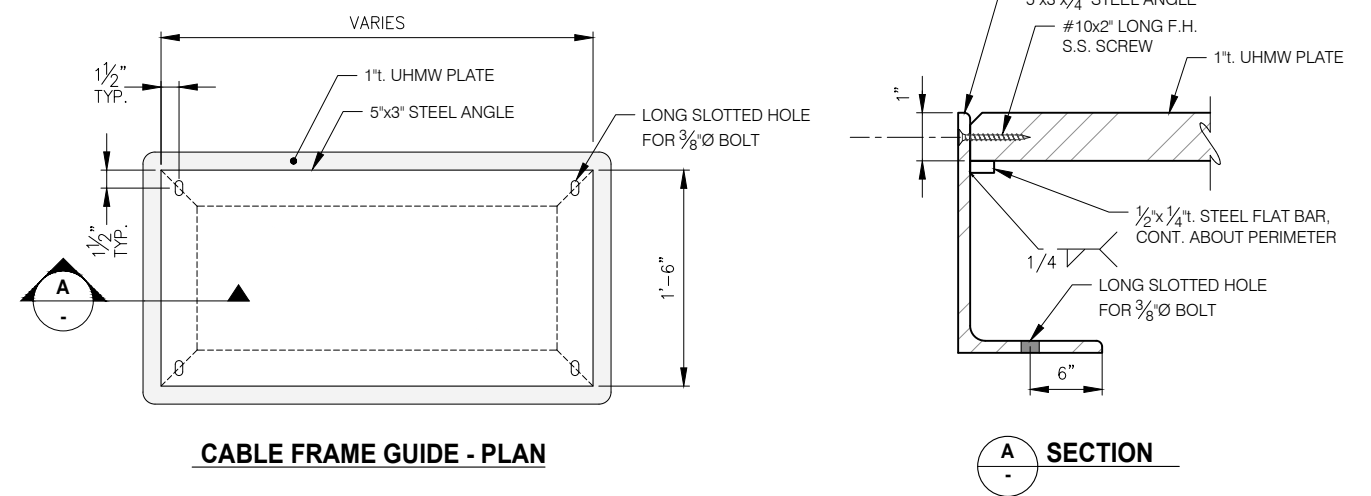
**ELECT. CABLE SUPPORT POST**  
**ELECT. PANEL SUPPORT POST**



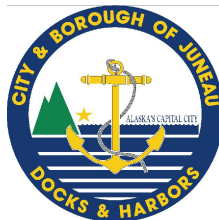
**ELECTRICAL SUPPORT POST**  
**FRONT ELEVATION**  
**ELECTRICAL SUPPORT POST BASE WELDMENT**  
**10' FLOAT - SIDE ELEVATION**



**CABLE FRAME AND SUPPORT POST LOCATION**  
**PLAN**

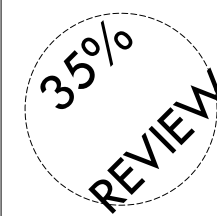


**CABLE FRAME GUIDE - PLAN**

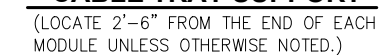


REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



ELECTRICAL SUPPORT ASSEMBLY DETAILS			
AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539



CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



## ELECTRICAL SUPPORT ASSEMBLY DETAILS

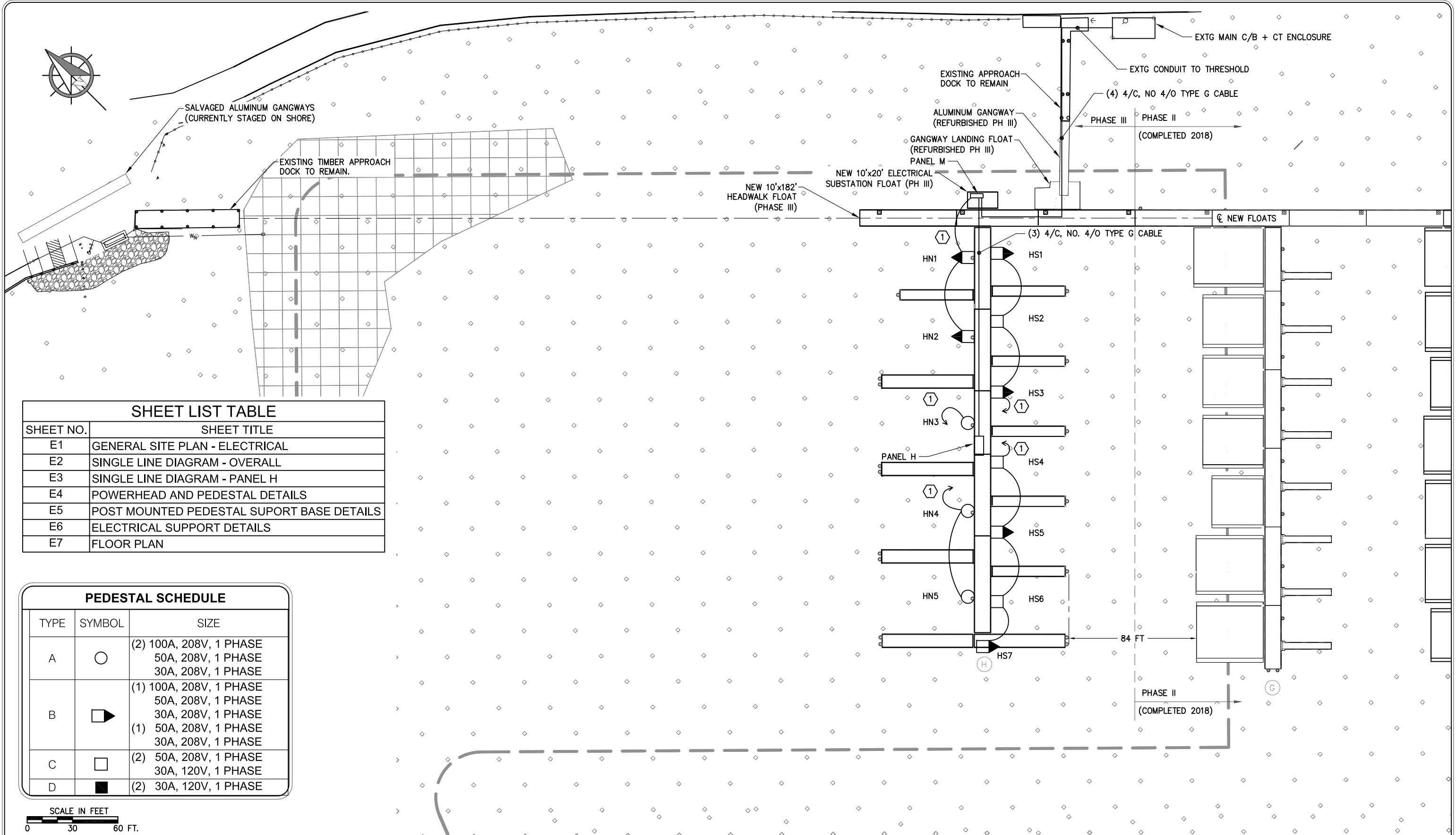
AURORA HARBOR REBUILD - PHASE III


DESIGN:	MS	DATE:	NOVEMBER 15, 2022
CHECKED:	ES	CONTRACT NO.	DH23-014
APPROVED:	CU	FILE NO.	1539


ES3



G3 G4 - Site Plans







2375 Jordan Avenue #7, Juneau, AK 99801  
Phone: 907-789-3350, License: AECL1010

REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292

DRAFT

GENERAL SITE PLAN - ELECTRICAL  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MGM	DATE:	DECEMBER XX, 2022
CHECKED:	BM	CONTRACT NO.	DH23-014
APPROVED:	MGM	FILE NO.	1539

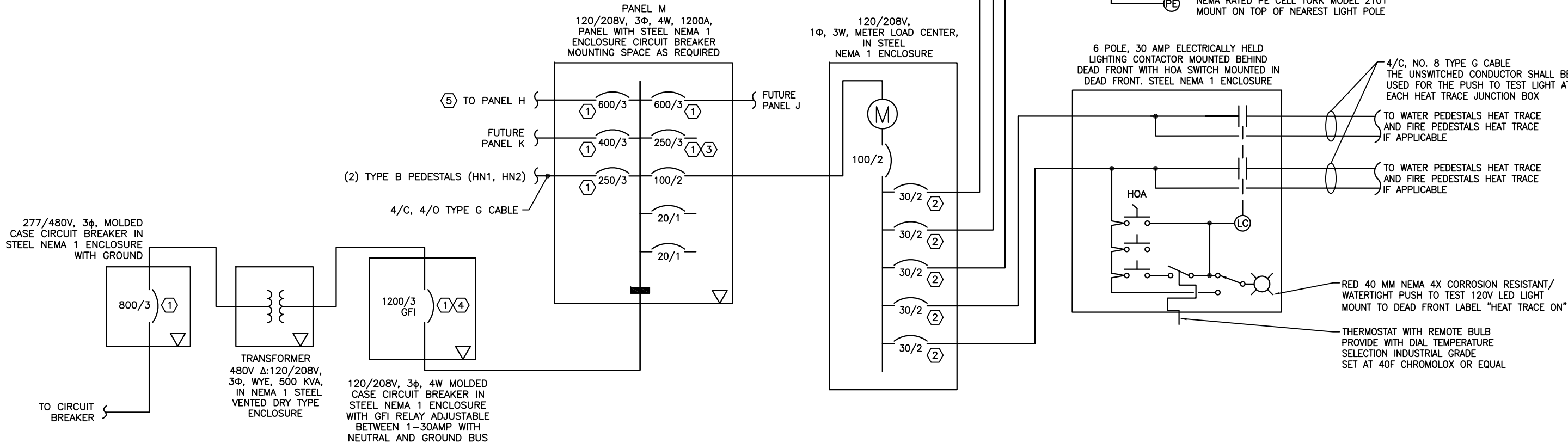
E1

SHEET NOTES:

1. PROVIDE DISTRIBUTION PANEL BOARD WITH MINIMUM (2) SPARE FEEDER CIRCUIT BREAKERS.
2. PROVIDE METER LOAD CENTER AND CONTACTORS FOR LIGHTING.

KEYNOTES:

- ① 100% RATED CIRCUIT BREAKER.
- ② CIRCUIT BREAKER WITH 30 MILLI-AMP GROUND FAULT PROTECTION.
- ③ SPARE CIRCUIT BREAKER.
- ④ PROVIDE GROUND FAULT RELAY CURRENT MONITORING AT LOAD SIDE OF CIRCUIT BREAKER. USE RELAY TO TRIP A 120V SHUNT TRIP RELAY IN CIRCUIT BREAKER. RELAY SHALL HAVE ADJUSTABLE SETTINGS BETWEEN 1 AMP-30 AMP.
- ⑤ 120/208V, 3 $\phi$ , 4W, 600A, 25 KAIC RATING, SQUARE D I-LINE TYPE HCP, STAINLESS STEEL, NEMA 3R ENCLOSURE.



SINGLE LINE DIAGRAM



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

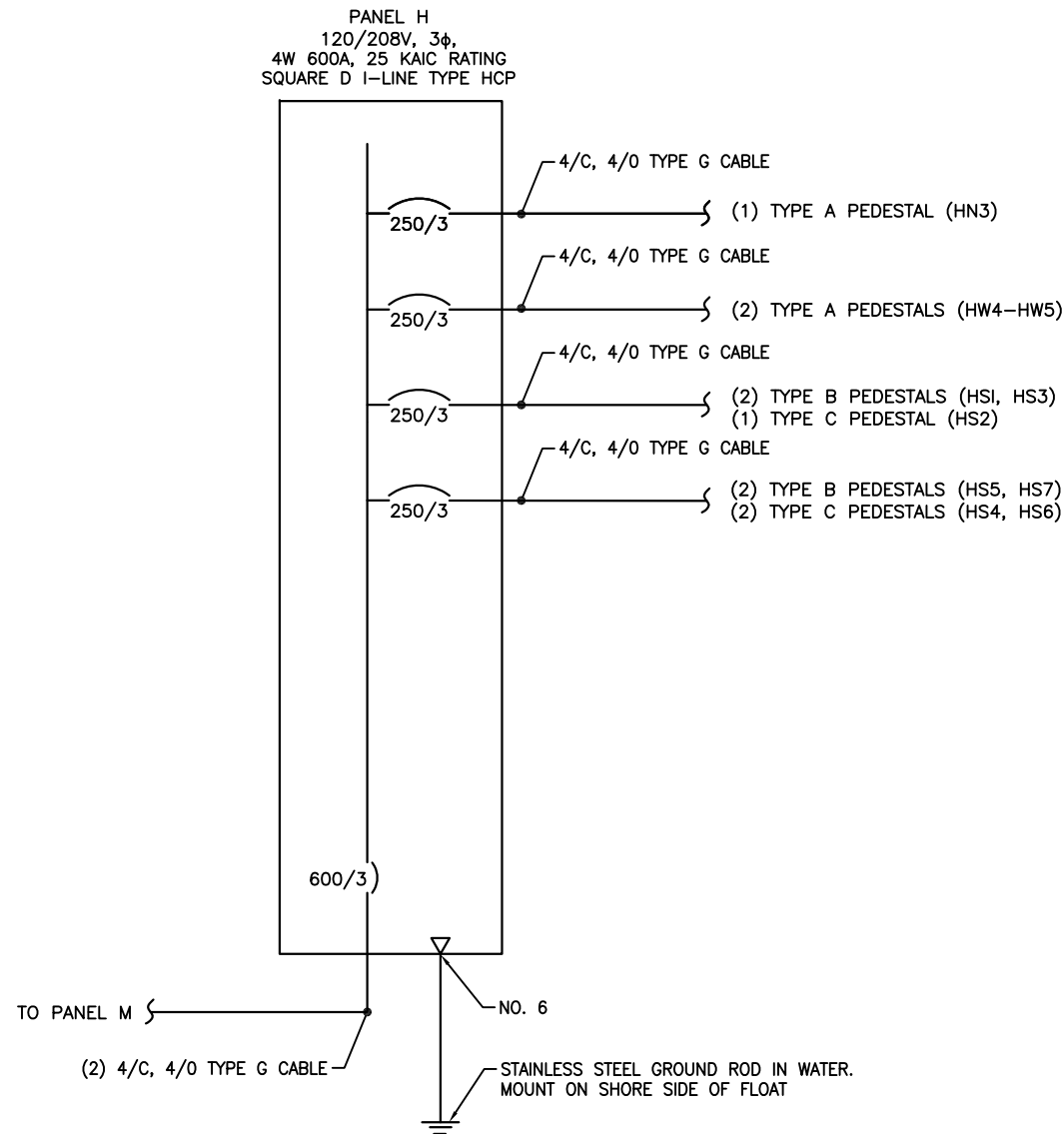
CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



SINGLE LINE DIAGRAM - OVERALL  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MGM	DATE:	DECEMBER XX, 2022
CHECKED:	BM	CONTRACT NO.	DH23-014
APPROVED:	MGM	FILE NO.	1539

E2



① SINGLE LINE DIAGRAM - PANEL H

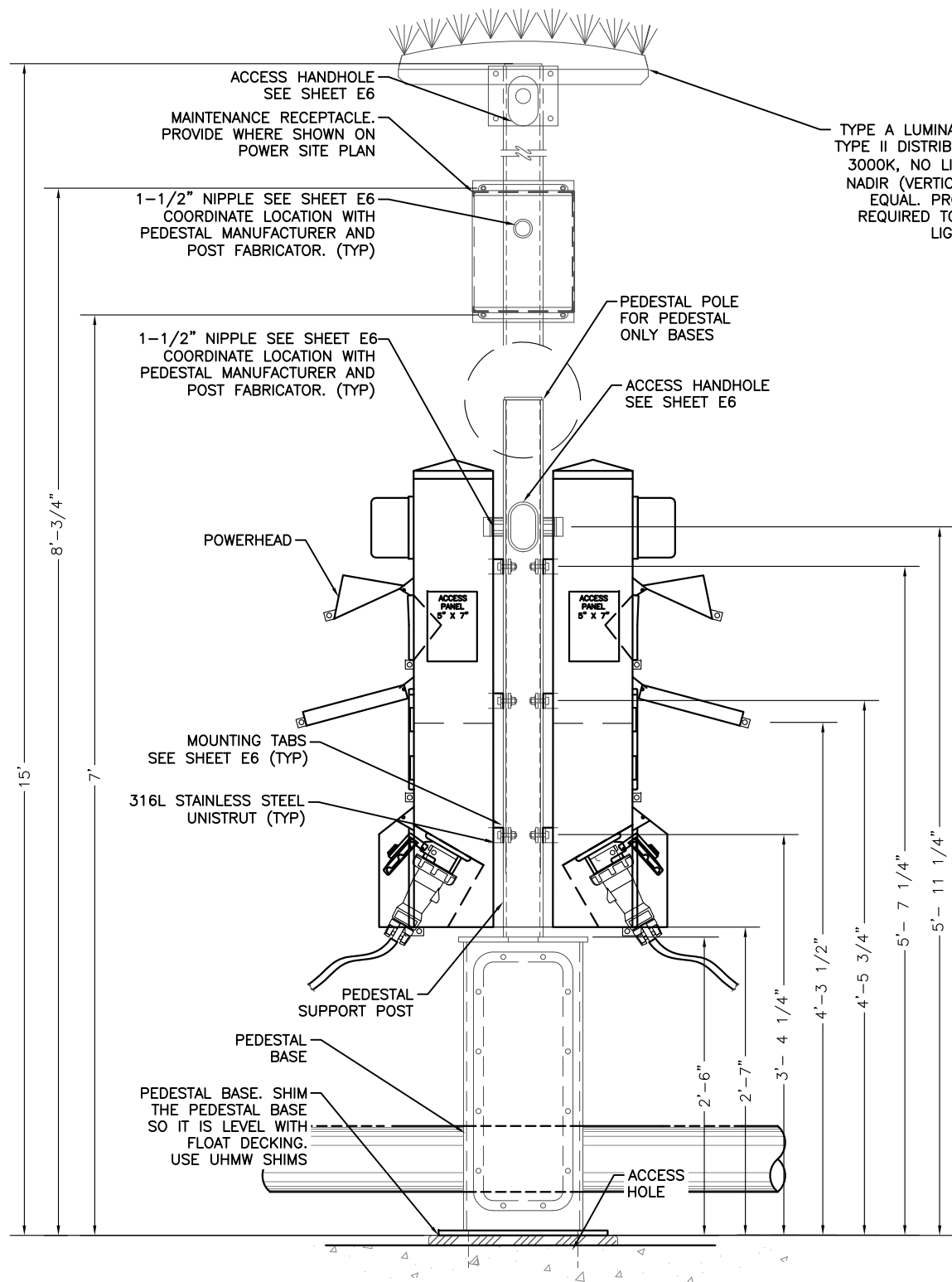


REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

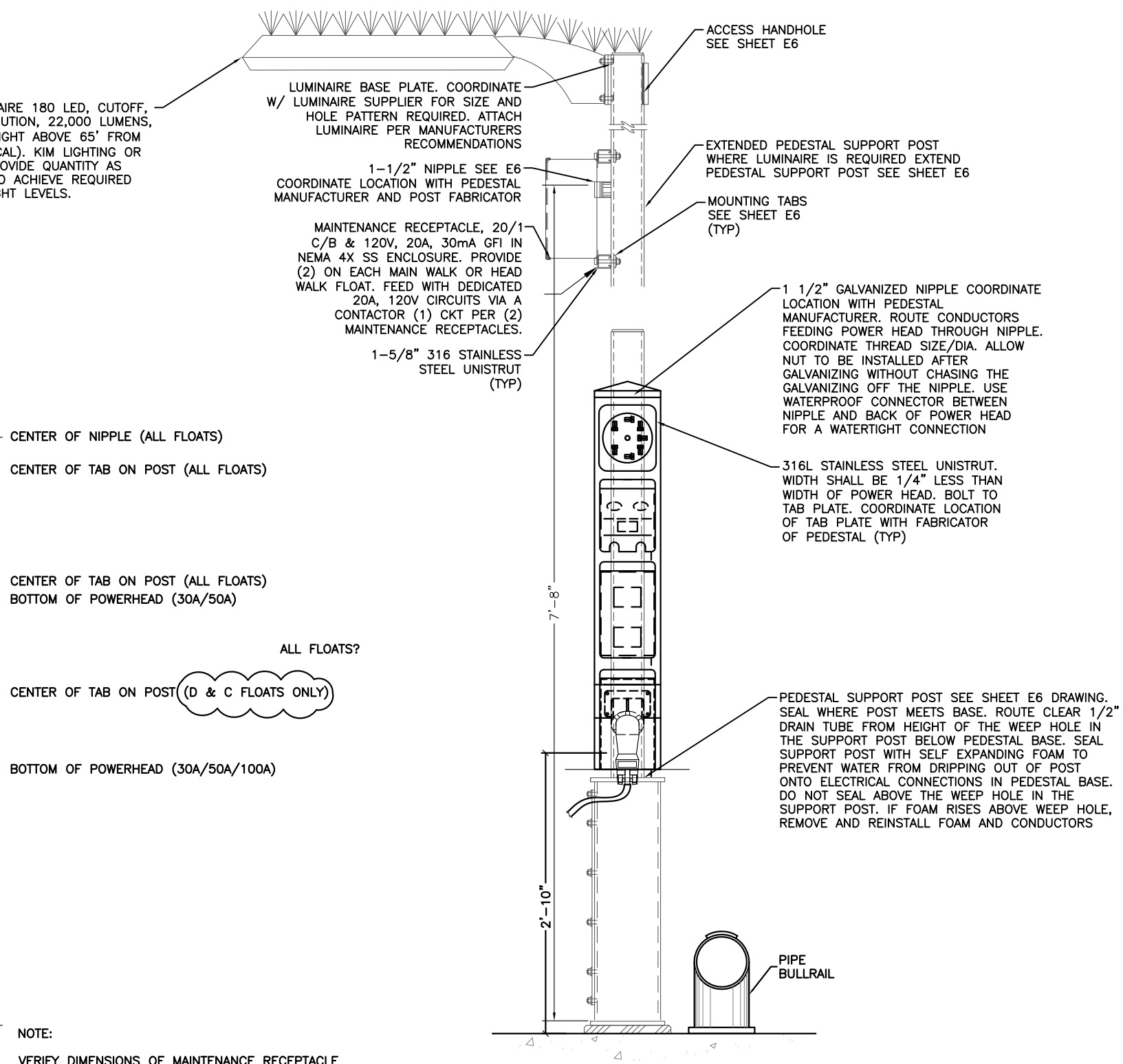
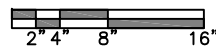
CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



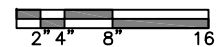
SINGLE LINE DIAGRAM - PANEL H AURORA HARBOR REBUILD - PHASE III				E3
DESIGN:	MGM	DATE:	DECEMBER XX, 2022	
CHECKED:	BM	CONTRACT NO.	DH23-014	
APPROVED:	MGM	FILE NO.	1539	



① POST MOUNTED PEDESTAL  
SIDE VIEW INSTALLATION



② POST MOUNTED PEDESTAL  
FRONT VIEW INSTALLATION



NOTE:  
VERIFY DIMENSIONS OF MAINTENANCE RECEPTACLE ENCLOSURE AND ADJUST HEIGHTS ACCORDINGLY. VERIFY TAB LOCATIONS ON PEDESTAL POLE ARE IN CORRECT LOCATIONS FOR BOTH MAINTENANCE RECEPTACLE AND POWER HEADS.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

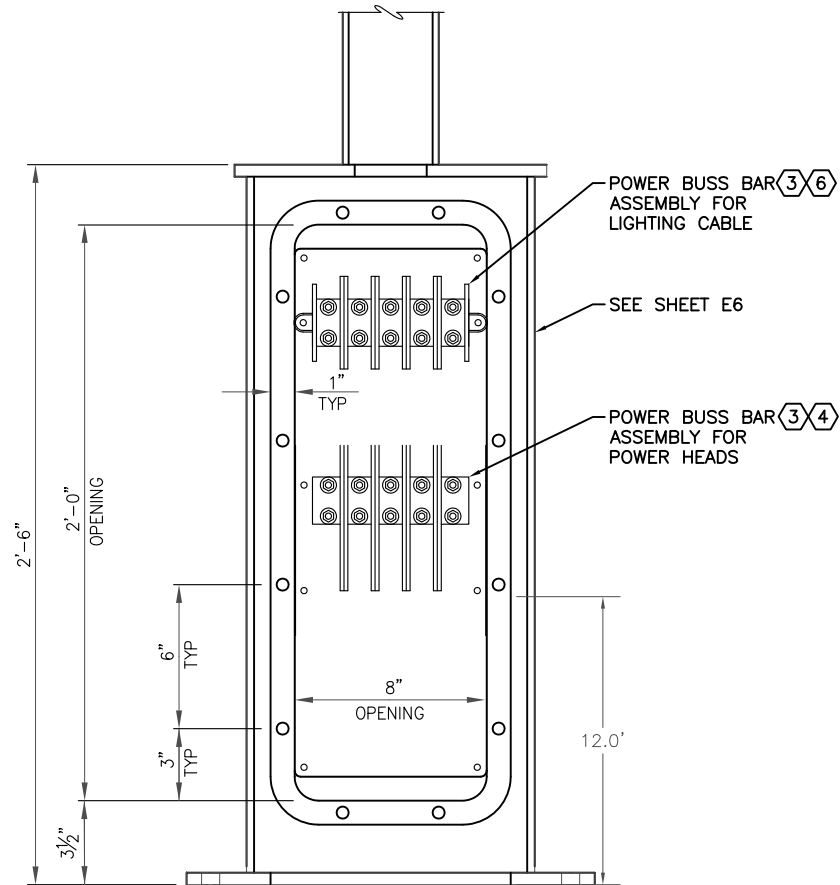
CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



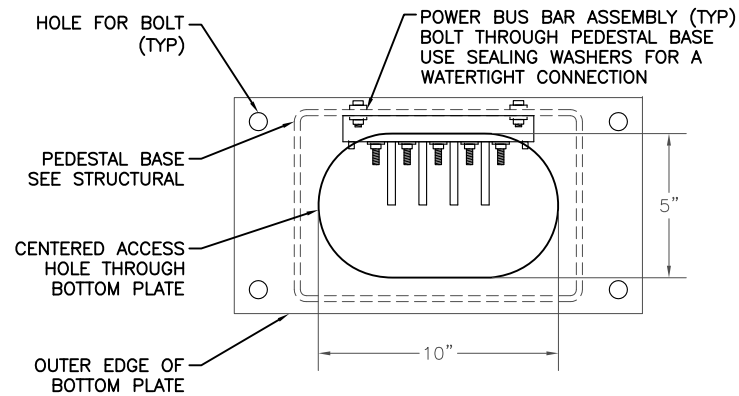
POWERHEAD AND PEDESTAL DETAILS  
AURORA HARBOR REBUILD - PHASE III

DESIGN:	MGM	DATE:	DECEMBER XX, 2022
CHECKED:	BM	CONTRACT NO.	DH23-014
APPROVED:	MGM	FILE NO.	1539





① PEDESTAL BASE - FRONT VIEW  
NO SCALE



② PEDESTAL BASE - TOP VIEW  
NO SCALE

SHEET NOTES:

1. PROVIDE SIZE AND QUANTITY OF POWER DISTRIBUTION BLOCKS AS REQUIRED.
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.



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



POST MOUNTED PEDESTAL SUPORT BASE  
DETAILS

AURORA HARBOR REBUILD - PHASE III

DESIGN:	MGM	DATE:	DECEMBER XX, 2022
CHECKED:	BM	CONTRACT NO.	DH23-014
APPROVED:	MGM	FILE NO.	1539

E5

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



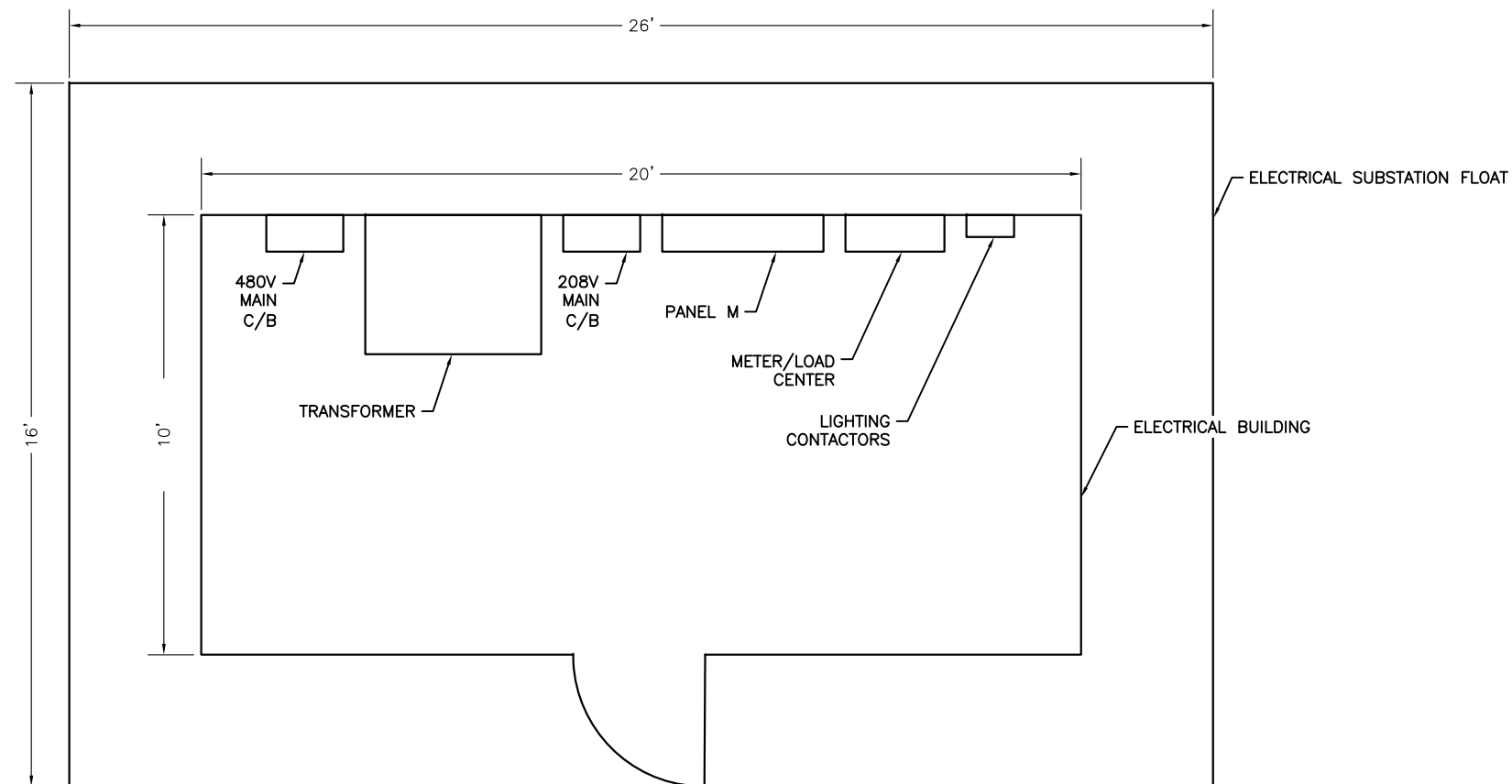
**STRUCTURAL STEEL:** All steel plate shall conform to ASTM A36, hot-dip galvanized (HDG), unless otherwise noted. Square and rectangular HSS shall be ASTM A500, Grade B, HDG. Pipe less than 12-inch diameter shall be ASTM A53, Grade B, Type E or S, HDG.

**STEEL WELDING:** All steel welding shall be done per AWS D1.1. All welders shall be qualified per AWS for the type of welding anticipated. All weld metal shall have chemistry similar to the base metal. No welding through coatings allowed. All galvanizing or other coatings within 1 inch of weld shall be removed, prior to welding, by grinding to bright metal.

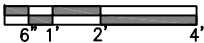
**BOLTS AND OTHER HARDWARE:** All bolts and associated hardware shall be ASTM A307, HDG, unless otherwise noted, with threads excluded from the shear plane. Bolts designated to be ASTM A325 shall be HDG, with threads excluded from the shear plane. All stainless steel hardware shall be Type 316.

**GALVANIZING:** All steel, bolts, chain, shackles, and miscellaneous hardware shall be HDG per ASTM A123 or A153, as appropriate, after fabrication, unless otherwise noted. Any galvanized coating damaged due to fabrication, welding, material handling, or occurring during installation shall be repaired using a combination of hot-applied repair sludge and a minimum of two coats of brush applied, zinc rich paint. Repair procedure and products shall be submitted for approval by the Engineer.

**NEOPRENE RUBBER:** Neoprene rubber gasket shall be UV stabilized, have durometer hardness of 60 and color black.



① ELECTRICAL BUILDING FLOOR PLAN



REVISIONS					
REV	DATE	DESCRIPTION	DWN	CHK	APP

CITY AND BOROUGH OF JUNEAU  
DOCKS & HARBORS DEPT.  
155 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE: 907-586-0292



FLOOR PLAN			
AURORA HARBOR REBUILD - PHASE III			
DESIGN:	MGM	DATE:	DECEMBER XX, 2022
CHECKED:	BM	CONTRACT NO.	DH23-014
APPROVED:	MGM	FILE NO.	1539