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MATERIAL SCHEDULE

SERVICE	SIZE	PIPE	TAKEDOWN JOINTS			VALVES		FITTINGS	FLEXIBLE CONNECTIONS
			MATERIAL	GASKETS	BOLTING	BODY	TRIM		
FIRE MAIN MAWP: 100 PSIG MAX TEMP: 100°F	ALL	ALUMINUM ASTM B241 6061 T6 SEAMLESS SCH 40	FLANGE ALUMINUM ASTM B241 6061 T6 ANSI B16.5 150#	APPROPRIATE MATERIAL FOR SYSTEM	BOLTS: STAINLESS STEEL ASTM A193 GRADE B8M ANSI B18.2.1 NUTS: STAINLESS STEEL ASTM A194 GRADE 8M ANSI B18.2.2	BUTTERFLY: DUCTILE IRON LUGGED TYPE BALL: 316 STAINLESS STEEL FLANGED HOSE VALVES: BRONZE B-62 FLANGED BY NFP THREADED	BUTTERFLY: 316 SS DISC BUNA-N SEATS BALL: 316 SS BALL PTFE SEATS AND SEALS HOSE VALVES: BRONZE B-62	ALUMINUM ASTM B241 6061 T6 SCH 40	-
SHELL CONNECTIONS MAWP: 100 PSIG MAX TEMP: 100°F	ALL	ALUMINUM ASTM B221 5086, 5083, 5456 H111 OR H112 SCH 80	FLANGE ALUMINUM ASTM B221, 5086, 5083, 5456-H111 OR H112 ANSI B16.5 150#					ALUMINUM ASTM B221 5086, 5083, 5456 H111 OR H112 SCH 80	-

SYMBOLS LIST

	DIRECTION OF FLOW
	PIPE UP
	PIPE DOWN
	REDUCER
	PRESSURE GAUGE
	VACUUM PRESSURE GAUGE
	BUTTERFLY VALVE
	BALL VALVE
	ANGLE HOSE GLOBE VALVE
	SIMPLEX STRAINER
	FLANGE
	CENTRIFUGAL PUMP
	FIRE STATION
	BHD/DECK PENETRATION
	PRESSURE TRANSDUCER
	MATERIAL TRANSITION
	SEA CHEST
	PLUG

EQUIPMENT LIST

QTY.	SERVICE	TYPE	MODEL	CAPACITY	DRIVE	REMARKS
1	FIRE PUMP	SELF-PRIMING HORIZONTAL CENTRIFUGAL	-	51 GPM @ 150 TDH	208V/3Ø/60Hz 7.5 HP TEFC MOTOR 3500 RPM	STAINLESS STEEL BODY SHAFT & IMPELLER
1	SEA WATER STRAINER	SIMPLEX BASKET TYPE	-	-	-	STAINLESS STEEL BODY AND BASKET

REVISION HISTORY

REV	ZONE	DESCRIPTION	DWN	DATE	APVD

GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH 46 CFR SUBCHAPTER T REGULATIONS.
- THIS DRAWING IS DIAGRAMMATIC AND DOES NOT REPRESENT A COMPLETE DETAILED DESIGN. EQUIPMENT LAYOUT IN A GIVEN AREA IS APPROXIMATE. THE CONTRACTOR SHALL DEVELOP A DETAILED DESIGN THAT PROVIDES A FULLY FUNCTIONAL ARRANGEMENT SUITABLE FOR INSTALLATION, TAKING INTO ACCOUNT ALL NECESSARY SYSTEM INTERFACES AND INTERFERENCES. DIMENSIONS SHALL BE VERIFIED FROM THE SHIP AND MANUFACTURERS' CERTIFIED DRAWINGS AS APPROPRIATE.
- PIPING SHALL BE RUN AS DIRECTLY AS PRACTICABLE WITH A MINIMUM NUMBER OF BENDS AND FITTINGS AND WITH SUFFICIENT TAKE DOWN JOINTS TO PROVIDE FOR REMOVAL, INSPECTION, SERVICING AND REPLACEMENT OF PIPING, VALVES, FITTINGS AND EQUIPMENT.
- AVOID POCKETS IN THE PIPE LINES, BOSSES AND VALVES OR SCREWED PLUGS SHALL BE FITTED TO ENABLE COMPLETE DRAINING OF PIPES WHERE POCKETS DO OCCUR.
- PIPING SHALL BE ADEQUATELY SUPPORTED BY HANGERS IN ACCORDANCE WITH ASTM F708. HANGERS SHALL BE ATTACHED TO THE PIPE WITH BOLTED CLAMPS AND WELDED TO THE BASIC SHIP STRUCTURE. HANGERS SHALL NOT BE ATTACHED BY WELDING DIRECTLY TO PIPES.
- ALL MATERIAL TRANSITIONS SHALL BE ACCOMPLISHED WITH FLANGED JOINTS. FLANGES AT THESE JUNCTIONS SHALL BE FITTED WITH GALVANIC ISOLATION KITS TO PREVENT METAL TO METAL CONTACT.
- FIRE STATIONS SHALL BE 1 1/2" SIZE AND FITTED WITH FLANGED ANGLE GLOBE HOSE VALVE, 50' OF 1 1/2" HOSE CONFORMING TO UL19, A SPANNER WRENCH, HOSE RACK, AND USCG APPROVED COMBINATION FIRE NOZZLE WITH A 1/2" ORIFICE. FIRE HOSE SHALL BE CONNECTED AND STOWED IN APPROVED HOSE RACKS WITHIN A FIBERGLASS ENCLOSURE.
- THE FIRE PUMP SHALL HAVE REMOTE START/STOP CONTROLS, RUN INDICATION AND PRESSURE INDICATION AT THE PILOTHOUSE CONSOLE.
- WHERE PIPING PENETRATES BULKHEADS OR DECKS, THE PENETRATION SHALL MAINTAIN THE WATERTIGHT INTEGRITY OF THE SPACE. USE USCG COMPLIANT BULKHEAD PENETRATION FOR COPPER NICKEL PIPE.
- PROVIDE GAUGE PIPING ASSEMBLIES AND MATERIALS IN ACCORDANCE WITH THE ASTM F721. TUBING AND FITTINGS SHALL BE 316 STAINLESS STEEL. ROOT VALVES SHALL BE BALL TYPE. ROOT AND GAUGE VALVES SHALL BE MANUFACTURED FROM 316 STAINLESS STEEL.

REFERENCES

- 16109-003-802-0 CONTRACT SPECIFICATIONS
- 16109-003-520-0 SEA CHESTS AND SEAWATER PIPING



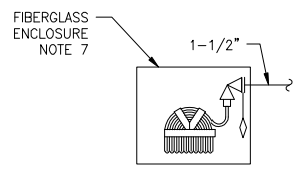
Elliott Bay Design Group
North Carolina, PLLC

CLIENT: NORTH CAROLINA D.O.T.
RALEIGH, NORTH CAROLINA

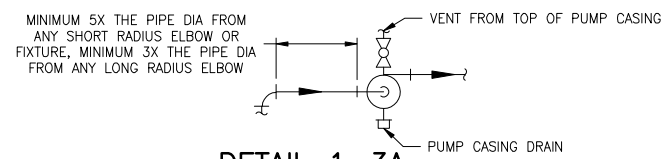
PROJECT: PEDESTRIAN FERRY

FIRE MAIN SYSTEM

SIZE	DWG NO.	REV
D	16109-003-521-0	-
SCALE	AS NOTED	FILE NAME
JHP	MOD	16109-003-521-0
DWN	JHP	SHEET 1 OF 2
MOD	LGB	APVD DATE
LGB	LGB	3/3/2017



DETAIL 1-6A
TYP FIRE STATION
SEE NOTE 7
SCALE: NONE



DETAIL 1-3A
CENTRIFUGAL PUMP INSTALLATION
SCALE: NONE



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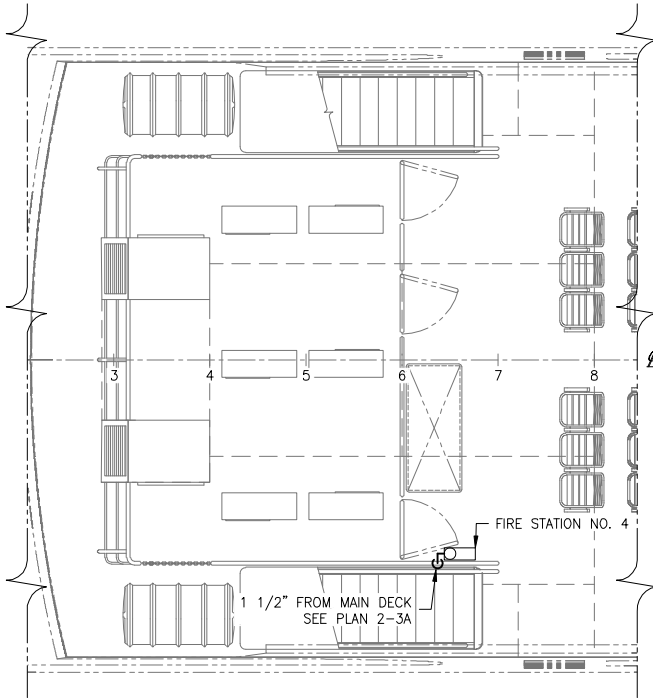
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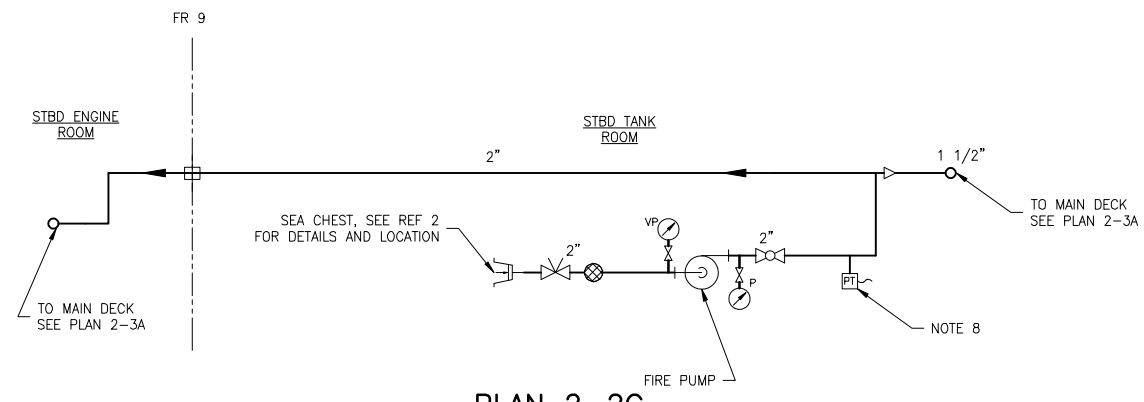
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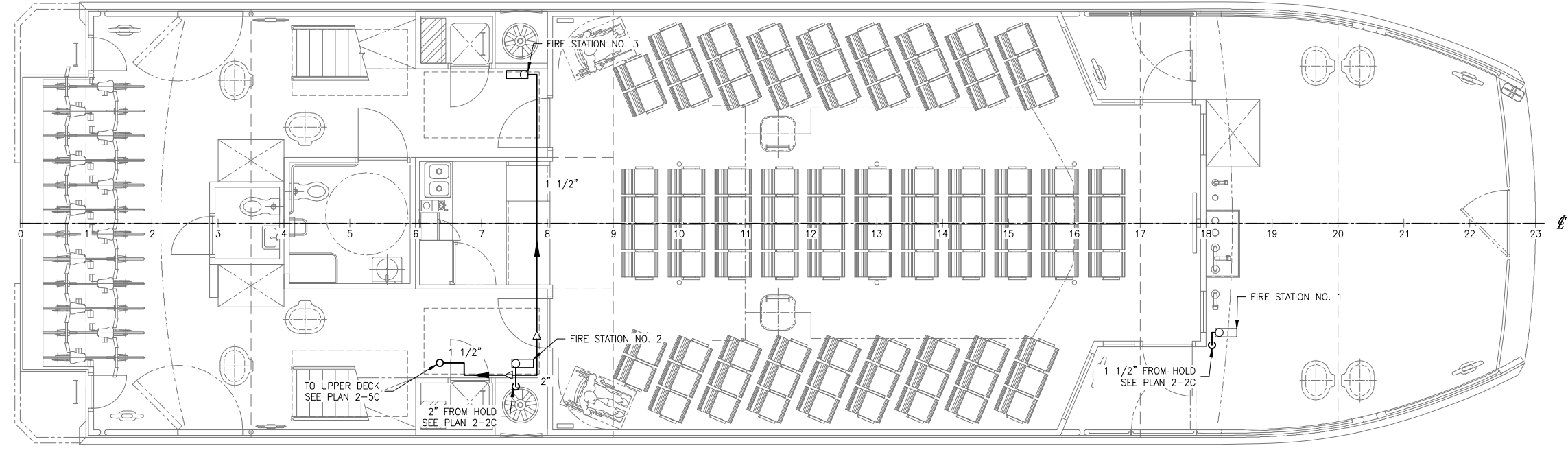
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PLAN 2-5C
 UPPER DECK
 SCALE: 1/4"=1'-0"



PLAN 2-2C
 HOLD
 SCALE: NONE



PLAN 2-3A
 MAIN DECK
 SCALE: 1/4"=1'-0"



SIZE	D	DWG NO.	16109-003-521-0	REV	-
SCALE	AS NOTED	FILE NAME	16109-003-521-0-	SHEET	2 OF 2

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