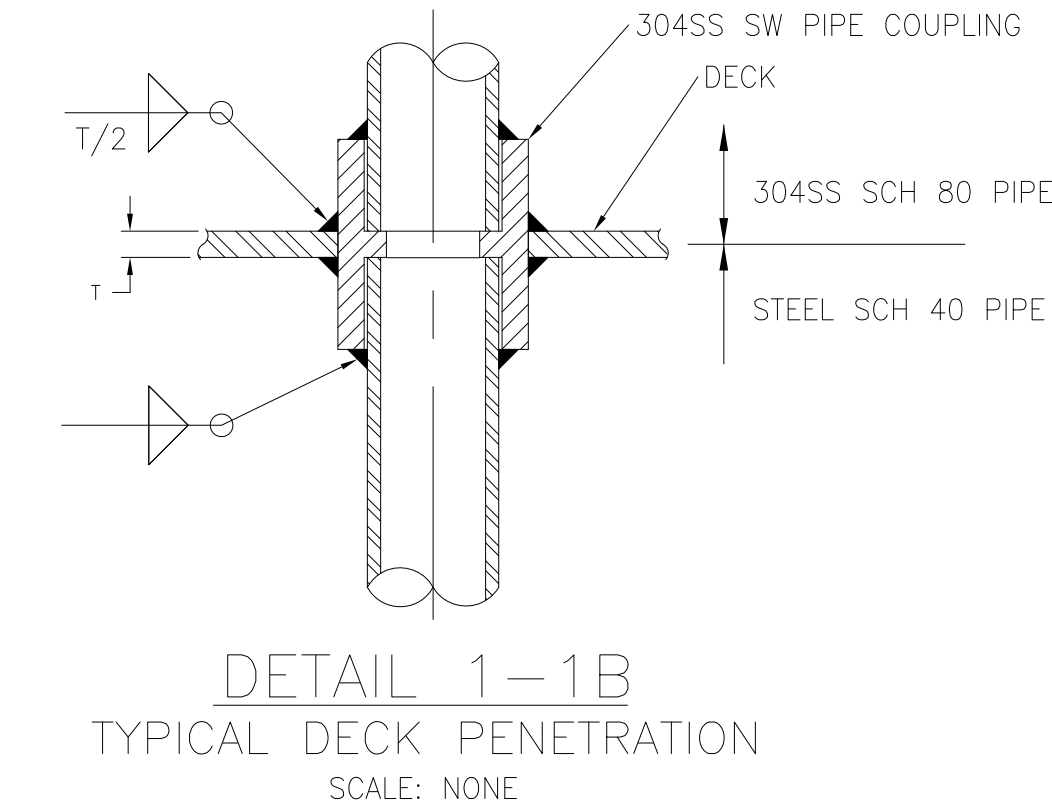
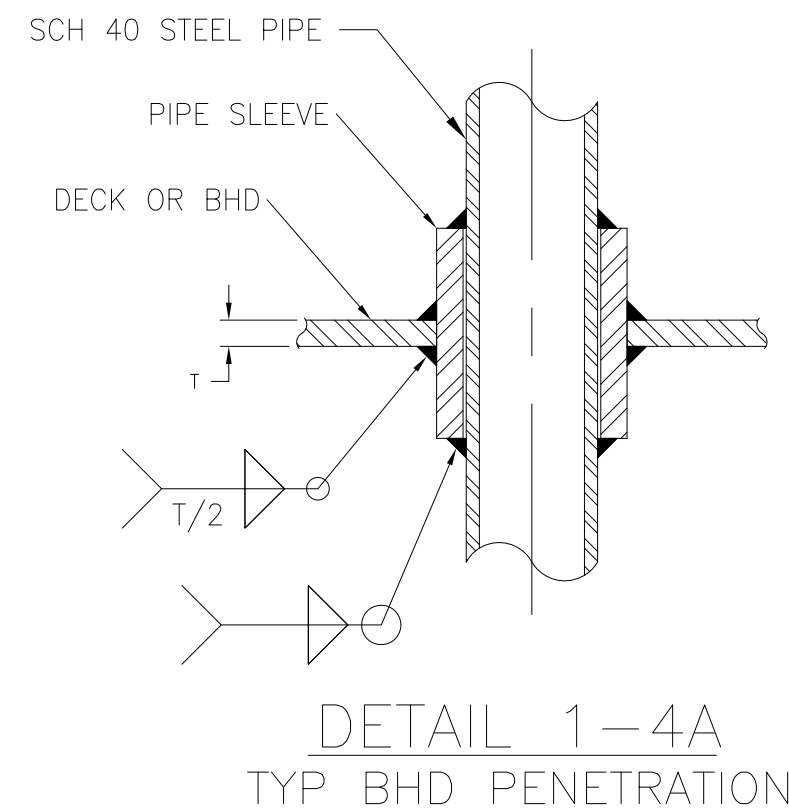
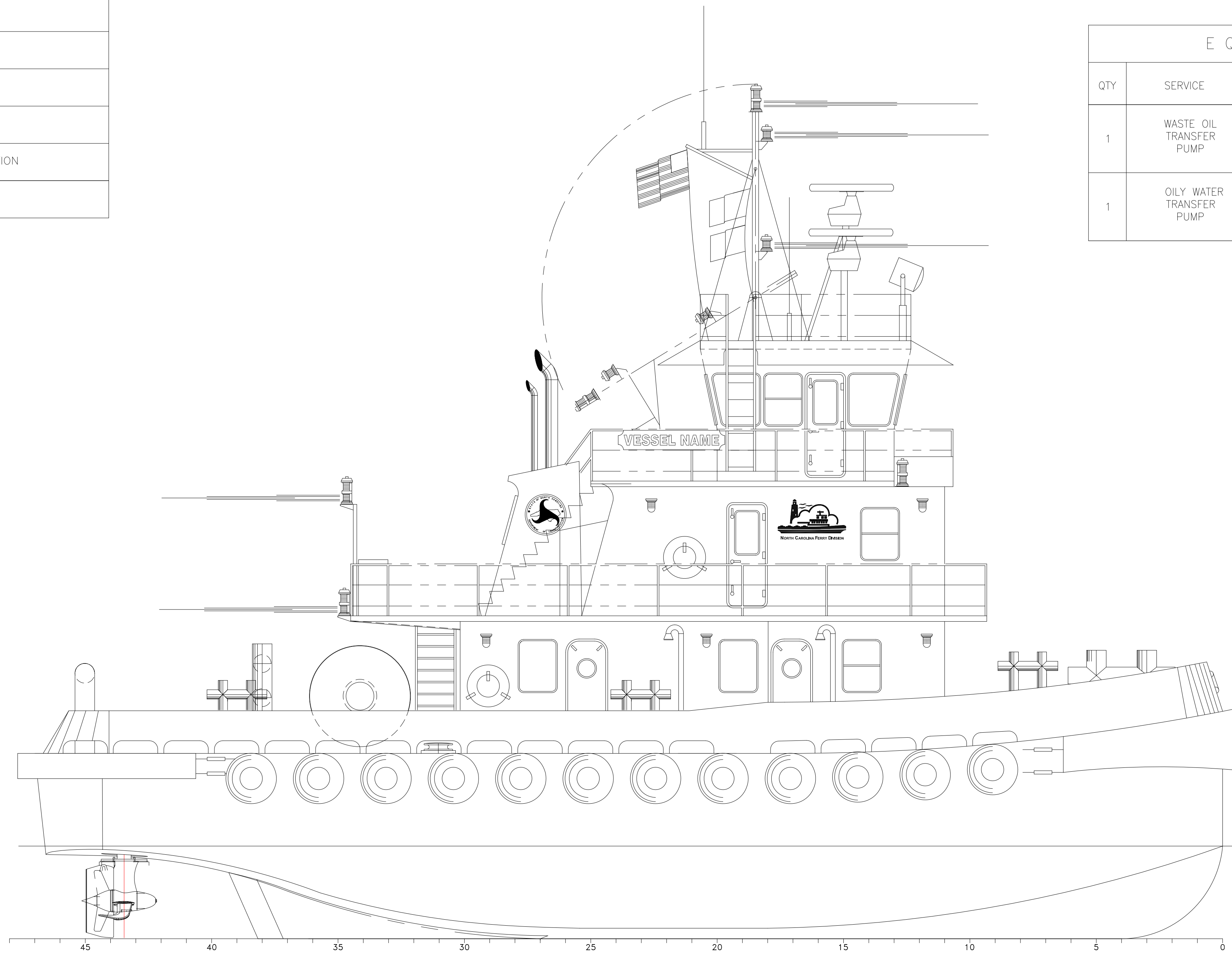


SYMBOLS LIST	
	PIPE
	REDUCER
	CHECK VALVE
	BALL VALVE
	BALL VALVE, LOCKING
	DIAPHRAGM PUMP
	CAMLOCK
	DRIP PAN
	HOSE REEL
	SUCTION STRAINER BOX
	BULKHEAD PIPE PENETRATION
	PRESSURE GAUGE

SERVICE	SIZE	PIPE	COMPONENTS				VALVES		BOLTING		REMARKS
			TAKEDOWN JOINTS	FITTINGS	FLEX CONNECT	GASKETS	BODY	TRIM	BOLTS/STUDS	NUTS/WASHERS	
WASTE OIL / OILY WATER DRAINS MAMP: 70 PSIG MAWT: 120°F	ALL	BELOW DECK CARBON STEEL, SCH 40, SEAMLESS, ASTM A53 TYPE S, OR ASTM A106, GRADE B, ANSI B36.10 ABOVE DECK 304SS, SCH 80, ASTM A312 GR304/304L	FLANGE #150, SOCKET WELD CARBON STEEL, ASTM A105, ANSI B16.5 VIEGA MEGAPRESS	BELOW DECK STEEL, VIEGA MEGAPRESS ABOVE DECK SOCKET WELD, S. STEEL, ASTM A351 GR 304/304L, ANSI B16.11	HOSE: SEE NOTE 11	GARLOCK STYLE 3000 BALL - ABV DK SW OR THREADED, 3-PIECE S. STEEL, ASTM A351 GR CF8M	BALL - BLW DK SW OR THREADED, 3-PIECE CARBON STEEL, ASTM A105, ASTM A181, OR ASTM A216 GR WCB CHECK - BLW DK THREADED, CARBON STEEL, ASTM A105, ASTM A181, OR ASTM A216 GR WCB	BALL CHROME PLATED BALL, RPTFE OR VITON SEATS CHECK CRES DISC	CARBON STEEL ASTM A307 GR B ANSI B18.2.1	HEX-HEAD CARBON STEEL ASTM A563 GR A ANSI B18.2.2	

EQUIPMENT & PUMP LIST					
QTY	SERVICE	TYPE	MODEL	CAPACITY	DRIVE
1	WASTE OIL TRANSFER PUMP	DOUBLE DIAPHRAGM		35 GPM @ 35 PSI	2HP TEFC MOTOR 208V/3P/60Hz SEE NOTE 10
1	OILY WATER TRANSFER PUMP	DOUBLE DIAPHRAGM		30 GPM @ 35 PSI	2HP TEFC MOTOR 208V/3P/60Hz SEE NOTE 10



KEY ELEVATION
NO SCALE

GENERAL NOTES -

GENERAL NOTES -

NO.	DESCRIPTION	NO.	DESCRIPTION
1.	MATERIAL AND WORKMANSHIP SHALL CONFORM TO U.S. COAST GUARD REQUIREMENTS FOR SUBCHAPTER "M" VESSELS.	12.	FLEXIBLE HOSE ASSEMBLIES SHALL MEET THE REQUIREMENTS OF 46 CFR 182.720, AND BE SUITABLE FOR WASTE OIL AND OILY WATER SERVICE. SUCTION HOSES SHALL BE NON-COLLAPSING.
2.	PIPING SHALL BE RUN AS DIRECTLY AS PRACTICABLE WITH A MINIMUM NUMBER OF BENDS AND FITTINGS. PROVIDE TAKEDOWN JOINTS FOR REMOVAL, INSPECTION, SERVICING, AND REPLACEMENT OF EQUIPMENT. PIPING SHALL BE RUN TO MINIMIZE CUTTING OF THE SHIP'S STRUCTURE.	13.	LOCATE BILGE STRIPPING SUCTIONS AT THE LOWEST POINTS IN THE ENGINE ROOM, EACH END.
3.	WHERE PIPES PENETRATE TANK BOUNDARIES, BULKHEADS, OR DECKS, HEAVY WEIGHT SPOOL PIECES OR REINFORCING PENETRATION FITTINGS SHALL BE USED. SEE DETAIL 1-4A.		
4.	PIPING SHALL BE SUPPORTED BY HANGERS IN ACCORDANCE WITH ASTM F708.		
5.	GAUGE ASSEMBLIES TO BE IN ACCORDANCE WITH ASTM F721. BALL VALVES, TUBING AND FITTINGS SHALL BE 316 STAINLESS STEEL.		
6.	DRIP PANS SHALL BE PROVIDED BENEATH ALL PUMPS, STRAINERS, & FILTERS THAT WILL LEAK DURING ROUTINE MAINTENANCE AND BE EQUIPPED WITH A LOW POINT DRAIN VALVE.		
7.	LUBE OIL PIPING SHALL NOT BE ROUTED NEAR ELECTRICAL DEVICES OR EQUIPMENT. LUBE OIL PIPING SHALL BE AT LEAST 18 INCHES AWAY FROM ANY SURFACE THAT NORMALLY HAS AN OPERATING TEMPERATURE OF 450°F OR GREATER.		
8.	GALVANIZED PIPE, FITTINGS, COMPONENTS, ETC. SHALL NOT BE USED.		
9.	FIT DRIP PANS UNDER HOSE REELS AND PUMPS.		
10.	FIT EACH MAIN ENGINE, GENERATOR, AND REDUCTION GEAR SUMP WITH A LOCKING DRAIN VALVE, 1" FEMALE CAMLOCK, AND DUST PLUG TO DRAIN LINE WITH A STAINLESS STEEL CHAIN OR CABLE.		
11.	EACH DIAPHRAGM PUMP SHALL BE SUPPLIED WITH ALUMINUM BODY, INTEGRATED COMPRESSOR, NPT PORTS, AND TPE SEATS, BALLS AND DIAPHRAGMS. EACH PUMP SHALL VFD CONTROLLED WITH PUSH BUTTON SPEED ADJUSTMENT.		

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TITLE: 70.5'x30'x11' NCDOT TOWBOAT

DIRTY OIL SYSTEM

Dwg. No. 17-1372-264 Alt. No. 0
Sh. 1 of 2

Drawn By: JACOB CONNALLY Date: JUNE 05, 2018
Checked By: _____ Date: _____
App'd By: _____ Scale: 1/2" = 1'-0"
ABS App'l: _____ USCG App'l: _____

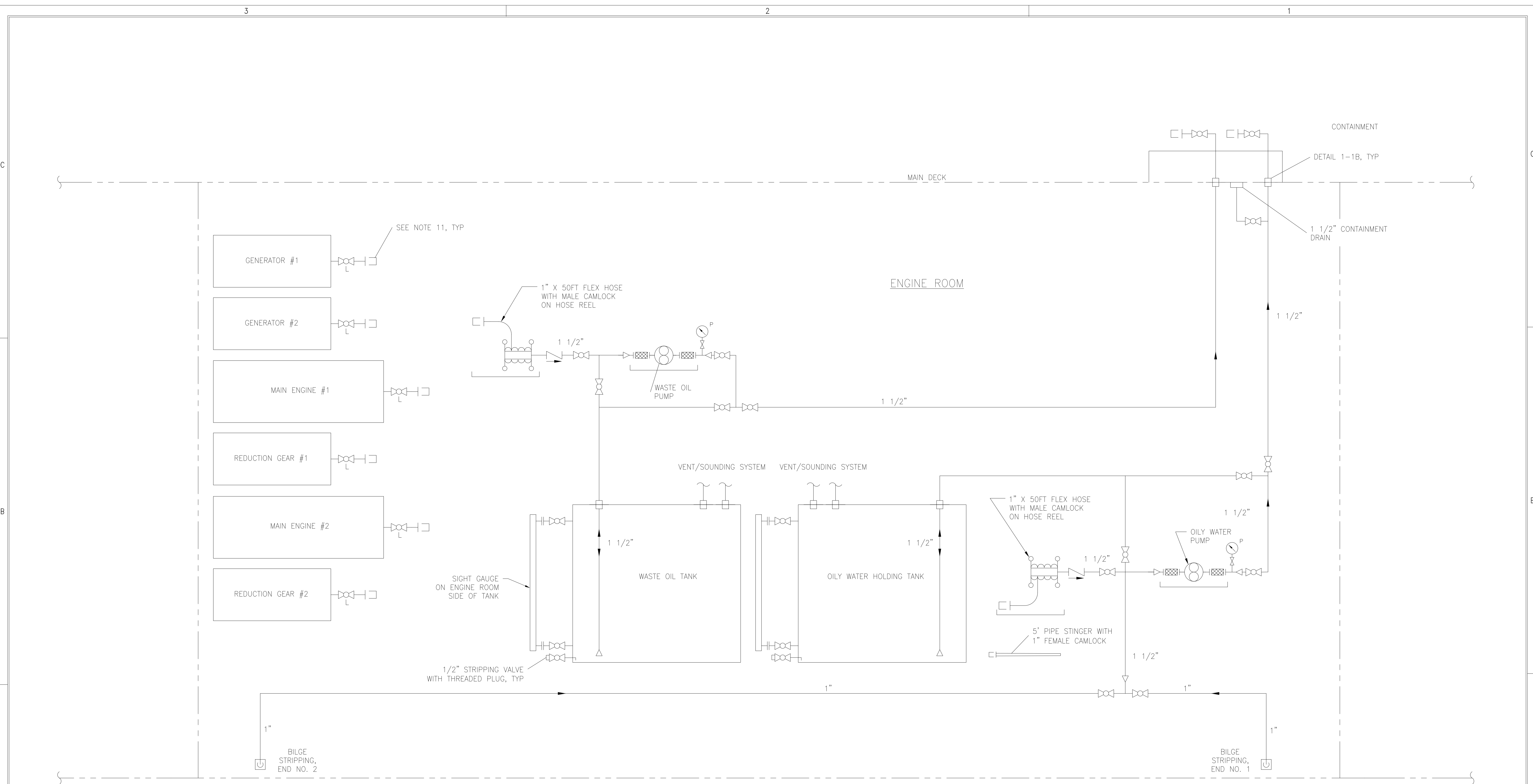


DIAGRAM 2-4A
OILY WATER COLLECTION/WASTE OIL SYSTEM

- GENERAL NOTES -		- GENERAL NOTES -	
NO.	DESCRIPTION	NO.	DESCRIPTION
1.	MATERIAL AND WORKMANSHIP SHALL CONFORM TO U.S. COAST GUARD REQUIREMENTS FOR SUBCHAPTER "M" VESSELS.	12.	FLEXIBLE HOSE ASSEMBLIES SHALL MEET THE REQUIREMENTS OF 46 CFR 182.720, AND BE SUITABLE FOR WASTE OIL AND OILY WATER SERVICE. SUCTION HOSES SHALL BE NON-COLLAPSING.
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11.	EACH DIAPHRAGM PUMP SHALL BE SUPPLIED WITH ALUMINUM BODY, INTEGRATED COMPRESSOR, NPT PORTS, AND TPE SEATS, BALLS AND DIAPHRAGMS. EACH PUMP SHALL VFD CONTROLLED WITH PUSH BUTTON SPEED ADJUSTMENT.		

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Title: 70.5'x30'x11' NCDOT TOWBOAT

DIRTY OIL PIPING

Dwg. No: 17-1372-264 Alt. No: 0
Sh: 2 of 2

Drawn By: JACOB CONNALLY Date: JUNE 05, 2018
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