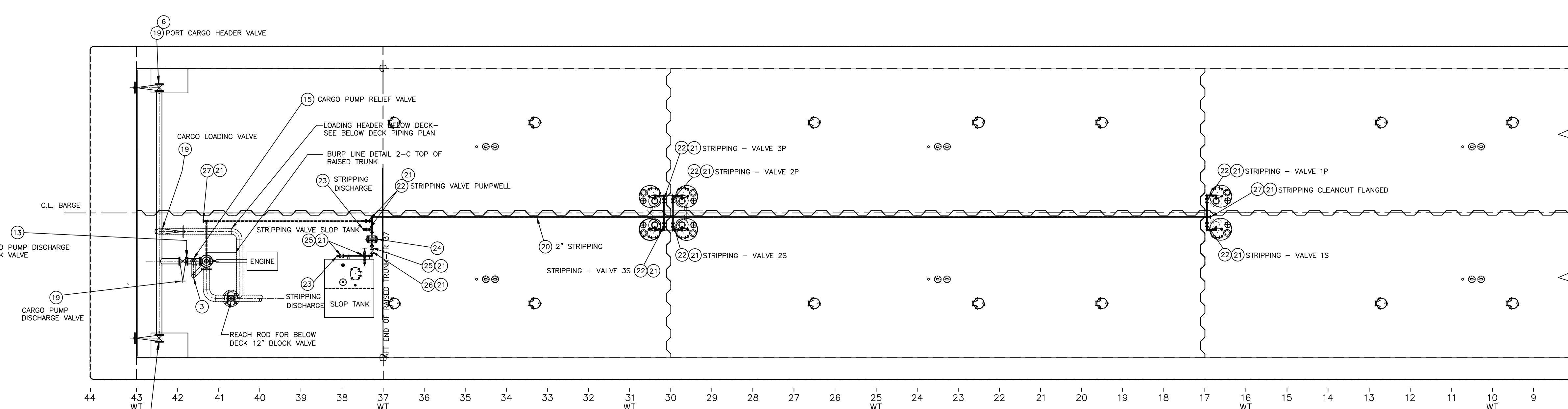
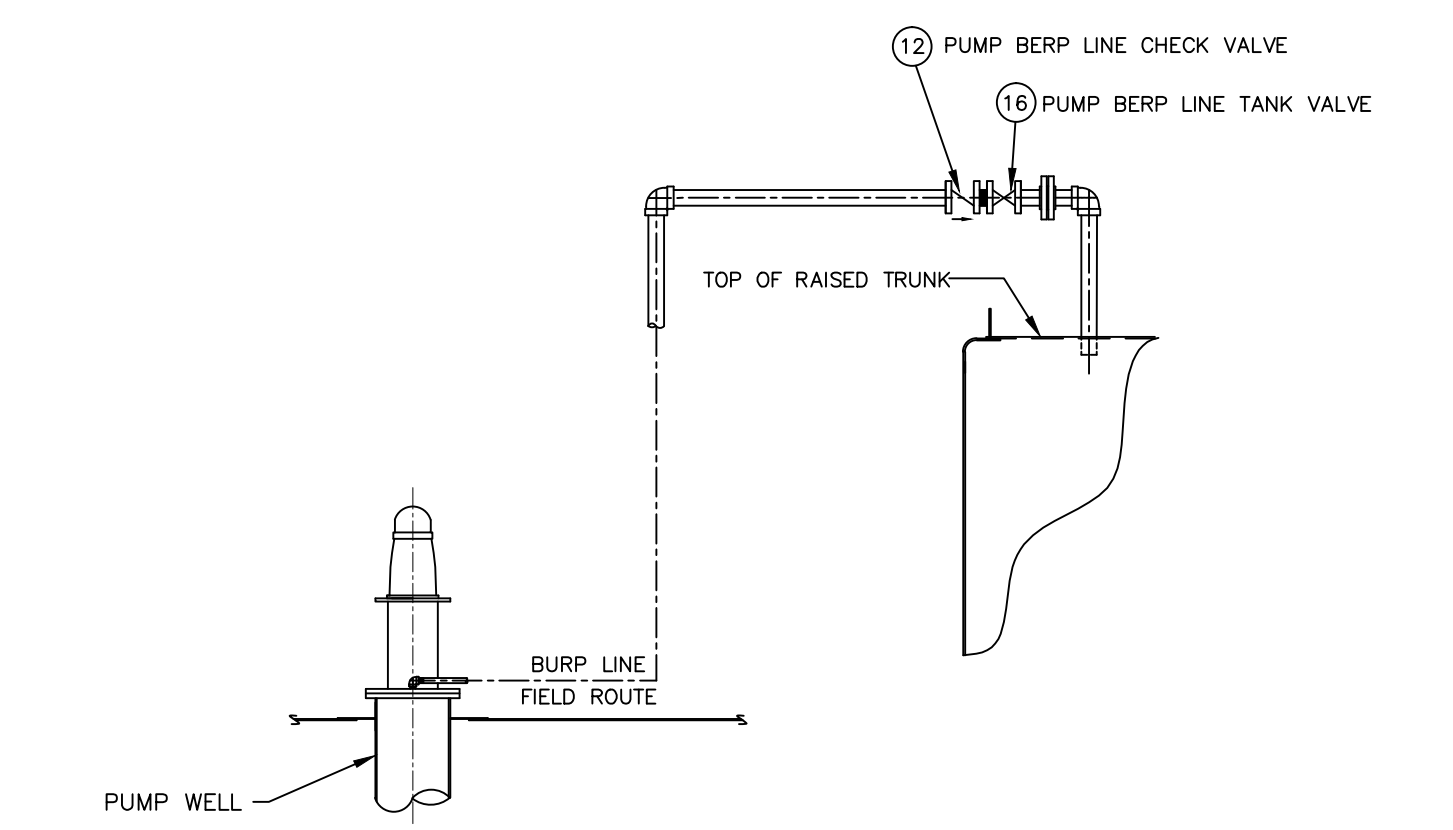
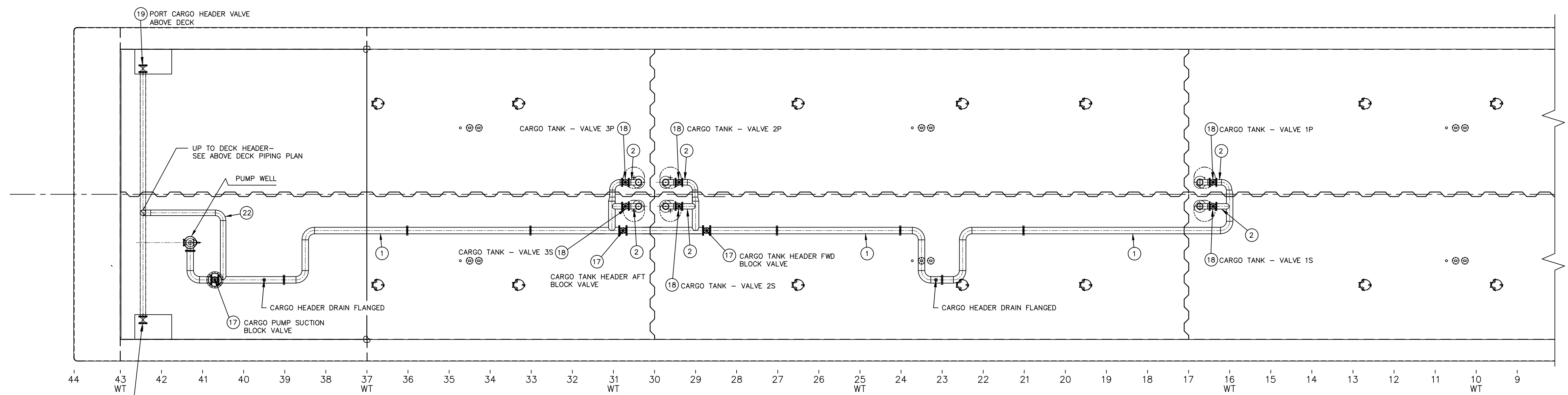


REVISIONS				
REV	ZONE	DESCRIPTION	DATE	APPROVED



- GENERAL NOTES:
- ALL PIPING SHALL MEET CURRENT USCG REQUIREMENTS FOR CLASS II PIPING SYSTEMS.
 - PIPES PASSING THROUGH WATER/OIL TIGHT BOUNDARIES SHALL BE WELDED DOUBLE CONTINUOUS.
 - CARGO SYSTEM:
PRESSURE: WORKING 100 PSI
DESIGN 150 PSI
TEST 225 PSI
RELIEF VALVE 125 PSI
 - ALL HATCHES, MANHOLES, STUFFING GLANDS, ETC. ON THE RAISED TRUNK WITH OPENINGS INTO THE CARGO TANKS SHALL BE FITTED WITH TEFLON GASKETS. ALL HATCHES, MANHOLES, ETC. THAT OPEN INTO VOIDS OUTSIDE OF THE CARGO AREA SHALL BE FITTED WITH NEOPRENE GASKETS.
 - CARGO PUMP ENGINE IS A CUMMINS MODEL 6CTA8.3D(M) RATED 270HP @ 1800RPM, IMO, US EPA TIER II COMPLIANT, CLASS I, DIVISION I COMPLIANT.
 - CARGO PUMP IS A BYRON JACKSON MODEL12X116GHC, 3 STAGE, RATED FOR 4285 BBL/HR @ 105 PSI, COMPLETE WITH AN AMARILLO S250 RIGHT ANGLE DRIVE W/1:1 RATIO AND DANA SL1710 x 48" LG. DRIVE SHAFT AND REMOVABLE GUARD.

LEVEL LOADING OF A SINGLE PRODUCT				
Draft (ft ABL)	Total Cargo (ST)	TANK		
		3 P/S (ST)	2 P/S (ST)	1 P/S (ST)
2.5	293.05	62.36	42.01	42.16
3.0	528.79	99.42	81.98	83.00
3.5	765.48	135.85	123.01	123.88
4.0	1,003.04	172.11	164.00	165.41
4.5	1,241.41	207.54	206.50	206.67
5.0	1,480.59	243.00	248.65	248.65
5.5	1,720.57	278.21	291.04	291.04
6.0	1,961.36	313.13	333.77	333.78
6.5	2,202.96	347.67	376.91	376.90
7.0	2,445.36	381.97	420.36	420.35
7.5	2,688.55	415.92	464.17	464.19
8.0	2,932.56	449.48	508.40	508.40
8.5	3,177.36	482.84	552.92	552.92
9.0	3,422.95	515.68	597.90	597.90
9.5	3,669.33	548.32	643.18	643.17
10.0	3,916.49	580.61	688.82	688.82
10.5	4,164.44	612.53	734.84	734.85
11.0	4,413.18	645.16	780.21	780.22
11.5	4,662.70	682.95	824.20	824.20

Notes:
1) Tank Load Values for Level Trim
2) Fuel Tank at 98% Full; Stop Tank Empty
3) Cargo Liquid SG = 1.05
4) Vessel Floating in Fresh Water

MK	QTY	SIZE	DESCRIPTION	MATERIAL	ASTM SPEC	ANSI SPEC	REMARKS
27	AR	2"	FLANGE, 150#, RF BLIND	ST. STEEL	TYPE 304	B16.5	
26	1	2"	VALVE, SWING CHECK, FLANGED, 150#, CR13 TRIM, SPACE FIG. 15051C	C. STEEL		B16.34	
25	2	2"	VALVE, GATE, FLANGED, 150#, OS&Y, R.S., CR13 TRIM, SPACE FIG. 15011C	C. STEEL		B16.34	
24	1		PUMP, AIR DIAPHRAGM, VERSA-MATIC MODEL #V3CA3RS30	CAST IRON			
23	2	2"	QUICK-CONNECT, MALE x FEMALE NPT W/DUST CAP & LANYARD	BRASS	B-62		
22	8	2"	VALVE, BALL, FLANGED, 800#, FULL PORT, CR13 TRIM, WARREN MODEL 6156 OR EQUAL	C. STEEL		B16.34	
21	AR	2"	FLANGE, 150#, RFSD	ST. STEEL	TYPE 304	B16.5	
20	AR	2"	PIPE, SCH 40 SEAMLESS	ST. STEEL	TYPE 304	B36.19	
19	4	10"	VALVE, GATE, 150# FLGD, OS&Y, R.S., C.S. BODY, CR13 TRIM, SPACE #15011C	CARBON STL	A-216 GR WCB	B16.5	
18	6	10"	VALVE, GATE, 150# FLGD, NRS, C.S. BODY, CR13 TRIM, SPACE #15021C	CARBON STL	A-216 GR WCB	B16.5	
17	3	12"	VALVE, GATE, 150# FLGD, NRS, C.S. BODY, CR13 TRIM, SPACE #15021C	CARBON STL	A-216 GR WCB	B16.5	
16	1	1 1/4"	GATE VALVE, 200#, SCR'D, NRS, 316 S.S. TRIM, SHARPE FIG. 30276	A-351		B16.10	
15	1		RELIEF VALVE SET @ 125 PSI, TELEDYNE #26PAT0L OR EQUAL	CARBON STL	A-216	B16.5	
14	AR		PRESSURE GAUGE, 4" DIAL, 1/2" MNPT BOTTOM CONNECTION, ASHCROFT OR EQUAL				
13	1	10"	CHECK VALVE, WAFER TYPE, 150#, CARBON STEEL BODY/316 S.S. TRIM, KEYSTONE #810 OR EQUAL	CARBON STL	A-216	B16.5	
12	1	1 1/4"	SWING CHECK VALVE, 200# SCR'D, 316 S.S. TRIM	A-351		B16.10	
11	AR		HALF COUPLING, 3000# THREADED BLK	FORGED STEEL	A-105	B16.11	
10	AR		CONC. REDUCER, B.W., SCH 40 BLK	STEEL	A-234	B16.9	
9	AR		ELBOW, 90° L.R.B.W., SCH 40 BLK	STEEL	A-234	B16.9	
8	AR		TEE, SCH 40 BLK B.W.	STEEL	A-234	B16.9	
7	AR		ELBOW, 45° L.R.B.W., SCH 40 BLK	STEEL	A-234	B16.9	
6	2		FLANGE, BLIND, 150# R.F., STAINLESS STEEL	ST. STEEL	TYPE 304	B16.5	
5	AR		RING GASKET, 150#, 1/16" THICK, NON-ASBESTOS, GARLOCK OR EQUAL				
4	AR		FLANGE, 150# R.F.S.O.	FORGED STEEL	A105	B16.5	
3	AR	6"	PIPE, SCH 40, ERW	BLK STEEL	A53 GR B	B36.10	
2	AR	10"	PIPE, SCH 40, ERW	BLK STEEL	A53 GR B	B36.10	
1	AR	12"	PIPE, SCH 40, ERW	BLK STEEL	A53 GR B	B36.10	

HULL APPLICABILITY					
C1012	CBC 378	C1005	CBC 372	H449	CBC 371
C1013	CBC 379	C1006	CBC 373	H450	CBC 376
C1014	CBC 381	C1007	CBC 374	H451	CBC 380
C1015	CBC 382	C1008	CBC 375	H452	CBC 384
C1016	CBC 383	C1011	CBC 377	H453	CBC 386
C1017	CBC 385				

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297'-6" x 54' x 12'-0" DOUBLE SKIN TANK BARGE

CARGO DIAGRAM

DRAWN BY:	RRN	SCALE:	3/32"=1'-0"	DRAWING NO.:	M-101	REVISION:	0	SHEET:	1
CHECKED BY:	RRN	DATE:	11/26/12						
USCG APPROVAL:									

BILL OF MATERIAL

