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SYMBOL	DESCRIPTION
	GLOBE VALVE
	GLOBE VALVE – LOCKED CLOSED
	GLOBE VALVE – LOCKED OPEN
	STOP CHECK GLOBE VALVE
	STOP CHECK GLOBE VALVE – LOCKED CLOSED
	STOP CHECK GLOBE VALVE – LOCKED OPEN
	LIFT CHECK VALVE
	BALL VALVE – LOCKED CLOSED
	NEEDLE VALVE
	NEEDLE VALVE WITH STEM TEST CONNECTION
	NEEDLE VALVE WITH STEM TEST CONNECTION– LOCKED OPEN
	PRIORITY VALVE – SEE NOTE 9
	PRESSURE REDUCING DIAPHRAM VALVE
	PRESSURE RELIEF VALVE
LP	ALARM, LOW PRESSURE
P	GAUGE, PRESSURE, LOCAL READING
T	THERMOMETER, LOCAL READING, W/THERMOWELL–SEE NOTE 15
PS	PRESSURE OPERATED SWITCH
DP	DEW POINT MONITOR

SYMBOL	DESCRIPTION
	PRESSURE REDUCING VALVE
DM SOL	AUTOMATIC DRAIN VALVE
EM SOL	ELECTROMAGNETIC AND MANUAL STARTING VALVE
PI SOL	TWO WAY SOLENOID VALVE – POSITION INDICATION
	BALL VALVE
	DRYER WITH MOISTURE SEPARATOR
	MOISTURE SEPARATOR
SOL	TWO WAY SOLENOID VALVE
	FLEXIBLE HOSE
	QUICK DISCONNECT HOSE CONNECTION
	HOSE CONNECTION C/W CAP AND KEEP CHAIN
	FLANGE
	AIR COMPRESSOR
	FILTER, COALESCING
D	MECHANICAL DIFFERENTIAL PRESS. INDICATOR, INC. TELLTALE
	LUBRICATOR
	REDUCER
F	MOISTURE SEPARATOR WITH FILTER
AD	AUTOMATIC DRAIN

GENERAL NOTES (CONTINUED)

TESTING:

6.1 THE STARTING AIR SYSTEM IS TO BE HYDROSTATICALLY TESTED TO 135% OF MAXIMUM WORKING PRESSURE OR 765 PSI (CLASS II).

6.2 THE SERVICE AIR AND CONTROL AIR SYSTEMS ARE TO BE HYDROSTATICALLY TESTED TO 135% OF THE MAXIMUM WORKING PRESSURE OR 190 PSI.

6.3 FOLLOWING THE HYDROSTATIC PRESSURE TEST, THE SYSTEMS SHALL BE DRAINED AND THOROUGHLY DRIED BY BLOWING OUT WITH CLEAN DRY AIR. THE SYSTEMS ARE THEN TO BE TIGHTNESS TESTED WITH DRY AIR (550 PSI FOR STARTING AIR, 125 PSI FOR SERVICE AND CONTROL AIR.

INSTALLATION

7.1 PER ABS NVR 5–2–10/2.3, THE COMPRESSOR INTAKE AIR TERMINAL SHALL BE LOCATED BETWEEN 6" & 18" FROM A VENTILATION AIR TERMINAL.

7.2 PIPE ROUTING IS INDICATIVE ONLY AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NVR SECTIONS 5–1–1A/5.3 AND 5–1–1B/5.3 (ELECTRICAL EQUIPMENT PROTECTION). PER ABS NVR 5–2–10 3.1, PIPING SHALL BE ARRANGED TO ELIMINATE POCKETS WHERE MOISTURE MAY COLLECT. WHERE POCKETS OR LOW POINTS IN AIR PIPING ARE UNAVOIDABLE, DRAINS WILL BE INSTALLED AT LOW POINTS.

7.3 DEAD END PIPING SHALL BE KEPT TO A MINIMUM.

7.4 DRAIN LINE TERMINALS ON MOISTURE SEPARATORS AND RECEIVERS SHALL BE LOCATED SO THAT THE DISCHARGE IS CLEARLY VISIBLE TO THE OPERATOR OF THE DRAINAGE VALVE.

7.5 DISTANCE FROM FINAL STARTING AIR REDUCING STATIONS TO THE ENGINES THEY SERVE IS TO BE KEPT TO A MINIMUM BUT TO BE AT LEAST 5M.

7.6 PER ABS NVR 5–2–10 3.8, DISCHARGE PIPING FROM RELIEF VALVES WILL BE DIRECTED SO AS TO NOT DAMAGE MACHINERY OR EQUIPMENT OR TO ENDANGER PERSONNEL.

7.7 ISOLATION GASKETS TO BE PROVIDED AT MATERIAL TRANSITIONS.

7.8 PNEUMATIC AIR OUTLETS LOCATED IN THE WEATHER SHALL BE PROTECTED BY WEATHERPROOF ENCLOSURES

7.9 AN EXPANDED METAL CAGE SHALL BE INSTALLED AROUND BOTH THE MOISTURE SEPARATOR/FILTER AND COALESCING FILTER ON THE SHORE SUPPLY LINE.

INSTRUMENTATION:

8. STARTING AIR SYSTEM SHALL BE IN ACCORDANCE WITH NVR 5–2–10/15 AS MODIFIED FOR THIS PROJECT:

8.1 FOR SSDGS THE AUTOMATIC STARTING AIR VALVES SHALL BE ACTUATED BY ONE OR MORE SOLENOID VALVES, AS NECESSARY. THE SOLENOID VALVES SHALL BE ARRANGED TO OPEN THE AUTOMATIC AIR STARTING VALVE TO ALIGN WITH THE REQUIREMENTS OF THE POWER MANAGEMENT SYSTEM, REFER TO REFERENCES 7 AND 8 FOR DETAILS.

8.2 FOR SSDGS, TO INDICATE THAT ALL MANUALLY–OPERATED VALVES ARE SET UP FOR AUTOMATIC OPERATION, ALL CUTOUT VALVES, EXCEPT THE BYPASS VALVE AROUND THE REDUCING VALVE, SHALL BE INSTALLED WITH A SWITCH CONNECTED TO GREEN INDICATOR LIGHTS, INSTALLED ON BOTH THE SWITCHBOARD ASSOCIATED WITH THE DIESEL GENERATOR AND ON THE ELECTRIC PLANT SECTION OF THE MAIN CONTROL CONSOLE, INDICATING THAT THE VALVES ARE IN THE OPEN POSITION.

9. COMPRESSOR OPERATION SHALL BE FULLY AUTOMATIC. THE COMPRESSOR'S CONTROLLER SHALL PROVIDE LOCAL DISPLAY OF KEY PARAMETERS AND SEND REMOTE DISPLAY OF THE SAME KEY PARAMETERS TO THE MPCMS. AIR RECEIVER LOW PRESSURE ALARMS SHALL BE PROVIDED AUDIBLY AND VISUALLY LOCALLY AND REMOTELY AT THE PROPULSION CONTROL CONSOLE.

10. IN ACCORDANCE WITH NVR 5–2–10 10.4 A TWO–STEP MANUAL RETURN SWITCH, UTILIZING A "PULL–OUT TO THROW" SAFETY INTERLOCK FEATURE, SHALL BE USED FOR CONTROL OF ALL SOLENOID VALVES IN AIR SYSTEMS.

11. ALL ELECTRICALLY ACTUATED VALVES SHALL BE PROVIDED WITH MEANS FOR OVERRIDING THE ACTUATOR OF THE VALVES MANUALLY. CONTROL VALVE SHALL BE INSTALLED IN THE COMPRESSED AIR STARTING SYSTEM TO PRECLUDE THE INITIATION OF THE AUTOMATIC STARTING SEQUENCE WHEN THE GENERATOR ENGINE IS RUNNING. THE CONTROL VALVE MAY BE ACTIVATED BY ENGINE FUEL, LUBRICATING OIL, OR COOLING WATER PRESSURE. (NVR 5–2–10/15.1.5) THE AUTOMATIC STARTING AIR VALVE FOR THE GENERATORS SHALL BE PROVIDED BY THE ENGINE VENDOR, AND SHALL BE ARRANGED WITH MANUAL STARTING OVERRIDE TO MEET INTENT OF NVR 5–2–10/15.1.2.

AUSTAL CM Issued By: Chelsea Weishaar 3/4/2024 12:46

ABBREVIATIONS

ACRONYM	DESCRIPTION
MPDE	MAIN PROPULSION DIESEL ENGINE
SSDG	SHIP SERVICE DIESEL GENERATOR
SCFM	STD CUBIC FEET/MINUTE
F	FAHRENHEIT
CRES	CORROSION RESISTANT STEEL
WTB	WATER TIGHT BULKHEAD
SCH	SCHEDULE
SC	SEA CHEST

LINE TYPES

- STARTING AIR (MP)
- VITAL SERV AIR (LP)
- CONTROL AIR (LP)
- NON–VITAL SERV AIR (LP)
- SWITCH CONNECTION

GENERAL NOTES

SYSTEM REQUIREMENTS

1. THE COMPRESSED AIR SYSTEM CONSISTS OF:

1.1 STARTING AIR SYSTEM – THE STARTING AIR SYSTEM IS A MEDIUM PRESSURE SYSTEM. IT OPERATES AT 550 PSI AND IS USED FOR STARTING THE 2 MAIN PROPULSION DIESEL ENGINES AND THE 4 SHIP SERVICE DIESEL GENERATOR ENGINES.

1.2 SERVICE AIR SYSTEM – THIS SYSTEM IS A LOW PRESSURE SYSTEM OPERATES AT 125 PSI. IT IS DIVIDED INTO A "VITAL" SYSTEM AND A "NON–VITAL SYSTEM". IT PROVIDES ALL THE SERVICE AIR REQUIRED THROUGHOUT THE VESSEL, INCLUDING AIR NEEDED FOR EQUIPMENT, FOR OPERATING HAND TOOLS, FOR SEA CHEST BLOW OUTS,

1.3 CONTROL AIR SYSTEM – THIS SYSTEM FEED OF THE SERVICE AIR SYSTEM. IT IS A 125 PSI SYSTEM ALSO. THE AIR IS DRIED TO A DEW POINT OF –40 DEGREE F. THIS AIR IS USED FOR INSTRUMENTS AND CONTROLS THAT REQUIRE SMALL FLOW DRY AIR.

1.4 VALVES WITH THIS NOTE REQUIRE PERMANENT ACCESS AT DECK LEVEL OR BY PERMANENT STANDING ELEVATED SURFACE. IF SUCH IS NOT PRACTICAL, ACCESS BY STAIR IS ACCEPTABLE.

TECHNICAL INFORMATION

2. THE STARTING AIR SYSTEM:

2.1 THE STARTING AIR SYSTEM CONSISTS OF 2 STARTING AIR COMPRESSORS AND 3 STARTING AIR RECEIVERS. 1 AIR COMPRESSOR AND 1 AIR RECEIVER ARE IN THE AFT ENGINE ROOM, 1 AIR COMPRESSOR AND 1 AIR RECEIVER ARE IN THE SSDG ROOM. THE THIRD AIR RECEIVER IS LOCATED IN THE FWD ENGINE ROOM.

2.2 EACH AIR RECEIVER IF SUPPLIED BY A 1" STARTING AIR MAIN THAT RUNS FROM THE AFT ENGINE ROOM THRU TO THE FWD SSDG ROOM.

2.3 THE STARTING AIR SYSTEM IS OPERATING AT 550 PSI. THE RELIEF VALVES ON THE AIR RECEIVERS ARE SET AT 565 PSI. MPDES AND THE SSDGS REQUIRE PRESSURE REDUCING STATIONS BEFORE THE AIR ENTERS THE AIR STARTER. B21

3. THE SERVICE AIR SYSTEM:

3.1 AIR DEHYDRATORS SHALL BE PROVIDED FOR THE SHIP SERVICE AIR COMPRESSORS. THEY MUST PROVIDE AIR AT A DEW POINT OF 55 DEG F AT 125 LB./IN^2.

4 THE CONTROL AIR SYSTEM:

4.1 FOR CONTROL AIR: DEHYDRATORS SHALL MEET THE REQUIREMENTS OF 5–2–10/13.2.2 (DRY AIR), ALTHOUGH DESICCANT TYPE DEHYDRATORS MAY BE USED IN LIEU OF MEMBRANE TYPE. WHERE NECESSARY, ADDITIONAL DEHYDRATORS AND OTHER FILTRATION/SEPARATION EQUIPMENT SHALL BE PROVIDED TO MEET THE REQUIREMENTS OF THE CONTROL AIR CONSUMERS THEY SERVE. IN PARTICULAR, THE REQUIREMENTS OF THE CONTROL AIR FOR THE MPDES SHALL BE MET. THE DEHYDRATORS SHALL BE ACTIVELY MONITORED, THEY SHALL PRODUCE A GENERAL ALARM UPON FAULT TO MPCMS AND LOCAL.

GENERAL

5.1 PER ABS NVR 5–2–10/13.3.6, INSTALL LABEL PLATES NEAR SEA CHEST BLOWING NEEDLE VALVES INSCRIBED WITH THE WORDS " CAUTION – DO NOT PERMIT PRESSURE TO EXCEED 2.40 BAR, (2.46KG/CM2, 35PSI) WHEN BLOWING–OUT SEA CHEST. PER ABS NVR 5–2–10 13.3.6, OUTLETS FOR BLOWING OUT SEA CHESTS ARE TO BE LOCATED CENTRALLY SO THAT EACH OUTLET CAN SERVE AS MANY SEA CHESTS AS PRACTICABLE. FOR DETAILS OF CONNECTIONS TO SEA CHEST BLOW OUT REFER TO REFERENCE 9.

5.4 ABS NVR 5–2–10/13.3.3, EACH BLOW GUN HOSE CONNECTION SHALL BE PROVIDED WITH A HOSE AND BLOW GUN. THE BLOW GUN SHALL BE FITTED WITH AN ORIFICE DESIGNED TO LIMIT DISCHARGE PRESSURE TO 25 PSI.

ALL PNEUMATIC TOOL AIR OUTLETS SHALL BE EQUIPPED WITH METAL BOWL GUARDS AND UNION END FITTINGS IN ACCORDANCE WITH MIL–F–1183.

5.5 PER ABS NVR 5–2–10 13.1.3, PRIORITY VALVES WILL BE SIZED FOR THE CONNECTED LOAD OF THE VALVE PLUS 25 PERCENT.

5.6 IN ACCORDANCE WITH 5–2–10/3.2 COMPRESSED AIR LINES SERVING WATER MIST PROTECTED SPACES SHALL BE PROVIDED WITH CUTOUT VALVES OUTSIDE THE SPACE SERVED.

5.7 PIPING CONNECTIONS TO RESILIENTLY MOUNTED EQUIPMENT SHALL CONTAIN FLEXIBLE HOSE CONNECTIONS IN ACCORDANCE WITH TECHNICAL DIRECTIVE S6430–AE–TED–010.

5.8 IN ACCORDANCE WITH 5–2–10/3.4 AIR SYSTEMS SHALL BE PROVIDED WITH MEANS FOR BLEEDING DOWN FOR REPAIR PURPOSES. TO ACCOMPLISH THIS, GAUGE ISOLATION AND TEST VALVES SHALL BE IN ACCORDANCE WITH MIL–V–24578, FITTED WITH A UNION TYPE CONNECTION BETWEEN THE VALVE BODY AND BONNET AND WITH THE STEM ASSEMBLED FROM THE BOTTOM OF THE BONNET. B29

5.9 IN ACCORDANCE WITH 5–2–10/8 AIR RECEIVERS SHALL BE IN ACCORDANCE WITH ASME PRESSURE VESSEL TEST CODE REQUIREMENTS OR PREVIOUSLY APPROVED NAVAL TECHNICAL AUTHORITY DESIGN. AIR RECEIVERS MAY COMPLY WITH 46 CFR 54, OR ASME BOILER AND PRESSURE VESSEL CODE AS APPLICABLE

5.10 FILTERS FOR REDUCING STATIONS SHALL MEET THE FILTRATION REQUIREMENTS SPECIFIED IN MIL–V–24272 OR ISO 8573.1, CLASS 5 PARTICULATE. PRESSURE INSTRUMENT PROTECTIVE DEVICES (SNUBBERS) IN ACCORDANCE WITH MIL–S–2940 SHALL BE INSTALLED IN ALL INSTRUMENT PIPING SYSTEMS IN WHICH PRESSURE SPIKES OR CONTINUOUS PRESSURE PULSATIONS ARE EXPECTED. SNUBBERS SHALL BE INSTALLED BETWEEN THE INSTRUMENT ISOLATION VALVE AND THE INDIVIDUAL PRESSURE INSTRUMENT AS CLOSE TO THE PRESSURE INSTRUMENT AS POSSIBLE.

5.11 IN ACCORDANCE WITH 5–2–10/3.4 AIR SYSTEMS SHALL BE PROVIDED WITH MEANS FOR BLEEDING DOWN FOR REPAIR PURPOSES. TO ACCOMPLISH THIS, GAUGE ISOLATION AND TEST VALVES SHALL BE IN ACCORDANCE WITH MIL–V–24578, FITTED WITH A UNION TYPE CONNECTION BETWEEN THE VALVE BODY AND BONNET AND WITH THE STEM ASSEMBLED FROM THE BOTTOM OF THE BONNET.

5.12 A HOSE SHALL BE PROVIDED SO THAT IT CAN REACH ANY POINT ON A HELICOPTER FOR WHICH THE CUTTER IS CLASS 1 CERTIFIED; SPOTTED AT THE AIRCRAFTS' FARTHEST AFT PERMISSIBLE FLIGHT DECK SPOTTING POSITION.

5.13 MPDE STARTING AIR PROVIDED WITH FILTERS WITH 5.0 MICRON ELEMENTS TO MEET AT LEAST THE QUALITY REQUIREMENT OF ISO 8573–1:2010 [6:7:X]:

5.13.1 SOLID PARTICLES PARTICLE SIZE > 40 MICRONS

5.13.2 MAX. CONCENTRATION < 5 MG/M3

5.13.3 RESIDUAL WATER CONTENT < 0.5 G/M3

5.13.4 ADDITIONAL REQUIREMENTS ARE:

5.13.5 THE AIR MUST NOT CONTAIN ORGANIC OR INORGANIC SILICON COMPOUNDS.

5.13.6 THE LAYOUT OF THE STARTING AIR SYSTEM MUST ENSURE THAT NO CORROSION MAY OCCUR.

5.13.7 THE STARTING AIR SYSTEM AND THE RECEIVER MUST BE EQUIPPED WITH CONDENSATE DRAIN DEVICES.

5.13.8 BY MEANS OF DEVICES PROVIDED IN THE STARTING AIR SYSTEM AND VIA MAINTENANCE OF THE SYSTEM COMPONENTS, IT MUST BE ENSURED THAT ANY HAZARDOUS FORMATION OF AN EXPLOSIVE COMPRESSED AIR/LUBE OIL MIXTURE IS PREVENTED IN A SAFE MANNER.

5.14 MPDE CONTROL AIR PROVIDED WITH FILTERS WITH 0.5 MICRONS ELEMENTS TO MEET AT LEAST THE QUALITY REQUIREMENT OF ISO 8573–1:2010 [5:4:3].

5.15 WHERE NON–UNION SW GLOBE VALVES ARE UTILIZED, TAKE DOWN JOINTS ARE TO BE PROVIDED TO REMOVE THE VALVES FOR MAINTENANCE. TAKE DOWN JOINTS NEED NOT BE ON AN INDIVIDUAL VALVE BASIS, BUT MAY BE FOR A GROUP OF VALVES. (FOR EXAMPLE, THE HP REDUCING STATION OR SEACHEST BLOW DOWN ASSEMBLIES). THE VALVES WITHIN THE ASSEMBLY SHOULD BE GENERALLY ARRANGED IN THE SAME DIRECTION, AND IN A DIRECTION SUCH THAT WHEN THE ASSEMBLY IS PLACED ON A WORK BENCH, THE VALVE SEAT IS POSITIONED TO ALLOW IT TO BE LAPPED.

5.16 MPDE LOCAL INSTRUMENT PANEL HAS A STARTING AIR PRESSURE READOUT FROM PT7170 WHICH SENDS A 4–20MA SIGNAL THAT CONVERTS INTO A PRESSURE READOUT.

5.17 A SCBA SYSTEM IS A VENDOR PROVIDED SYSTEM AND IS CAPTURED ON OPC–640–01–5015 DAMAGE CONTROL STATIONS ARRANGEMENT. B6

5.18 A PROTECTIVE COVERING OF METAL LAGGING WILL BE APPLIED OVER UNINSULATED HOT SURFACES TO PROTECT PERSONNEL OR REDUCE RISK OF FIRE.

5.19 THE MPDE LOCAL INSTRUMENT PANEL (OR SACOS) DOES HAVE A STARTING AIR PRESSURE READOUT. THE PRESSURE TRANSMITTER (PT7170) SENDS A 4–20MA ANALOG SIGNAL, WHICH CONVERTS TO INTO A PRESSURE READING.

360B WMSM	919 AF
PLAN SET	HULLS

APPLICABILITY

AUSTAL DRAWING NO. OPC–551–01–5001

REVISIONS

REV	SH	ZONE	ITEM	DESCRIPTION	DATE	APPR. SIG & ORG
—				–DELETED 1 STARTING AIR COMPRESSOR. –DELETED 2 STARTING AIR RECEIVERS AND MADE 2 STARTING AIR RECEIVERS LARGER. –DELETED 2 STARTING AIR AFTERCOOLERS.	05/26/23	TIM GENTRY
A	1	3–A	1	ADD GENERAL NOTE 5.16 USCG COMPLIANCE COMMENT 2	10/08/23	TIM GENTRY
	1 9	1–C 66–B	2	RESERVATION 1 MODIFIED FINAL PIPE HOOKUP DEPENDENT ON VENDOR DATA USCG COMPLIANCE COMMENT 4		
	1	3–C	3	REVISE GENERAL NOTE 3.1 USCG DESIGN CONCERNS COMMENT 1		
	3 4,5,7, 8	23–B VAR	4	PRESSURE REDUCING VALVES REORIENTED TOWARDS CONSUMERS USCG DESIGN CONCERNS COMMENT 4		
	4 VAR	31–C VAR	5	LUBRICATORS REMOVED USCG DESIGN CONCERNS COMMENT 5		
	3 VAR	20–D VAR	6	VALVES MOVED CLOSER TO BOTH SIDES OF ALL WT BHDS OR ADDED USCG DESIGN CONCERNS COMMENT 6 USCG COMPLIANCE COMMENT 1		
	4	31–C	7	SPELLING CORRECTION ADMINISTRATIVE NOTES 2		
	1A	1–A	8	FIX ZONE NUMBERS LETTERS USCG COMPLIANCE COMMENT 2		

CONTINUED ON SHEET 1A–2 B20

B9

REFERENCE PLANS

NO.	TITLE	DRAWING NO.
8	ROLLS ROYCE DRAWING – CONTROL VALVE ASSEMBLY	314–315
7	GENERAL ARRANGEMENT DRAWING	360B–WMSM–070–001
6	POTABLE WATER SYSTEM DIAGRAM	360B–WMSM–532–001
5	FUEL OIL SYSTEM DIAGRAM	360B–WMSM–541–001
4	BILGE AND BALLAST SYSTEM DIAGRAM	360B–WMSM–529–001
3	CHILLED WATER SYSTEM DIAGRAM	360B–WMSM–532–003
2	MACHINERY SEA WATER COOLING SYSTEM	360B–WMSM–256–001
1	SEWAGE SYSTEM DIAGRAM	360B–WMSM–593–003

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APPROVED: BRAD VICKERS	05/26/23	
USCG APPROVAL	MM/DD/YY	
APPR. SIG & ORG		
APPR. AUTH		

UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING

360 FEET B18 WMSM

COMPRESSED AIR SYSTEM DIAGRAM

TITLE SHEET

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81390	360B–WMSM–551–001	B

SCALE: NOTED SHEET: 1 OF 29

SYSTEM DESIGN / MATERIAL SCHEDULE

SUB-SYSTEM NUMBER	SUB-SYSTEM	CLASS	MWP AND SOURCE	TEST PRESSURE AND CRITERIA	SYSTEM CLEANLINESS	MEDIA TEMPERATURE	SIZE RANGE	INSULATION	LAGGING	PIPE TYPE AND STANDARD	VALVES	FITTINGS	FLANGES	FLANGE HARDWARE	OTHER TAKEDOWN JOINTS	REMARKS
SA SS1	STARTING AIR	ABS NVR CLASS II SEE REMARK 3	565 PSI RELIEF VALVE	763 PSI SEE REMARK 1	AFTER HYDRO TEST BLOW DOWN THE SYSTEM WITH DRY AIR UNTIL IT IS DRY	120 F	ALL	N/A	N/A	SS 316L, SCH 10S MIL-P-24691/1	BALL: SS 316L, MSS SP-72-2010A (1/4"-2") RELIEF: SS 316L, MIL-V-24332, FLANGED ENDS ONLY, CLASS 300 CHECK: SS 316L, ASME B16.34, CLASS 300, LIFT CHECK, SPRING LOADED	BELLED END SOCKET-WELD: SS 316L, ASME B16.11 BUTT-WELD: SS WP316L-S, ASME 16.9 MAFS: ASTM F1387, SCH 10S	BUTT-WELD AND SOCKET-WELD: SS F316L, ASME B16.5, SERIES 300	BOLTS, SCREWS AND STUDS: NICKEL COPPER, ASTM F468, GRADE 400 NUTS: NICKEL COPPER, ASTM F467, GRADE 400 GASKETS: O-RING, FLUOROCARBON, SAE-AMS7276	N/A	1. PER NVR 5-2-10/22.1 SYSTEM SHALL BE HYDROSTATICALLY TESTED TO 135 PERCENT OF THE DESIGN PRESSURE. 2. PER NVR 5-1-1B/3.6.2 SYSTEMS SHALL BE TESTED TO AT LEAST 50 PSI 3. PER NVR 5-1-1A/TABLE 1 STARTING AIR IS ABOVE CLASS III AND BELOW CLASS I, MAKING IT A CLASS II SYSTEM. THE SERVICE AIR AND CONTROL AIR SYSTEMS ARE CLASS III.
CA SS2	CONTROL AIR	ABS NVR CLASS III	140 PSI	189 PSI							BALL: SS 316L, MSS SP-72-2010A (1/4"-2") RELIEF: SS 316L, MIL-V-24332, FLANGED ENDS ONLY, CLASS 150 CHECK: SS 316L, SW, CLASS 600, LIFT CHECK, SPRING LOADED	BELLED END SOCKET-WELD: SS 316L, MSS SP-119 BUTT-WELD: SS 316L, ASME B16.9 SOCKET-WELD: SS 316L, ASME B16.11 (MOD)	SOCKET-WELDING: SS 316L, ASME B16.5 (MOD)			
ALPV SS3	SERVICE AIR VITAL	ABS NVR CLASS III	140 PSI	189 PSI												
ALP SS4	SERVICE AIR NON-VITAL	ABS NVR CLASS III	140 PSI	189 PSI												

REVISIONS (CONTINUED FROM SHEET 1)

REV	SH	ZONE	ITEM	DESCRIPTION	DATE	APPL SIG & ORG
B	3-15	VAR	1	DUPLICATE DRAWING ID NUMBERS CORRECTED	12/06/23	G.RICE
	6	42-D	2	COMBINED SERVICE AIR RECEIVER NO. 2 WITH COMPRESSOR, REROUTED PIPING DELETE ITEM 116/CA-V-087, ADD ITEM 04/CA-V-087,104/CA-V-088 USCG 70Z02322C93220001 CC 3,7	02/19/24	A.CARRIER
	14 17 19	110-D 134-C 151-C	3	ROUTED CA TO LIFEBOATS		
	7	51-D	4	COMBINED SERVICE AIR RECEIVER NO. 1 WITH COMPRESSOR, REROUTED PIPING ADD 104/CA-V-088 USCG 70Z02322C93220001 CC 3		
	14	111-B	5	GLOBE VALVE LOCKED CLOSED ADDED		
	1	3-A	6	GENERAL NOTES 5.17, 5.18, AND 5.19 ADDED USCG 70Z02322C93220001 CC 1 AND 2		
	3,6,7	19-B,20-C,24-C,43-C,52-C	7	ADD DRAIN TO OILY WASTE SYSTEM		
	4,5,6,7, 8,9,11, 12,14,15	VAR	8	CORRECTED AND RELABELLED SHEET REFERENCES		
	3,5,8	18-C,23-C 36-D,61-C	9	PRESSURE TRANSMITTERS ADDED		
	9	70-B	10	DELETE ITEM 247, ADD ITEM 226		
	4	B-29	11	WTB 115 POSITION ADJUSTED USCG 70Z02322C93220001 ADM 6		
	1	B-5	12	DELETE ELECTROMAGNETIC STARTING VALVE ADD ELECTROMAGNETIC AND MANUAL STARTING VALVE USCG 70Z02322C93220001 ADM 7		
	24	185-A	13	EXTENDED VIEWPORT FWD AND AFT		
	19 21 24	150-C 163-C 157-C	14	MOVED PIPE STBD OF BHD		
	2	ALL	15	ADD 'MTU FURNISHED' INFO TO ITEM 278		
	14	111-A	16	REVISE PIPE OUTLET		
	3	17-C,23-D	17	DELETE VALVES USCG 70Z02322C93220001 CC 10		
	1	1-A	18	ADD 'FEET'		
	14	110-D	19	ADD 'SHORE CONNECTION'		
	1	1-C	20	ADDED REVISION DATES		
	1	3-D	21	GENERAL NOTE UPDATED		
	3 26	21-C 202-C	22	DELETE P-2 1/2-SA-SS1-007 ADD P-2 1/2-SA-SS1-001		
	4 28	27-C 218-C	23	DELETE P-3/8-CA-SS2-013, P-3/8-CA-SS2-014, P-1/2-CA-SS2-015		
	21,24,28	164-D, 188-D, 217-D	24	DELETE P-3/4-ALPV-SS3-041 ADD P-1-ALPV-SS3-041		
	14 19	107-C 146-C	25	DELETE P-3/4-ALP-SS4-077, P-3/4-ALP-SS4-076 ADD P-1/4-ALP-SS4-076		
	12	91-C	26	DELETE P-1/2-ALP-SS4-093, ADD P-1/2-ALP-SS4-094		
	17	133-C	27	DELETE P-3/4-ALPV-SS3-015, ADD P-3/8-ALPV-SS4-015		
	11	83-B	28	ADD END CONNECTION		
	1	1-C	29	DELETED RESERVATIONS, ADDED REFERENCE 8		
	8	61-B	30	DELETE P-1-ALPV-SS3-008, ADD P-1-ALPV-SS3-009		
	5	35-B	31	DELETE P-3/4-ALP-SS4-177, ADD P-3/4-ALP-SS4-178		
	3	18-C,20-C	32	SEPARATE PRESSURE REDUCING STATIONS INTO INDIVIDUAL COMPONENTS		

360 WBS

MATERIAL SCHEDULE
AND MATERIAL TABLE

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-BBS-551-001	B

SCALE: NOTED SHEET: 1

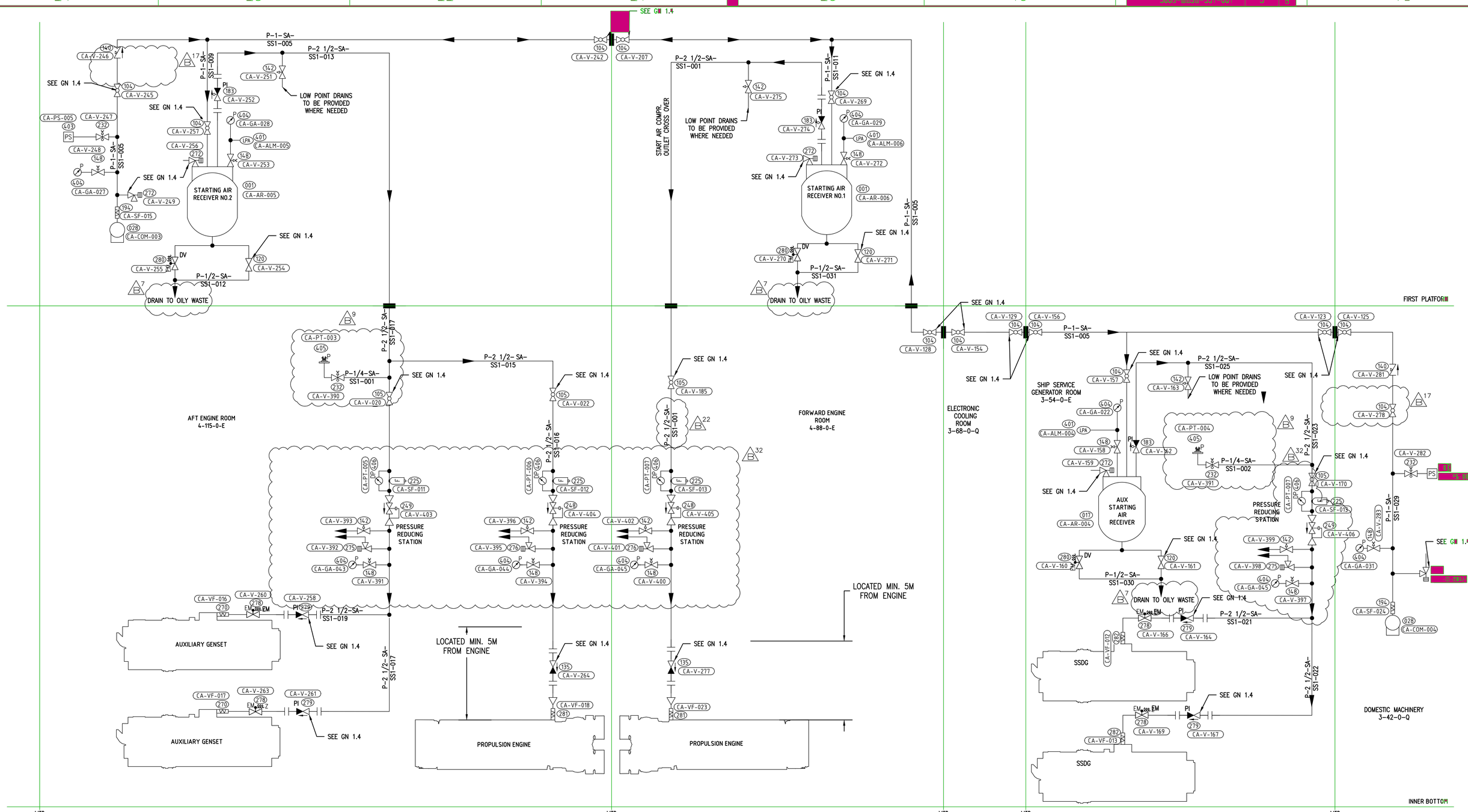
MATERIALS LIST

ITEM NO	Count	IFS	TYPE	TYPE DESCRIPTION	SIZE (NPS)	MATERIAL	END CONNECTION	STANDARD	PRESSURE RATING	TEMPERATURE RATING	MANUFACTURER	MODEL	ADDITIONAL
001	2	TBD	RECEIVER	STARTING AIR	200 US GAL	STEEL	300 LB FLANGED	COMMERCIAL	565 PSI	200 °F	TBD	TBD	START AIR RECIEVER
002	2	TBD	AIR DEHYDRATOR	CONTROL AIR	2.4 SCFM @ 125 PSI	VARIOUS	NPT	COMMERCIAL	140 PSI	200 °F	TBD	TBD	CONTROL AIR LOW PRESSURE OUTLET AIR @ −40F DEWPOINT
010	2	TBD	COMPRESSOR	LP AIR	51 SCFM @ 125 PSI	VARIOUS	150LB FLANGED	COMMERCIAL	140 PSI	200 °F	TBD	TBD	
015	2	TBD	AIR DEHYDRATOR	SERVICE AIR LOW PRESSURE OUTLET AIR @ 55F DEWPOINT	62 SCFM @ 125 PSI	MANUFACTURERS STD.	150LB FLANGED	COMMERCIAL	140 PSI	200 °F	TBD	TBD	SERVICE AIR LOW PRESSURE OUTLET AIR @ 55F DEWPOINT
016	2	TBD	RECEIVER	LP AIR	95 US GAL	STEEL	150 LB FLANGED	COMMERCIAL	140 PSI	200 °F	TBD	TBD	SERVICE AIR RECEIVER
017	1	TBD	RECEIVER	STARTING AIR	100 US GAL	STEEL	300 LB FLANGED	COMMERCIAL	565 PSI	200 °F	TBD	TBD	AUX. STARTING AIR RECEIVER
018	1	TBD	RECEIVER	LP AIR	30 US GAL	STEEL	150 LB FLANGED	COMMERCIAL	140 PSI	200 °F	TBD	TBD	STERN TUBE AIR RECEIVER
028	2	TBD	COMPRESSOR	STARTING AIR	22.2 SCFM @ 550 PSI	VARIOUS	300LB FLANGED	COMMERCIAL	565 PSI	200 °F	TBD	TBD	
100	90	192584	VALVE	BALL	1/4	CRES 316	SOCKET WELD	MSS SP−110	150 PSI	250 °F	Triac	F83−SW−0025−XXX	
101	6	193671	VALVE	BALL	3/8	CRES 316	SOCKET WELD	MSS SP−110	150 PSI	250 °F	Triac	F83−SW−0038−XXX	
102	34	192597	VALVE	BALL	1/2	CRES 316	SOCKET WELD	MSS SP−110	150 PSI	250 °F	Triac	F83−SW−0050−XXX	
103	30	192587	VALVE	BALL	3/4	CRES 316	SOCKET WELD	MSS SP−110	150 PSI	250 °F	Triac	F83−SW−0075−XXX	
104	63	192589	VALVE	BALL	1	CRES 316	SOCKET WELD	MSS SP−110	150 PSI	250 °F	Triac	F83−SW−0100−XXX	
105	4	193672	VALVE	BALL	2 1/2	CRES 316	SOCKET WELD	MSS SP−110	150 PSI	250 °F	Triac	F88−SW−0250−XXX	
116	5	192616	VALVE	BALL LOCKED CLOSED	1	NI−AL−BRZ	WAFER	MSS SP−68	225 PSI	250 °F	BRAY	"400400−11001A80/A006, 010250−21141007"	
120	6	TBD	VALVE	GLOBE	1/2	316LSS BODY AND TRIM	150 LB FLANGED	API 602	150 PSI (MIN.)	250 °F	TBD	TBD	GLOBE
121	2	TBD	VALVE	GLOBE LOCKED CLOSED	3/4	316LSS BODY AND TRIM	150 LB FLANGED	API 602	800 PSI	250 °F	TBD	TBD	GLOBE LOCKED CLOSED
130	4	TBD	VALVE	GLOBE STOP−CHECK	1/4	316LSS BODY AND TRIM	UNION SW ENDS	COMMERCIAL	150 PSI (MIN.)	250 °F	TBD	TBD	GLOBE STOP−CHECK
132	2	TBD	VALVE	GLOBE STOP−CHECK	1/2	316LSS BODY AND TRIM	UNION SW ENDS	COMMERCIAL	150 PSI (MIN.)	250 °F	TBD	TBD	GLOBE STOP−CHECK
134	1	TBD	VALVE	GLOBE STOP−CHECK	1	316LSS BODY AND TRIM	UNION SW ENDS	COMMERCIAL	150 PSI (MIN.)	250 °F	TBD	TBD	GLOBE STOP−CHECK
135	2	TBD	VALVE	GLOBE STOP−CHECK	2 1/2	316LSS BODY AND TRIM	300 LB FLANGED	COMMERCIAL	550 PSI (MIN.)	250 °F	TBD	TBD	GLOBE STOP−CHECK
140	9	192610	VALVE	LIFT−CHECK SPRING LOADED	1	BRONZE	SOCKET WELD	MSS SP−110	50 PSI	250 °F	PBM	SPN1E5U−G−−L04	
142	35	192800	VALVE	NEEDLE	1/4	CRES 316	SOCKET WELD	COMMERCIAL	600 PSI	250 °F	DERBYSHIRE	M1156−1197	
148	40	TBD	VALVE	NEEDLE STEM CONNECTION	1/4	316LSS BODY AND TRIM	UNION SW ENDS	MIL−V−24578	6000 PSI	250 °F	TBD	TBD	NEEDLE STEM CONNECTION
160	1	TBD	VALVE	PRESSURE REDUCING DIAPHRAM 125 PSI INLET 87 PSI OUTLET	1	BRONZE BODY 316LSS TRIM	UNION ENDS	MIL−V−24834	150 PSI	250 °F	FISCHER		PRESSURE REDUCING DIAPHRAM 125 PSI INLET 87 PSI OUTLET
168	4	TBD	VALVE	SELF−ACTUATED PRESSURE RELIEF ANGLED SET @ 40 PSI	1	316LSS BODY AND TRIM	150# UNION SW	COMMERCIAL	150 PSI	120 °F	TBD	TBD	SET @ 40 PSI
183	3	TBD	VALVE	STOP−CHECK GLOBE LOCKED OPEN POSITION INDICATOR	2 1/2	316LSS BODY AND TRIM	300 LB FLANGED	API 600	300 PSI	250 °F	TBD	TBD	STOP−CHECK GLOBE LOCKED OPEN POSITION INDICATOR
190	4	TBD	HOSE	FLEXIBLE HOSE VENDOR FURNISHED	1/4	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	FLEXIBLE HOSE VENDOR FURNISHED
191	1	TBD	HOSE	FLEXIBLE HOSE VENDOR FURNISHED	3/8	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	FLEXIBLE HOSE VENDOR FURNISHED
194	2	TBD	HOSE	FLEXIBLE HOSE VENDOR FURNISHED	1	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	FLEXIBLE HOSE VENDOR FURNISHED
224	4	TBD	FILTER	COALESCING FILTER	1	ALUMINUM BODY	THREADED	TBD	250 PSI	TBD	TBD	TBD	COALESCING FILTER
225	4	194351	FILTER	FILTER W/ MOISTURE SEPARATOR	2 1/2	VARIOUS	TBD	TBD	TBD	TBD	PARKER HANNAFIN	MN85−8CVG	
226	3	TBD	LUBRICATOR	LUBRICATOR	TBD	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	LUBRICATOR
232	8	192801	VALVE	NEEDLE STEM CONNECTION LOCKED OPEN	1/4	CRES 316	SOCKET WELD	COMMERCIAL	6000 PSI	250 °F	DERBY SHIRE	M1156−SPECIAL	
246	21	193709	REGULATOR	AIR PRESSURE FILTER (5 MICRON) − REGULATOR − LUBRICATOR	3/4	ALUMINUM BOWL	FPT	ASTM F1795	0−140 PSI	120 °F	INGERSOLL RAND	C38341−810	ADJUSTABLE − DRAIN INCLUDED
247	7	193708	REGULATOR	AIR PRESSURE FILTER (5 MICRON) − REGULATOR	3/4	ALUMINUM BOWL	FPT	ASTM F1795	0−140 PSI	120 °F	INGERSOLL RAND	P39344−614	ADJUSTABLE − DRAIN INCLUDED
248	2	193261	VALVE	MPDE PRESSURE REDUCING 2000 SCFM	1	SST BODY SST/NBR TRIM	300# FLANGED	MIL−V−24834	740 PSI	250 °F	FISHER	EZR 1270−8388905	SET @ 450 PSI
249	2	193262	VALVE	MPDE PRESSURE REDUCING 1700 SCFM	1	SST BODY SST/NBR TRIM	300# FLANGED	MIL−V−24834	1050 PSI	120 °F	FISHER	EZR 1270−8388905	SET @ 125 PSI
269	8	TBD	VALVE	PRIORITY UPSTREAM SHUTOFF	1 1/4	316LSS BODY AND TRIM	150# UNION SW	MIL−V−24384 TYP. III	150 PSI	120 °F	TBD	TBD	SET @ 85 PSI
270	2	TBD	HOSE	VENDOR FURNISHED	TBD	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	VENDOR FURNISHED
271	4	TBD	HOSE	VENDOR FURNISHED	TBD	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	VENDOR FURNISHED
272	7	TBD	VALVE	SELF−ACTUATED PRESSURE RELIEF ANGLED SET AT 580 PSI	1	316LSS BODY AND TRIM	300# FLANGED	COMMERCIAL	600 PSI	120 °F	TBD	TBD	SET AT 580 PSI
274	7	TBD	VALVE	SELF−ACTUATED PRESSURE RELIEF ANGLED SET AT 140 PSI	1	316LSS BODY AND TRIM	150# UNION SW	COMMERCIAL	150 PSI	120 °F	TBD	TBD	SET AT 140 PSI
275	2	194350	VALVE	SELF−ACTUATED PRESSURE RELIEF ANGLED SET AT 150 PSI	1	316LSS BODY AND TRIM	150# UNION SW	COMMERCIAL	300 PSI	120 °F	KUNKLE	917BDEB06BKE0150	SET AT 150 PSI
276	2	194349	VALVE	SELF−ACTUATED PRESSURE RELIEF ANGLED SET AT 470 PSI	1	316LSS BODY AND TRIM	300# FLANGED	COMMERCIAL	600 PSI	120 °F	KUNKLE	917BDEB06BKE0470	SET AT 470 PSI
278	4	TBD	VALVE	TWO−WAY SOLENOID ELECTROMAGNETIC STARTING VF	1 1/2	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	MTU FURNISHED
279	4	TBD	VALVE	GLOBE STOP−CHECK POSITION INDICATOR	2 1/2	316LSS BODY AND TRIM	300 LB FLANGED	COMMERCIAL	550 PSI (MIN.)	250 °F	TBD	TBD	GLOBE STOP−CHECK POSITION INDICATOR
280	6	TBD	VALVE	TWO−WAY SOLENOID DRAIN VALVE	1/2	316LSS BODY AND TRIM	TBD	TBD	232 PSI	250 °F	TBD	TBD	TWO−WAY SOLENOID DRAIN VALVE
281	2	TBD	HOSE	VENDOR FURNISHED (FMD)	TBD	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	
282	2	TBD	HOSE	VENDOR FURNISHED (MTU)	TBD	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	
400	2	TBD	MONITOR	DEW POINT MONITOR	TBD	VARIOUS	TBD	TBD	150 PSI	120 °F	TBD	TBD	DEW POINT MONITOR
401	4	TBD	ALARM	LOW PRESSURE ALARM	1/4	VARIOUS	FPT	COMMERCIAL	150 PSI	120 °F	TBD	TBD	LOW PRESSURE ALARM
403	4	TBD	SWITCH	PRESSURE SWITCH	1/4	VARIOUS	FPT	COMMERCIAL	150 PSI	120 °F	TBD	TBD	PRESSURE SWITCH
404	40	TBD	GAUGE	PRESSURE LOCAL READING (0−150 PSI)	1/4	VARIOUS	MALE MPT	COMMERCIAL	150 PSI	140 °F	TBD	TBD	PRESSURE LOCAL READING (0−150 PSI)
405	2	TBD	GAUGE	PRESSURE TRANSMITTER	1/2	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	MTU FURNISHED
406	4	TBD	GAUGE	DIFFERENTIAL PRESSURE	1/4	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	
407	2	TBD	GAUGE	PRESSURE TRANSMITTER	1/2	VARIOUS	TBD	TBD	TBD	TBD	TBD	TBD	

360 W S
EQUIPMENT AND FITTING LIST

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B−WS−551−001	B

SCALE: NOTED SHEET: 2



360 W S

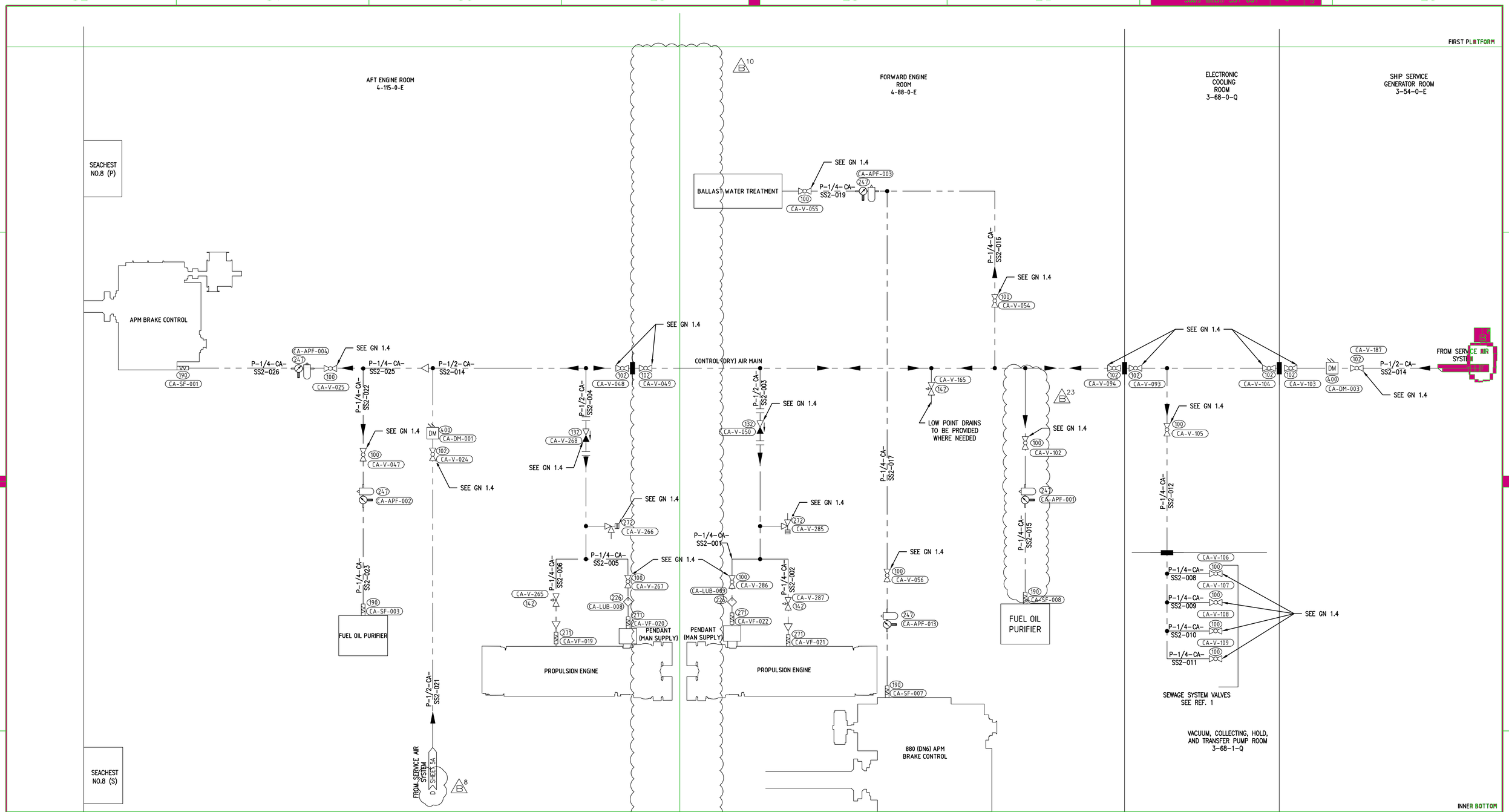
COMPRESSED AIR SYSTE

DIAGRAM

STARTING AIR BELOW 1ST PLATF FR 68-1

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B- S -551-001	B

SCALE: S OTED | SHEET: 3



360 WSS

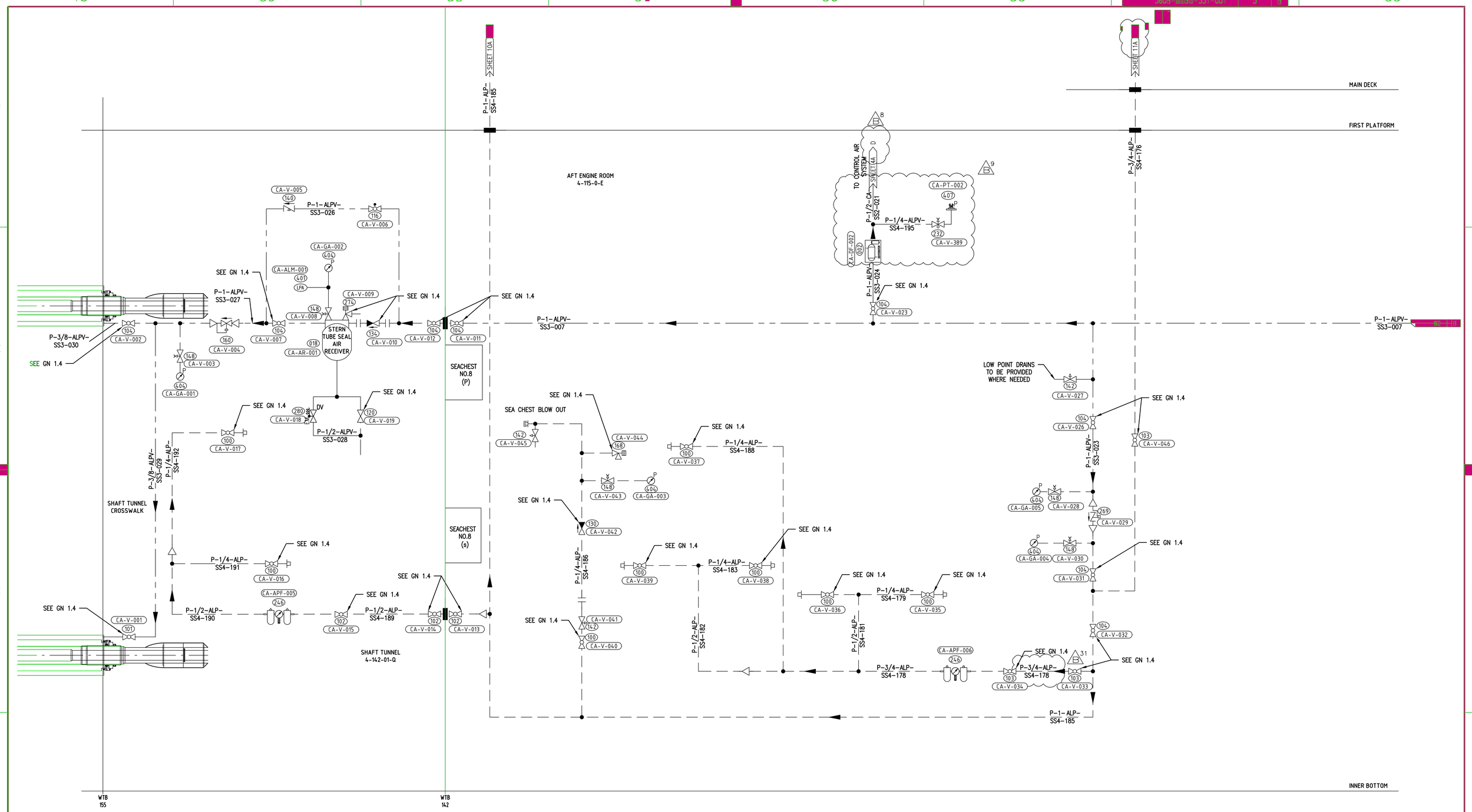
COMPRESSED AIR SYSTEM

DIAGRAM

CONTROL AIR BEL 1ST PLATF FR 68-112

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-WSS-551-001	B

SCALE: AS NOTED SHEET: 4



360 W S

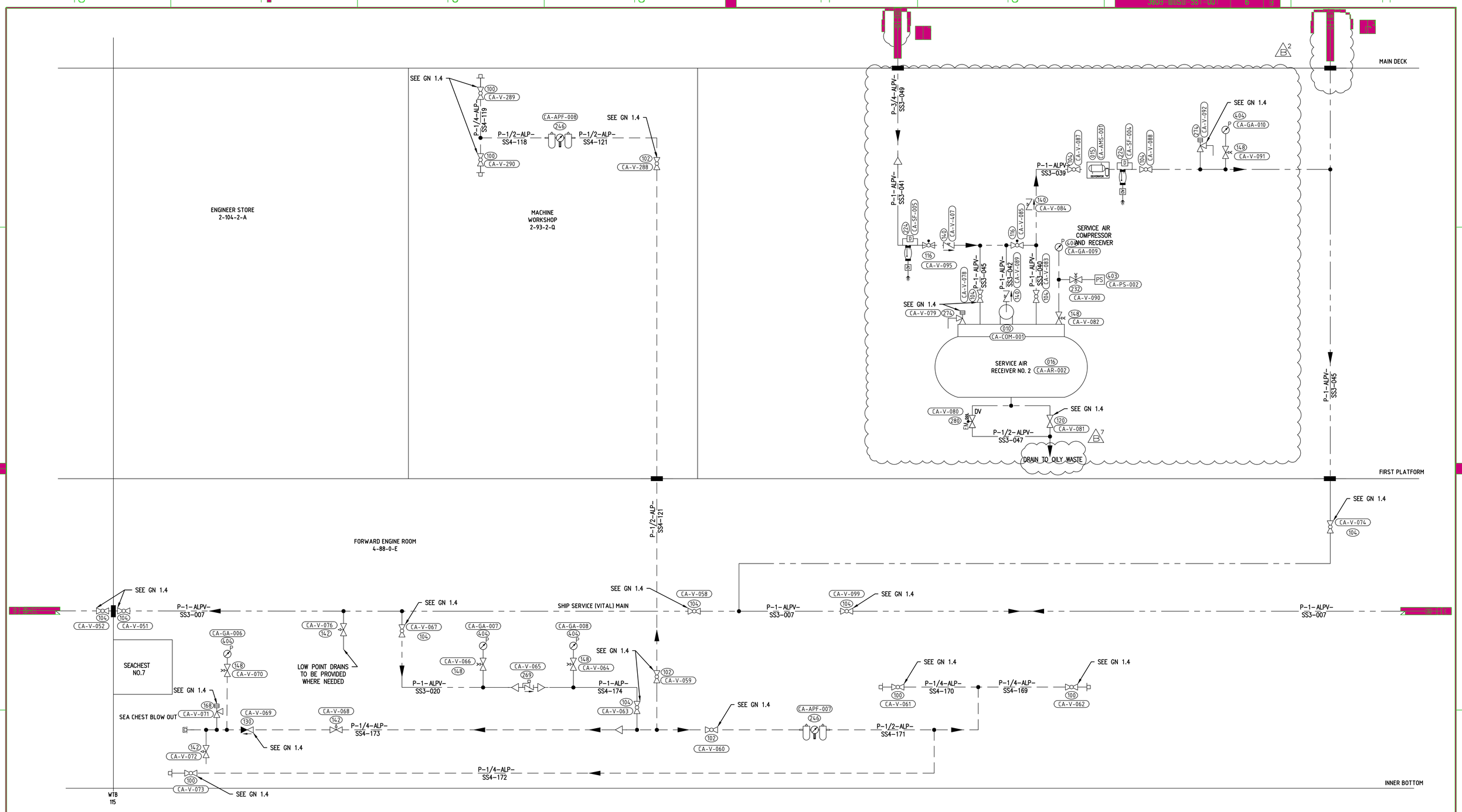
COMPRESSED AIR SYSTE

DIAGRAM

SERVICE AIR BEL MAIN DECK FR 115–155

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B- S -551-001	B

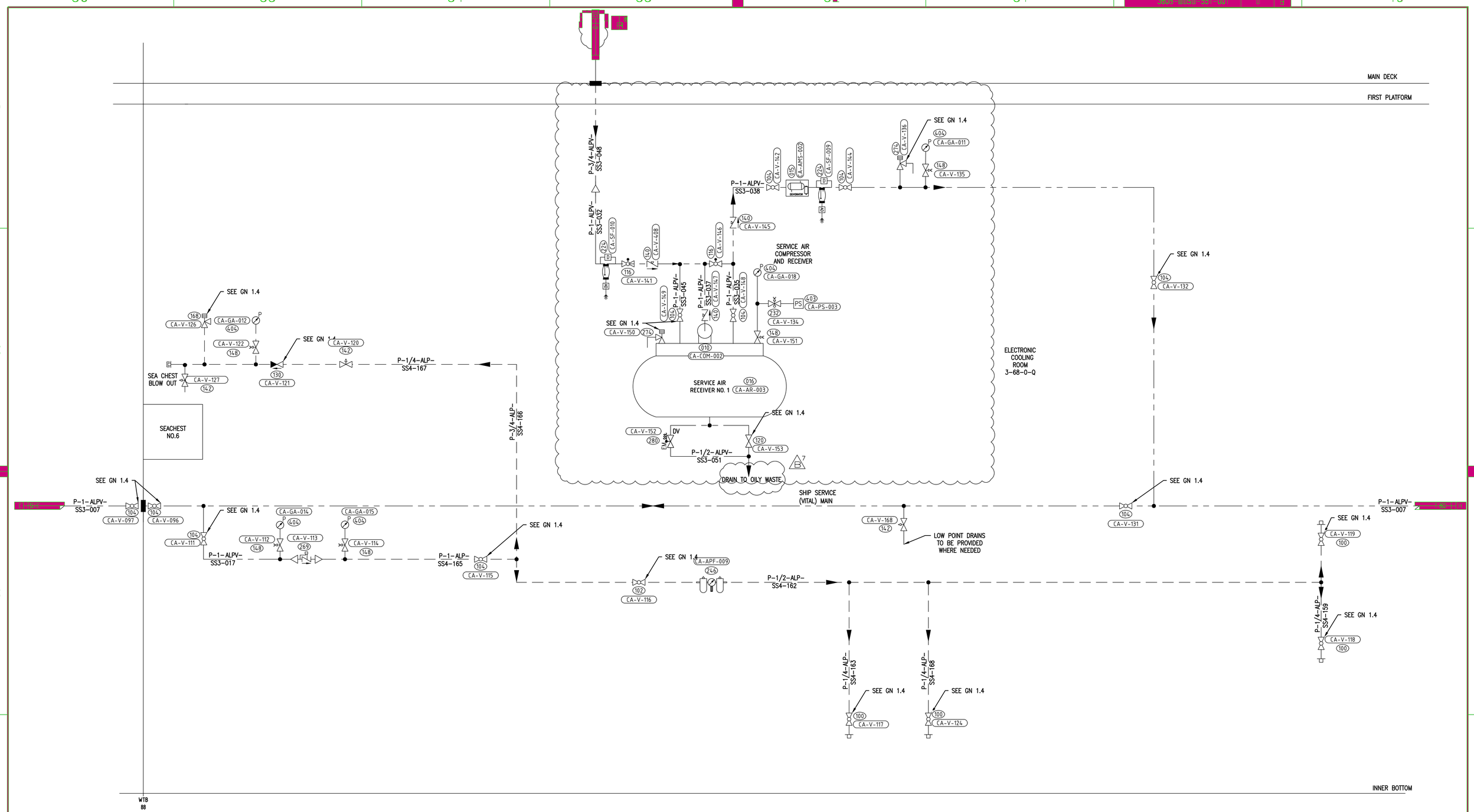
SCALE: S OTED | SHEET: 5



360 W S
COMPRESSED AIR SYSTE
DIAGRAM
SERVICE AIR BELOW MAIN DECK FR 88-115

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B- S -551-001	B

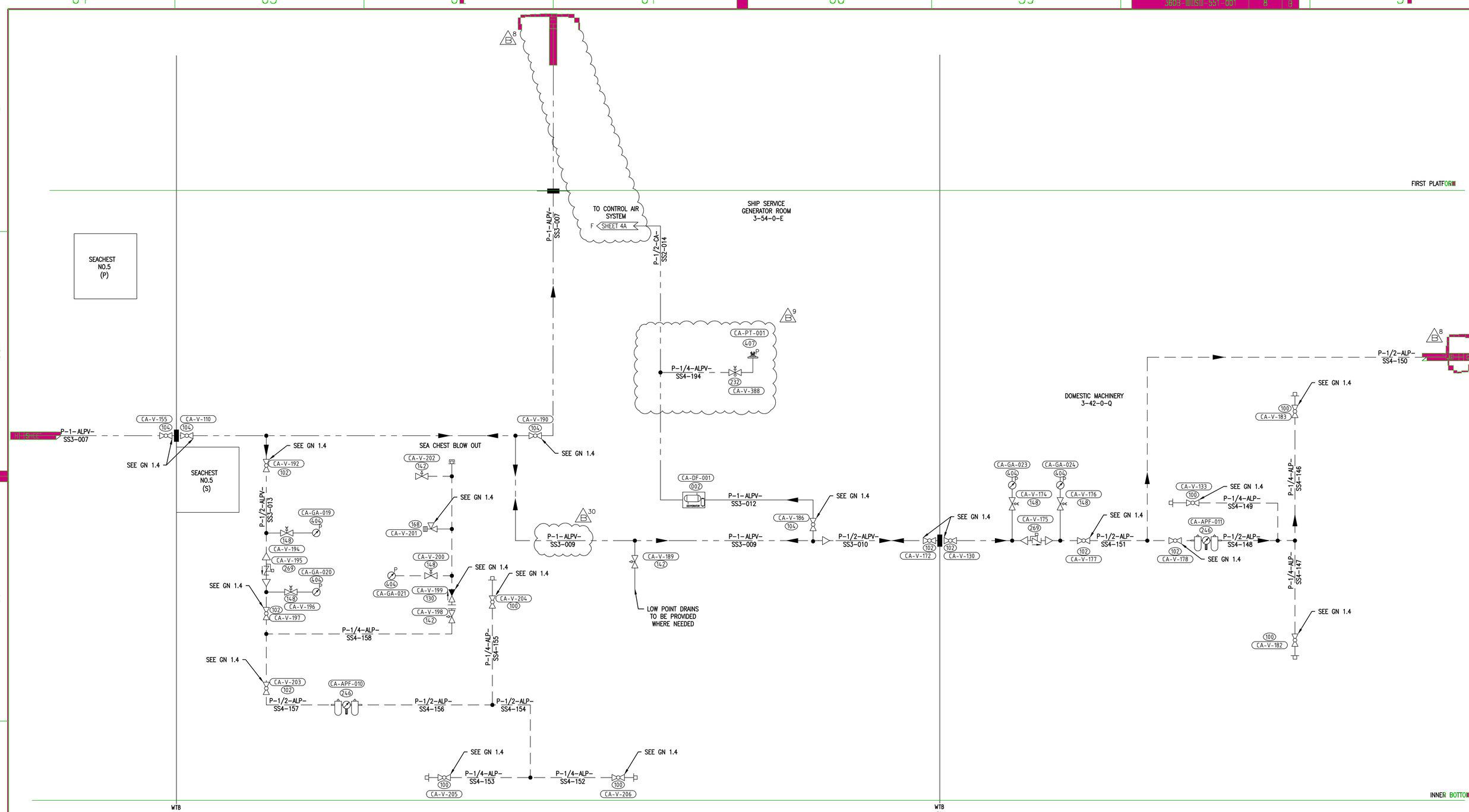
SCALE: S NOTED SHEET: 6



360 W S
COMPRESSED AIR SYSTE
DIAGRAM
SERVICE AIR BELOW MAIN DECK FR 68-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	813 0	360B- S -551-001	B

SCALE: S NOTED SHEET:



360 W S

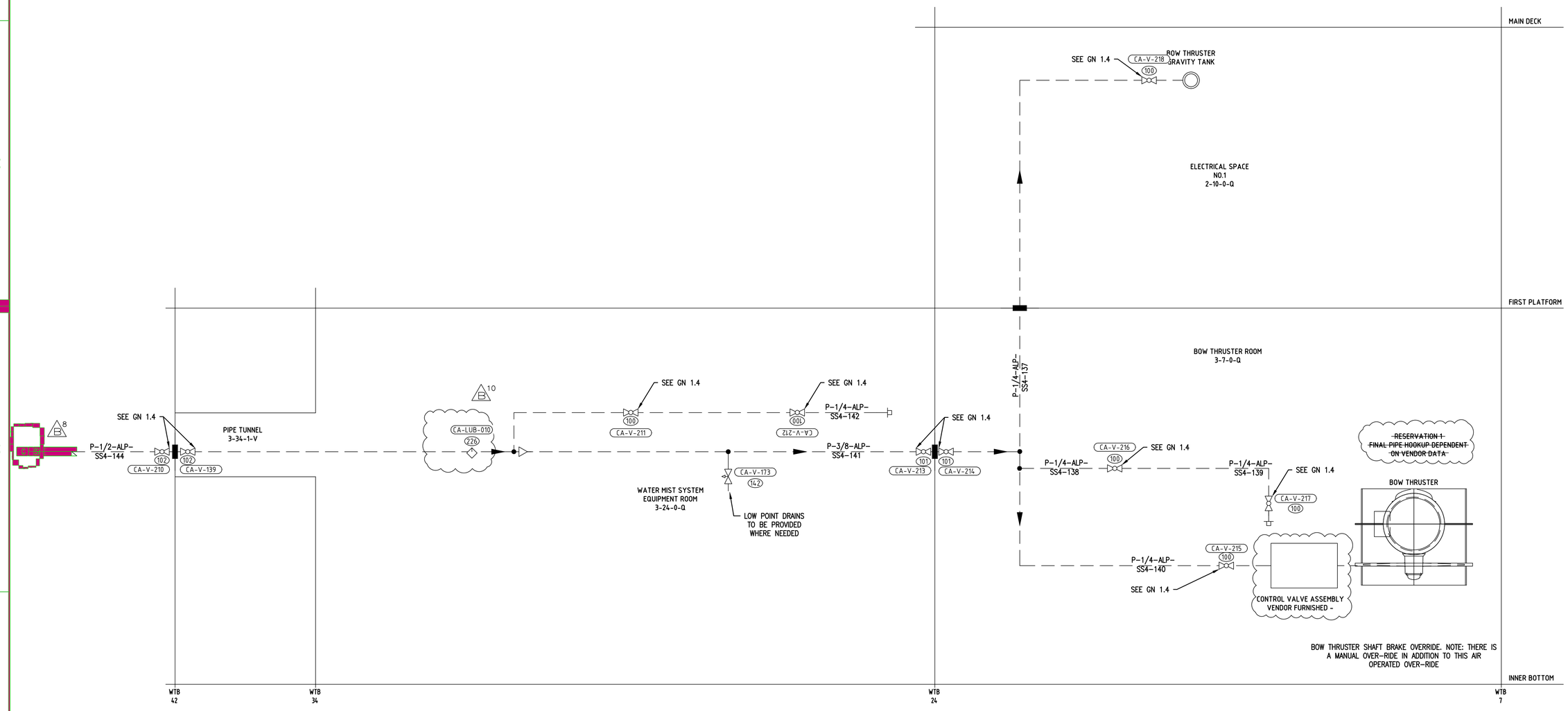
COMPRESSED AIR SYSTE

SYSTEM

SERV/START AIR BEL 1ST PLATF FR 42-68

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81 0	360B- S -551-001	B

SCALE: S OTED | SHEET: 8



360 W S

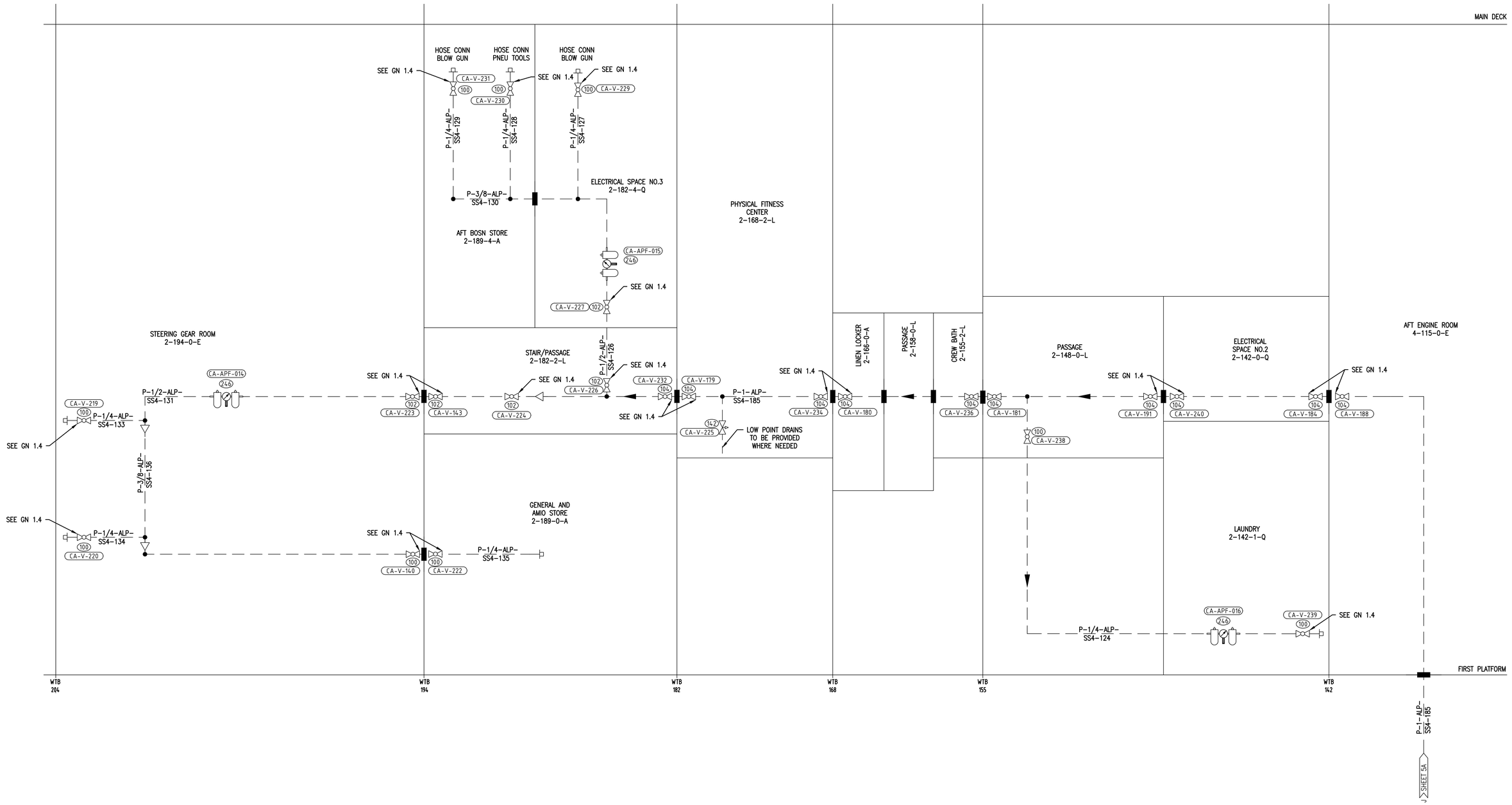
COMPRESSED AIR SYSTE

SYSTEM

SERV AIR FWD BEL MN DK FR 7-

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	813 0	360B- S -551-001	B

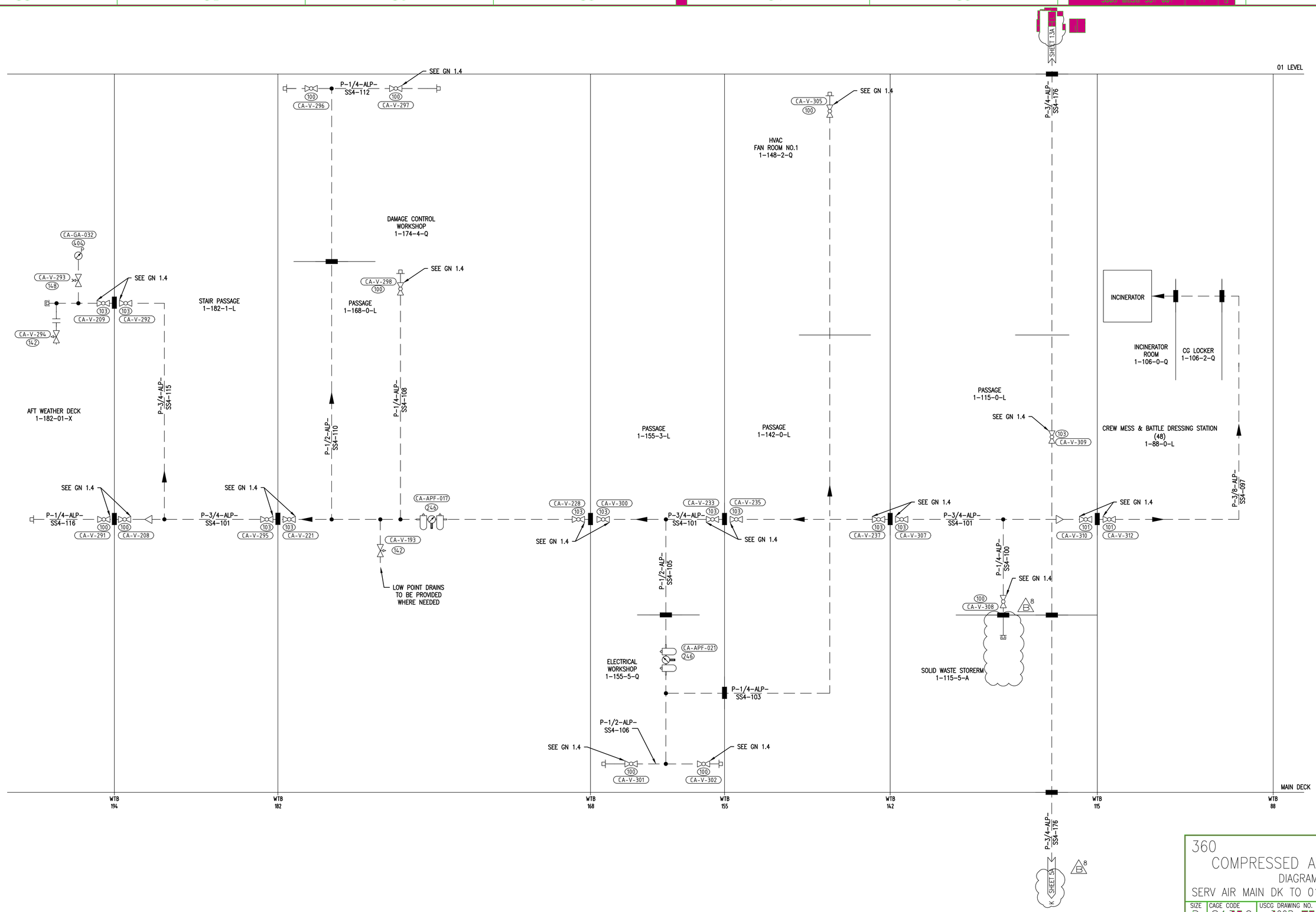
SCALE: S NOTED | SHEET: 9



360 W S
COMPRESSED AIR SYSTE
SYSTEM
SERV AIR ABOVE 1ST PLATF FR 142-20

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-S-551-001	B

SCALE: AS NOTED SHEET: 10



360 W[redacted]S[redacted]

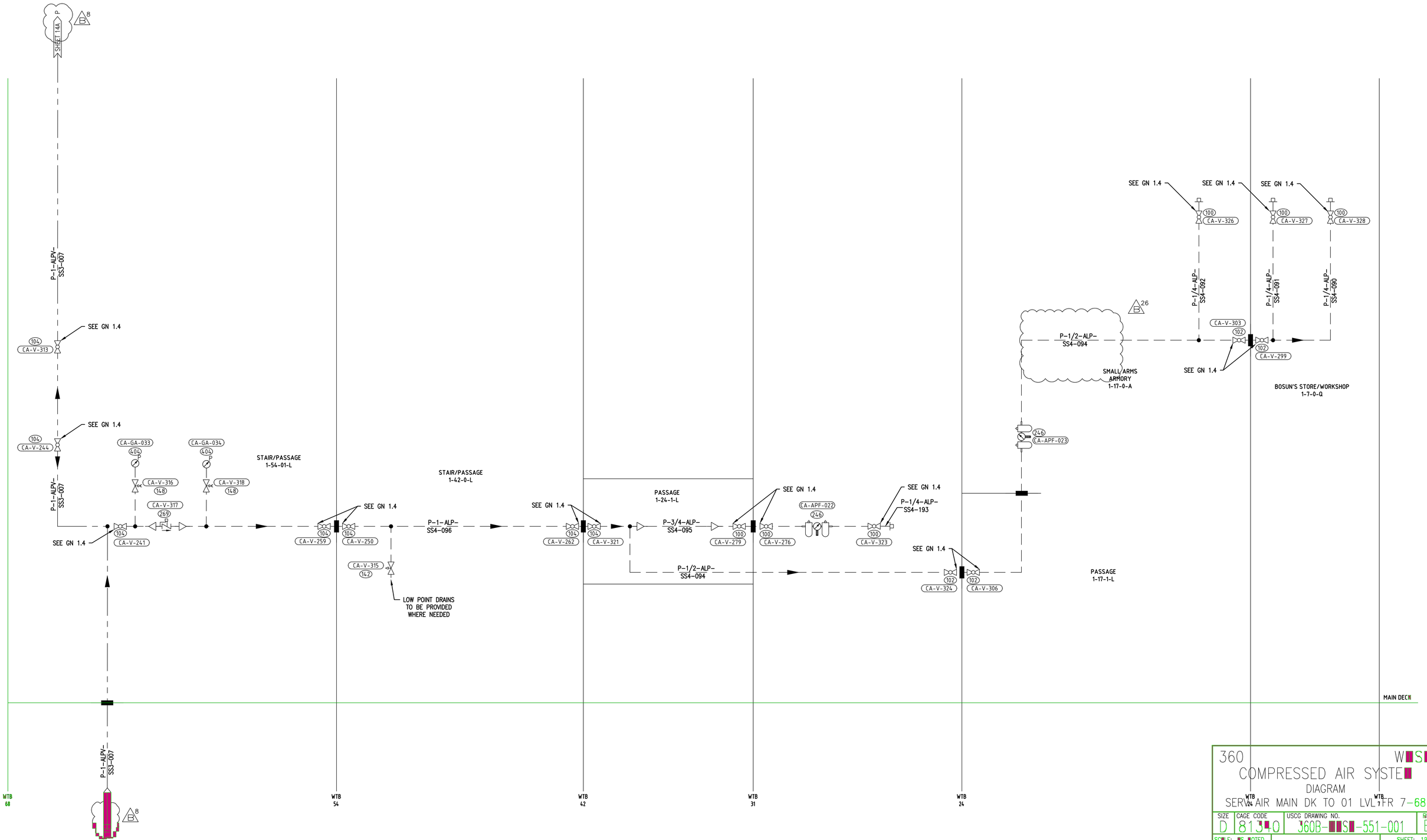
COMPRESSED AIR SYSTE[redacted]

DIAGRAM

SERV AIR MAIN DK TO 01 LVL FR 88-19[redacted]

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

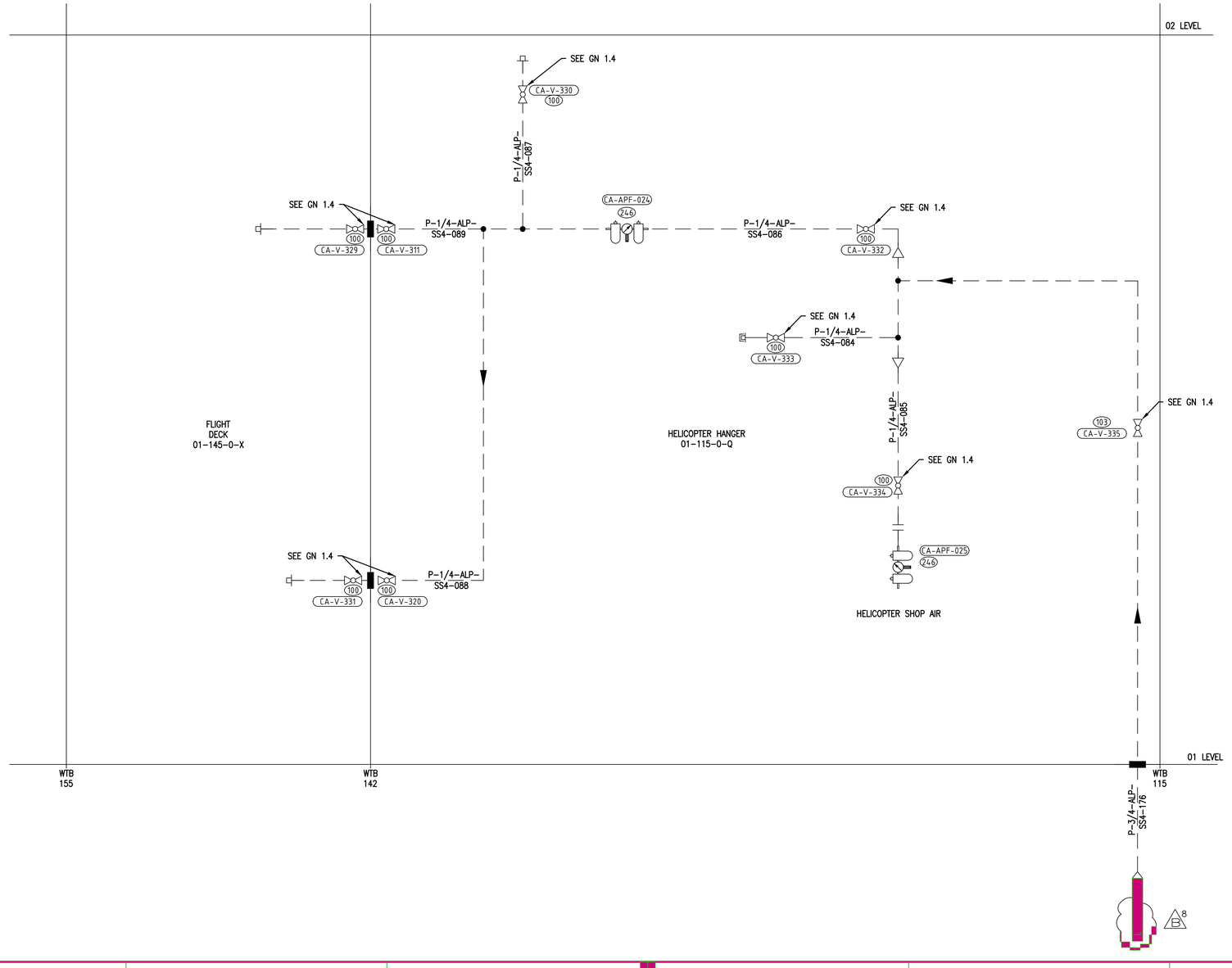
SCALE: [redacted]S [redacted]OTED SHEET: 11



360 W S
COMPRESSED AIR SYSTE
DIAGRAM
SERV AIR MAIN DK TO 01 LVL FR 7-68

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	813 0	360B- S -551-001	B

SCALE: S NOTED | SHEET: 12



360 W[redacted]S[redacted]

COMPRESSED AIR SYSTE[redacted]

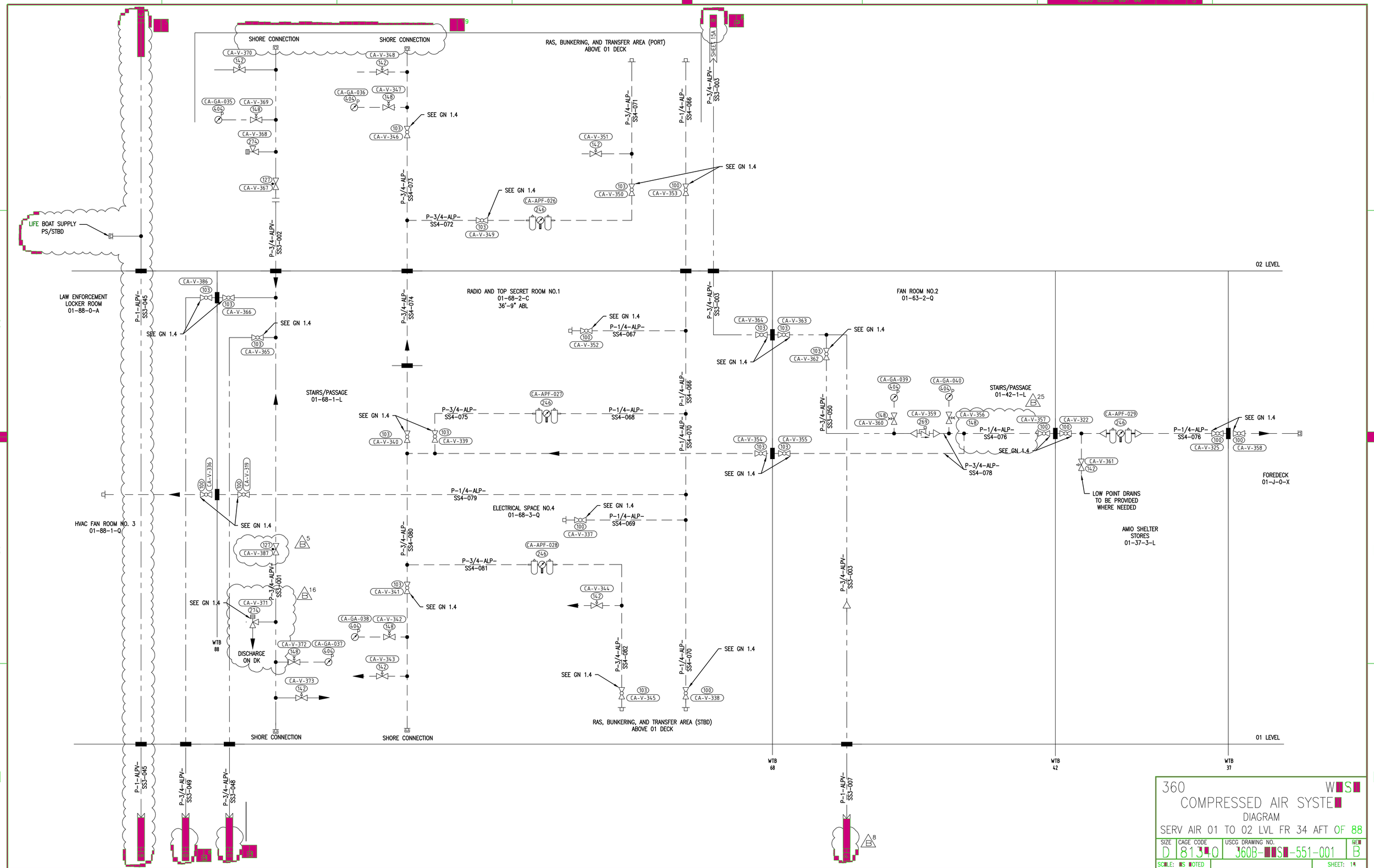
DIAGRAM

SERV AIR 01 LVL TO 02 LVL FR 115-155

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81[redacted]40	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED

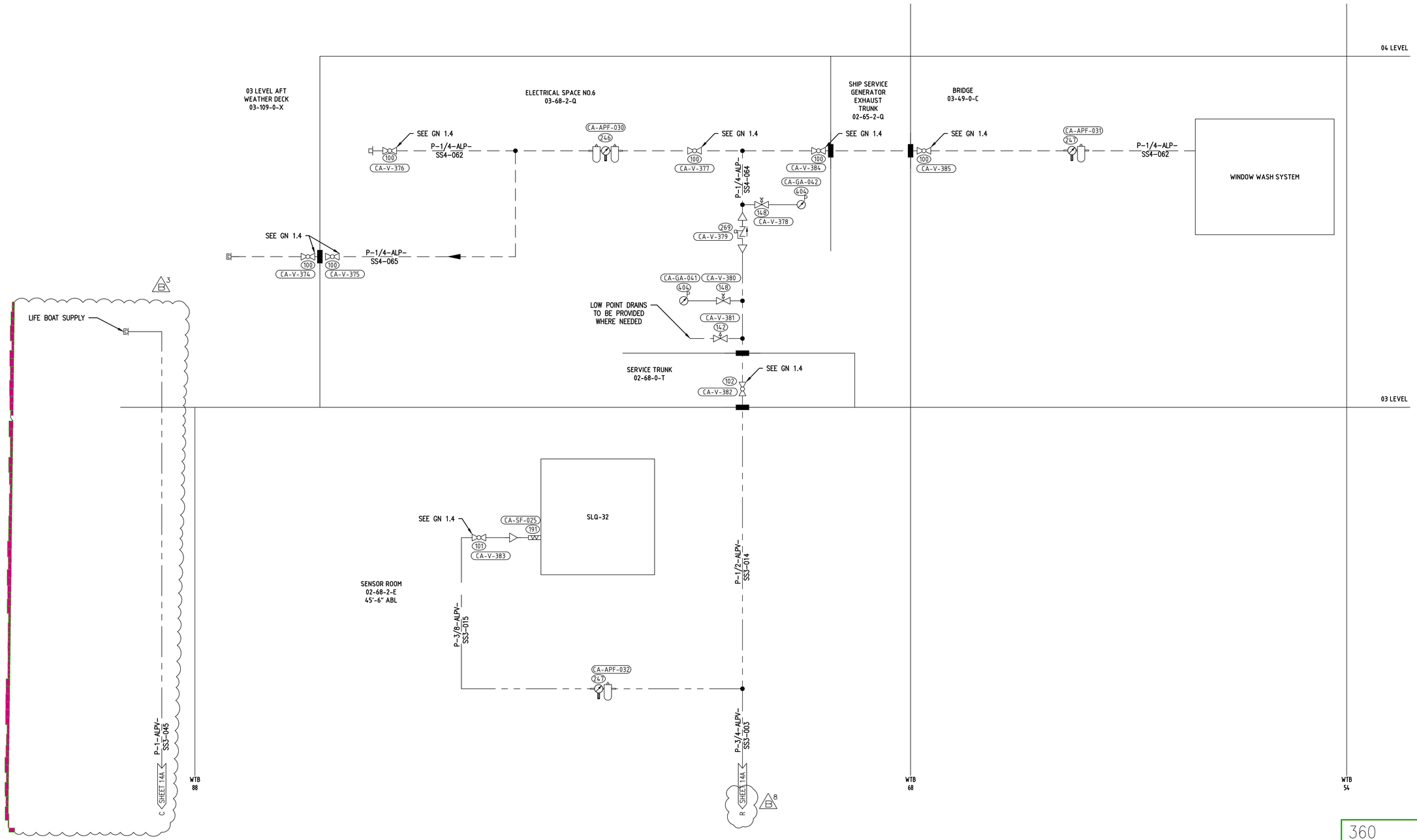
SHEET: 13



360 W S
COMPRESSED AIR SYSTE
DIAGRAM
SERV AIR 01 TO 02 LVL FR 34 AFT OF 88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B- S -551-001	B

SCALE: S NOTED SHEET: 1



360 W[redacted]S[redacted]

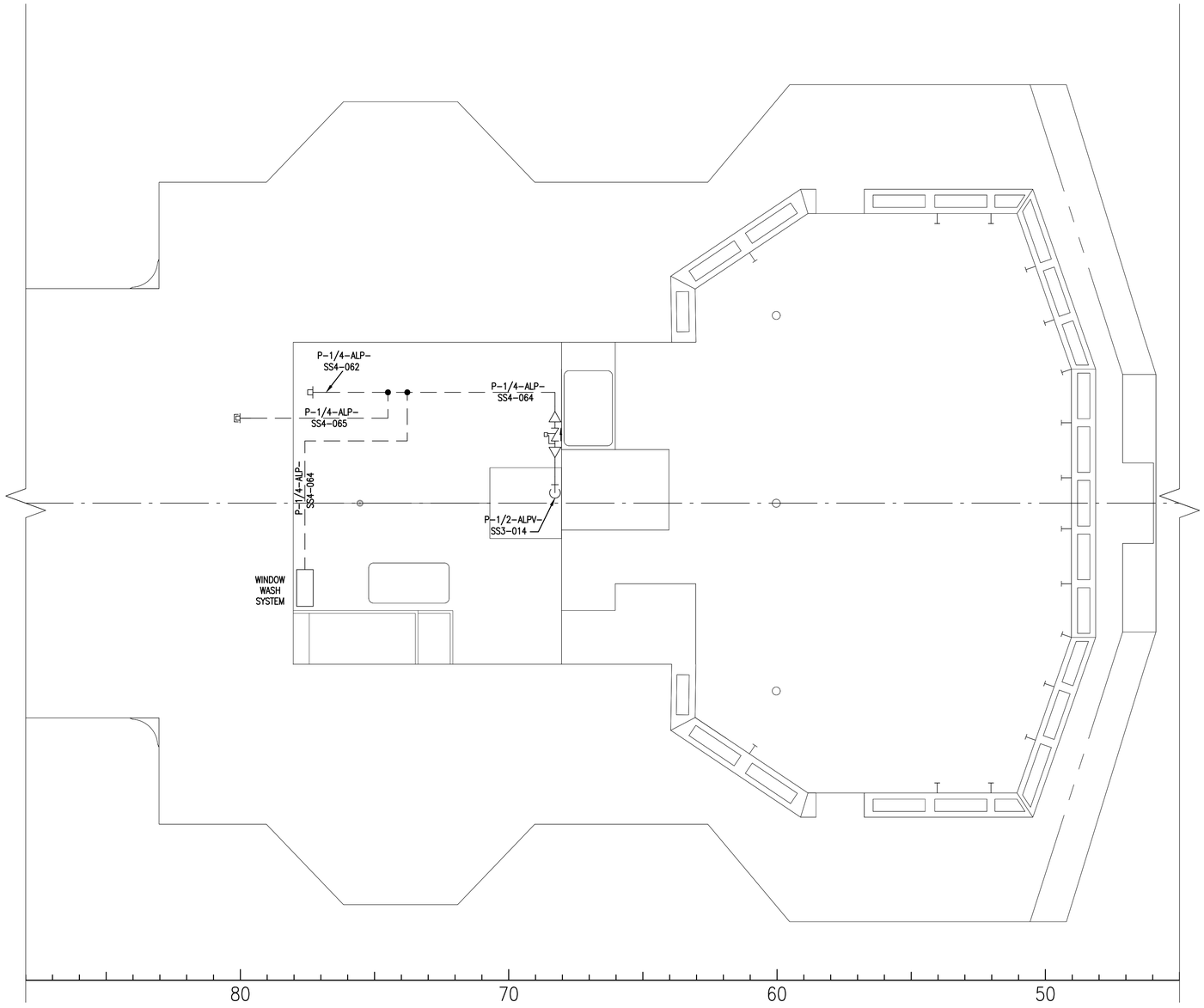
COMPRESSED AIR SYSTE[redacted]

DIAGRAM

SERV AIR 02 LVL TO 04 LVL FR 54-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED SHEET: 15



PLAN VIEW 124-A

SERVICE AIR
03 LEVEL
FRAMES 46-88
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
03 LEVEL
FR 46-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	J60B-[redacted]S[redacted]-551-001	B

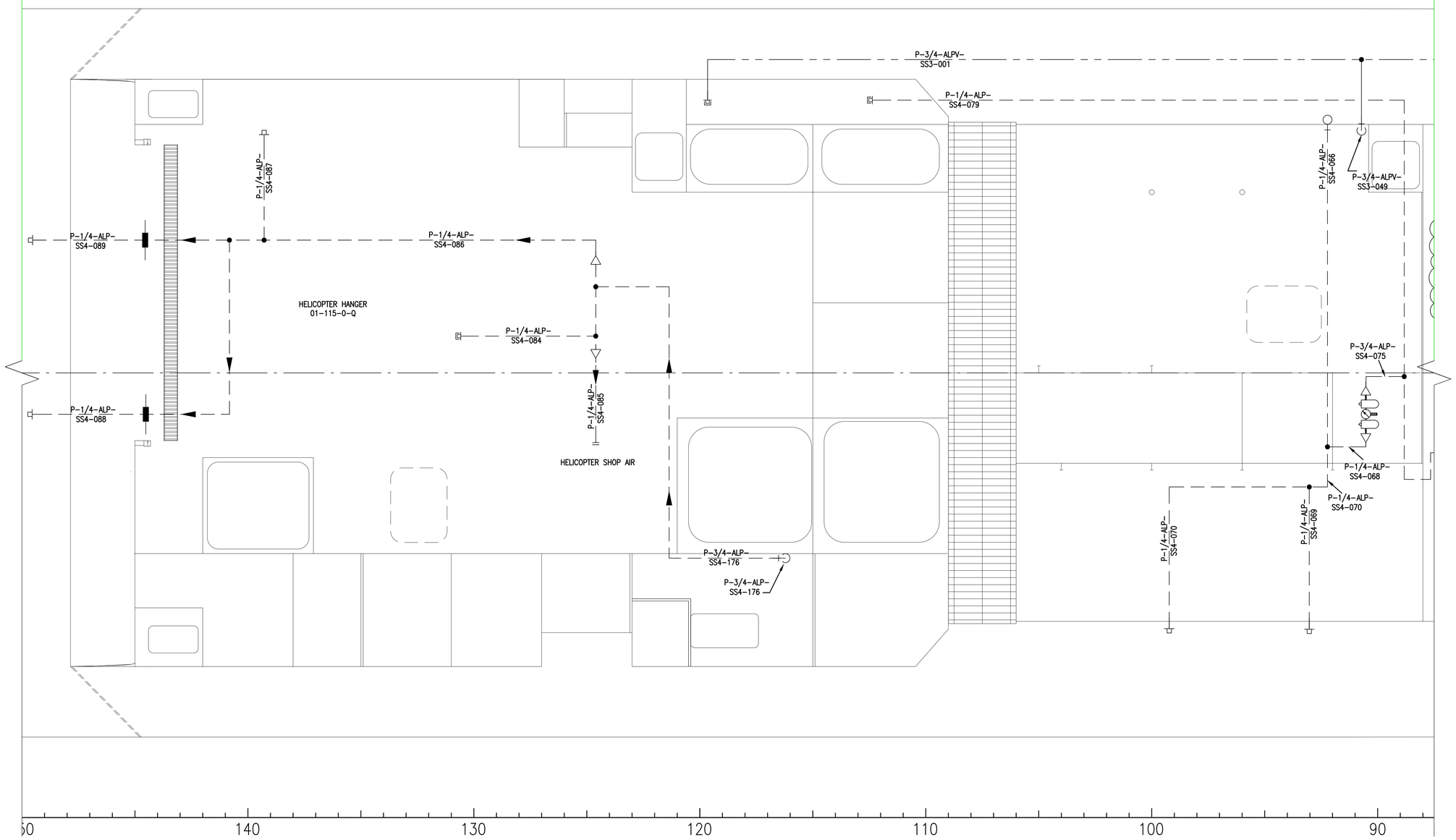
SCALE: [redacted]S [redacted]OTED | SHEET: 16

PLAN VIEW 132-A

SERVICE AIR
02 LEVEL
FRAMES 38-88
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
02 LEVEL
FR 38-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B
SCALE: [redacted]S [redacted]OTED			SHEET: 1[redacted]



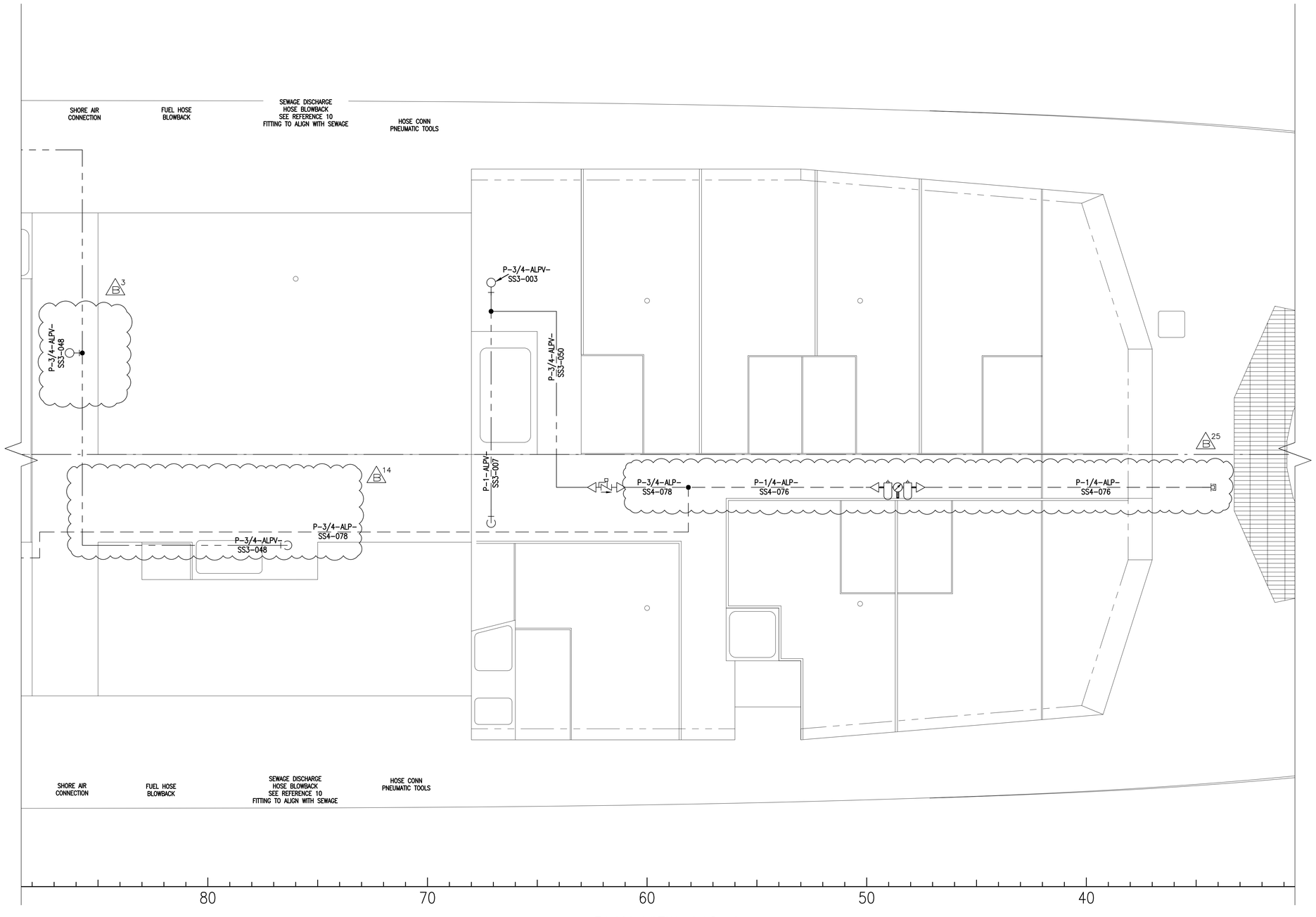
PLAN VIEW 140-A

SERVICE AIR
01 LEVEL
FRAMES 88-149
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
01 LEVEL
FR 88-149

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81[redacted]0	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED | SHEET: 18



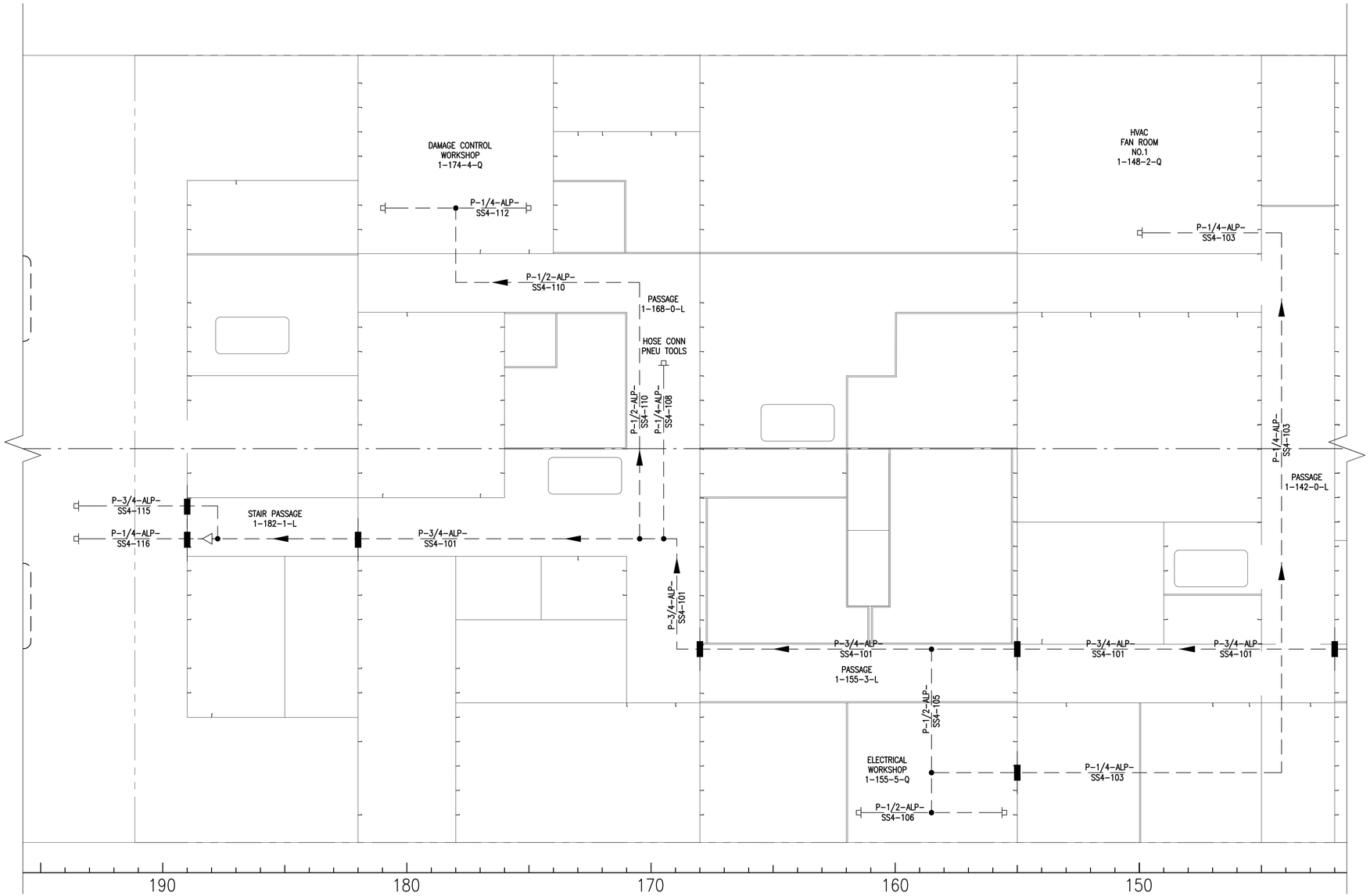
PLAN VIEW 148-A

SERVICE AIR
01 LEVEL
FRAMES 31-88
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
01 LEVEL
FR 31-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: AS NOTED | SHEET: 19



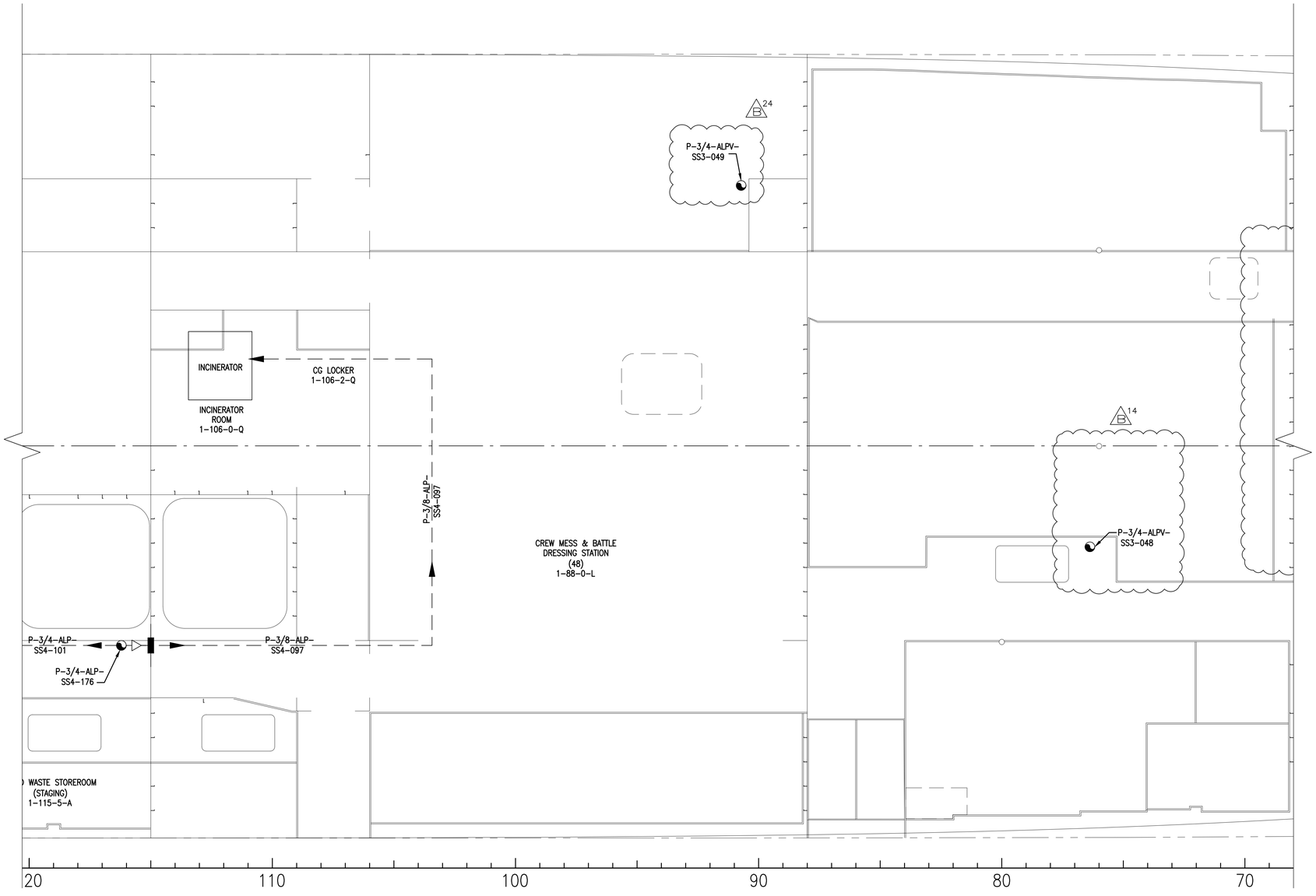
PLAN VIEW 156-A

SERVICE AIR
MAIN DECK
FRAMES 142-195
SCALE: 1/4" = 1'-0

COMPRESS AIR SYSTEM
SERVICE AIR
MAIN DECK
FR 142-195

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: AS NOTED | SHEET: 20



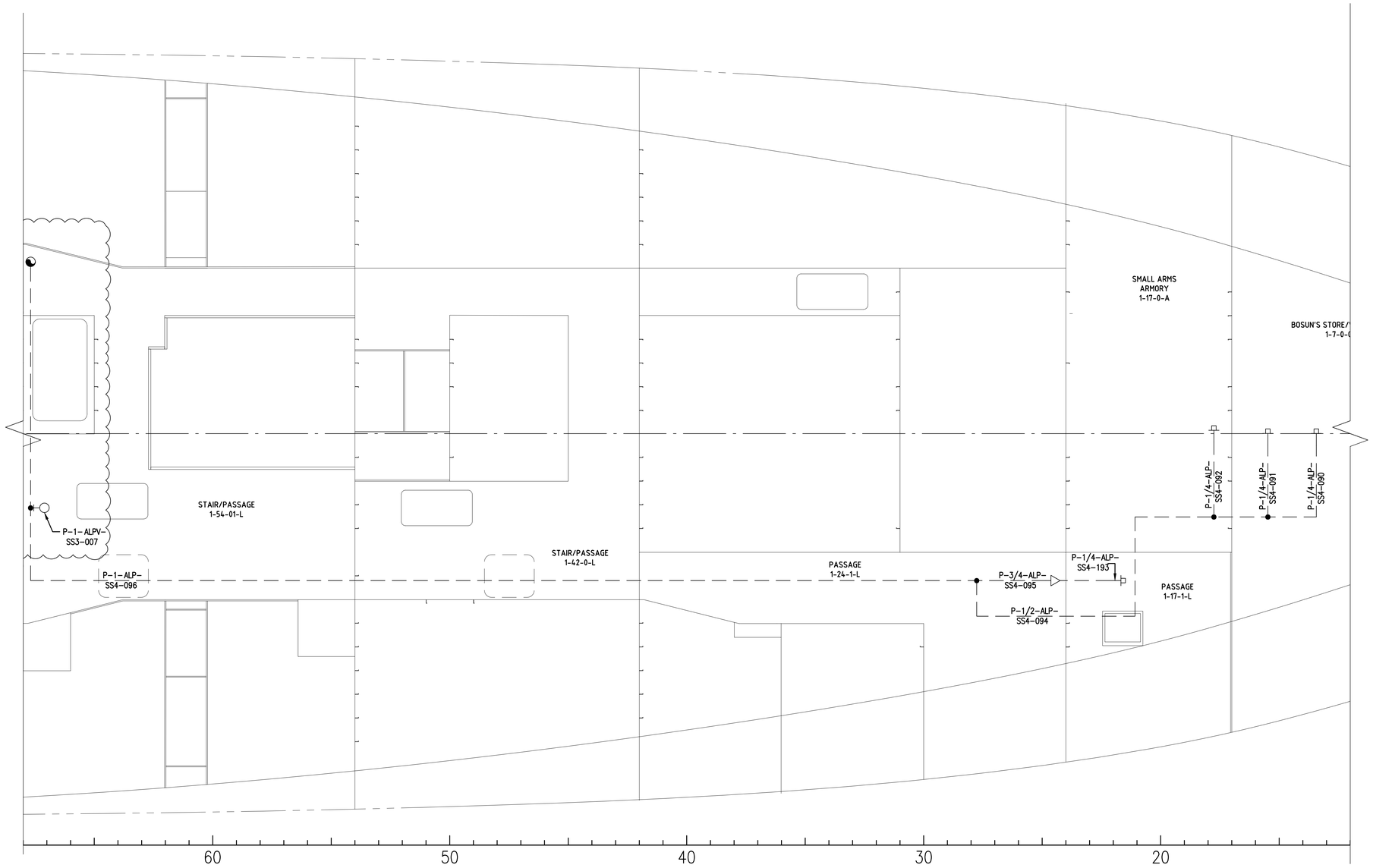
PLAN VIEW 164-A

SERVICE AIR
MAIN DECK
FRAMES 69-120
SCALE: 1/4" = 1'-0

COMPRESSED AIR SYSTEM
SERVICE AIR
MAIN DECK
FR 69-120

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: AS NOTED | SHEET: 21



PLAN VIEW 172-A

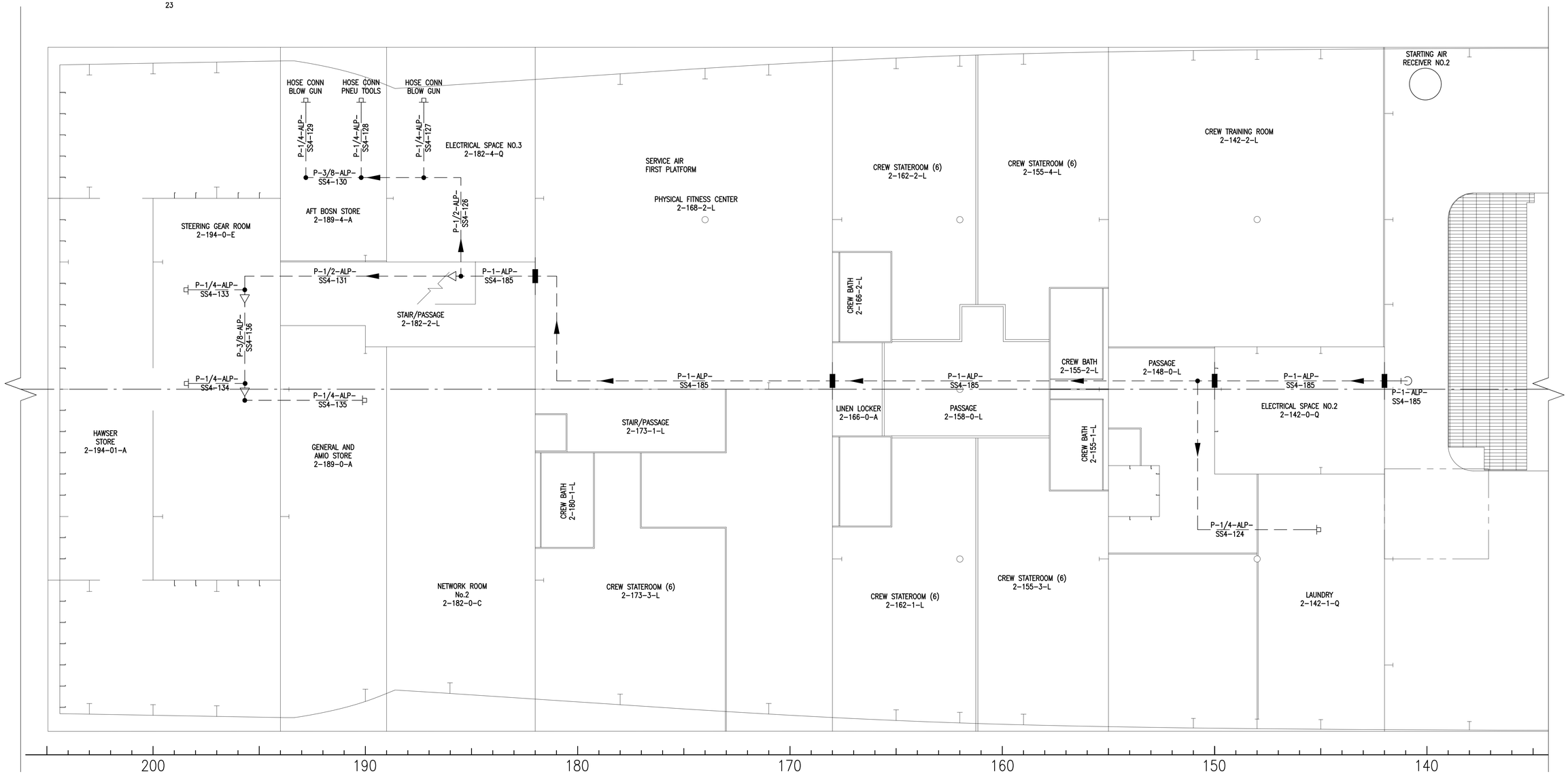
SERVICE AIR
MAIN DECK
FRAMES 13-69
SCALE: 1/4" = 1'-0

COMPRESSED AIR SYSTEM
SERVICE AIR
MAIN DECK
FR 13-69

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: AS NOTED | SHEET: 22

23



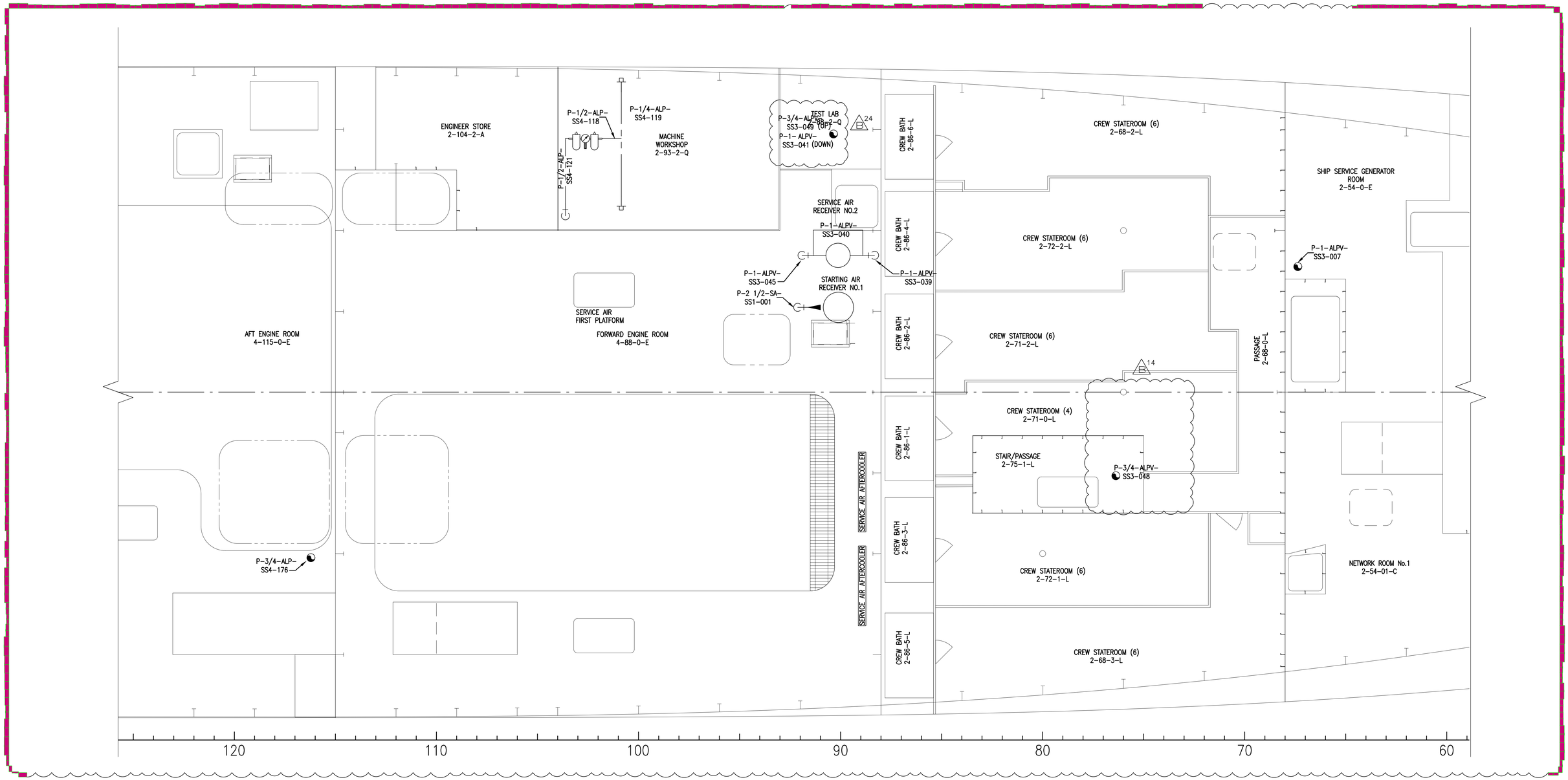
PLAN VIEW 180-A

SERVICE AIR
FIRST PLATFORM
FRAMES 140-199
SCALE: 1/4" = 1'-0

COMPRESSED AIR SYSTEM
SERVICE AIR
FIRST PLATFORM
FR 140-199

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: AS NOTED | SHEET: 23



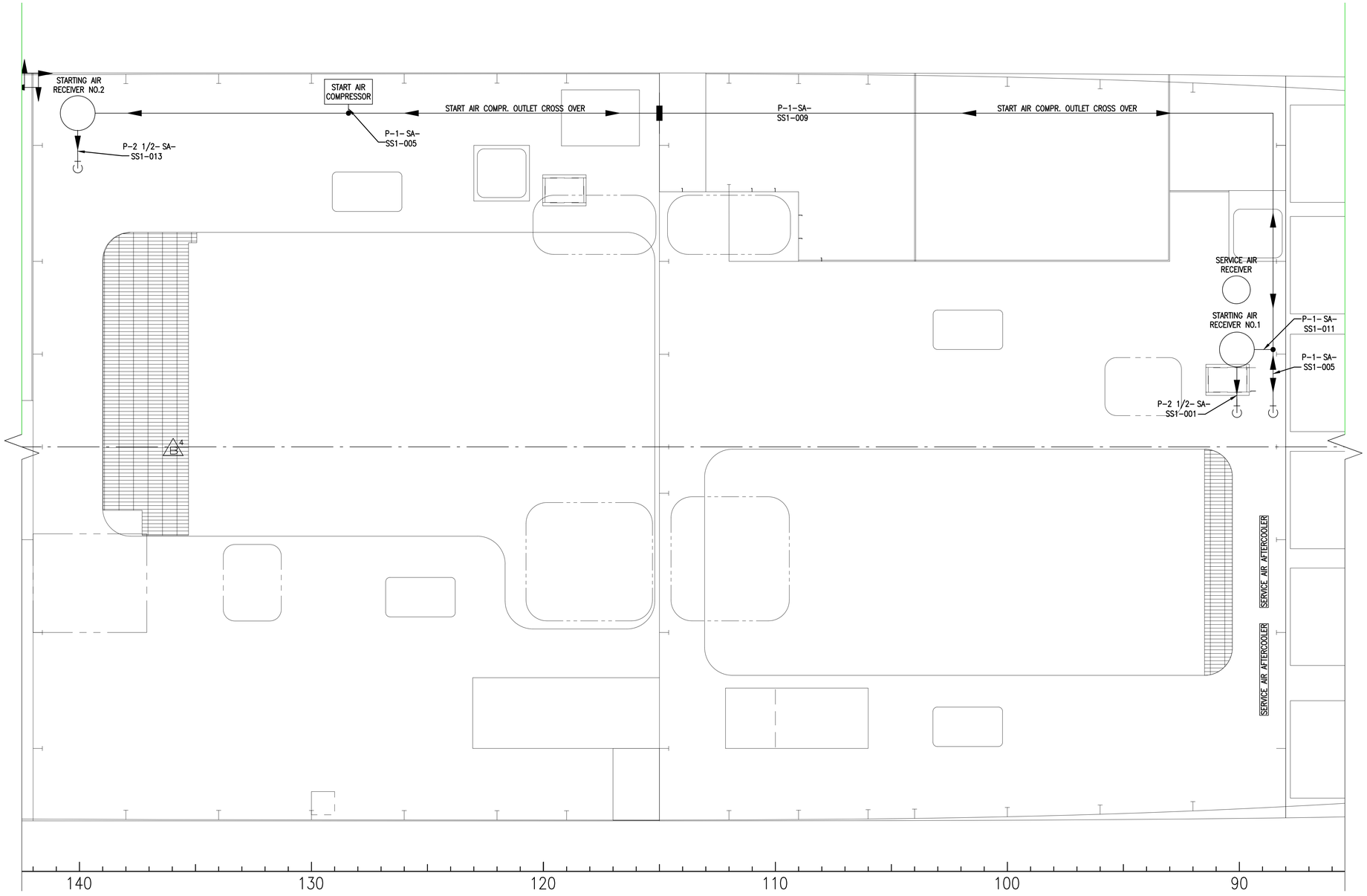
PLAN VIEW 188-A

SERVICE AIR
FIRST PLATFORM
FRAMES 68-120
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
FIRST PLATFORM
FR 68-120

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	813[redacted]0	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED | SHEET: 24



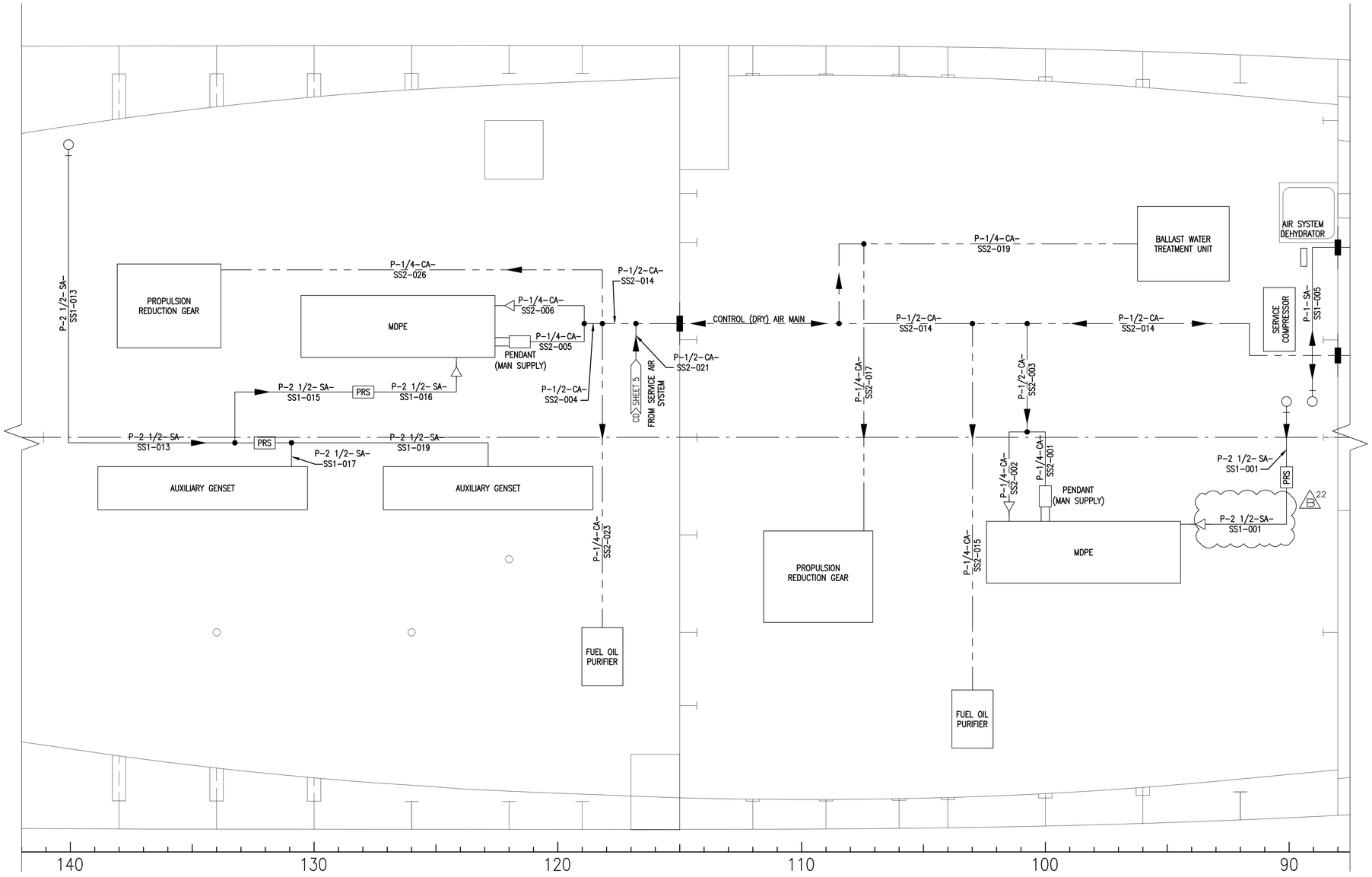
PLAN VIEW 196-A

START AIR
FIRST PLATFORM
FRAMES 86-142
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
START AIR
FIRST PLATFORM
FR 86-142

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81[redacted]0	J60B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED | SHEET: 25



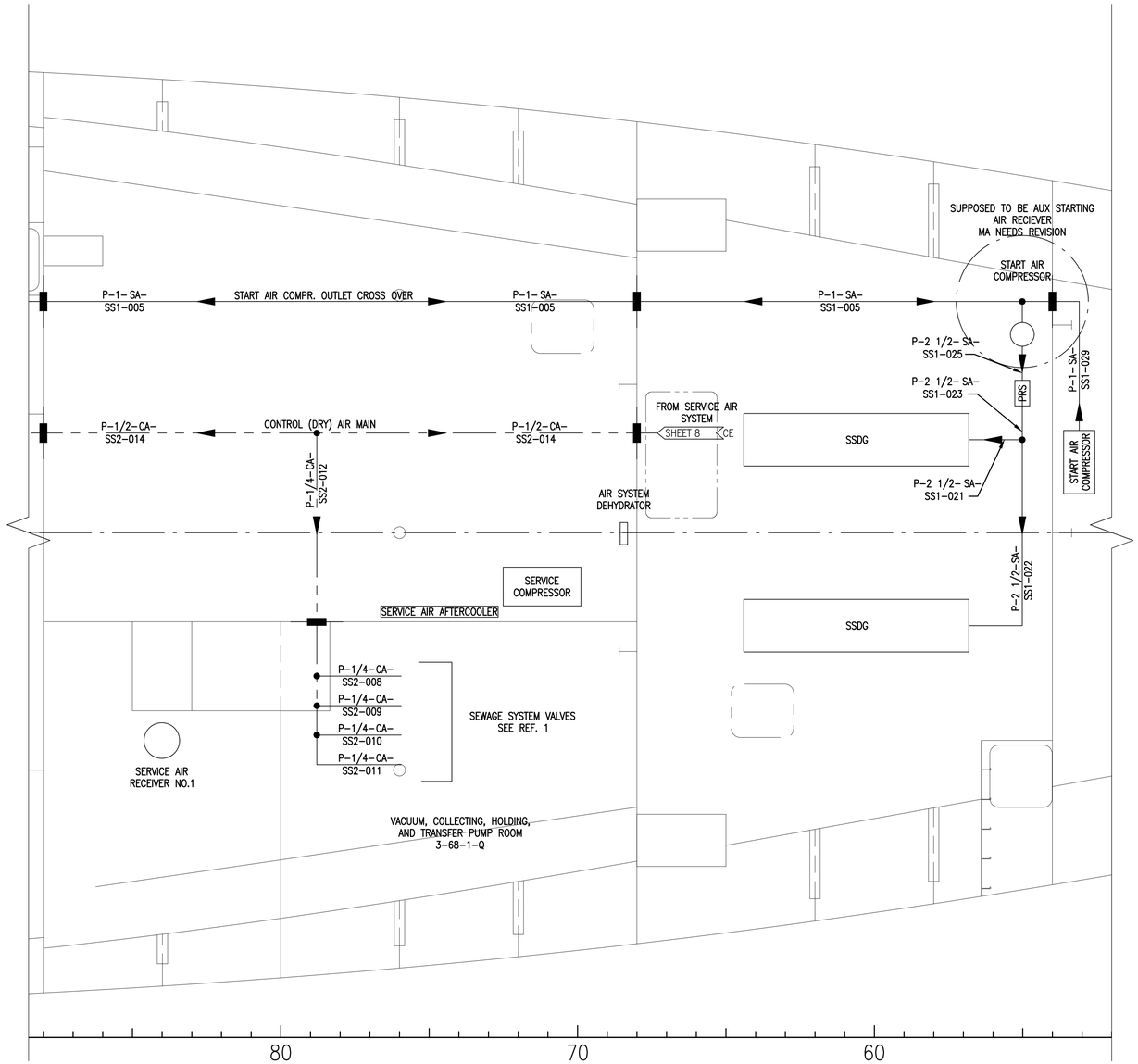
PLAN VIEW 204-A

START AND CONTROL AIR
INNER BOTTOM
FRAMES 88-141
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
START AND CONTROL AIR
INNER BOTTOM
FR 88-141

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81J[redacted]0	J60B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED | SHEET: 26



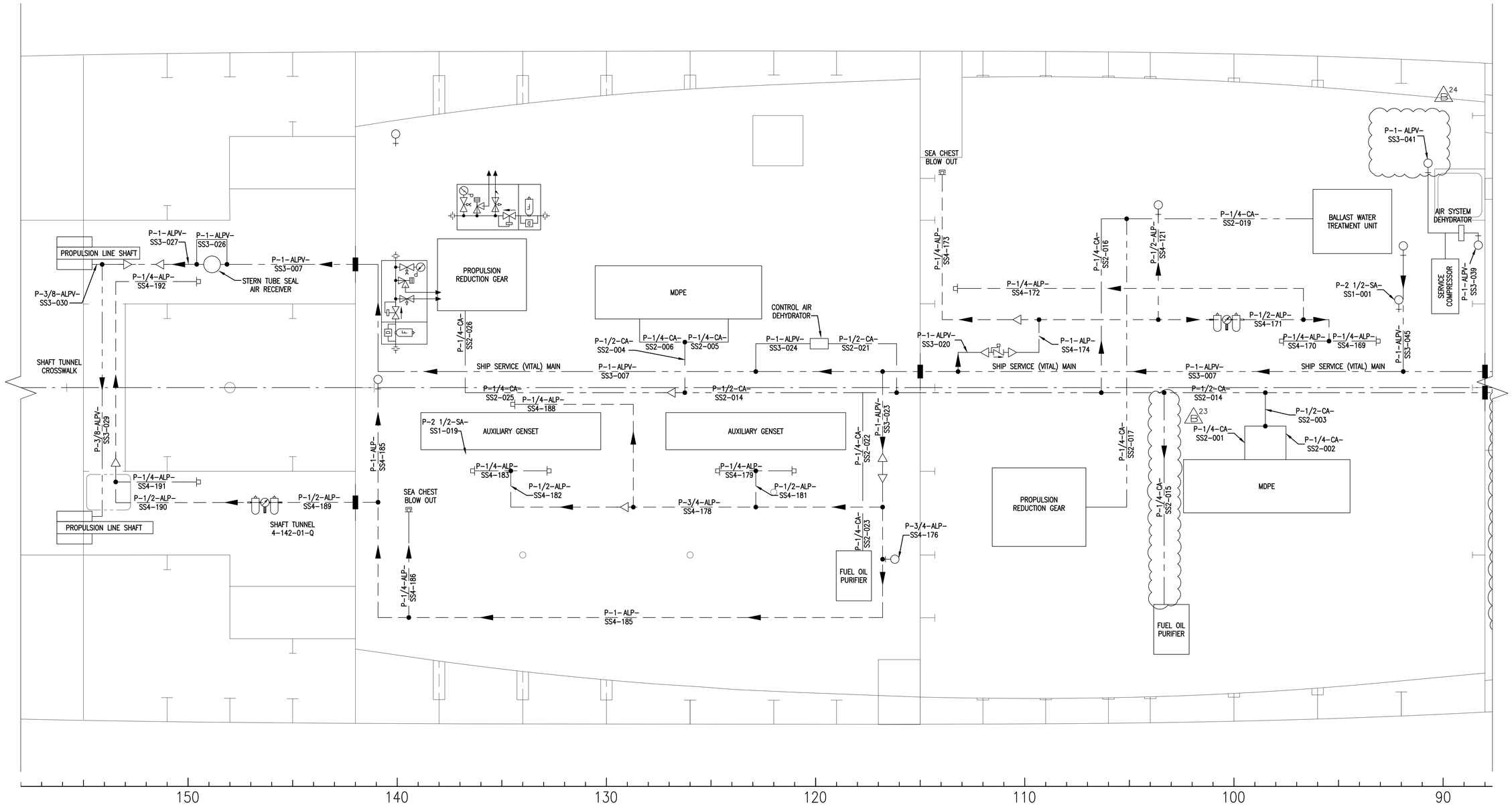
PLAN VIEW 212-A

CONTROL AIR
INNER BOTTOM
FRAMES 53-88
SCALE: 1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
CONTROL AIR
INNER BOTTOM
FR 53-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED SHEET: [redacted]



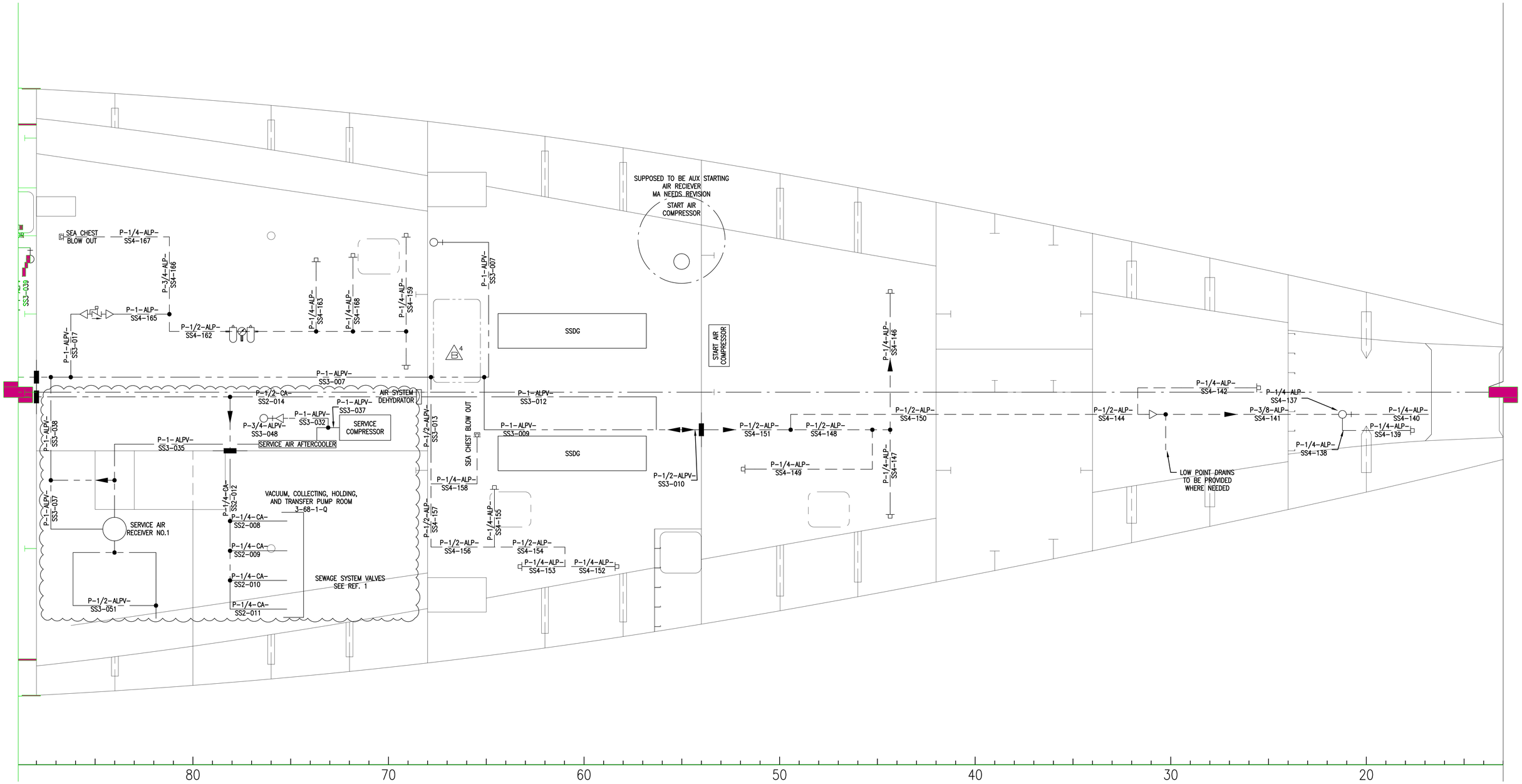
PLAN VIEW 220-A

SERVICE AIR
INNER BOTTOM
FRAMES 88-157
SCALE:1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
INNER BOTTOM
FRAMES 88-157

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81[redacted]0	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED | SHEET: 28



PLAN VIEW 228-A

SERVICE AIR
INNER BOTTOM
FRAMES FR 14-88
SCALE:1/4" = 1'-0

COMPRESSED AIR DECK PL[redacted]
SERVICE AIR
INNER BOTTOM
FRAMES FR 14-88

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-[redacted]S[redacted]-551-001	B

SCALE: [redacted]S [redacted]OTED | SHEET: 29