DWG NO 360B-WMSM-551-001 | SH 1 | REV A

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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.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GLOBE VALVE	DM SSDG	AUTOMATIC DRAIN VALVE
	GLOBE VALVE – LOCKED CLOSED	EM SSDG	ELECTROMAGNETIC STARTING VALVE
	GLOBE VALVE – LOCKED OPEN	PI SSDG	TWO WAY SOLENOID VALVE – POSITION INDICATION
	STOP CHECK GLOBE VALVE		BALL VALVE
	STOP CHECK GLOBE VALVE – LOCKED CLOSED		DRYER WITH MOISTURE SEPARATOR
	STOP CHECK GLOBE VALVE – LOCKED OPEN		MOISTURE SEPARATOR
	LIFT CHECK VALVE	SSDG	TWO WAY SOLENOID VALVE
	BALL VALVE – LOCKED CLOSED	SYMBOL	DESCRIPTION
	NEEDLE VALVE		FLEXIBLE HOSE
	NEEDLE VALVE WITH STEM TEST CONNECTION		HOSE CONNECTION
	NEEDLE VALVE WITH STEM TEST CONNECTION– LOCKED OPEN		HOSE CONNECTION C/W CAP AND KEEP CHAIN
	PRIORITY VALVE – SEE NOTE 9		FLANGE
	PRESSURE REDUCING VALVE		AIR COMPRESSOR
	PRESSURE RELIEF VALVE		FILTER, COALESCING
LPA	ALARM, LOW PRESSURE	D	MECHANICAL DIFFERENTIAL PRESS. INDICATOR, INC. TELLTALE
P	GAUGE, PRESSURE, LOCAL READING		LUBRICATOR
T	THERMOMETER, LOCAL READING, W/THERMOWELL–SEE NOTE 15		REDUCER
PS	PRESSURE OPERATED SWITCH	F	MOISTURE SEPARATOR WITH FILTER
DM	DEW POINT MONITOR	AD	AUTOMATIC DRAIN

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.

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.
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.
4. THE CONIROL 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.
- 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 OMPLY 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.

360B WMSM	919 AF
PLAN SET	HULLS
APPLICABILITY	

AUSTAL DRAWING NO. OPC-551-01-5001

REVISIONS

REV	SH	ZONE	ITEM	DESCRIPTION	DATE	APPVL 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 /s/
A	1	3-A	1	ADD GENERAL NOTE 5.16 USCG COMPLIANCE COMMENT 2		
A	1 9	1-C 66-B	2	RESERVATION 1 MODIFIED FINAL PIPE HOOKUP DEPENDENT ON VENDOR DATA USCG COMPLIANCE COMMENT 4		
A	1	3-C	3	REVISE GENERAL NOTE 3.1 USCG DESIGN CONCERNS COMMENT 1		
A	3 4,5, 7,8	23-B VAR	4	PRESSURE REDUCING VALVES REORIENTED TOWARDS CONSUMERS USCG DESIGN CONCERNS COMMENT 4		
A	4 VAR	31-C VAR	5	LUBRICATORS REMOVED USCG DESIGN CONCERNS COMMENT 5		
A	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		
A	4	31-C	7	SPELLING CORRECTION ADMINISTRATIVE NOTES 2		
A	1A	1-A	8	FIX ZONE NUMBERS LETTERS USCG COMPLIANCE COMMENT 2		

RESERVATIONS

1. SHEET 9 – RESERVED FINAL HOOK-UP OF LP AIR TO BOW THRUSTER PENDING RECEIPT OF FINAL VENDOR DATA.

NO.	TITLE	DRAWING NO.
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

REFERENCE PLANS

STINFO DESIGNATION

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

COMPRESSED AIR SYSTEM DIAGRAM

TITLE SHEET

DESIGNED: G RICE	05/26/23
DRAWN: H LINDEMANN	05/26/23
CHECKED: T GENTRY	05/26/23
APPROVED: BRAD VICKERS	05/26/23

USCG APPROVAL MM/DD/YY
APPVL SIG /s/
APPVL AUTH

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

SCALE: AS 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												

360			WMSM
MATERIAL SCHEDULE AND MATERIAL TABLE			
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001	REV A
SCALE: AS NOTED			SHEET: 1A

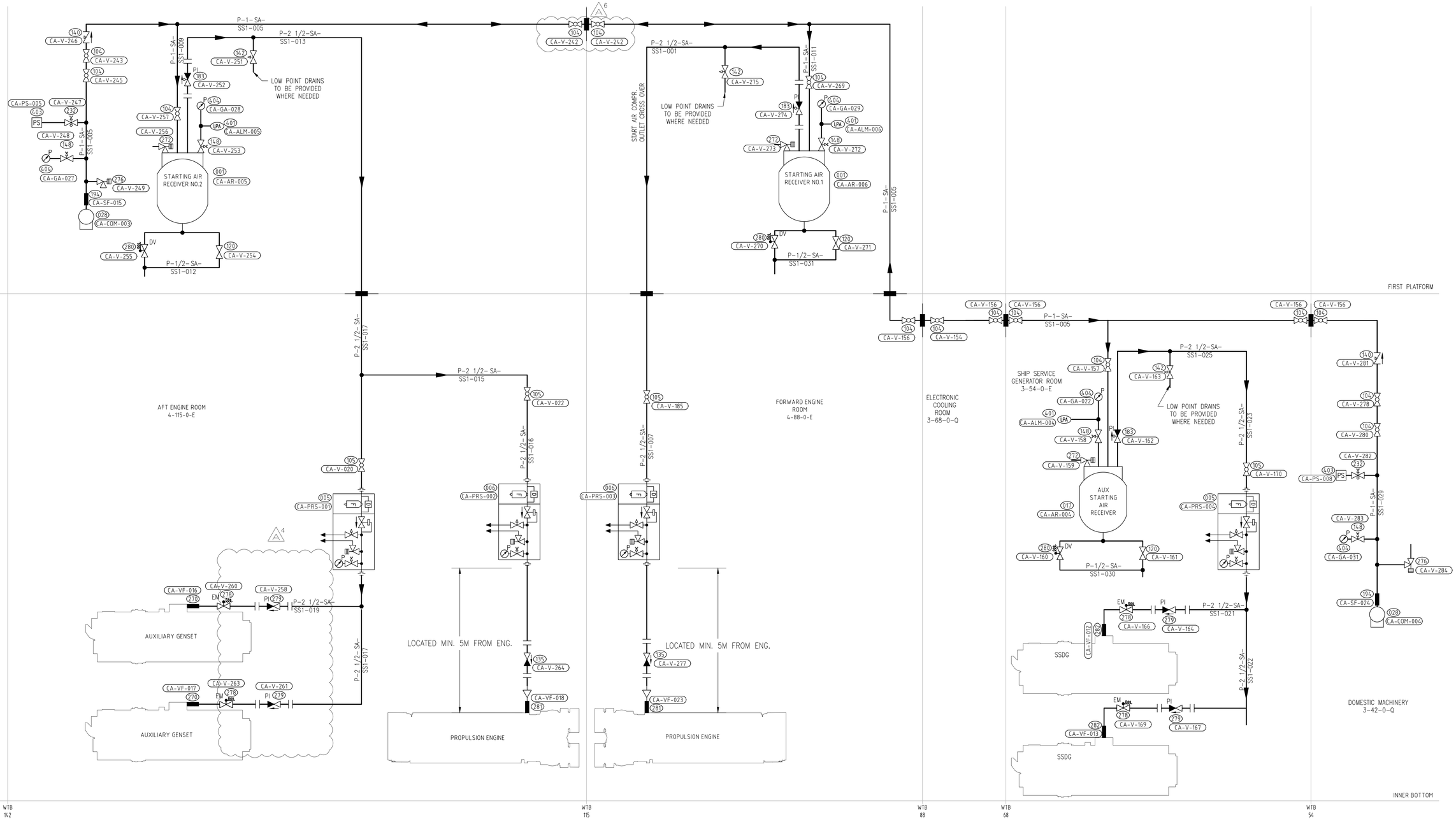
MATERIALS LIST

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	200F	TBD	TBD	START AIR RECIEVER
002	2	TBD	AIR DEHYDRATOR	CONTROL AIR	2.4 SCFM @ 125 PSI	VARIOUS	TBD	COMMERCIAL	140 PSI	200F	TBD	TBD	CONTROL AIR LOW PRESSURE OUTLET AIR @ -40F DEWPOINT
005	2	TBD	REGULATOR	PRESSURE REDUCING STATION	2 1/2	VARIOUS	300 LB FLANGED	VARIOUS	TBD	TBD	TBD	TBD	550 PSI INLET 145 PSI OUTLET
006	2	TBD	REGULATOR	PRESSURE REDUCING STATION	2 1/2	VARIOUS	300 LB FLANGED	VARIOUS	TBD	TBD	TBD	TBD	550 PSI INLET 435 PSI OUTLET
010	2	TBD	COMPRESSOR	LP AIR	51 SCFM @ 125 PSI	VARIOUS	150LB FLANGED	COMMERCIAL	140 PSI	200F	TBD	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	200F	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	200F	TBD	TBD	SERVICE AIR RECEIVER
017	1	TBD	RECEIVER	STARTING AIR	100 US GAL	STEEL	300 LB FLANGED	COMMERCIAL	565 PSI	200F	TBD	TBD	AUX. STARTING AIR RECEIVER
018	1	TBD	RECEIVER	LP AIR	30 US GAL	STEEL	150 LB FLANGED	COMMERCIAL	140 PSI	200F	TBD	TBD	STERN TUBE AIR RECEIVER
028	2	TBD	COMPRESSOR	STARTING AIR	22.2 SCFM @ 550 PSI	VARIOUS	300LB FLANGED	COMMERCIAL	565 PSI	200F	TBD	TBD	TBD
100	89	TBD	VALVE	BALL	1/4	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL
101	7	TBD	VALVE	BALL	3/8	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL
102	34	TBD	VALVE	BALL	1/2	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL
103	30	TBD	VALVE	BALL	3/4	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL
104	64	TBD	VALVE	BALL	1	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL
105	4	TBD	VALVE	BALL	2 1/2	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL
115	1	TBD	VALVE	BALL LOCKED CLOSED	3/4	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL LOCKED CLOSED
116	5	TBD	VALVE	BALL LOCKED CLOSED	1	316LSS BODY AND TRIM	UNION SW ENDS	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	BALL LOCKED CLOSED
120	6	TBD	VALVE	GLOBE	1/2	316LSS BODY AND TRIM	150 LB FLANGED	API 602	150 PSI (MIN.)	250F	TBD	TBD	GLOBE
127	1	TBD	VALVE	GLOBE LOCKED CLOSED	3/4	316LSS BODY AND TRIM	150 LB FLANGED	API 602	800 PSI	250F	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.)	250F	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.)	250F	TBD	TBD	GLOBE STOP-CHECK
134	1	TBD	VALVE	GLOBE STOP-CHECK	1	316LSS BODY AND TRIM	UNION SW ENDS	COMMERCIAL	150 PSI (MIN.)	250F	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.)	250F	TBD	TBD	GLOBE STOP-CHECK
140	9	TBD	VALVE	LIFT-CHECK SPRING LOADED	1	316LSS BODY AND TRIM	150 LB FLANGED	MSS SP-110	150 PSI (MIN.)	250F	TBD	TBD	LIFT-CHECK SPRING LOADED
142	31	TBD	VALVE	NEEDLE	1/4	316LSS BODY AND TRIM	SW	API 602	800 PSI	250F	TBD	TBD	NEEDLE
148	36	TBD	VALVE	NEEDLE STEM CONNECTION	1/4	316LSS BODY AND TRIM	UNION SW ENDS	MIL-V-24578	6000 PSI	250F	TBD	TBD	NEEDLE STEM CONNECTION
160	1	TBD	VALVE	PRESSURE REDUCING 125 PSI INLET 87 PSI OUTLET	1/4	BRONZE BODY 316LSS TRIM	UNION ENDS	MIL-V-24834	150 PSI	250F	TBD	TBD	PRESSURE REDUCING 125 PSI INLET 87 PSI OUTLET
168	4	TBD	VALVE	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 40 PSI	1/2	316LSS BODY AND TRIM	FLANGED	COMMERCIAL	150 PSI	250F	TBD	TBD	SELF-ACTUATED PRESSURE RELIEF ANGLED 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	250F	TBD	TBD	STOP-CHECK GLOBE LOCKED OPEN POSITION INDICATOR
190	4	TBD	HOSE	FLEXIBLE HOSE VENDOR FURNISHED	1/4	TBD	TBD	TBD	TBD	TBD	TBD	TBD	FLEXIBLE HOSE VENDOR FURNISHED
191	1	TBD	HOSE	FLEXIBLE HOSE VENDOR FURNISHED	3/8	TBD	TBD	TBD	TBD	TBD	TBD	TBD	FLEXIBLE HOSE VENDOR FURNISHED
194	4	TBD	HOSE	FLEXIBLE HOSE VENDOR FURNISHED	1	TBD	TBD	TBD	TBD	TBD	TBD	TBD	FLEXIBLE HOSE VENDOR FURNISHED
224	2	TBD	FILTER	COALESCING FILTER	1	ALUMINUM BODY	THREADED	TBD	250 PSI	TBD	TBD	TBD	COALESCING FILTER
226	2	TBD	LUBRICATOR	LUBRICATOR			TBD	TBD			TBD	TBD	LUBRICATOR
232	4	TBD	VALVE	NEEDLE STEM CONNECTION LOCKED OPEN	1/4	316LSS BODY AND TRIM	UNION SW	MIL-V-24578	6000 PSI	250F	TBD	TBD	NEEDLE STEM CONNECTION LOCKED OPEN
246	21	TBD	REGULATOR	AIR PRESSURE FILTER (5 MICRON) - REGULATOR - LUBRICATOR	3/4	ALUMINUM BOWL	FPT	ASTM F1795	0-140 PSI	120F	TBD	TBD	ADJUSTABLE - DRAIN INCLUDED
247	8	TBD	REGULATOR	AIR PRESSURE FILTER (5 MICRON) - REGULATOR	3/4	ALUMINUM BOWL	FPT	ASTM F1795	0-140 PSI	120F	TBD	TBD	ADJUSTABLE - DRAIN INCLUDED
269	8	TBD	VALVE	PRIORITY UPSTREAM SHUTOFF @ 85 PSI	1 1/4	316LSS BODY AND TRIM	UNION SW ENDS	MIL-V-24384 TYP. III	150 PSI	250F	TBD	TBD	PRIORITY UPSTREAM SHUTOFF @ 85 PSI
270	2	TBD	HOSE	VENDOR FURNISHED	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	VENDOR FURNISHED
271	4	TBD	HOSE	VENDOR FURNISHED	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	VENDOR FURNISHED
272	3	TBD	VALVE	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 500 PSI	1/2	316LSS BODY AND TRIM	FLANGED	COMMERCIAL	150 PSI	250F	TBD	TBD	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 500 PSI
273	2	TBD	VALVE	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 131 PSI	1/2	316LSS BODY AND TRIM	FLANGED	COMMERCIAL	150 PSI	250F	TBD	TBD	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 131 PSI
274	3	TBD	VALVE	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 140 PSI	1/2	316LSS BODY AND TRIM	FLANGED	COMMERCIAL	150 PSI	250F	TBD	TBD	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 140 PSI
275	4	TBD	VALVE	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 140 PSI	1/2	316LSS BODY AND TRIM	FLANGED	COMMERCIAL	150 PSI	250F	TBD	TBD	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 140 PSI
276	2	TBD	VALVE	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 500 PSI	1/2	316LSS BODY AND TRIM	FLANGED	COMMERCIAL	300 PSI	250F	TBD	TBD	SELF-ACTUATED PRESSURE RELIEF ANGLED SET @ 500 PSI
278	4	TBD	VALVE	TWO-WAY SOLENOID ELECTROMAGNETIC STARTING VF	1 1/2	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TWO-WAY SOLENOID ELECTROMAGNETIC STARTING VF
279	4	TBD	VALVE	GLOBE STOP-CHECK POSITION INDICATOR	2 1/2	316LSS BODY AND TRIM	300 LB FLANGED	COMMERCIAL	550 PSI (MIN.)	250F	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	250F	TBD	TBD	TWO-WAY SOLENOID DRAIN VALVE
281	2	TBD	HOSE	VENDOR FURNISHED (FMD)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
282	2	TBD	HOSE	VENDOR FURNISHED (MTU)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
400	2	TBD	MONITOR	DEW POINT MONITOR			TBD	TBD			TBD	TBD	DEW POINT MONITOR
401	6	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	36	TBD	GAUGE	PRESSURE LOCAL READING (0-150 PSI)		VARIOUS	MALE MPT	COMMERCIAL	150 PSI	140 °F	TBD	TBD	PRESSURE LOCAL READING (0-150 PSI)

360 WMSM
EQUIPMENT AND FITTING LIST

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

SCALE: AS NOTED | SHEET: 2



360 WMSM
COMPRESSED AIR SYSTEM
DIAGRAM
STARTING AIR BELOW 1ST PLATF FR 68-142

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

SCALE: AS NOTED | SHEET: 3

FIRST PLATFORM

AFT ENGINE ROOM
4-115-0-E

FORWARD ENGINE ROOM
4-88-0-E

ELECTRONIC COOLING ROOM
3-68-0-Q

SHIP SERVICE GENERATOR ROOM
3-54-0-E

SEACHEST NO.8 (P)

SEACHEST NO.8 (S)

BALLAST WATER TREATMENT

APM BRAKE CONTROL

CA-SF-001

CA-APF-004

CA-V-025

CA-V-047

CA-APF-002

CA-SF-003

FUEL OIL PURIFIER

CA-DM-001

CA-V-024

FROM SERVICE AIR SYSTEM
SHEET 5

CA-V-055

CA-APF-003

CA-V-048

CA-V-268

CA-V-266

CA-V-267

CA-LUB-008

CA-VF-020

CA-V-265

CA-VF-019

PENDANT (MAN SUPPLY)

PROPULSION ENGINE

CONTROL (DRY) AIR MAIN

CA-V-050

CA-V-285

CA-LUB-009

CA-V-286

CA-VF-022

CA-V-287

CA-VF-021

PENDANT (MAN SUPPLY)

PROPULSION ENGINE

CA-V-165

LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

CA-V-056

CA-APF-001

CA-SF-007

880 (DN6) APM BRAKE CONTROL

CA-V-054

CA-V-102

CA-APF-001

CA-SF-008

FUEL OIL PURIFIER

CA-V-100

CA-V-105

CA-V-104

CA-DM-003

CA-V-187

FROM SERVICE AIR SYSTEM
SHEET 8

CA-V-106
CA-V-107
CA-V-108
CA-V-109

SEWAGE SYSTEM VALVES
SEE REF. 1

VACUUM, COLLECTING, HOLD, AND TRANSFER PUMP ROOM
3-68-1-Q

P-1/4-CA-SS2-026
P-1/4-CA-SS2-025
P-1/2-CA-SS2-014
P-1/4-CA-SS2-022
P-1/4-CA-SS2-023
P-1/2-CA-SS2-021
P-1/2-CA-SS2-004
P-1/4-CA-SS2-005
P-1/4-CA-SS2-006
P-1/2-CA-SS2-003
P-1/4-CA-SS2-001
P-1/4-CA-SS2-002
P-1/4-CA-SS2-017
P-1/4-CA-SS2-016
P-3/8-CA-SS2-013
P-1/4-CA-SS2-015
P-1/4-CA-SS2-012
P-1/4-CA-SS2-019
P-1/4-CA-SS2-008
P-1/4-CA-SS2-009
P-1/4-CA-SS2-010
P-1/4-CA-SS2-011

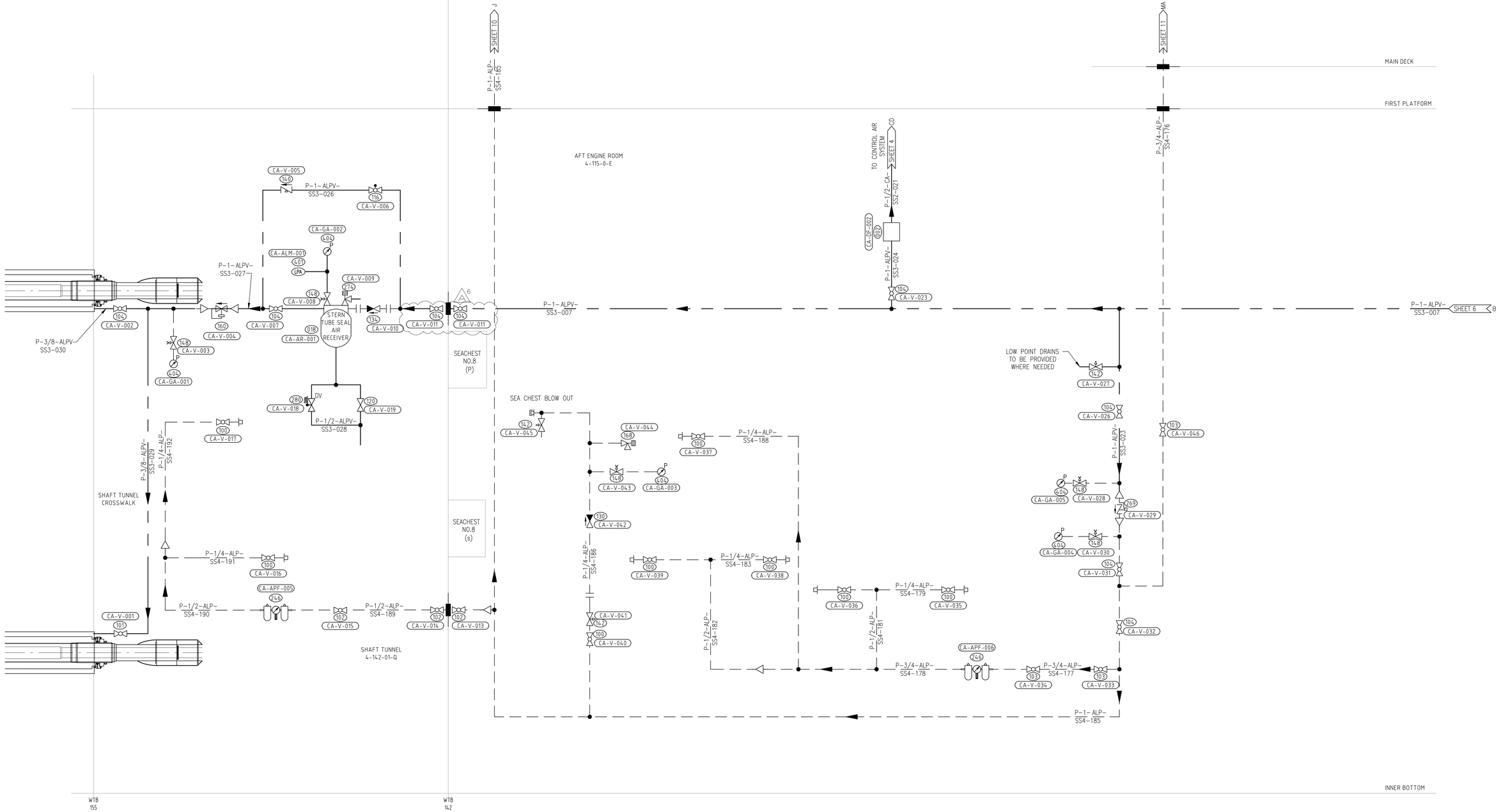
WTB 142
WTB 115
WTB 88
WTB 68

INNER BOTTOM

360 WMSM
COMPRESSED AIR SYSTEM
DIAGRAM
CONTROL AIR BEL 1ST PLATF FR 68-142

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

SCALE: AS NOTED | SHEET: 4



360		WMSM
COMPRESSED AIR SYSTEM		
DIAGRAM		
SERVICE AIR BEL MAIN DECK FR 115-155		
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001 REV A
SCALE: AS NOTED		SHEET: 5

DWG NO 360B-WMSM-551-001 | SH 6 | REV A

ENGINEER STORE
2-104-2-A

MACHINE WORKSHOP
2-93-2-Q

FORWARD ENGINE ROOM
4-88-0-E

SEACHEST NO.7

MAIN DECK

FIRST PLATFORM

INNER BOTTOM

WTB 115

SERVICE AIR RECEIVER NO. 2

SHIP SERVICE (VITAL) MAIN

SEA CHEST BLOW OUT

LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

P-1-ALPV-SS3-040
P-1-ALPV-SS3-042
P-1-ALPV-SS3-045
P-1-ALPV-SS3-039
P-3/4-ALPV-SS3-041
P-1/4-ALP-SS4-119
P-1/2-ALP-SS4-118
P-1/2-ALP-SS4-121
P-1-ALPV-SS3-007
P-1-ALPV-SS3-020
P-1-ALP-SS4-174
P-1/4-ALP-SS4-173
P-1/4-ALP-SS4-172
P-1/4-ALP-SS4-170
P-1/4-ALP-SS4-169
P-1/2-ALP-SS4-171
P-1-ALPV-SS3-047

CA-V-289, CA-V-290, CA-V-288, CA-APF-008, CA-V-084, CA-V-085, CA-V-074, CA-V-077, CA-V-078, CA-V-083, CA-V-079, CA-V-082, CA-V-087, CA-GA-009, CA-ALM-002, CA-AR-002, CA-V-080, CA-V-081, DV, CA-GA-010, CA-V-091, CA-V-092, CA-AMS-001, CA-SF-004, CA-V-095, CA-SF-006, CA-COM-001, CA-V-090, CA-V-089, CA-PS-002, CA-V-051, CA-GA-006, CA-V-070, CA-V-071, CA-V-069, CA-V-072, CA-V-073, CA-V-076, CA-V-068, CA-V-067, CA-GA-007, CA-V-066, CA-V-065, CA-GA-008, CA-V-064, CA-V-063, CA-V-059, CA-V-060, CA-APF-007, CA-V-058, CA-V-099, CA-V-061, CA-V-062

SHEET 5 | SHEET 7 | SHEET 14

360	WMSM
COMPRESSED AIR SYSTEM DIAGRAM	
SERVICE AIR BELOW MAIN DECK FR 88-115	
SIZE D	CAGE CODE 81340
USCG DRAWING NO. 360B-WMSM-551-001	REV A
SCALE: AS NOTED	SHEET: 6

01 LEVEL

MAIN DECK

FIRST PLATFORM

SHEET 14

P-3/4-ALPV-SS3-031

P-1-ALPV-SS3-035

P-1-ALPV-SS3-038

P-1-ALPV-SS3-032

P-1-ALPV-SS3-037

CA-V-145 (140)

CA-V-146 (116)

CA-V-147 (140)

CA-V-148 (104)

CA-V-149 (104)

CA-GA-018 (404)

CA-ALM-003 (401) LPA

CA-V-150 (274)

CA-V-151 (148)

CA-V-132 (104)

CA-V-138 (104)

CA-V-135 (148)

CA-GA-017 (404)

CA-PS-003 (403) PS

CA-V-134 (232)

CA-V-136 (275)

CA-V-144 (104)

CA-SF-009 (274) AD

CA-V-141 (115)

CA-AMS-002 (015)

CA-V-142 (104)

CA-V-137 (140)

CA-SF-010 (194)

CA-COM-002 (010)

ELECTRONIC COOLING ROOM 3-68-0-Q

SERVICE AIR RECEIVER NO. 1

CA-AR-003 (016)

CA-V-152 (280) DV

CA-V-153 (120)

P-1/2-ALPV-SS3-051

CA-V-126 (168)

CA-GA-012 (404) P

CA-V-122 (148)

CA-V-120 (142)

CA-V-127 (142)

CA-V-121 (130)

P-1/4-ALP-SS4-167

SEA CHEST BLOW OUT

SEACHEST NO.6

P-3/4-ALP-SS4-166

6

E SHEET 6

P-1-ALPV-SS3-007

CA-V-101 (104)

CA-V-101 (104)

CA-V-111 (104)

P-1-ALPV-SS3-017

CA-GA-014 (404) P

CA-V-112 (148)

CA-V-113 (269)

CA-GA-015 (404) P

CA-V-114 (148)

P-1-ALP-SS4-165

CA-V-115 (104)

SHIP SERVICE (VITAL) MAIN

CA-V-168 (142)

LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

CA-V-131 (104)

P-1-ALPV-SS3-007 SHEET 8 H

CA-V-119 (100)

P-1/4-ALP-SS4-159

CA-V-118 (100)

CA-V-116 (102)

CA-APF-009 (246)

P-1/2-ALP-SS4-162

P-1/4-ALP-SS4-163

CA-V-117 (100)

P-1/4-ALP-SS4-168

CA-V-124 (100)

WTB 88

INNER BOTTOM

360		WMSM
COMPRESSED AIR SYSTEM		
DIAGRAM		
SERVICE AIR BELOW MAIN DECK FR 68-88		
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001 REV A
SCALE: AS NOTED		SHEET: 7

FIRST PLATFORM

SHEET 12 U

P-1-ALPV-SS3-007

TO CONTROL AIR SYSTEM
CE SHEET 4

P-1/2-CA-SS2-014

SHIP SERVICE GENERATOR ROOM 3-54-0-E

SEACHEST NO.5 (P)

H SHEET 7 P-1-ALPV-SS3-007

6

CA-V-155 (104) CA-V-155 (104)

CA-V-190 (104)

SEA CHEST BLOW OUT

SEACHEST NO.5 (S)

CA-V-192 (102)

CA-V-202 (142)

P-1/2-ALPV-SS3-013

CA-GA-019 (404) (148)

CA-V-201 (168)

CA-V-194

CA-V-195 (268)

CA-GA-020 (404) (148)

CA-V-196 (102)

CA-V-197

CA-V-200 (148)

CA-GA-021 (404)

CA-V-199 (180)

CA-V-198 (142)

CA-V-204 (100)

P-1/4-ALP-SS4-158

P-1/4-ALP-SS4-155

CA-V-203 (102)

CA-APF-010 (246)

P-1/2-ALP-SS4-157

P-1/2-ALP-SS4-156

P-1/2-ALP-SS4-154

P-1/4-ALP-SS4-153

P-1/4-ALP-SS4-152

CA-V-205 (100)

CA-V-206 (100)

CA-DF-001 (002)

P-1-ALPV-SS3-012

CA-V-186 (104)

P-1-ALPV-SS3-008

P-1-ALPV-SS3-009

P-1/2-ALPV-SS3-010

CA-V-189 (142)

LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

6

CA-V-172 (102) CA-V-172 (102)

CA-GA-023 (404)

CA-GA-024 (404)

CA-V-174 (148)

CA-V-175 (269)

CA-V-176 (148)

P-1/2-ALP-SS4-151

CA-V-177 (102)

P-1/2-ALP-SS4-150

SHEET 9 I

DOMESTIC MACHINERY 3-42-0-Q

CA-V-183 (100)

P-1/4-ALP-SS4-149

CA-V-178 (102)

CA-APF-011 (246)

P-1/2-ALP-SS4-148

P-1/4-ALP-SS4-146

P-1/4-ALP-SS4-147

CA-V-182 (100)

WTB 68

WTB 54

INNER BOTTOM

360		WMSM
COMPRESSED AIR SYSTEM		
SYSTEM		
SERV/START AIR BEL 1ST PLATF FR 42-68		
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001 REV A
SCALE: AS NOTED		SHEET: 8

MAIN DECK

CA-V-218 (100) BOW THRUSTER GRAVITY TANK

ELECTRICAL SPACE
NO.1
2-10-0-Q

FIRST PLATFORM

BOW THRUSTER ROOM
3-7-0-Q

P-1/4-ALP-SS4-137

SHEET 8

P-1/2-ALP-SS4-144

(102) CA-V-210

(102) CA-V-210

6

PIPE TUNNEL
3-34-1-V

CA-APF-012 (247)

(100) CA-V-211

P-1/4-ALP-SS4-142

(100) CA-V-212

P-3/8-ALP-SS4-141

(142) CA-V-173

WATER MIST SYSTEM
EQUIPMENT ROOM
3-24-0-Q

LOW POINT DRAINS
TO BE PROVIDED
WHERE NEEDED

(101) CA-V-213

(101) CA-V-214

P-1/4-ALP-SS4-138

(100) CA-V-216

P-1/4-ALP-SS4-139

(100) CA-V-217

RESERVATION 1
FINAL PIPE HOOKUP DEPENDENT
ON VENDOR DATA
2

BOW THRUSTER

(100) CA-V-215

P-1/4-ALP-SS4-140

BOW THRUSTER SHAFT BRAKE OVERRIDE. NOTE: THERE IS A MANUAL OVER-RIDE IN ADDITION TO THIS AIR OPERATED OVER-RIDE

INNER BOTTOM

WTB 42 | WTB 34 | WTB 24 | WTB 7

360 WMSM
COMPRESSED AIR SYSTEM
SYSTEM
SERV AIR FWD BEL MN DK FR 7-42

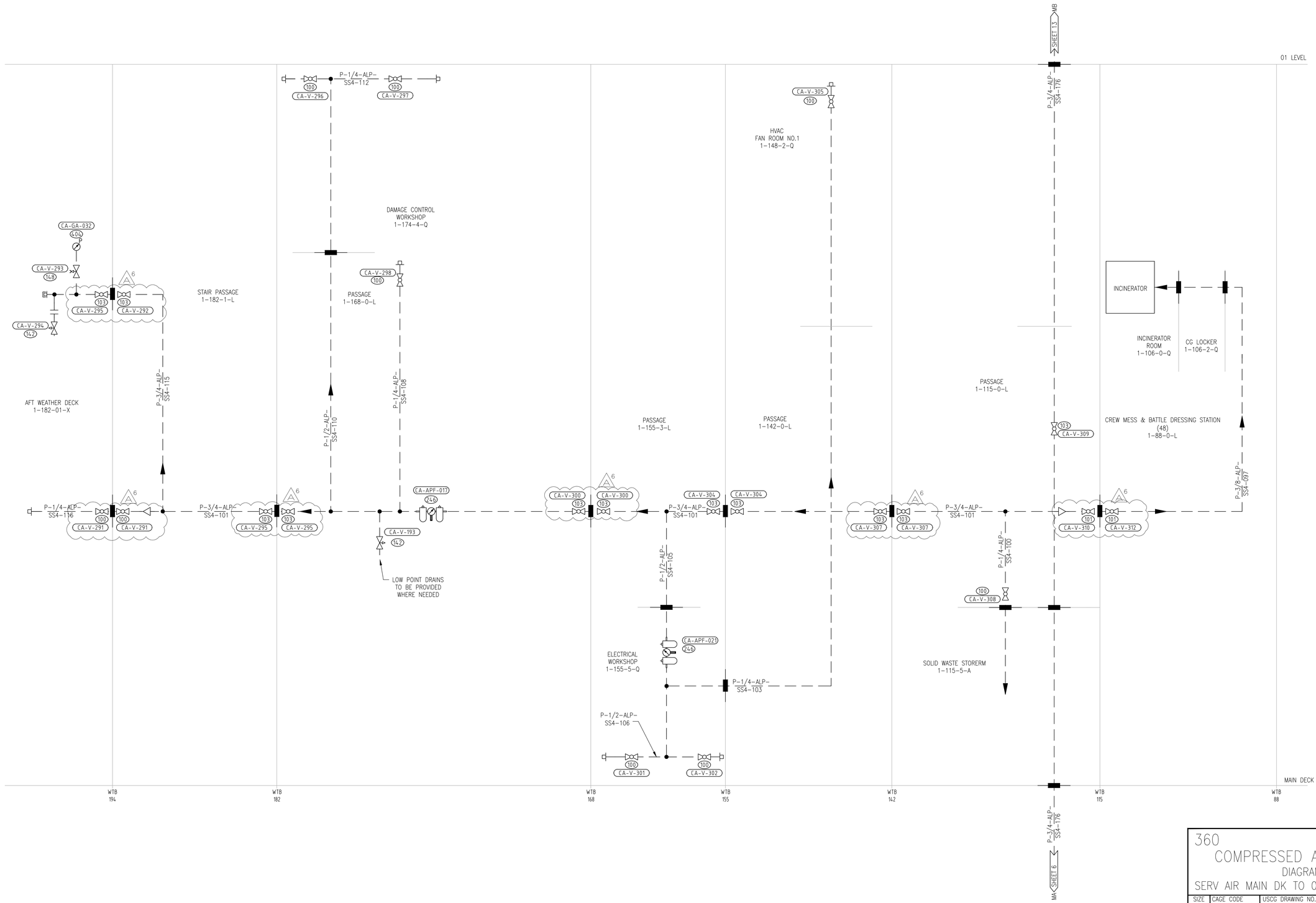
SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-WMSM-551-001	A

SCALE: AS NOTED | SHEET: 9

MAIN DECK

HOSE CONN BLOW GUN
HOSE CONN PNEU TOOLS
HOSE CONN BLOW GUN
CA-V-231 (100)
CA-V-230 (100)
CA-V-229 (100)
P-1/4-ALP-SS4-129
P-1/4-ALP-SS4-128
P-1/4-ALP-SS4-127
P-3/8-ALP-SS4-130
ELECTRICAL SPACE NO.3
2-182-4-Q
AFT BOSN STORE
2-189-4-A
PHYSICAL FITNESS CENTER
2-168-2-L
CA-APF-015 (246)
CA-V-227 (102)
STEERING GEAR ROOM
2-194-0-E
STAIR/PASSAGE
2-182-2-L
P-1/2-ALP-SS4-126
LINEN LOCKER
2-166-0-A
PASSAGE
2-158-0-L
CREW BATH
2-155-2-L
PASSAGE
2-148-0-L
ELECTRICAL SPACE NO.2
2-142-0-Q
AFT ENGINE ROOM
4-115-0-E
CA-APF-014 (246)
P-1/2-ALP-SS4-131
CA-V-219 (100)
P-1/4-ALP-SS4-133
CA-V-223 (102)
CA-V-224 (102)
CA-V-226 (102)
CA-V-232 (104)
P-1-ALP-SS4-185
CA-V-234 (104)
CA-V-236 (104)
CA-V-240 (104)
CA-V-225 (142)
LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED
CA-V-238 (100)
P-3/8-ALP-SS4-136
P-1/4-ALP-SS4-134
CA-V-220 (100)
GENERAL AND AMIO STORE
2-189-0-A
CA-V-222 (100)
P-1/4-ALP-SS4-135
LAUNDRY
2-142-1-Q
CA-APF-016 (246)
CA-V-239 (100)
P-1/4-ALP-SS4-124
FIRST PLATFORM
P-1-ALP-SS4-185
SHEET 5
WTB 204
WTB 194
WTB 182
WTB 168
WTB 155
WTB 142

360			WMSM
COMPRESSED AIR SYSTEM			
SYSTEM			
SERV AIR ABOVE 1ST PLATF FR 142-204			
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001	REV A
SCALE: AS NOTED			SHEET: 10

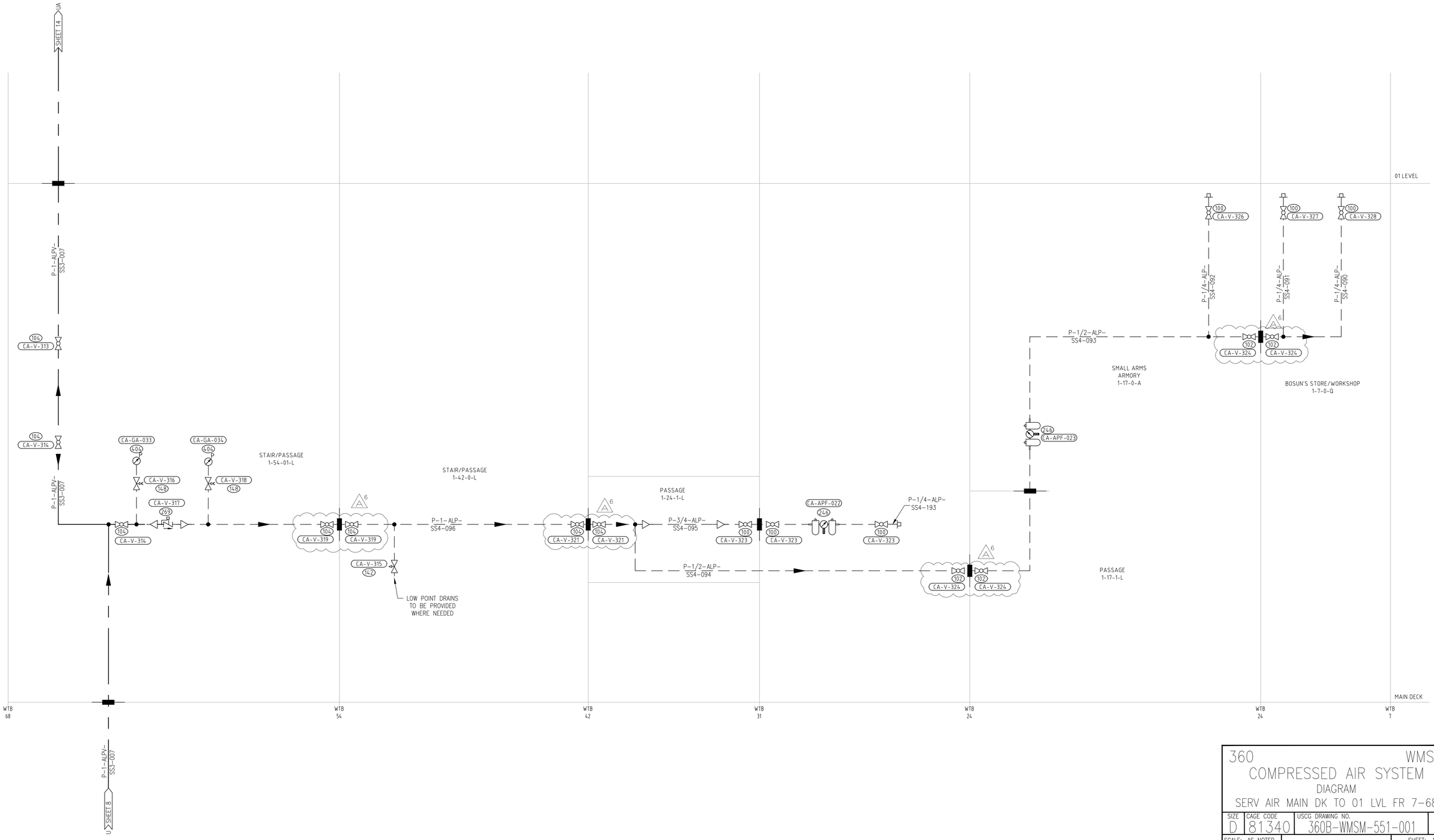


360 WMSM
COMPRESSED AIR SYSTEM
DIAGRAM
SERV AIR MAIN DK TO 01 LVL FR 88-194

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

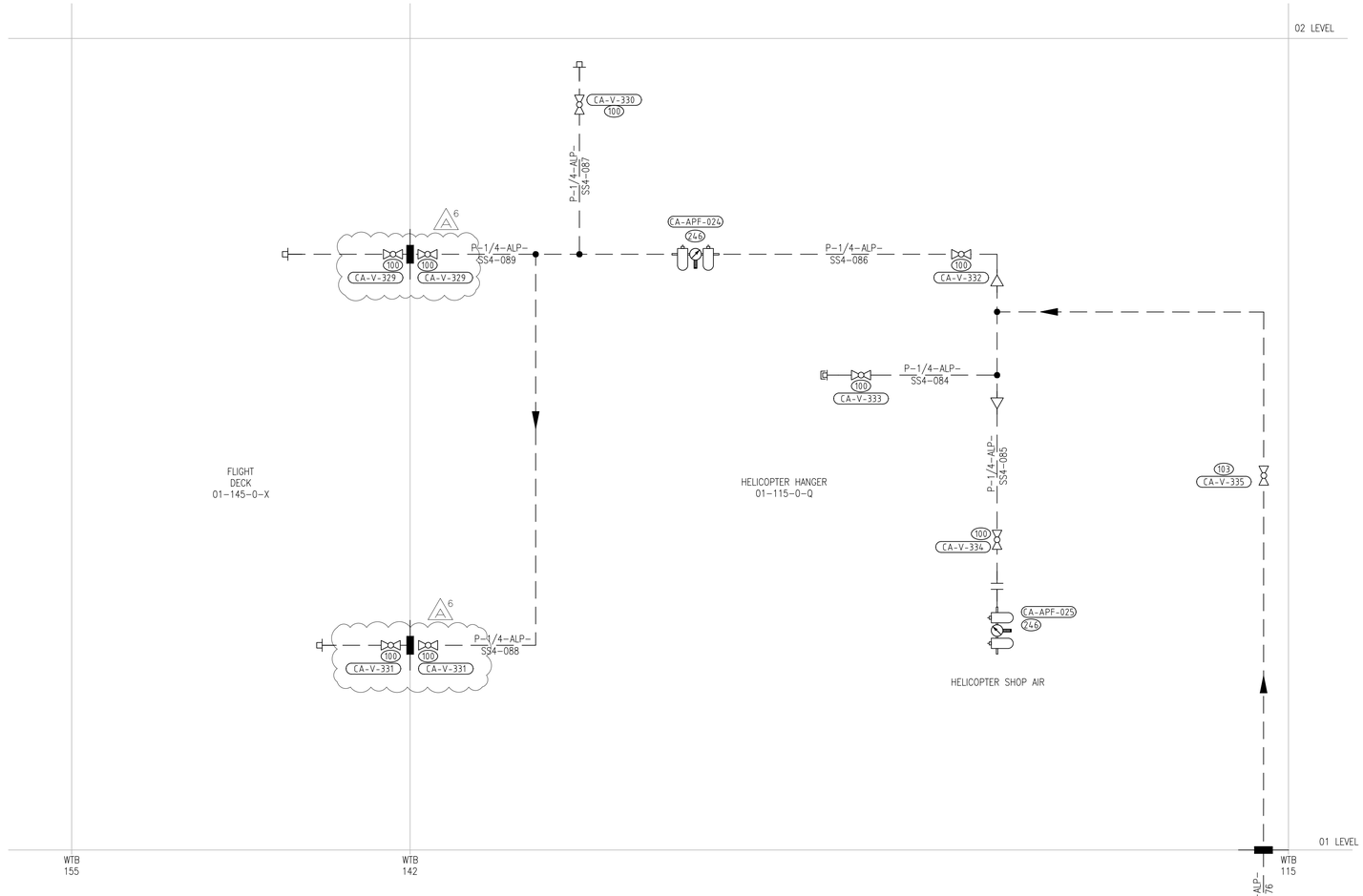
SCALE: AS NOTED | SHEET: 11

DWG NO 360B-WMSM-551-001 | SH 12 | REV A



360	WMSM
COMPRESSED AIR SYSTEM	
DIAGRAM	
SERV AIR MAIN DK TO 01 LVL FR 7-68	
SIZE: D	CAGE CODE: 81340
USCG DRAWING NO.: 360B-WMSM-551-001	REV: A
SCALE: AS NOTED	SHEET: 12

DWG NO 360B-WMSM-551-001 | SH 13 | REV A



360 WMSM COMPRESSED AIR SYSTEM DIAGRAM

SERV AIR 01 LVL TO 02 LVL FR 115-155

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

SCALE: AS NOTED | SHEET: 13

DWG NO 360B-WMSM-551-001 | SH 14 | REV A

SHORE CONNECTIONS

RAS, BUNKERING, AND TRANSFER AREA (PORT) ABOVE 01 DECK

SHEET 15 U8

CA-V-370 (142)
CA-V-348 (142)
CA-GA-035 (404)
CA-V-369 (148)
CA-GA-036 (404)
CA-V-347 (148)
CA-V-368 (275)
CA-V-346 (103)
CA-V-367 (127)
CA-V-351 (142)
CA-V-350 (103)
CA-V-353 (100)
CA-APF-026 (246)
CA-V-349 (103)

P-3/4-ALP-SS4-071
P-1/4-ALP-SS4-066
P-3/4-ALPV-SS3-003
P-3/4-ALP-SS4-073
P-3/4-ALP-SS4-072
P-3/4-ALPV-SS3-002
P-3/4-ALP-SS4-074
P-1/4-ALP-SS4-067

02 LEVEL

LAW ENFORCEMENT LOCKER ROOM 01-88-0-A

CA-V-366 (103) (103) CA-V-366
CA-V-365 (103)

RADIO AND TOP SECRET ROOM NO.1 01-68-2-C 36'-9" ABL

FAN ROOM NO.2 01-63-2-Q

CA-V-364 (103) CA-V-363 (103)
CA-V-352 (100)
CA-V-362 (103)

STAIRS/PASSAGE 01-68-1-L

CA-APF-027 (246)
P-3/4-ALP-SS4-075
P-1/4-ALP-SS4-068
CA-V-340 (103)
CA-V-339 (103)

CA-GA-039 (404)
CA-GA-040 (404)
STAIRS/PASSAGE 01-42-1-L
CA-V-360 (148)
CA-V-359 (269)
CA-V-356 (148)
P-3/4-ALPV-SS3-050
P-1/4-ALP-SS4-077
CA-V-357 (100) CA-V-357 (100)
CA-APF-029 (246)
P-1/4-ALP-SS4-076
CA-V-358 (100) CA-V-358 (100)
CA-V-354 (103) CA-V-355 (103)
P-3/4-ALP-SS4-078
CA-V-361 (142)
FOREDECK 01-J-0-X

LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

CA-V-336 (100) CA-V-336 (100)
P-1/4-ALP-SS4-079

HVAC FAN ROOM NO. 3 01-88-1-Q

ELECTRICAL SPACE NO.4 01-68-3-Q

AMIO SHELTER STORES 01-37-3-L

P-3/4-ALP-SS4-080
P-1/4-ALP-SS4-069
CA-V-337 (100)
P-3/4-ALPV-SS3-003

01 LEVEL

WTB 88 | WTB 68 | WTB 42 | WTB 37

CA-APF-028 (246)
P-3/4-ALP-SS4-081
CA-V-341 (103)
CA-V-344 (142)
CA-V-371 (275)
P-3/4-ALPV-SS3-001
CA-GA-038 (404)
CA-V-342 (148)
CA-V-372 (148)
CA-GA-037 (404)
CA-V-343 (142)
CA-V-373 (142)
P-3/4-ALP-SS4-082
P-1/4-ALP-SS4-070
CA-V-345 (103)
CA-V-338 (100)

P-3/4-ALPV-SS3-049 → RA SHEET 6
P-3/4-ALPV-SS3-048 → TA SHEET 7
P-1-ALPV-SS3-007 → UA SHEET 12

SHORE CONNECTIONS

RAS, BUNKERING, AND TRANSFER AREA (STBD) ABOVE 01 DECK

360			WMSM
COMPRESSED AIR SYSTEM DIAGRAM			
SERV AIR 01 TO 02 LVL FR 34 AFT OF 88			
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001	REV A
SCALE: AS NOTED			SHEET: 14

04 LEVEL

03 LEVEL AFT WEATHER DECK 03-109-0-X

ELECTRICAL SPACE NO.6 03-68-2-Q

SHIP SERVICE GENERATOR EXHAUST TRUNK 02-65-2-Q

BRIDGE 03-49-0-C

CA-APF-030 246

100 CA-V-376

P-1/4-ALP-SS4-062

100 CA-V-377

P-1/4-ALP-SS4-064

100 CA-V-384

CA-GA-042 404

6

100 CA-V-385

CA-APF-031 247

P-1/4-ALP-SS4-062

WINDOW WASH SYSTEM

148 CA-V-378

269 CA-V-379

6

100 CA-V-374

100 CA-V-375

P-1/4-ALP-SS4-065

CA-GA-041 404

CA-V-380 148

LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

CA-V-381 142

SERVICE TRUNK 02-68-0-T

102 CA-V-382

03 LEVEL

SLQ-32

CA-SF-025 191

101 CA-V-383

SENSOR ROOM 02-68-2-E 45'-6" ABL

P-1/2-ALPV-SS3-014

P-3/8-ALPV-SS3-015

CA-APF-032 247

P-3/4-ALPV-SS3-003

UB SHEET 14

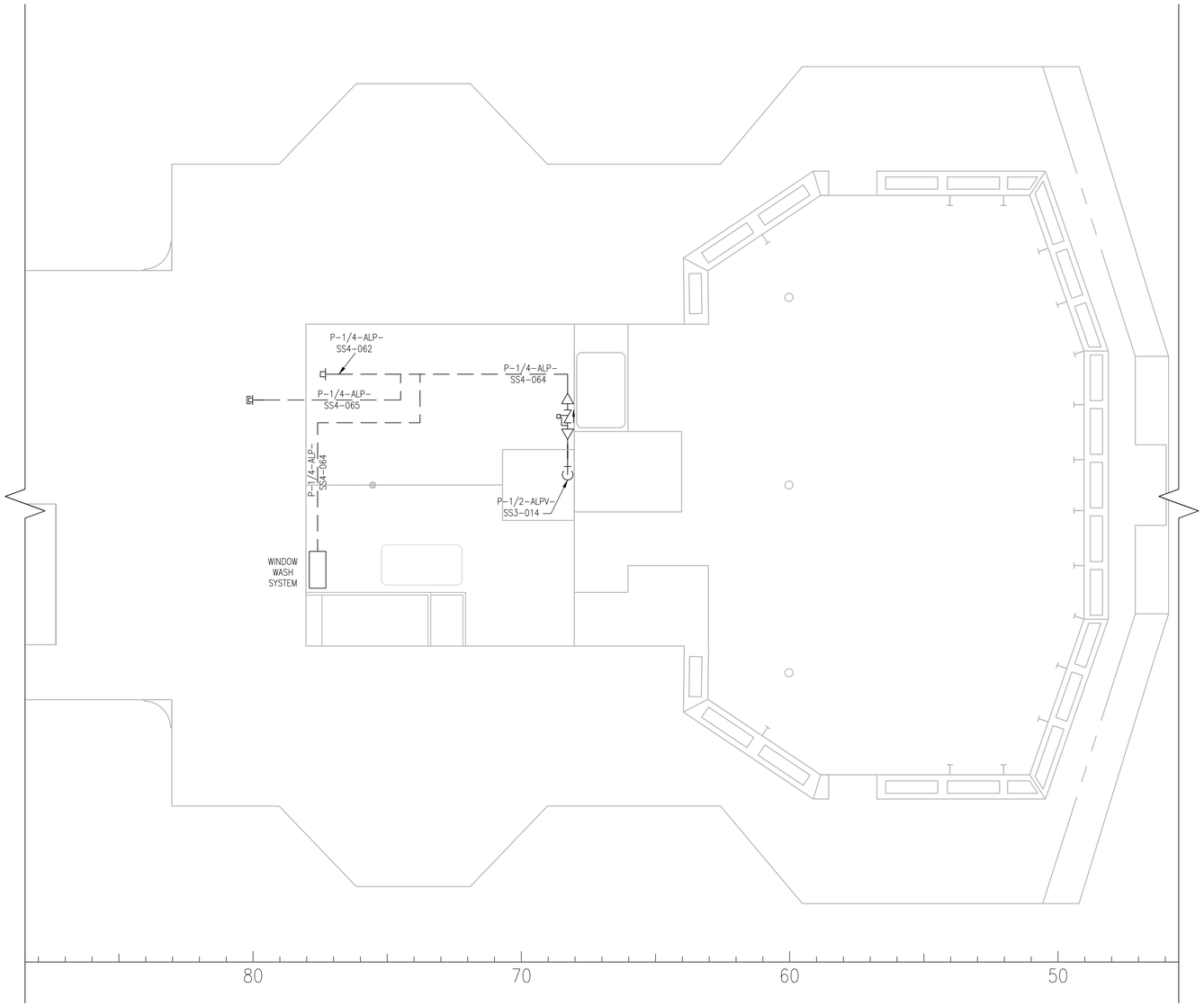
WTB 88

WTB 68

WTB 54

360			WMSM
COMPRESSED AIR SYSTEM			
DIAGRAM			
SERV AIR 02 LVL TO 04 LVL FR 54-88			
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001	REV A
SCALE: AS NOTED			SHEET: 15

DWG NO 360B-WMSM-551-001 | SH 16 | REV A



PLAN VIEW 124-A

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

COMPRESSED AIR DECK PLAN SERVICE AIR 03 LEVEL FR 46-88

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

SCALE: AS NOTED | SHEET: 16

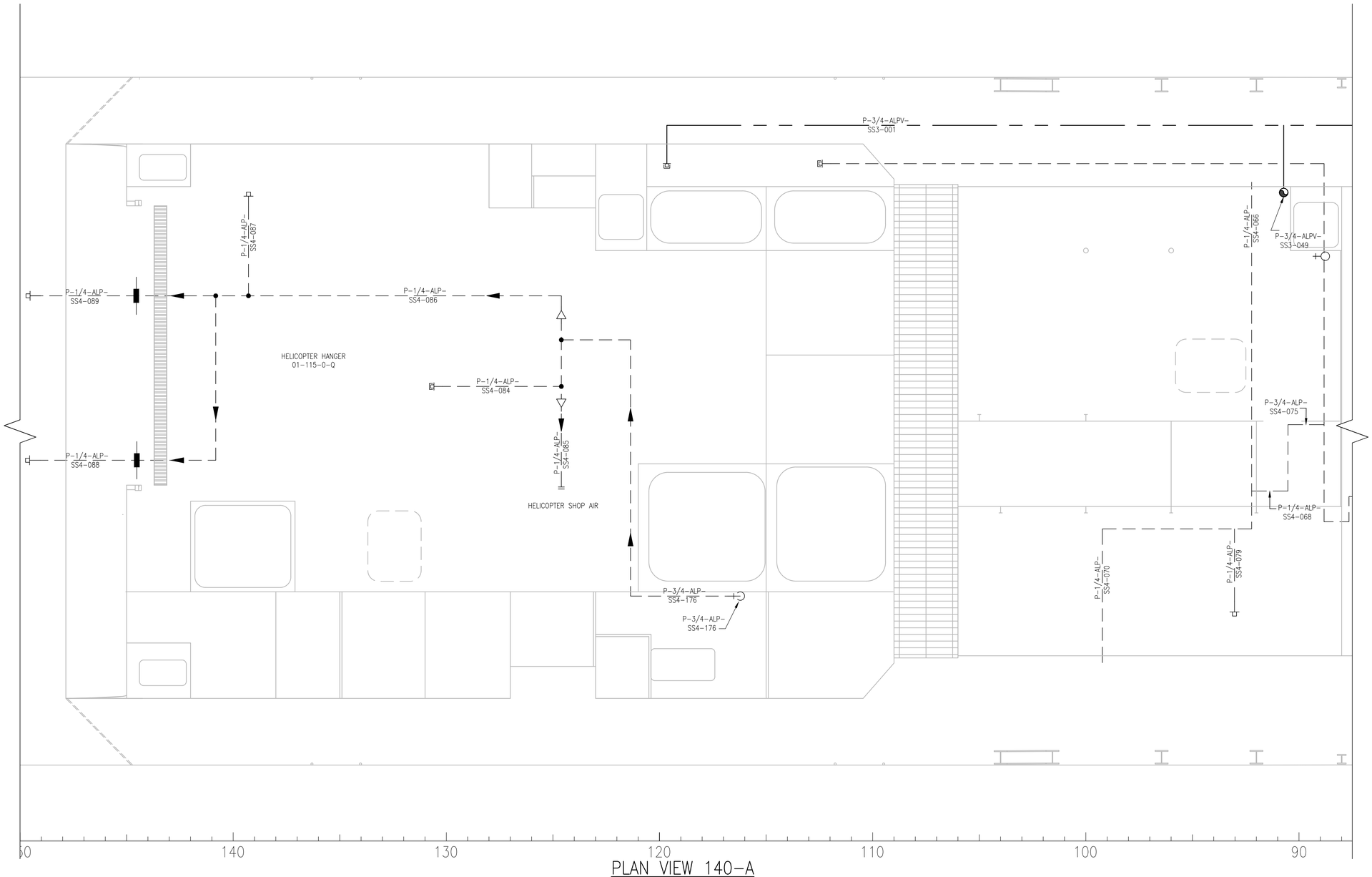
PLAN VIEW 132-A

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

COMPRESSED AIR DECK PLAN
SERVICE AIR
02 LEVEL
FR 38-88

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

SCALE: AS NOTED | SHEET: 17



PLAN VIEW 140-A

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

COMPRESSED AIR DECK PLAN SERVICE AIR 01 LEVEL FR 88-149

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-WMSM-551-001	A
SCALE: AS NOTED			SHEET: 18

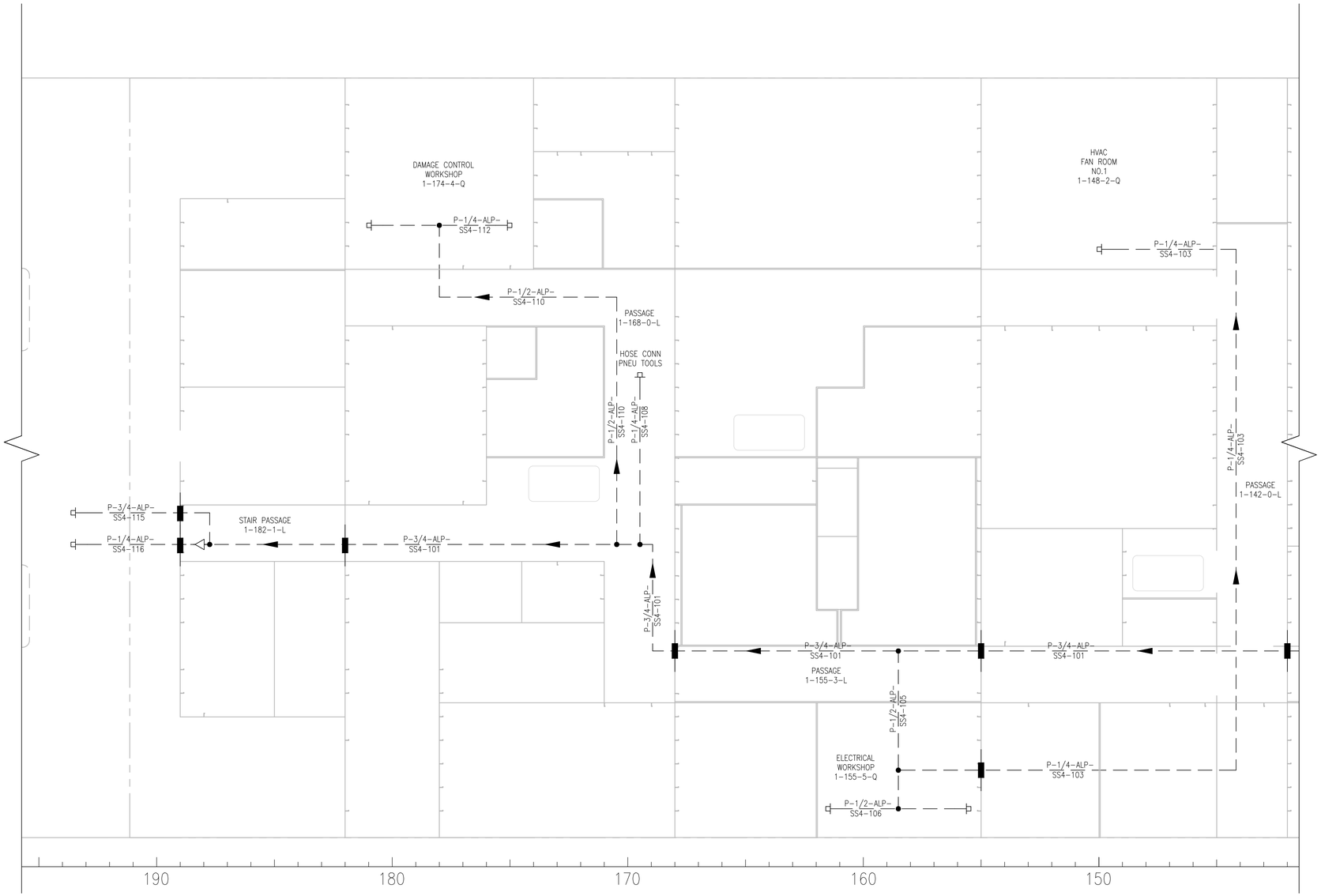
PLAN VIEW 148-A

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

COMPRESSED AIR DECK PLAN
SERVICE AIR
01 LEVEL
FR 31-88

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

SCALE: AS NOTED | SHEET: 19



PLAN VIEW 156-A

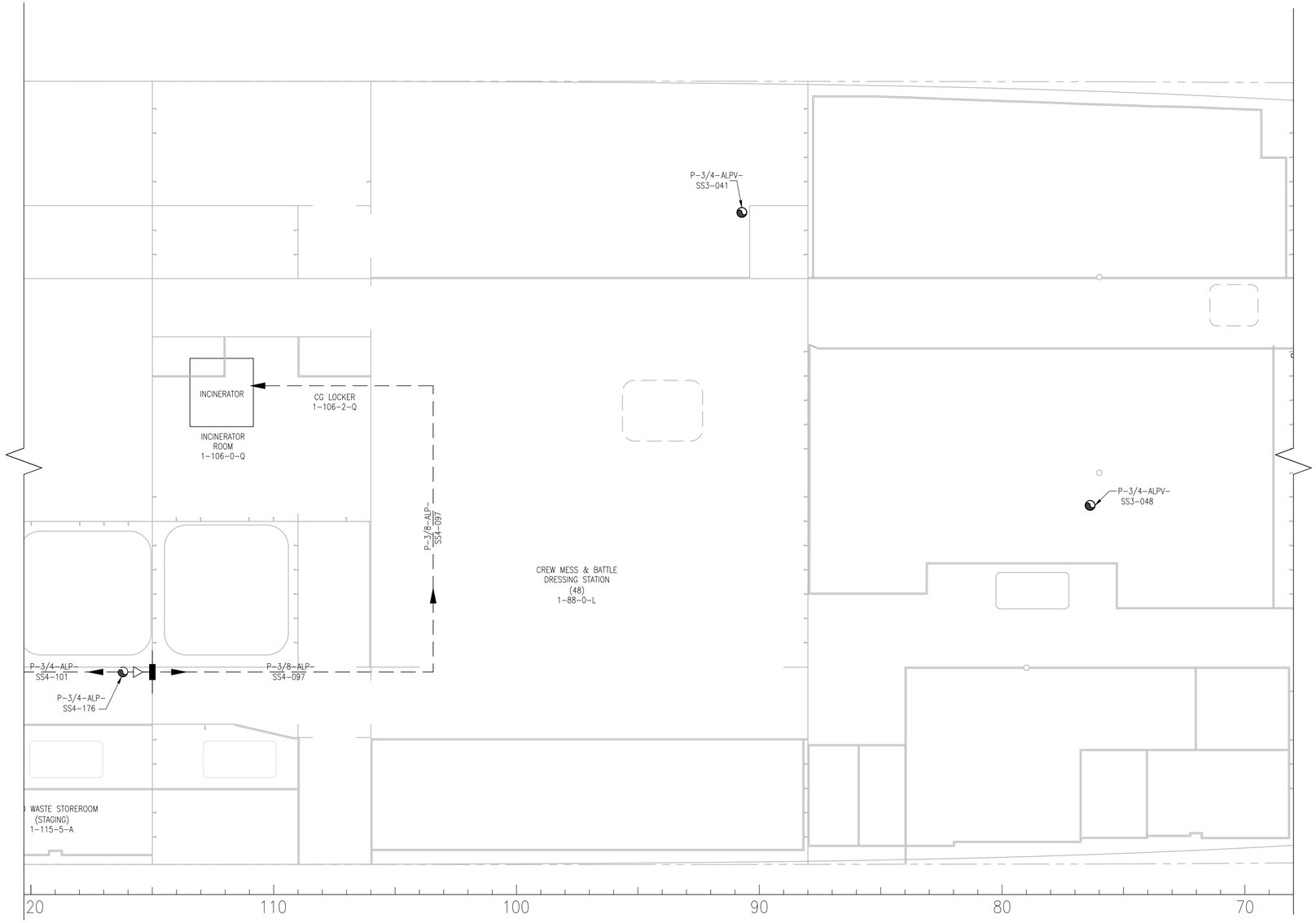
SERVICE AIR
MAIN DECK
FRAMES 142-195
SCALE: 1/4" = 1'-0

COMPRESS AIR SYSTEM
SERVICE AIR
MAIN DECK
FR 142-195

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

SCALE: AS NOTED | SHEET: 20

DWG NO 360B-WMSM-551-001 | SH 21 | REV A



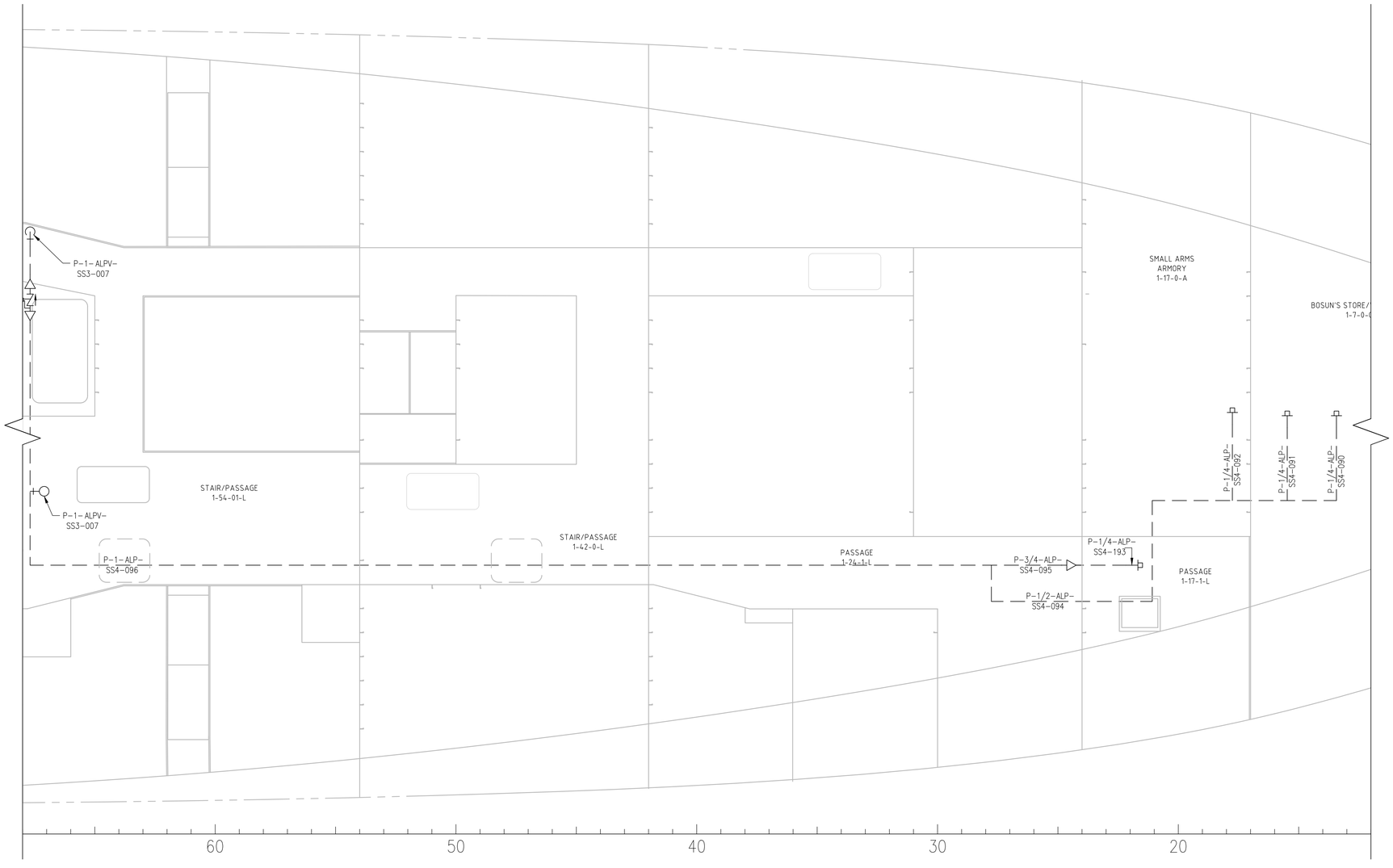
PLAN VIEW 164-A

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-WMSM-551-001	A

SCALE: AS NOTED | SHEET: 21

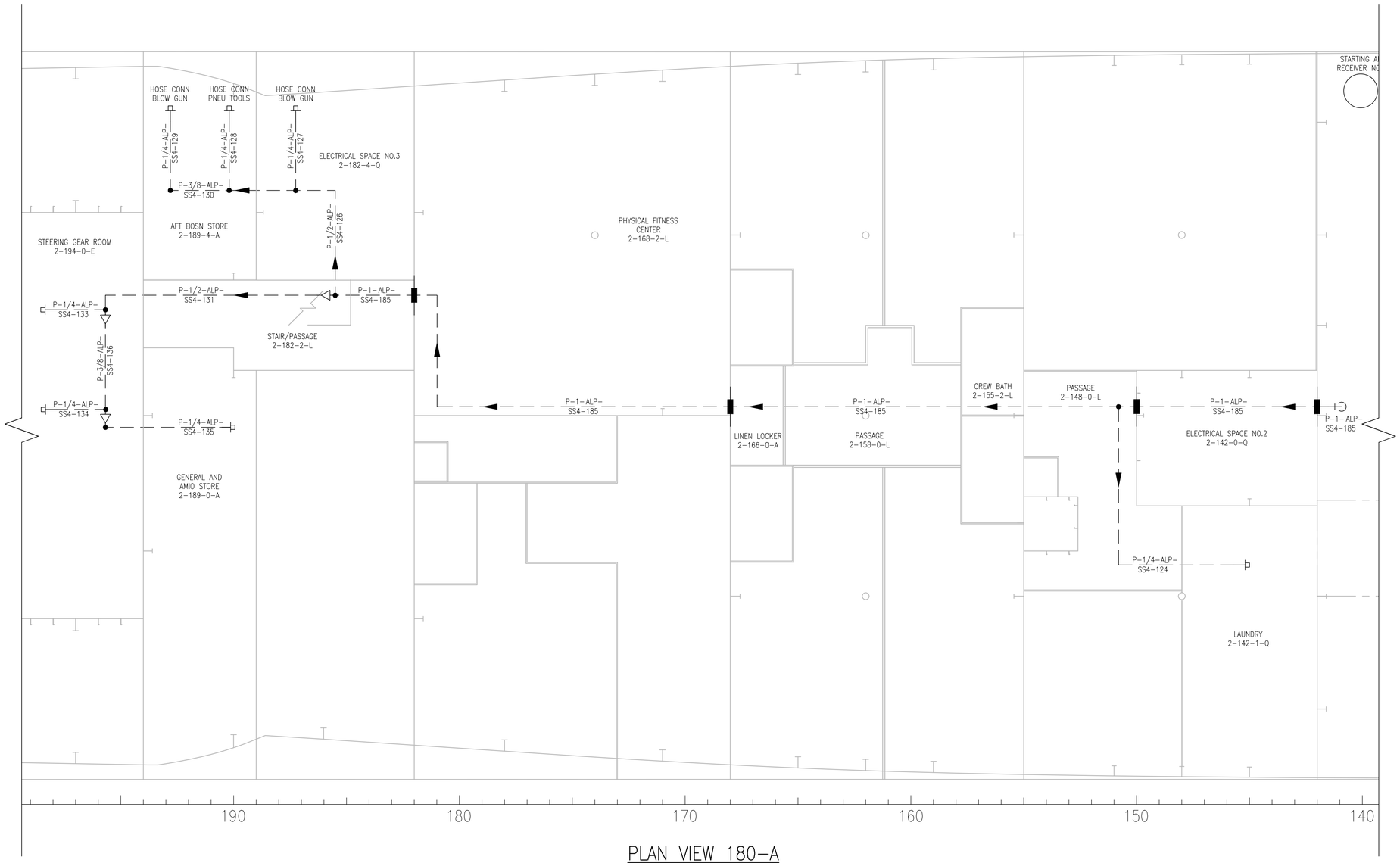


PLAN VIEW 172-A

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-WMSM-551-001	A
SCALE: AS NOTED			SHEET: 22



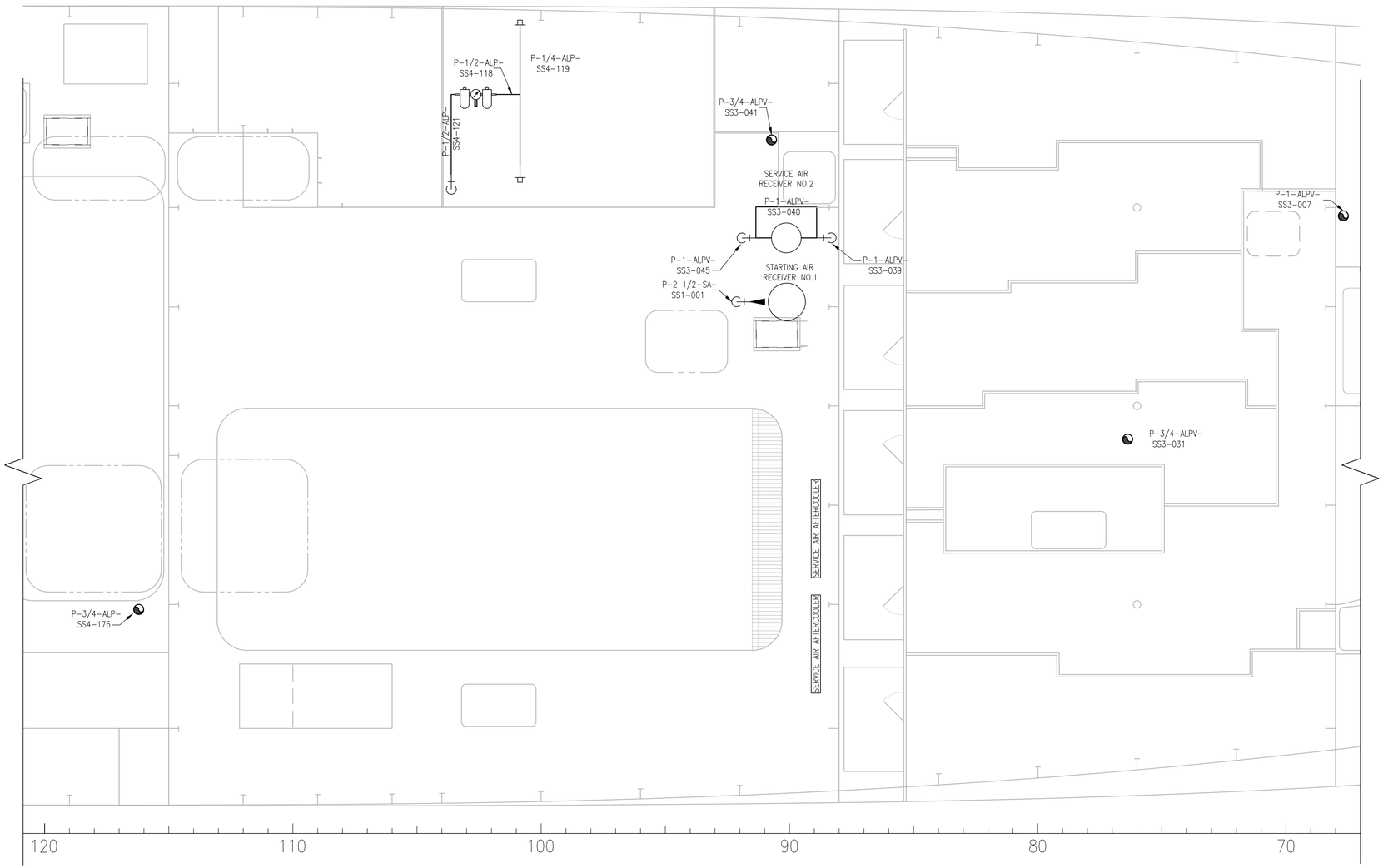
PLAN VIEW 180-A

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-WMSM-551-001	A

SCALE: AS NOTED | SHEET: 23



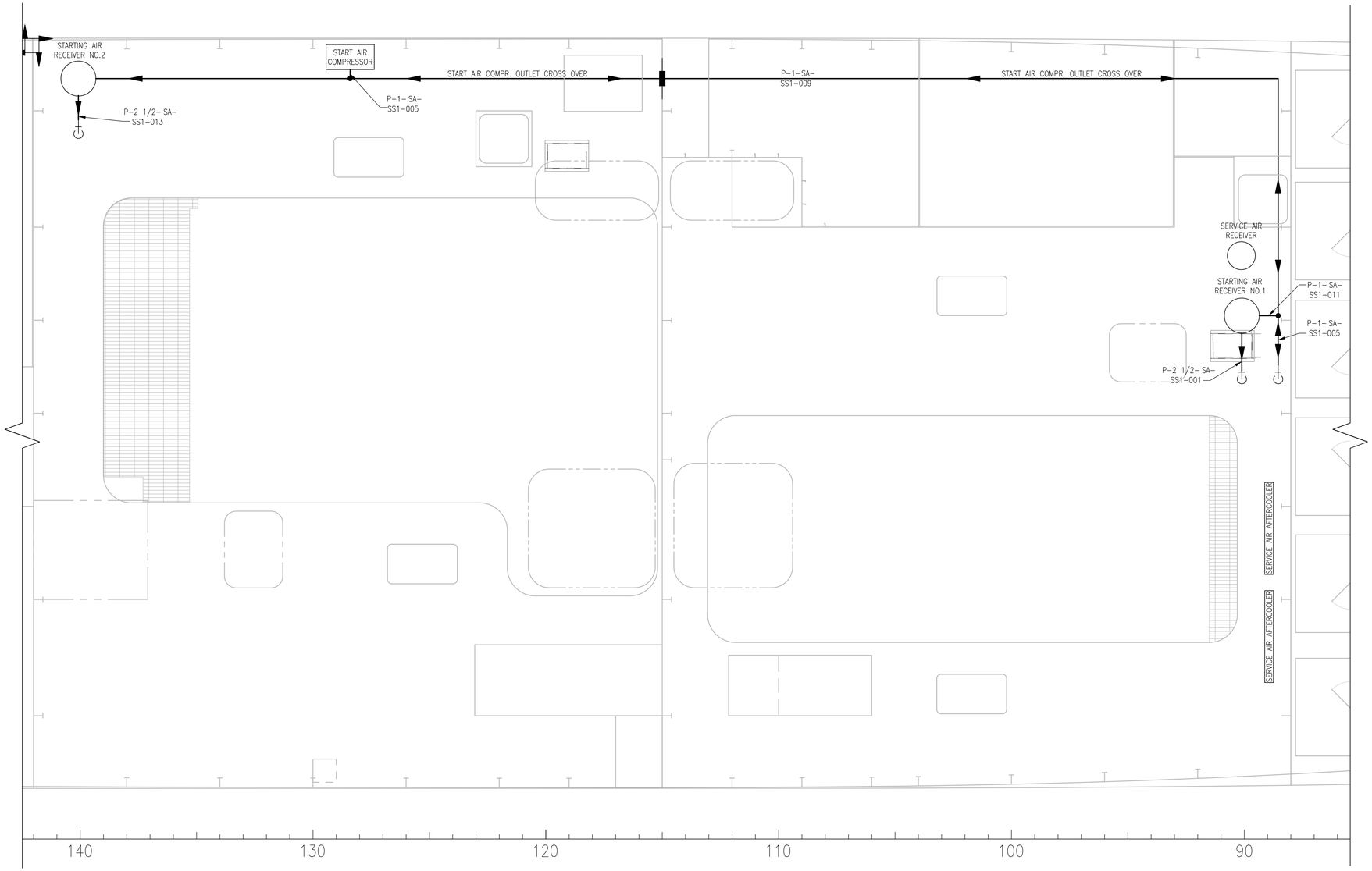
PLAN VIEW 188-A

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

COMPRESSED AIR DECK PLAN SERVICE AIR FIRST PLATFORM FR 68-120

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

SCALE: AS NOTED | SHEET: 24



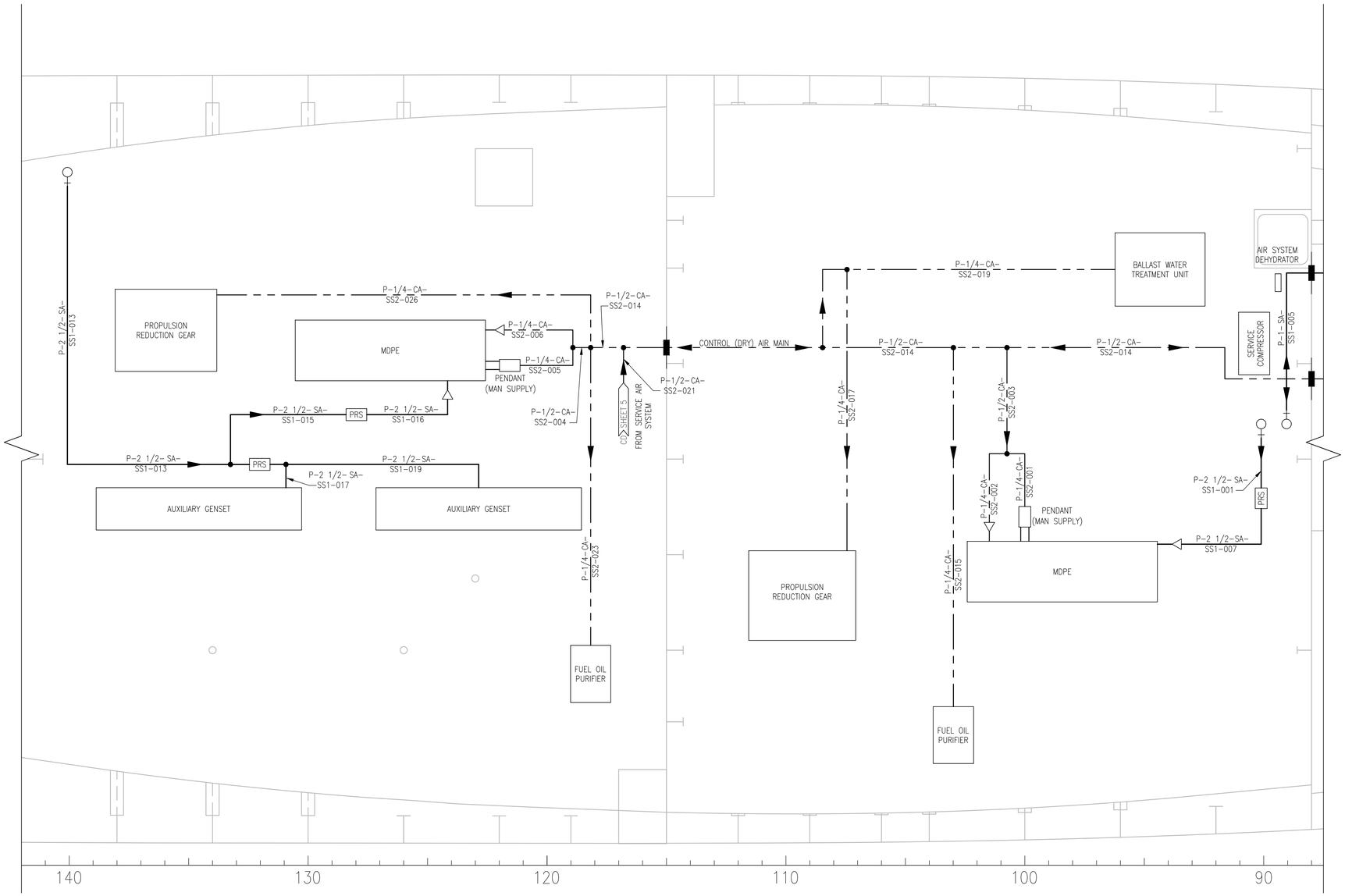
PLAN VIEW 196-A

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

COMPRESSED AIR DECK PLAN START AIR FIRST PLATFORM FR 86-142

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

SCALE: AS NOTED | SHEET: 25

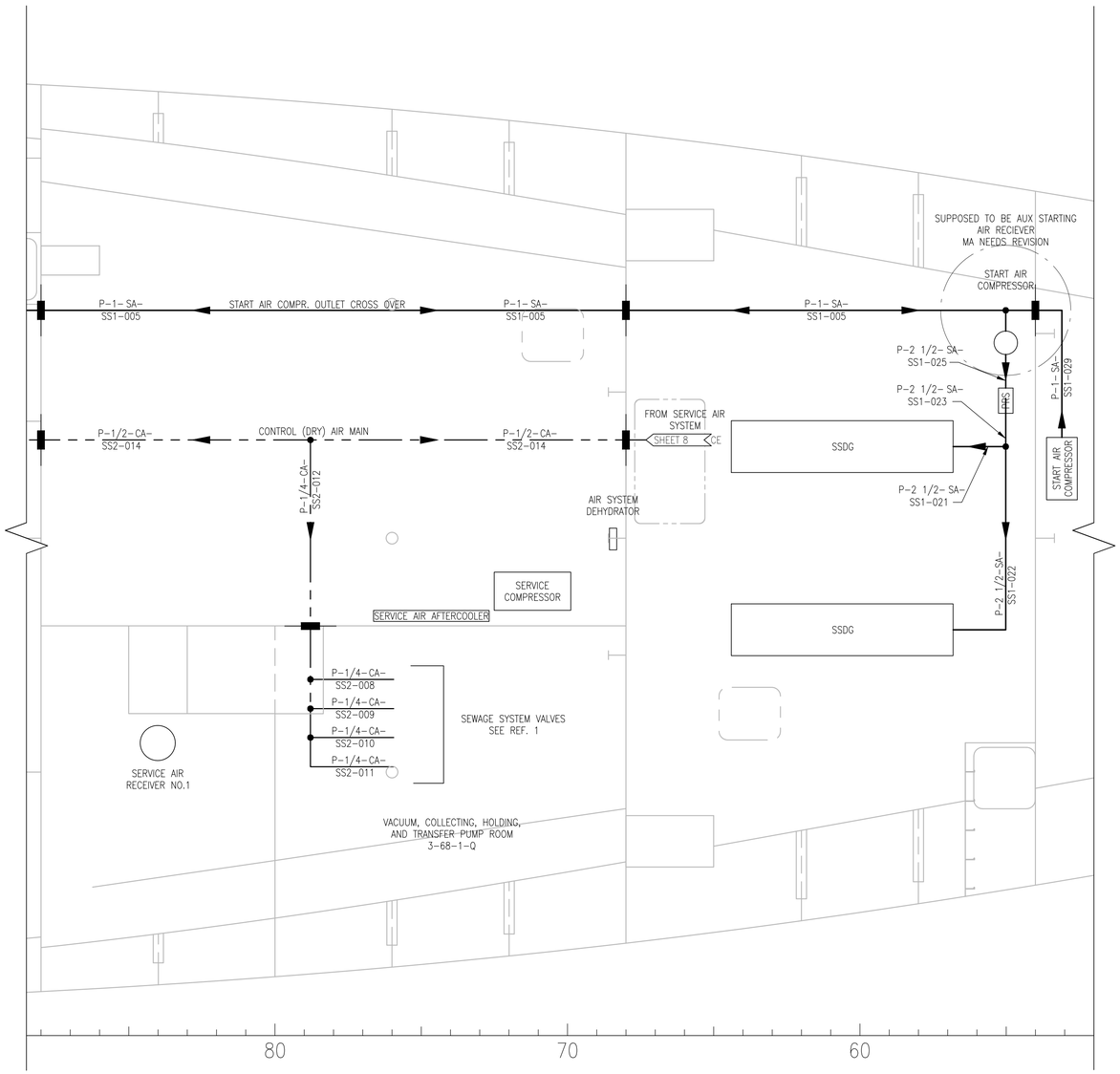


PLAN VIEW 204-A

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

COMPRESSED AIR DECK PLAN START AND CONTROL AIR INNER BOTTOM FR 88-141

SIZE	CAGE CODE	USCG DRAWING NO.	REV
D	81340	360B-WMSM-551-001	A
SCALE: AS NOTED			SHEET: 26



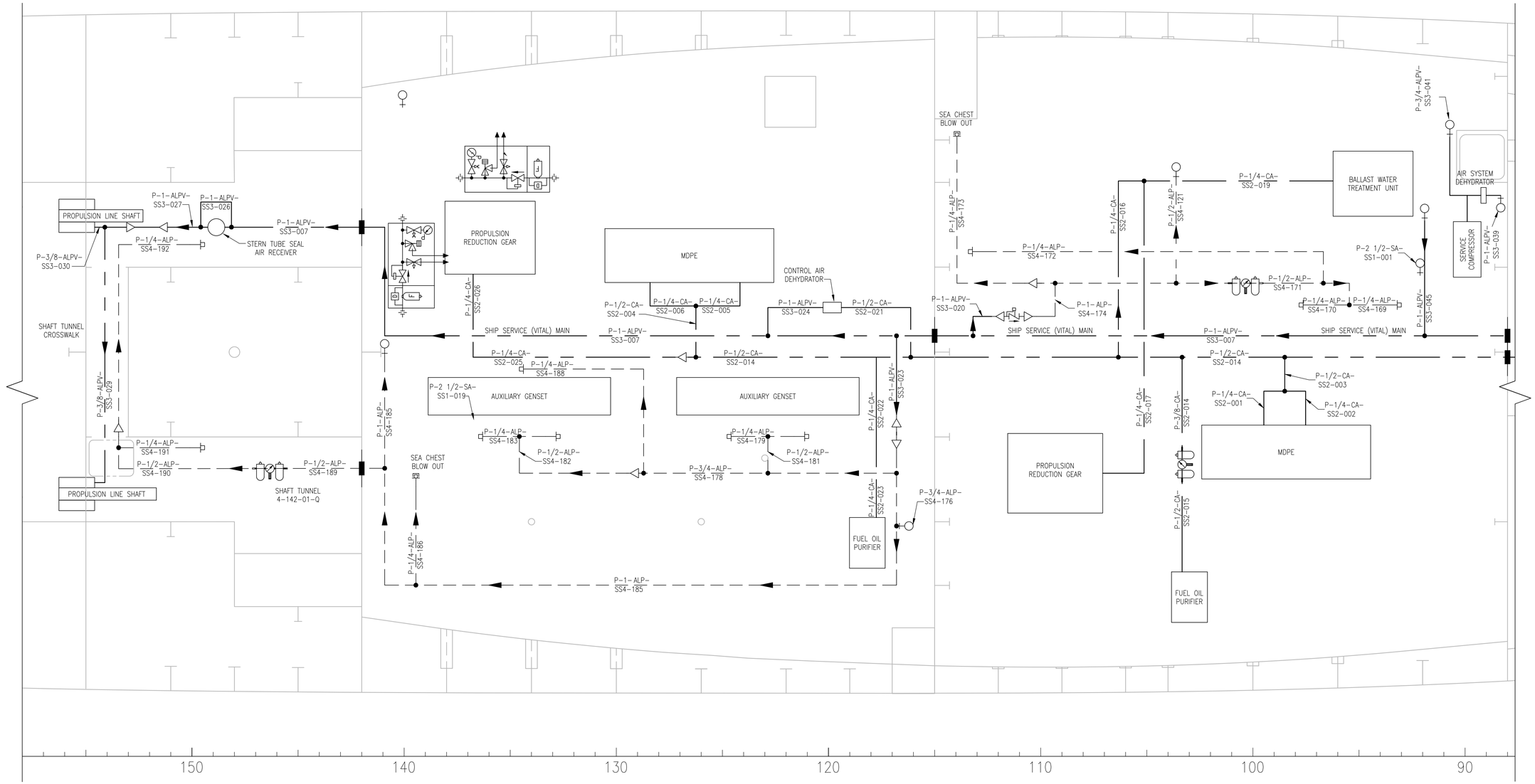
PLAN VIEW 212-A

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

COMPRESSED AIR DECK PLAN CONTROL AIR INNER BOTTOM FR 53-88

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

SCALE: AS NOTED | SHEET: 27



PLAN VIEW 220-A

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

COMPRESSED AIR DECK PLAN SERVICE AIR INNER BOTTOM FRAMES 88-157			
SIZE D	CAGE CODE 81340	USCG DRAWING NO. 360B-WMSM-551-001	REV A
SCALE: AS NOTED			SHEET: 28

SEA CHEST BLOW OUT
P-1/4-ALP-SS4-167
P-3/4-ALP-SS4-166
P-1-ALP-SS4-165
P-1/2-ALP-SS4-162
P-1/4-ALP-SS4-163
P-1/4-ALP-SS4-168
P-1/4-ALP-SS4-159
P-1-ALPV-SS3-017
P-1-ALPV-SS3-007
P-1-ALPV-SS3-045
P-1-ALPV-SS3-032
P-1-ALPV-SS3-035
P-1-ALPV-SS3-037
P-1/2-ALPV-SS3-051
SERVICE AIR RECEIVER NO.1
P-1/2-CA-SS2-014
P-3/4-ALPV-SS3-031
SERVICE AIR AFTERCOOLER
SERVICE COMPRESSOR
AIR SYSTEM DEHYDRATOR
P-1/2-ALPV-SS3-013
P-1/4-CA-SS2-012
P-1/4-CA-SS2-008
P-1/4-CA-SS2-009
P-1/4-CA-SS2-010
P-1/4-CA-SS2-011
VACUUM, COLLECTING, HOLDING, AND TRANSFER PUMP ROOM 1-68-1-Q
SEWAGE SYSTEM VALVES SEE REF. 1
SEA CHEST BLOW OUT
P-1/4-ALP-SS4-158
P-1/2-ALP-SS4-157
P-1/2-ALP-SS4-156
P-1/4-ALP-SS4-155
P-1/2-ALP-SS4-154
P-1/4-ALP-SS4-153
P-1/4-ALP-SS4-152
P-1-ALPV-SS3-007
SSDG
P-1-ALPV-SS3-009
SSDG
P-1/2-ALPV-SS3-010
SUPPOSED TO BE AUX STARTING AIR RECIEVER MA NEEDS REVISION
START AIR COMPRESSOR
START AIR COMPRESSOR
P-1/4-ALP-SS4-146
P-1/2-ALP-SS4-150
P-1/2-ALP-SS4-151
P-1/2-ALP-SS4-148
P-1/4-ALP-SS4-149
P-1/4-ALP-SS4-147
P-1/2-ALP-SS4-144
P-1/4-ALP-SS4-142
P-1/4-ALP-SS4-137
P-3/8-ALP-SS4-141
P-1/4-ALP-SS4-140
P-1/4-ALP-SS4-139
P-1/4-ALP-SS4-138
LOW POINT DRAINS TO BE PROVIDED WHERE NEEDED

80 70 60 50 40 30 20

PLAN VIEW 228-A

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

COMPRESSED AIR DECK PLAN
SERVICE AIR
INNER BOTTOM
FRAMES FR 14-88

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

SCALE: AS NOTED | SHEET: 29