TRANSMITTAL LETTER − REVISION 11

This package contains the CRJ900 Aircraft Airport Planning Manual, CSP C−020, Revision 11, dated Dec 17/2015.

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AIRPORT PLANNING MANUAL

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CRJ SERIES
Regional Jet

Model CL−600−2D15
Model CL−600−2D24

Series 705/900

AIRPORT PLANNING MANUAL

Volume 1

CSP C−020

MASTER

BOMBARDIER INC.
BOMBARDIER AEROSPACE COMMERCIAL AIRCRAFT
CUSTOMER SUPPORT

123 GARRATT BLVD., TORONTO, ONTARIO
CANADA M3K 1Y5

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Initial Issue: Oct 31/2002
Revision 11: Dec 17/2015

Technical Publications

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Oct 04/2013

AIRPORT PLANNING MANUAL

RECORD OF REVISIONS

Record the date you insert and remove each Revision in your manual.

REV. NO.	ISSUE DATE	DATE INSERTED	INSERTED BY
Rev. 1	Jan 15/2004	Dec 06/2005	BCSG
Rev. 2	Apr 07/2005	Dec 06/2005	BCSG
Rev. 3	Mar 20/2009	Mar 20/2009	BCSG
Rev. 4	May 20/2010	May 20/2010	BCSG
Rev. 5	Dec 20/2010	Dec 20/2010	BCSG
Rev. 6	Apr 20/2011	Apr 20/2011	BCSG
Rev. 7	Dec 21/2011	Dec 21/2011	BCSG
Rev. 8	Dec 19/2012	Dec 19/2012	BCSG
Rev. 9	Dec 18/2013	Dec 18/2013	BCSG
Rev. 10	Dec 18/2014	Dec 18/2014	BCSG
Rev. 11	Dec 17/2015	Dec 17/2015	BCSG

REV. NO.	ISSUE DATE	DATE INSERTED	INSERTED BY

BCSG: Bombardier Customer Service Group

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BCSG: Bombardier Customer Service Group

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AIRPORT PLANNING MANUAL

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INTRODUCTION

1. General

A. The Airport Planning Manual (APM), prepared by Bombardier Aerospace, contains general data on the airport facilities, ramp, and runway areas necessary to operate the Canadair Regional Jet (CRJ) Model CL−600−2D24 aircraft. This manual agrees with the Air Transportation Association of America Specification No. 100 (ATA 100), Revision 34 dated February 15, 1996 and is written in Simplified English.

B. The content of this manual will change as options and aircraft changes occur. Make sure that you refer to the latest release of the manual.

C. If there is a difference between the data contained in this manual and that given by the local Regulatory Authority, the data from the Regulatory Authority must be obeyed.

2. Manual Organization

A. The APM contains the sections that follow:

- Section 01: Introduction
- Section 02: Aircraft Description
- Section 03: Aircraft Performance
- Section 04: Ground Maneuvering
- Section 05: Terminal Servicing
- Section 06: Operating Conditions
- Section 07: Pavement Data
- Section 08: Derivative Aircraft
- Section 09: Scaled Drawings

3. Dimensions

A. Linear dimensions given in this manual are in inches with the metric equivalents in parentheses ().

4. Correspondence

A. Send all correspondence about this manual to:

Bombardier Inc.
Bombardier Aerospace Commercial Aircraft
Customer Support
Mailbox Stop N42−25
123 Garratt Blvd., Toronto
Ontario, Canada
M3K 1Y5

Attention: Director, Technical Publications

5. Translation of Manual

A. If all or part of this publication is translated, the official version is the English language version by Bombardier Aerospace Regional Aircraft.

6. Standard Term Definitions

A. The definitions that follow are used throughout the APM:

Maximum Design Taxi Weight (MTW). Maximum weight at which an aircraft can move safely on the ground. This includes the fuel for these displacements and the takeoff run.

Maximum Design Landing Weight (MLW). Maximum weight for landing as limited by aircraft strength and airworthiness requirement.

Maximum Design Take−Off Weight (MLOW). Maximum weight for takoff as limited by aircraft strength and airworthiness requirements. (This includes weight of fuel for taxi and run−up.)

Operational Weight Empty (OWE). Weight of structure, power plant, furnishings, systems, unusable fuel and other items of equipment that are a necessary part of a particular aircraft configuration. Also included are certain standard items, personnel, equipment and supplies necessary for full operations, but does not include usable fuel or payload.

Maximum Design Zero Fuel Weight (MZFW). Maximum weight permitted before usable fuel and other usable agents must be loaded in defined sections of the aircraft, as limited by strength and airworthiness requirements.

Maximum Payload. Maximum design zero weight (MLOW) minus operational weight empty (OWE).

Maximum Cargo Volume. The maximum space available for cargo.

Maximum Seating Capacity. The maximum number of passengers permitted based on certification requirements.

Usable Fuel. Fuel available for aircraft propulsion and the APU.

7. Acronyms

A.

The acronyms that follow are used in the APM:

CGFS	Center of Gravity at Fuselage Station
FBO	Fixed Base Operator
ISA	International Standard Atmosphere
MLW	Maximum Landing Weight
MTOW	Maximum Take−Off Weight
MFW	Maximum Flight Weight
MRW	Maximum Ramp Weight
MZFW	Maximum Zero Fuel Weight
OWE	Operating Weight Empty
VM	Weight on Main Gear
VN	Weight on Nose Gear

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AIRCRAFT DESCRIPTION

1. Introduction

This section contains general description data about the aircraft. This section is divided into the subsections that follow:

– Aircraft characteristics

– Aircraft dimensions

– Interior configurations

– Door clearances

– Cargo compartment configurations.

2. Aircraft Characteristics

A. This section contains general data about the CRJ900 aircraft characteristics.

B. The structural weight limits, such as maximum ramp weight, and zero fuel weight are dependent on configuration. Refer to each aircraft's specified Weight and Balance Manual (CSP B−041) and Weight and Balance Report for structural limits and other weight information.

C. Refer to Table 1 for the aircraft characteristics.

D. Refer to Table 2 for the system fluid capacities.

E. Refer to Table 3 for the service fluid capacities.

Table 1 − Aircraft Characteristics

Description	Model CL−600−2D24	Model CL−600−2D15
Engines	QTY: 2 GE CF34−8C5 Turbofan	QTY: 2 GE CF34−8C5 Turbofan
Mode	Passenger	Passenger
Maximum Seating Capacity	86	75
Maximum Ramp Weight (MRW) A/C 15001 − 15035	82750 lb (37535 kg)	NA

Description	Model CL−600−2D24	Model CL−600−2D15
Maximum Ramp Weight (MRW) A/C 15036 − 15990	85000 lb (38555 kg)	85000 lb (38555 kg)
Maximum Take−Off Weight (MTOW) A/C 15001 − 15035	82500 lb (37421 kg)	NA
Maximum Take−Off Weight (MTOW) A/C 15036 − 15990	84500 lb (38329 kg)	84500 lb (38329 kg)
Maximum Landing Weight (MTLW)	73500 lb (33340 kg)	73500 lb (33340 kg)
Minimum Flight Weight (MFW)	45000 lb (20412 kg)	45000 lb (20412 kg)
Maximum Zero Fuel Weight (MZFW) A/C 15001 − 15035	70000 lb (31751 kg)	NA
Maximum Zero Fuel Weight (MZFW) A/C 15036 − 15990	70750 lb (32092 kg)	70000 lb (31751 kg)
Maximum Fuel Tank Capacity	2903 US gal (10989 L) 19595 lb (8888 kg)[1]	2903 US gal (10989 L) 19595 lb (8888 kg)[1]
Unusable Fuel	33.8 US gal (127.95 L) 228.2 lb (103.5 kg)[1]	33.8 US gal (127.95 L) 228.2 lb (103.5 kg)[1]
Maximum Cargo Volume − Aft Baggage Compartment	437.5 pi³ (12.39 m³)[2]	
Maximum Cargo Volume − Forward Under Floor Baggage	156.0 pi³ (4.41 m³)[2]	
Maximum Cargo Volume − Under−seat storage	129.0 pi³ (3.65 m³)[2]	
Maximum Cargo Volume − Overhead bins	144.47 pi³ (4.09 m³)[2]	

[1] Weight is calculated with a fuel density of 6.75 lb/US gal (0.809 kg/L).

[2] Cargo volume can be modified according to interior configuration.

Table 2 − System Fluid Capacities

Description	Volume	Weight
APU and Engine Fluids Calculated with 7.5 lb/US gal (0.898 kg/L)		
Engines Oil Tank @ 60 °F	5.2 US gal (19.68 L)	42.4 lb (19.2 kg)
Oil Replenisment Tank	1.6 US gal (6.06 L)	13.0 lb (5.9 kg)
Lines and Internal Engine Oil	0.9 US gal (3.41 L)	7.5 lb (3.4 kg)
Total	7.7 US gal (29.15 L)	62.9 lb (28.5 kg)
Hydraulic Fluids @ 77 °F (25 °C) Low Density 8.43 lb/US gal (1.01 kg/L)		
System 1 Reservoir	0.7 US gal (2.65 L)	6.2 lb (2.8 kg)
System 2 Reservoir	1.0 US gal (3.79 L)	8.0 lb (3.6 kg)
System 3 Reservoir	0.8 US gal (3.03 L)	6.6 lb (3.0 kg)
Total	2.5 US gal (9.46 L)	20.8 lb (9.4 kg)
Hydraulic Fluids @ 77 °F (25 °C) High Density 8.86 lb/US gal (1.06 kg/L)		
System 1 Reservoir	0.7 US gal (2.65 L)	6.5 lb (2.9 kg)
System 2 Reservoir	1.0 US gal (3.79 L)	8.4 lb (3.8 kg)
System 3 Reservoir	0.8 US gal (3.03 L)	6.9 lb (3.1 kg)
Total	2.5 US gal (9.46 L)	21.8 (9.8 kg)

Table 3 − Service Fluid Capacities

Description	Volume	Weight
Potable Water @ 60 °F (15.5 °C)		
Forward Galley/Lavatory Tank	11.0 US gal (41.64 L)	91.7 lb (41.6 kg)
Aft Lavatory Tank	10 US gal (37.85 L)	83.4 lb (37.9 kg)
Chemical Toilet Fluid @ 60 °F (15.5 °C)		
Forward or Aft Toilet Tank	2.3 US gal (8.71 L)	19.2 lb (8.7 kg)

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**ON A/C ALL

DIMENSIONS

**ON A/C 15001−15035, 15038−15039, 15042

1. General

A. This section contains general data about the aircraft dimensions and clearances.

B. The structural weight limits, such as maximum ramp weight, landing weight, and zero fuel weight are dependent on configuration. Refer to each aircraft Weight and Balance Manual (CSP C−041) and Weight and Balance Report for structural limits and other weight information.

C. Refer to Table 1 and Figures 1, and 2 for the aircraft dimensions and clearances.

D. Refer to Table 3 and Figure 3 for the door dimensions and clearances.

Table 1 − General Aircraft Dimensions and Areas

DESCRIPTION	VALUE
Total Aircraft Length	1426.70 in. (36.24 m)
Total Aircraft Height	289.40 in. (7.35 m)
Wing Span	915.20 in. (23.24 m)
Total Horizontal Stabilizer Span	336.40 in. (8.54 m)
Fuselage External Diameter	105.96 in. (2.69 m)
Fuselage Length	1318.80 in. (33.50 m)
Static Ground Angle (Nominal)	1.6 degrees
Total Wing Area	764.95 ft^2 (71.07 m^2)
Total Horizontal Stabilizer Area	171.40 $ft.^2$ (15.91 m^2)
Total Vertical Stabilizer Area	119.36 $ft.^2$ (11.09 m^2)

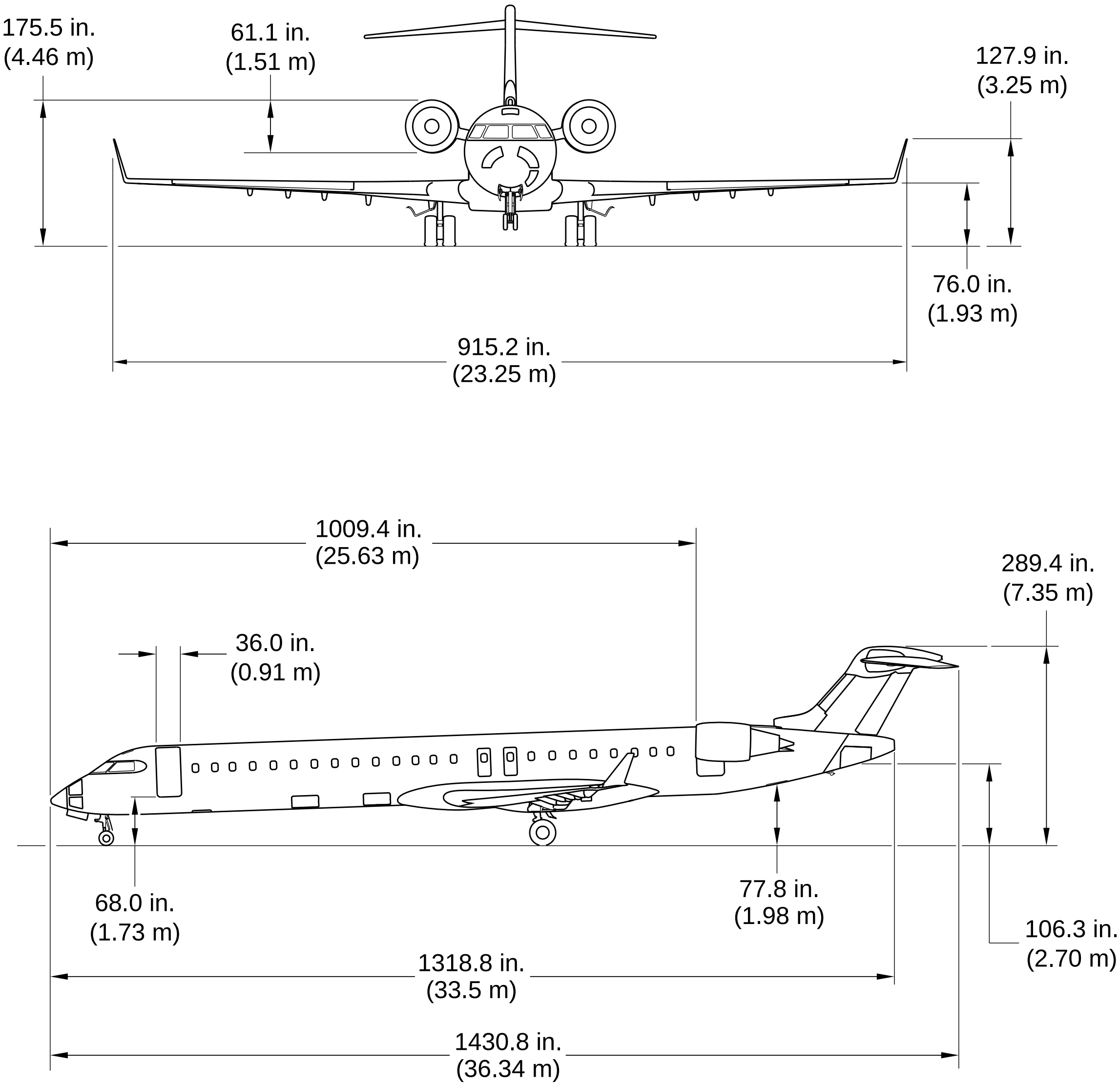
Table 2 − Landing Gear Dimensions

LANDING GEARS	MAIN	NOSE
Tire Dimensions	H36 x 12.0 −18 18 PR	H20.5 x 6.75 −10 12 PR

LANDING GEARS	MAIN	NOSE
Wheel Size	18.0 in. (0.46 m)	10.0 in. (0.25 m)
Wheel Base (max)	681.1 in. (17.3 m)	N/A
Track	160.2 in. (4.07 m)	N/A

Table 3 − Door Dimensions

DOOR	HEIGHT	WIDTH
Passenger Door	5 ft. 10 in. (1.78 m)	3 ft. (0.91 m)
Service Door	4 ft.. (1.22 m)	2 ft. (0.61 m)
Aft Baggage Door	2 ft 9 in. (0.84 m)	3 ft. 7 in.. (1.09 m)
Under−Floor Baggage Door (Fwd)	1 ft. 8 in. (0.51 m)	3 ft. 6 in. (1.07 m)
Under−Floor Baggage Door (Aft)	1 ft. 8 in. (0.51 m)	3 ft. 6 in. (1.07 m)
Type III Over−Wing Exit Door (Fwd)	3 ft. 7 in. (1.09 m)	1 ft. 8 in. (0.51 m)
Type III Over−Wing Exit Door (Aft)	3 ft 7 in. (1.09 m)	1 ft. 8 in. (0.51 m)
Crew Escape Hatch	19.6 in. (0.50 m)	18.6 in. (0.47 m)

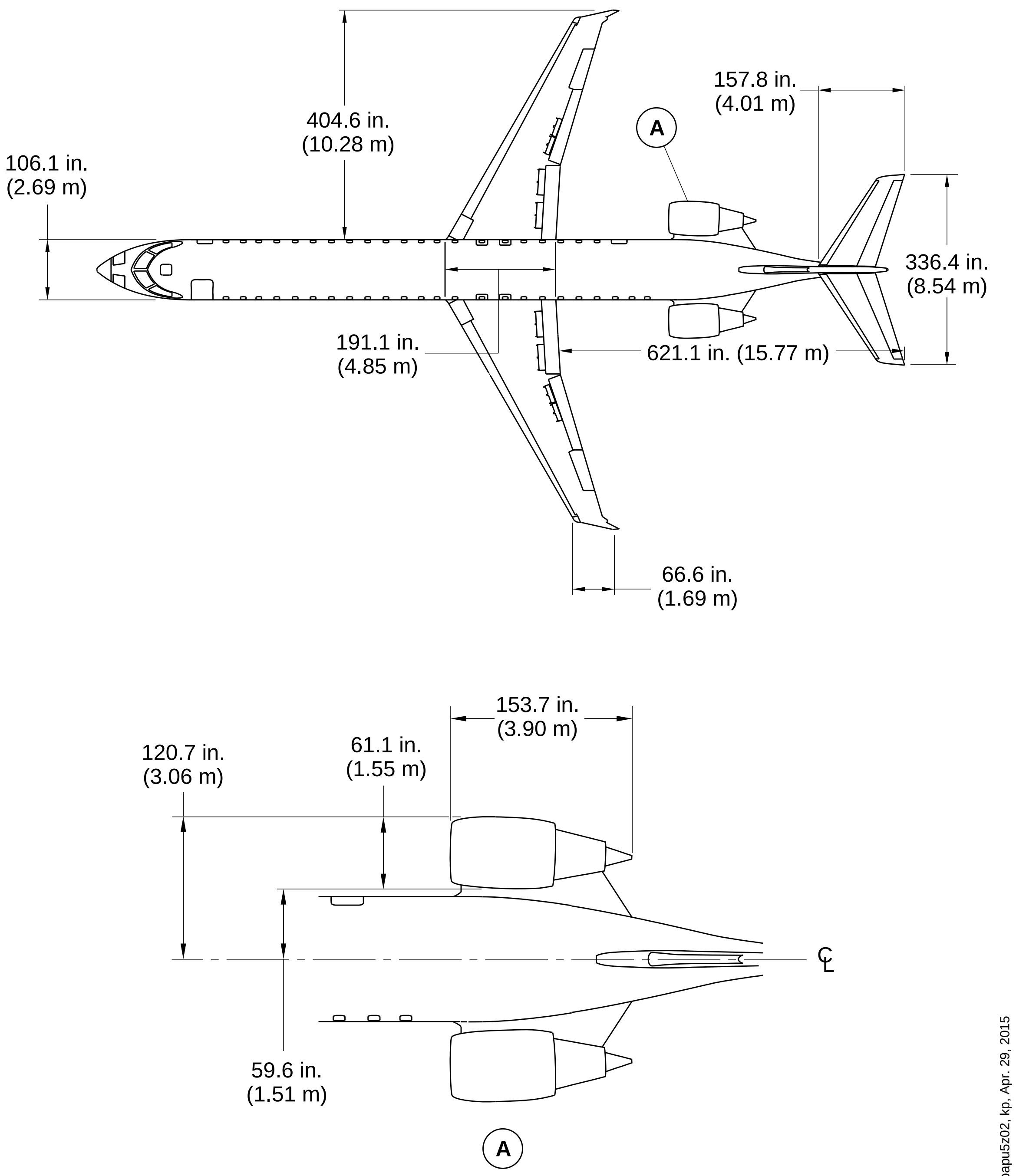


NOTE

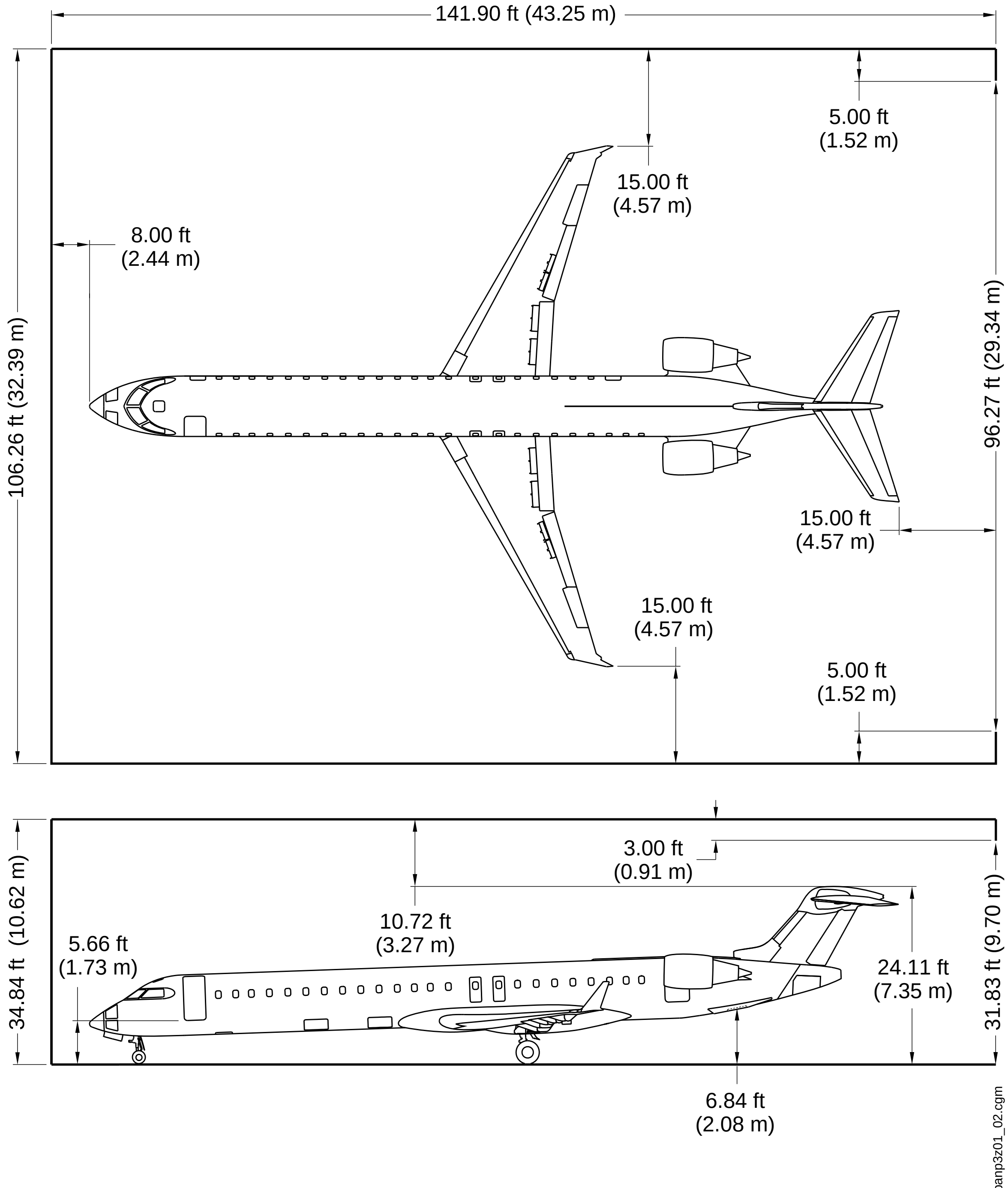
Average clearance. Ground clearance depends on aircraft weight and center of gravity.

bapu5z01, kp, Apr. 29, 2015

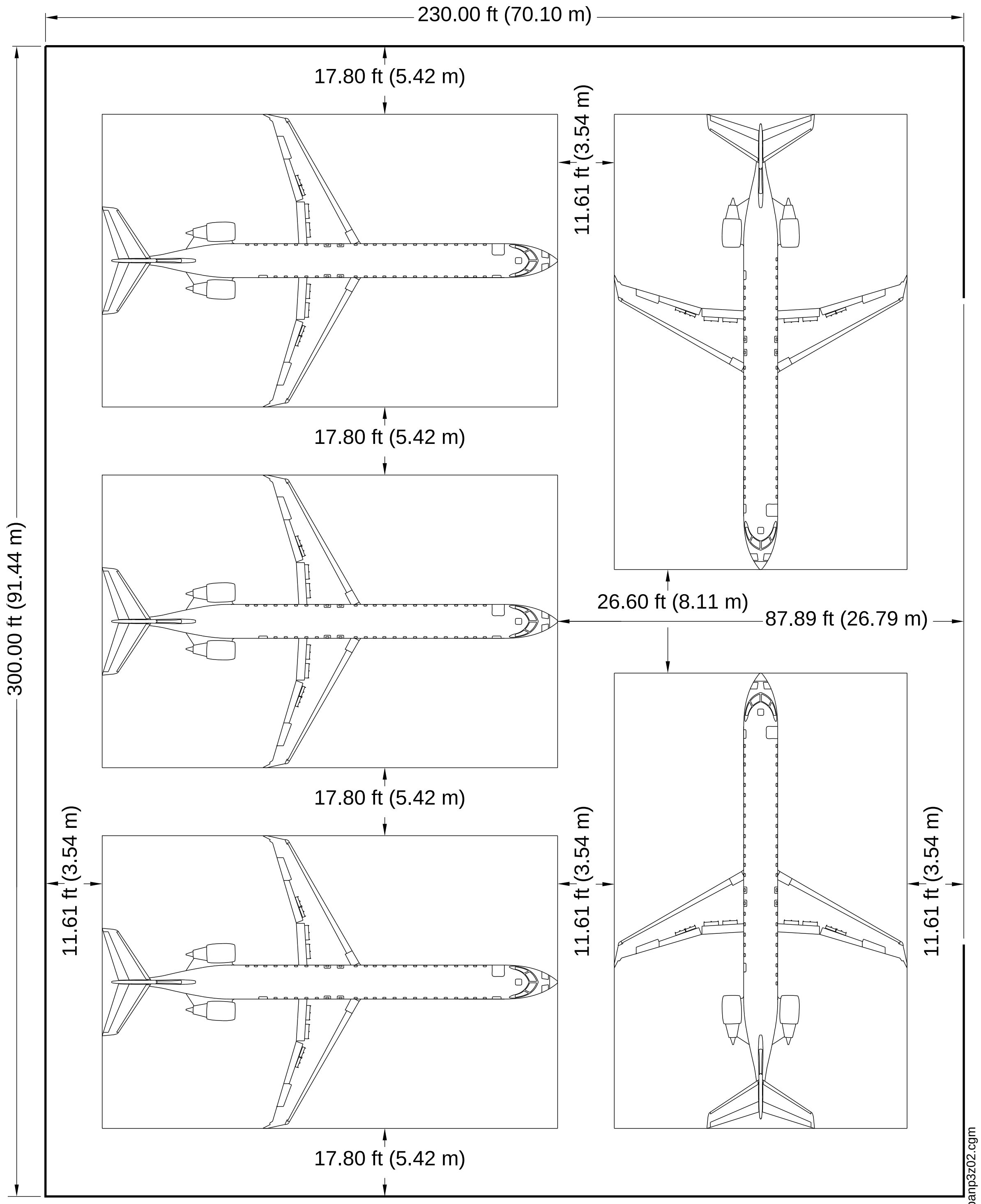
Aircraft Dimensions
Figure 1 (Sheet 1 of 2)



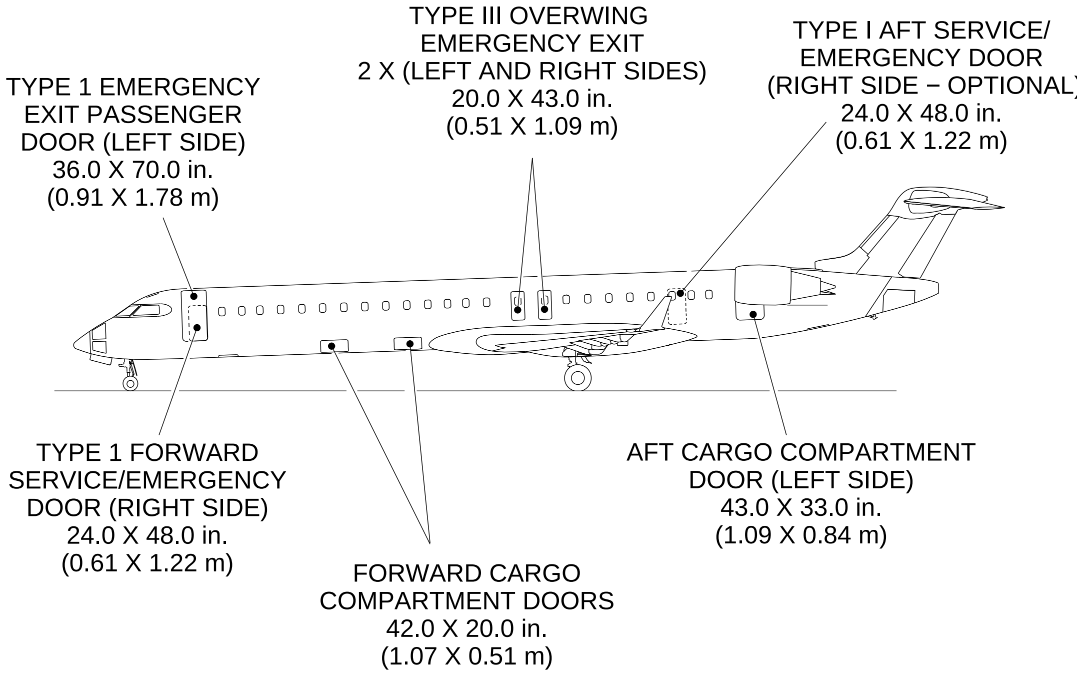
Aircraft Dimensions
Figure 1 (Sheet 2 of 2)

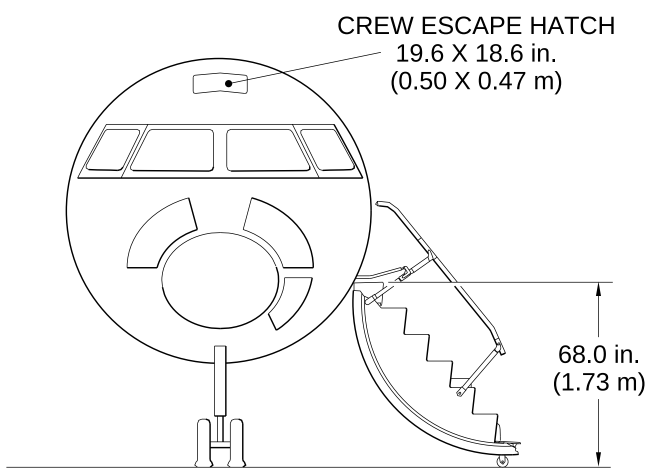


Hangar Spaces Needs
Figure 2 (Sheet 1 of 2)



Hangar Spaces Needs
Figure 2 (Sheet 2 of 2)





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Door Dimensions and Clearances
Figure 3

**ON A/C 15036−15037, 15040−15041, 15043−15990

2. General

A. This section contains general data about the aircraft dimensions and clearances.

B. The structural weight limits, such as maximum ramp weight, landing weight, and zero fuel weight are dependent on configuration. Refer to each aircraft Weight and Balance Manual (CSP C−041) and Weight and Balance Report for structural limits and other weight information.

C. Refer to Table 1 and Figures 4, and 5 for the aircraft dimensions and clearances.

D. Refer to Table 3 and Figure 6 for the door dimensions and clearances.

Table 1 − General Aircraft Dimensions and Areas

DESCRIPTION	VALUE
Total Aircraft Length	1426.70 in. (36.24 m)
Total Aircraft Height	289.40 in. (7.35 m)
Wing Span	978.34 in. (24.85 m)
Total Horizontal Stabilizer Span	336.40 in. (8.54 m)
Fuselage External Diameter	105.96 in. (2.69 m)
Fuselage Length	1318.80 in. (33.50 m)
Static Ground Angle (Nominal)	1.6 degrees
Total Wing Area	764.95 ft^2 (71.07 m^2)
Total Horizontal Stabilizer Area	171.40 $ft.^2$ (15.91 m^2)
Total Vertical Stabilizer Area	119.36 $ft.^2$ (11.09 m^2)

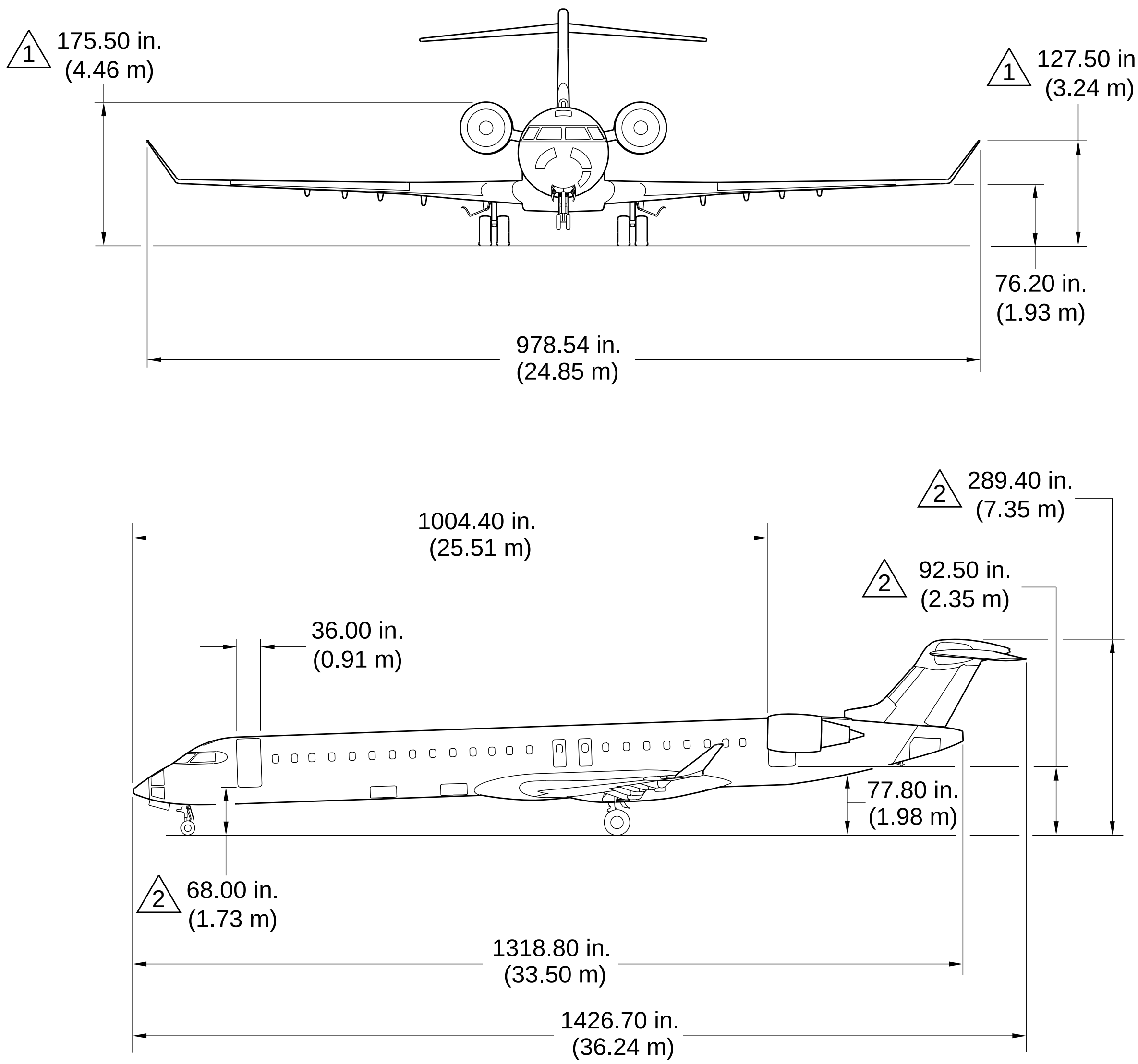
Table 2 − Landing Gear Dimensions

LANDING GEARS	MAIN	NOSE
Tire Dimensions	H36 x 12.0 −18 18 PR	H20.5 x 6.75 −10 12 PR
Wheel Size	18.0 in. (0.46 m)	10.0 in. (0.25 m)
Wheel Base (max)	681.1 in. (17.3 m)	N/A

LANDING GEARS	MAIN	NOSE
Track	160.2 in. (4.07 m)	N/A

Table 3 − Door Dimensions

DOOR	HEIGHT	WIDTH
Passenger Door	5 ft. 10 in. (1.78 m)	3 ft. (0.91 m)
Service Door	4 ft. (1.22 m)	2 ft. (0.61 m)
Aft Baggage Door	2 ft. 9 in. (0.84 m)	3 ft. 7 in. (1.09 m)
Under−Floor Baggage Door (Fwd)	1 ft. 8 in. (0.51 m)	3 ft. 6 in. (1.07 m)
Under−Floor Baggage Door (Aft)	1 ft. 8 in. (0.51 m)	3 ft 6 in. (1.07 m)
Type III Over−Wing Exit Door (Fwd)	3 ft. 7 in. (1.09 m)	1 ft. 8 in. (0.51 m)
Type III Over−Wing Exit Door (Aft)	3 ft. 7 in. (1.09 m)	1 ft. 8 in. (0.51 m)
Crew Escape Hatch	19.6 in. (0.50 m)	18.6 in. (0.47 m)



NOTES

1. Maximum ramp weight 85000 lb (38555 kg).
2. Average clearance. Clearance depends on aircraft weight and center of gravity.

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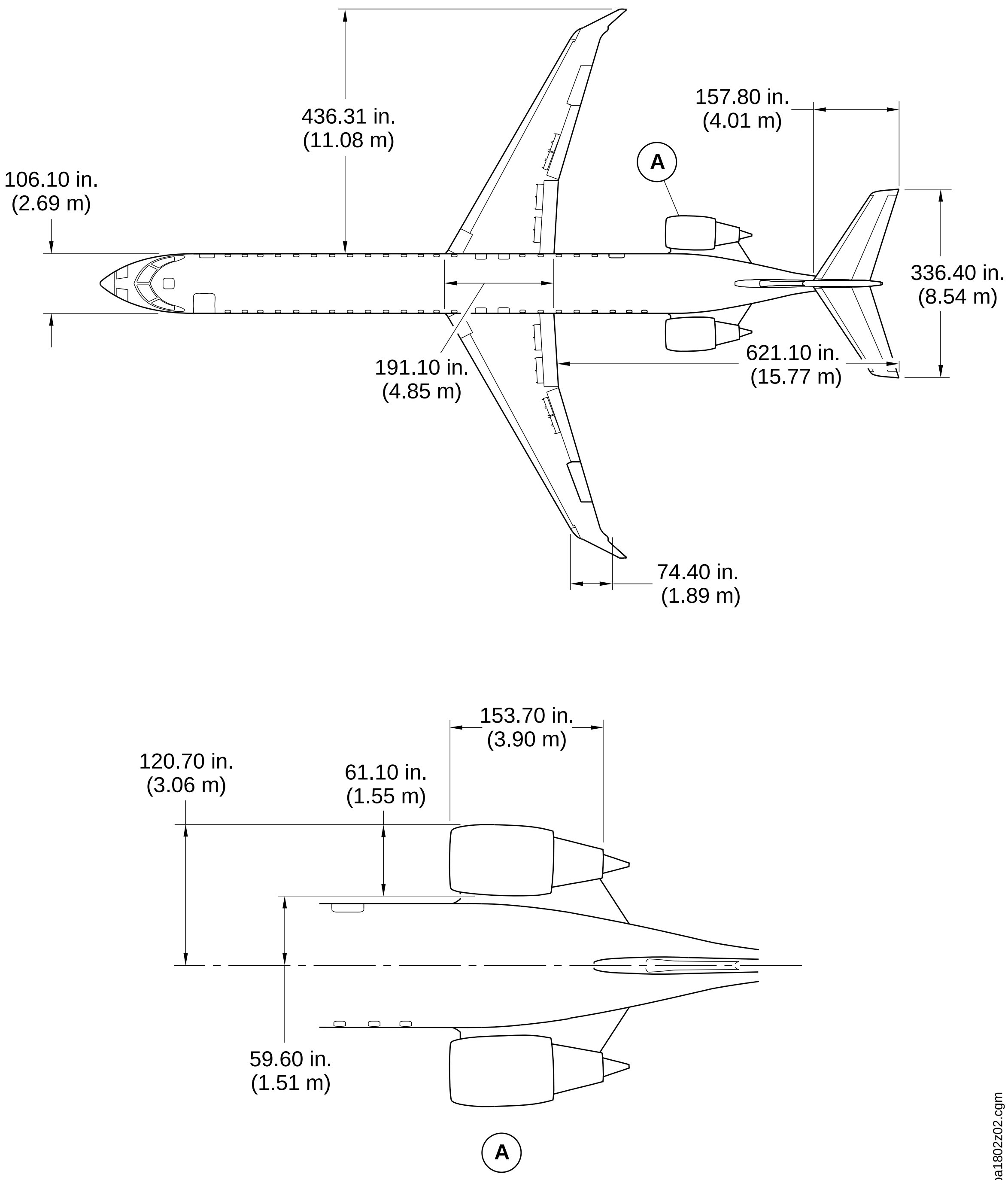
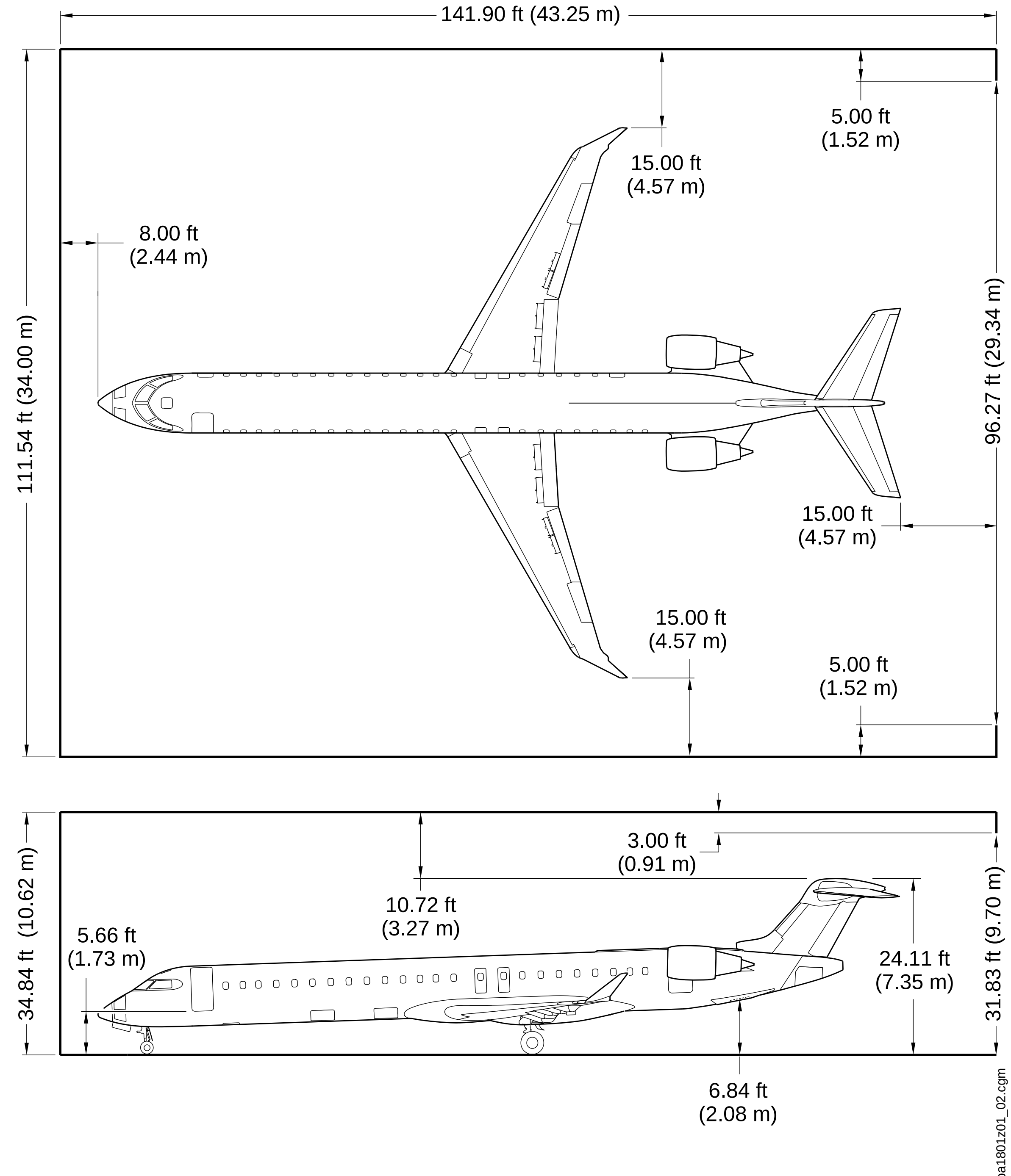
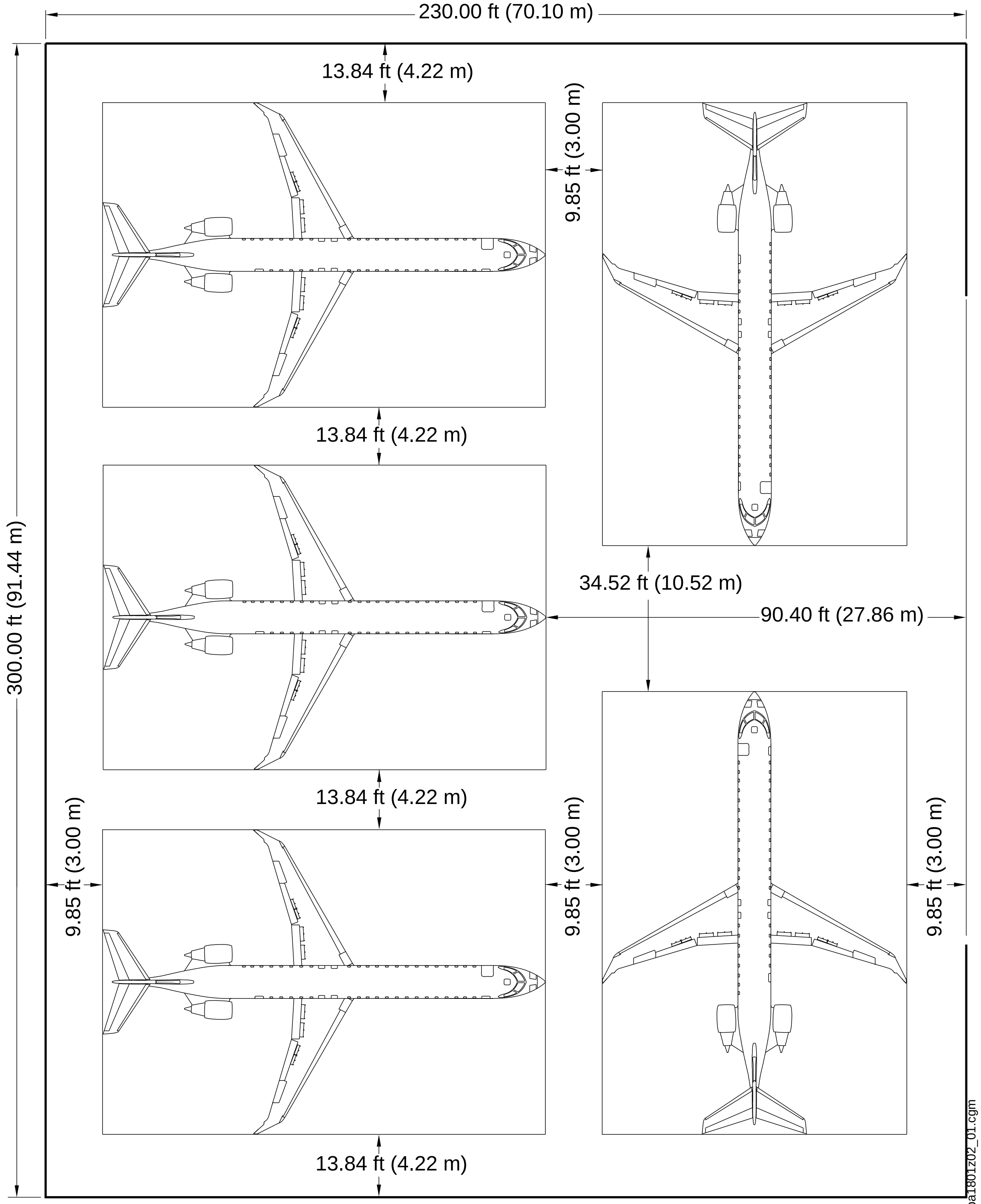
Aircraft Dimensions
Figure 4 (Sheet 1 of 2)



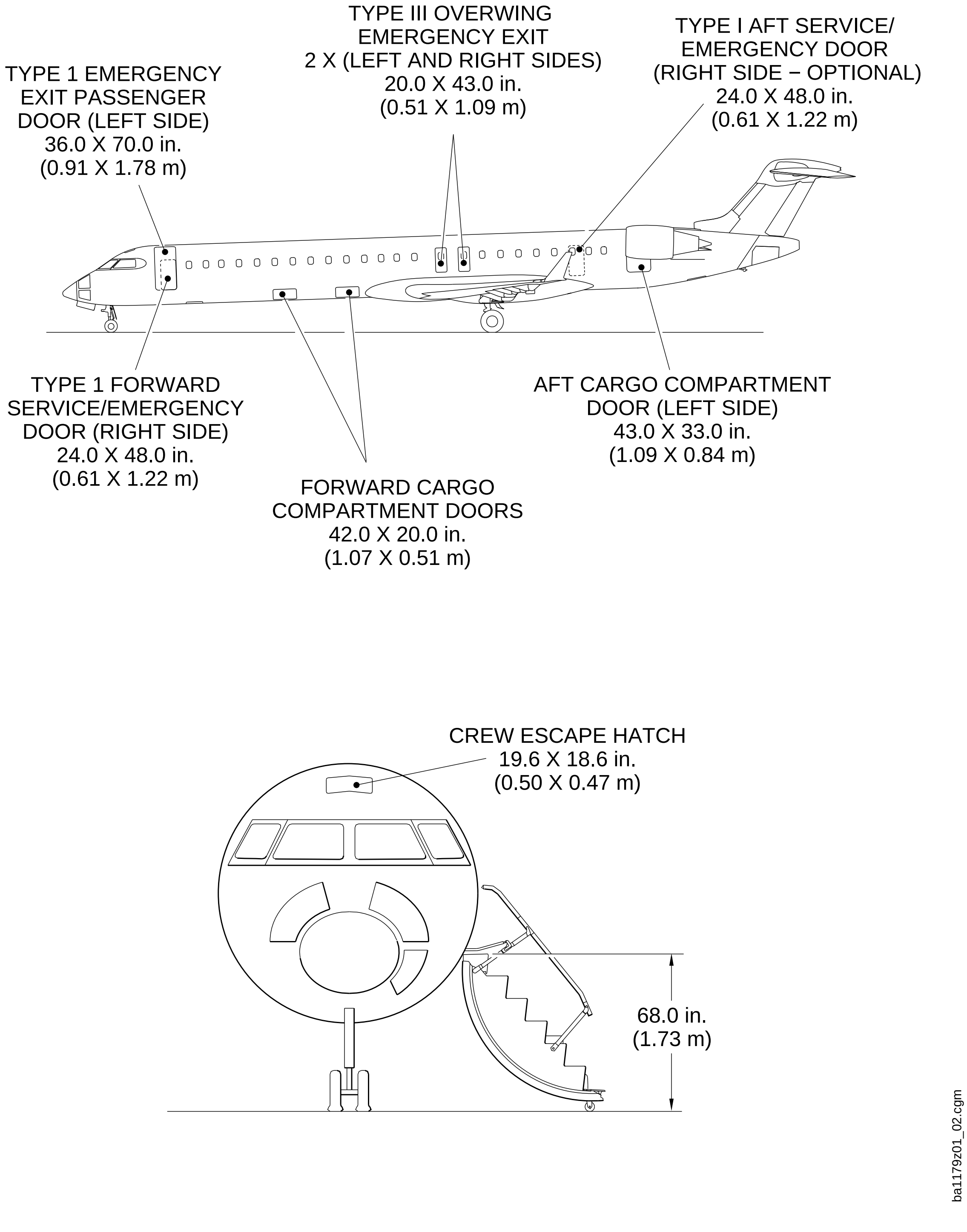
Aircraft Dimensions
Figure 4 (Sheet 2 of 2)



Hangar Space Needs
Figure 5 (Sheet 1 of 2)



Hangar Space Needs
Figure 5 (Sheet 2 of 2)



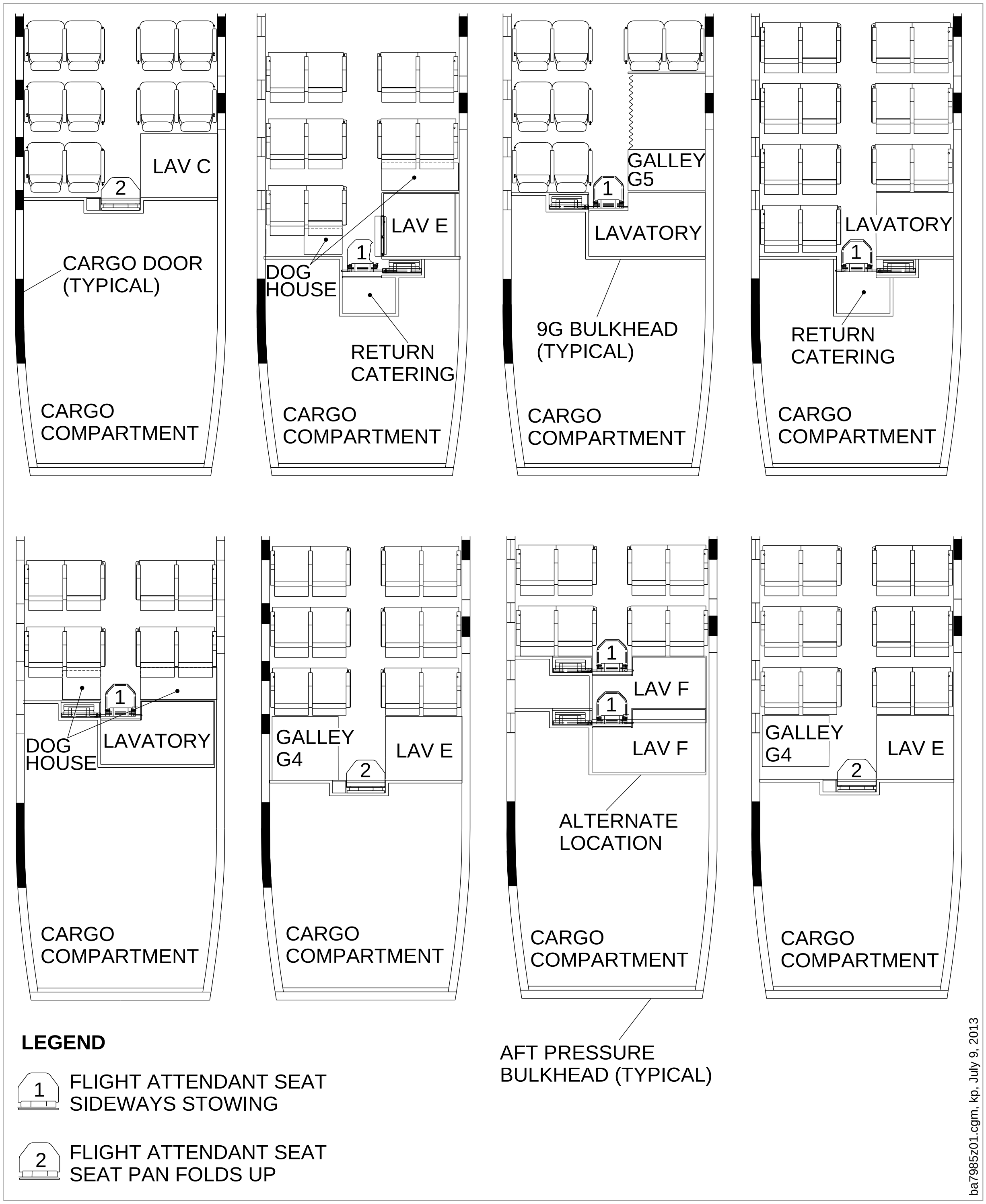
Door Dimensions and Clearances
Figure 6

INTERIOR CONFIGURATIONS

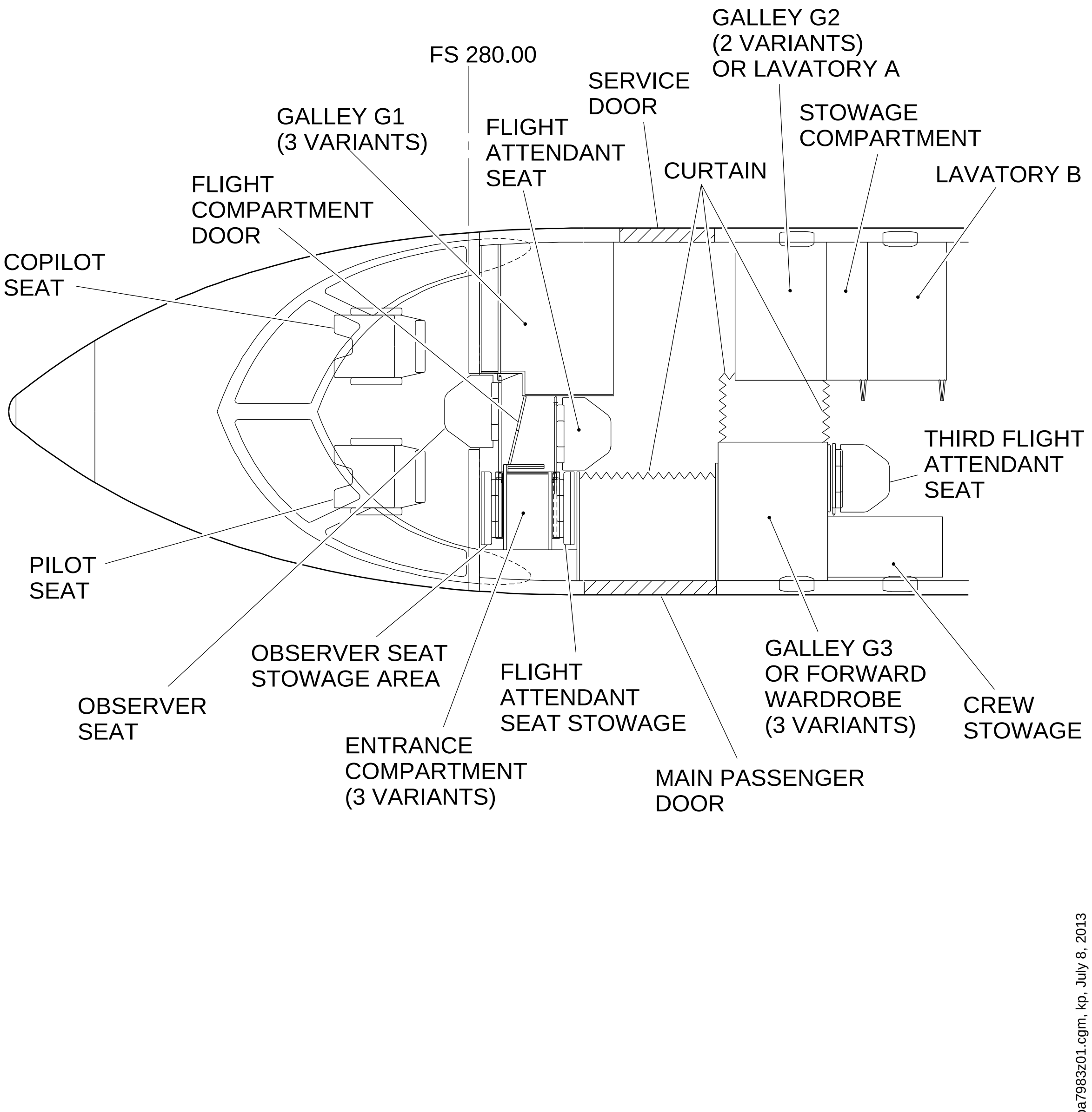
1. General

A. This section contains examples of passenger compartment interior configuration.

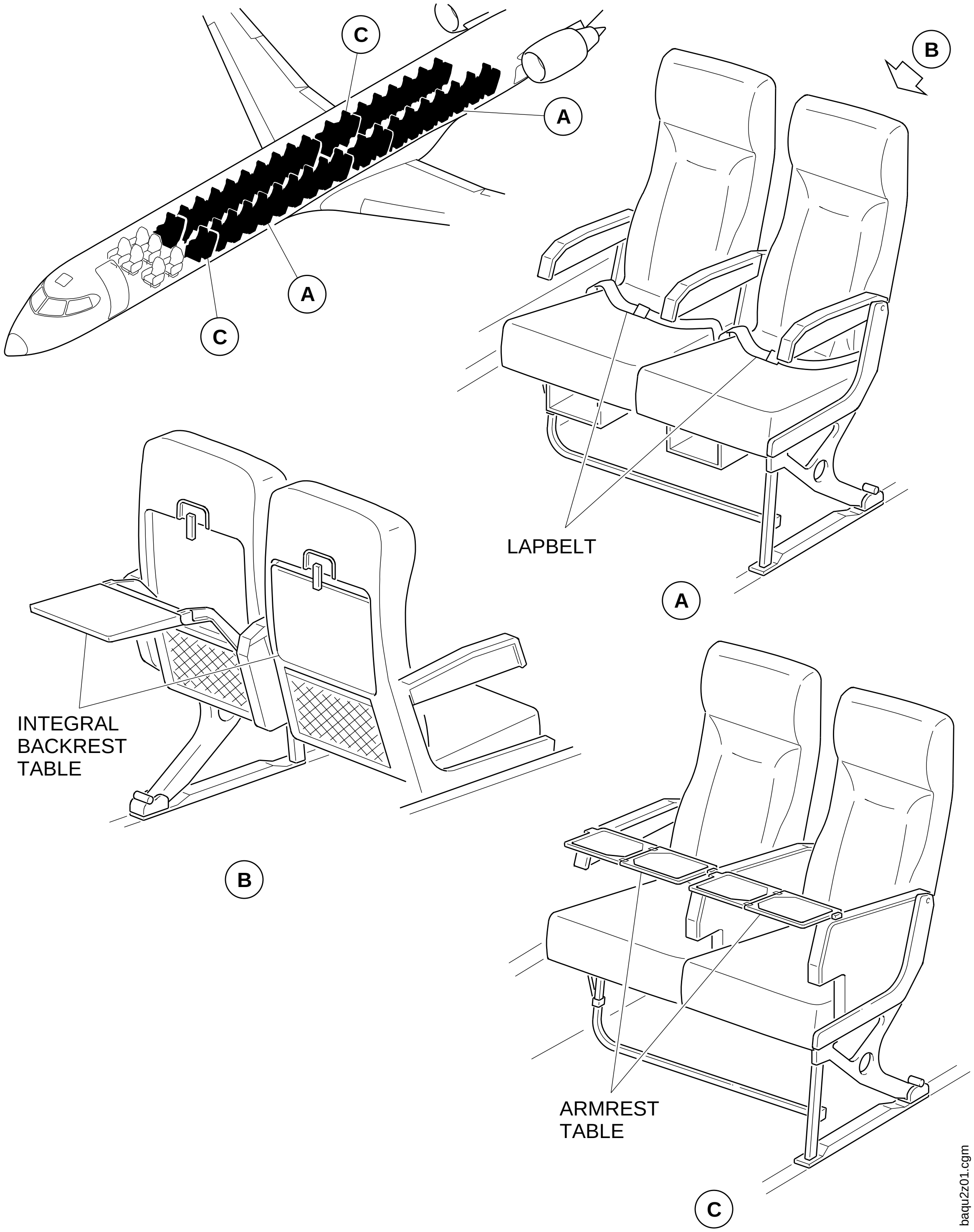
B. The passenger compartment includes the galley area, lavatory, and passenger seating area. The galley and utility areas are isolated from the passenger area by partitions and curtains (refer to Figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36).



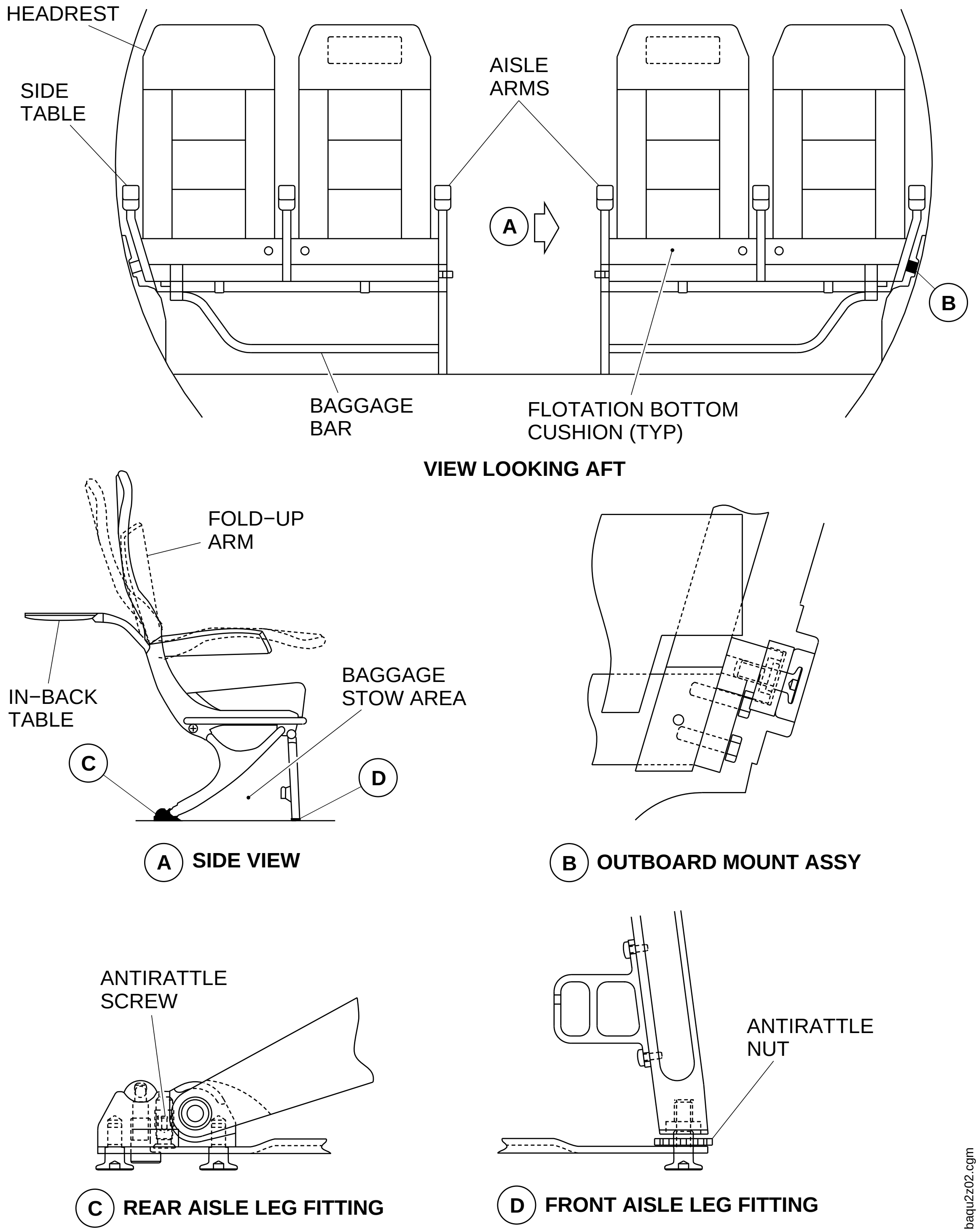
Aft Passenger Cabin Configurations and Lavatory Options
Figure 1



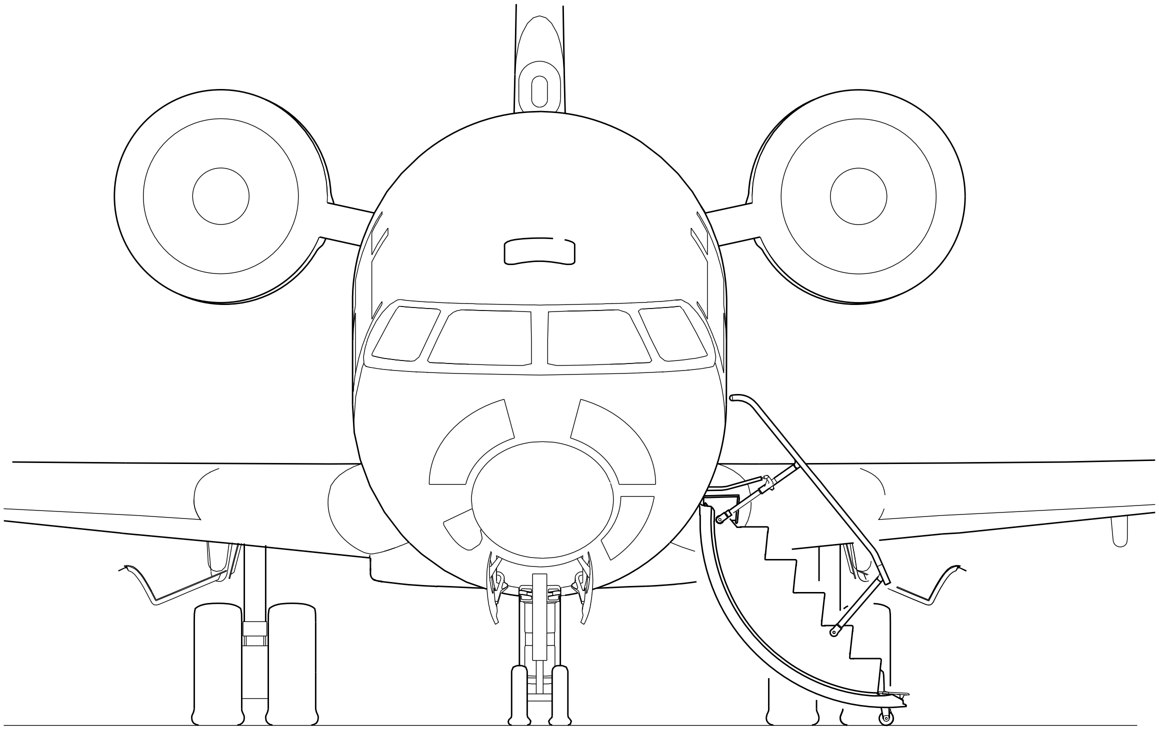
Forward Passenger Cabin Configuration
Figure 2

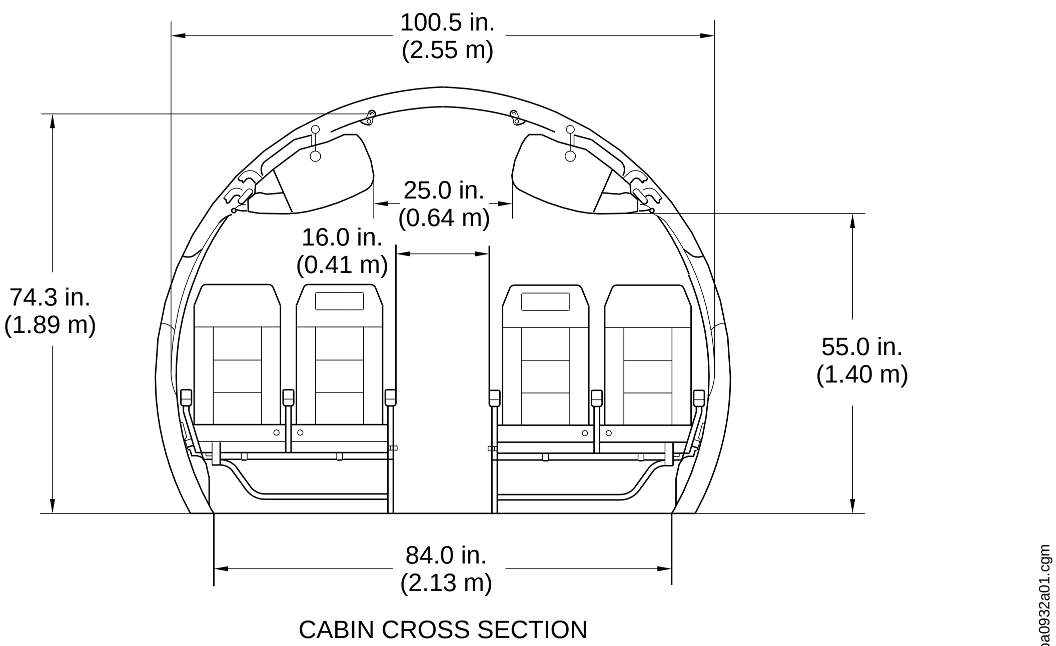


Passenger Seats
Figure 3 (Sheet 1 of 2)



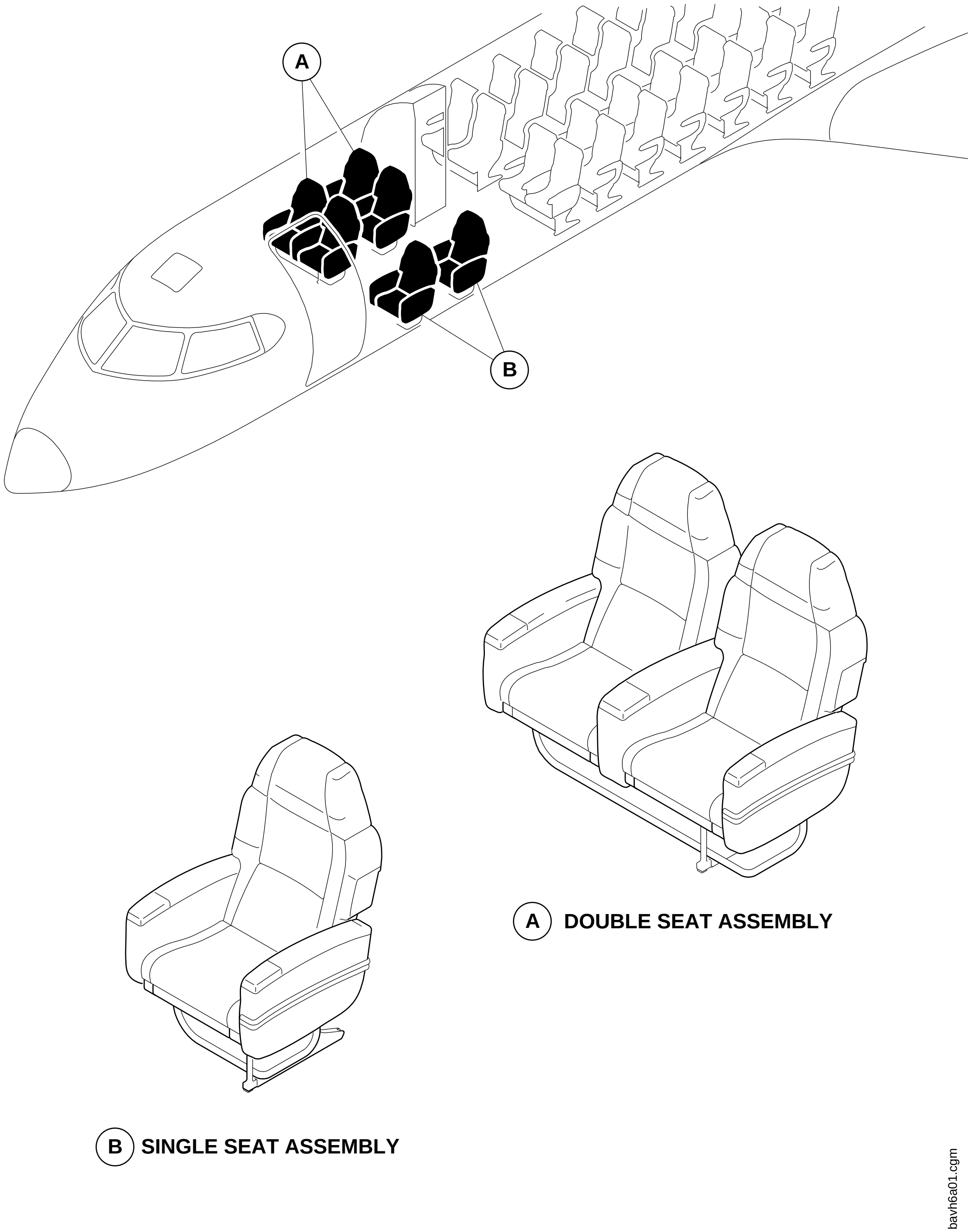
Passenger Seats
Figure 3 (Sheet 2 of 2)



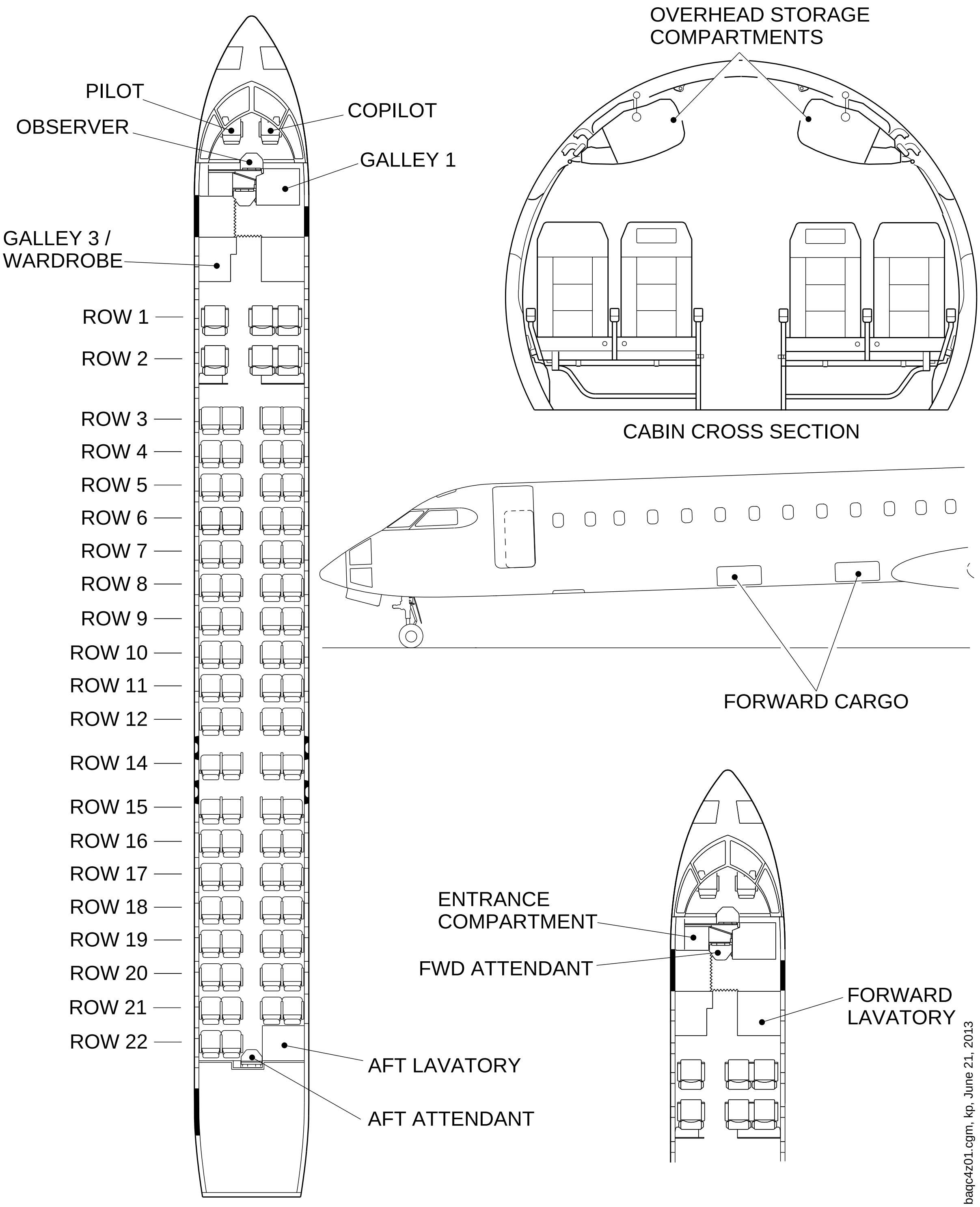


CABIN CROSS SECTION

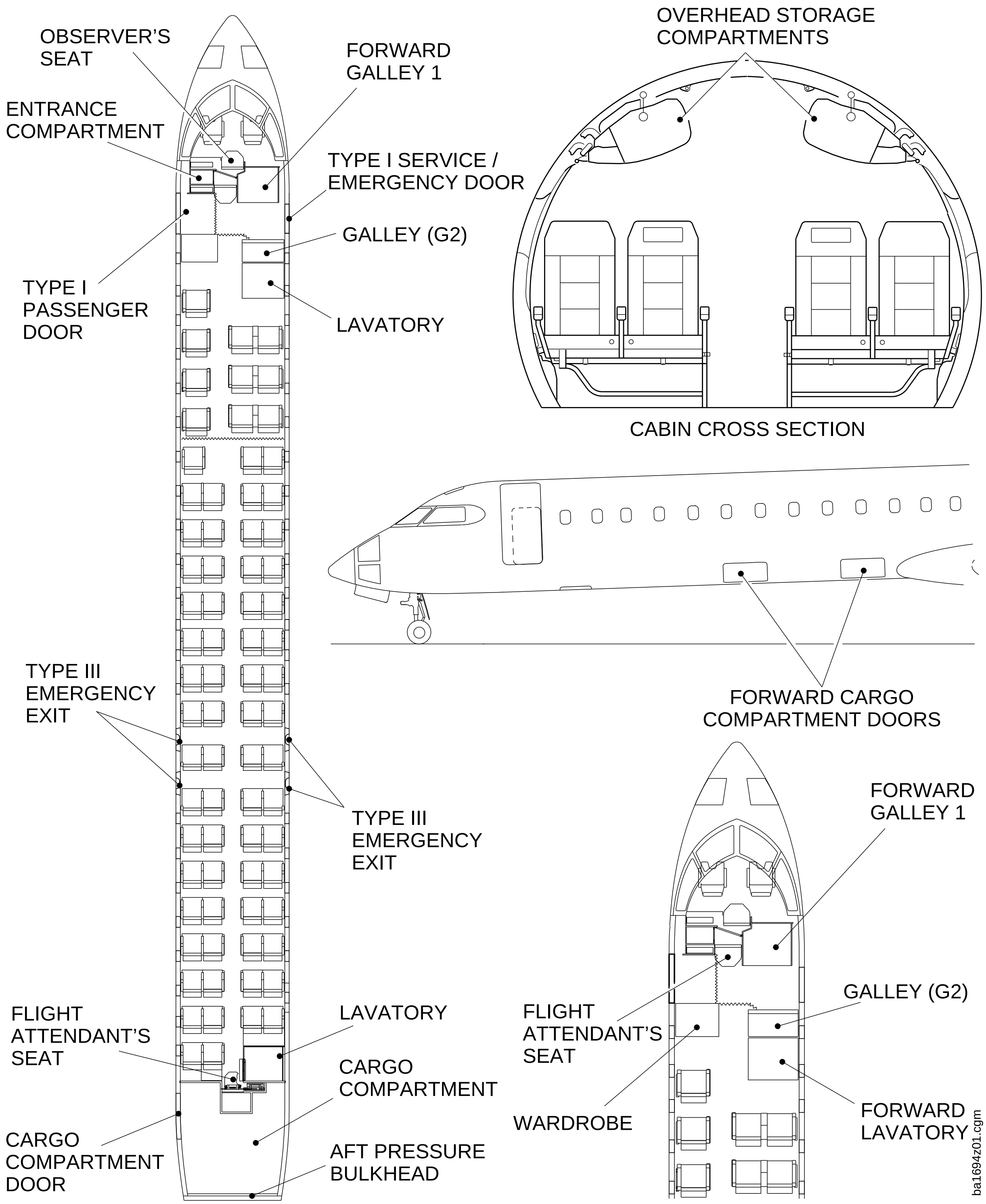
Passenger Compartment Cross Section
Figure 4



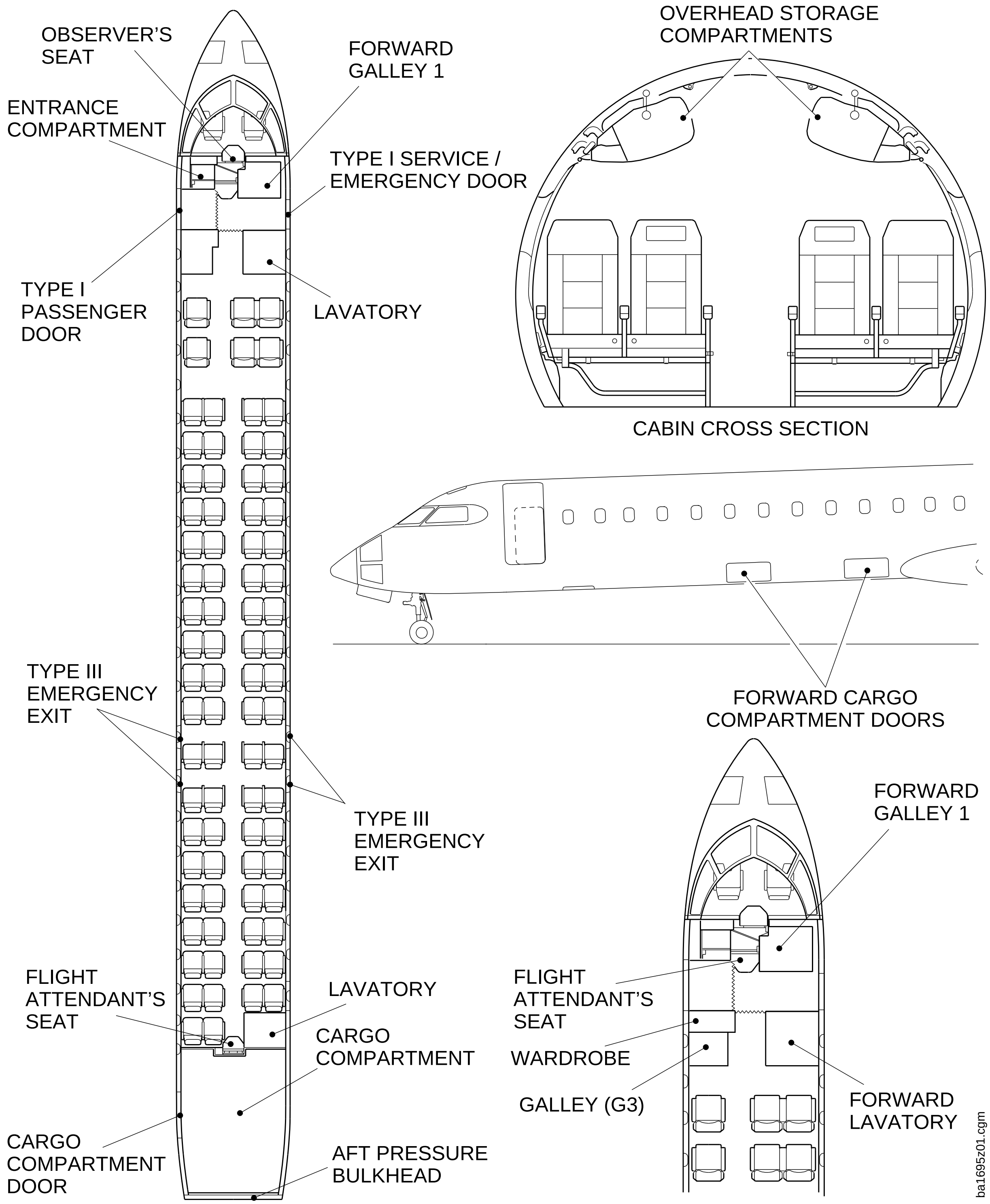
Passenger Seat − Business Class
Figure 5



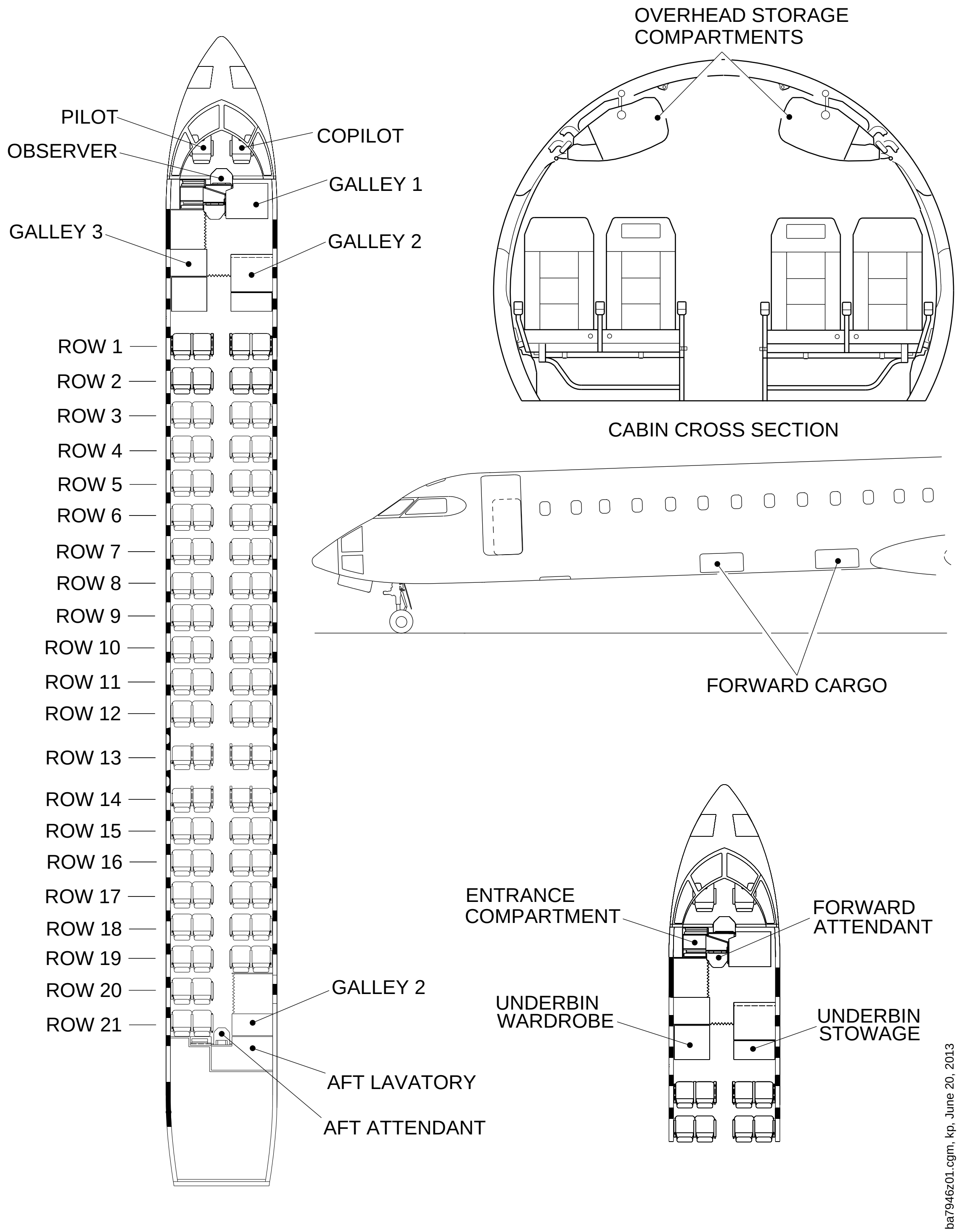
Passenger and Crew Arrangement − 80 Passengers
Figure 6



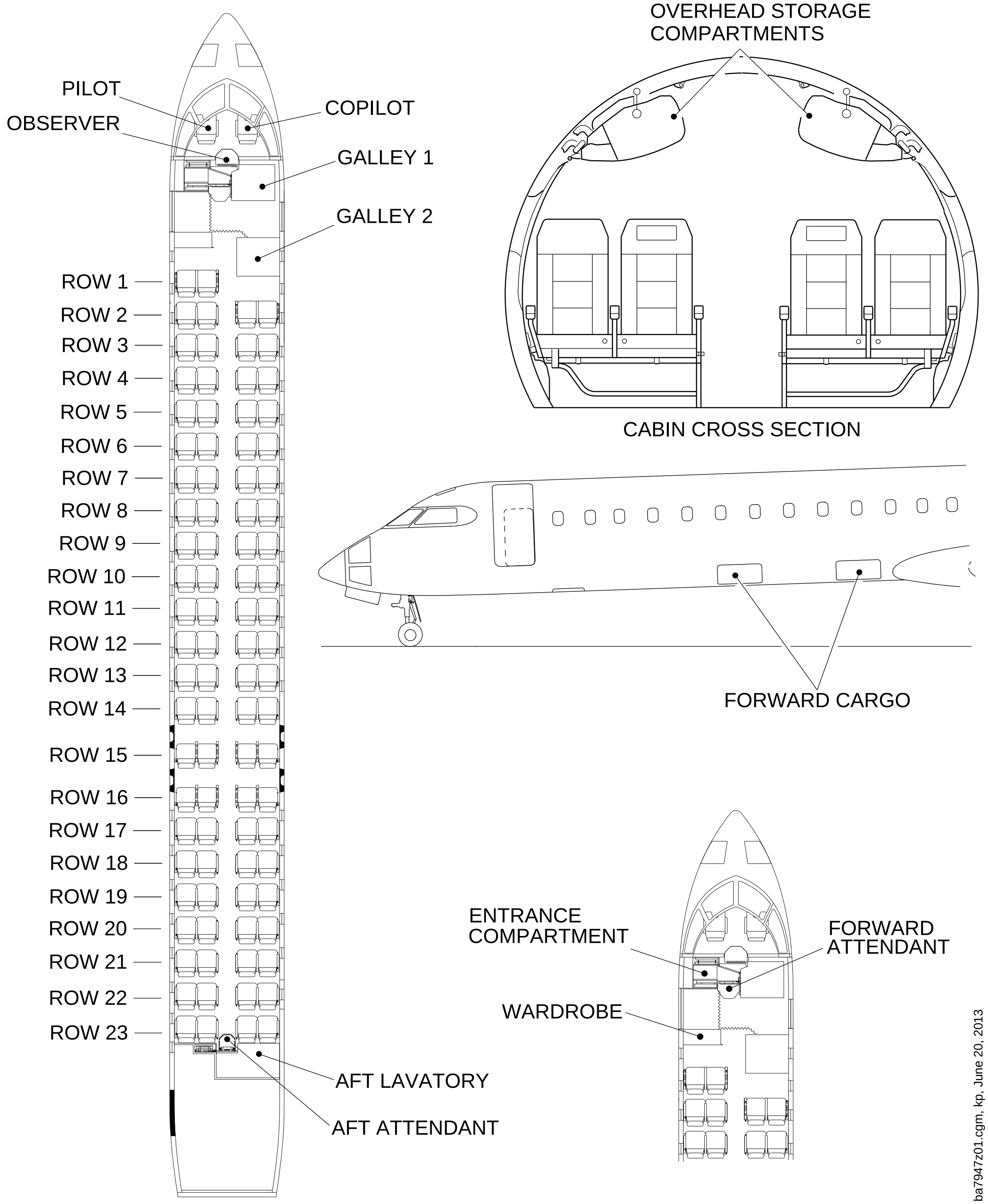
Passenger and Crew Arrangement − 75 Passengers
Figure 7



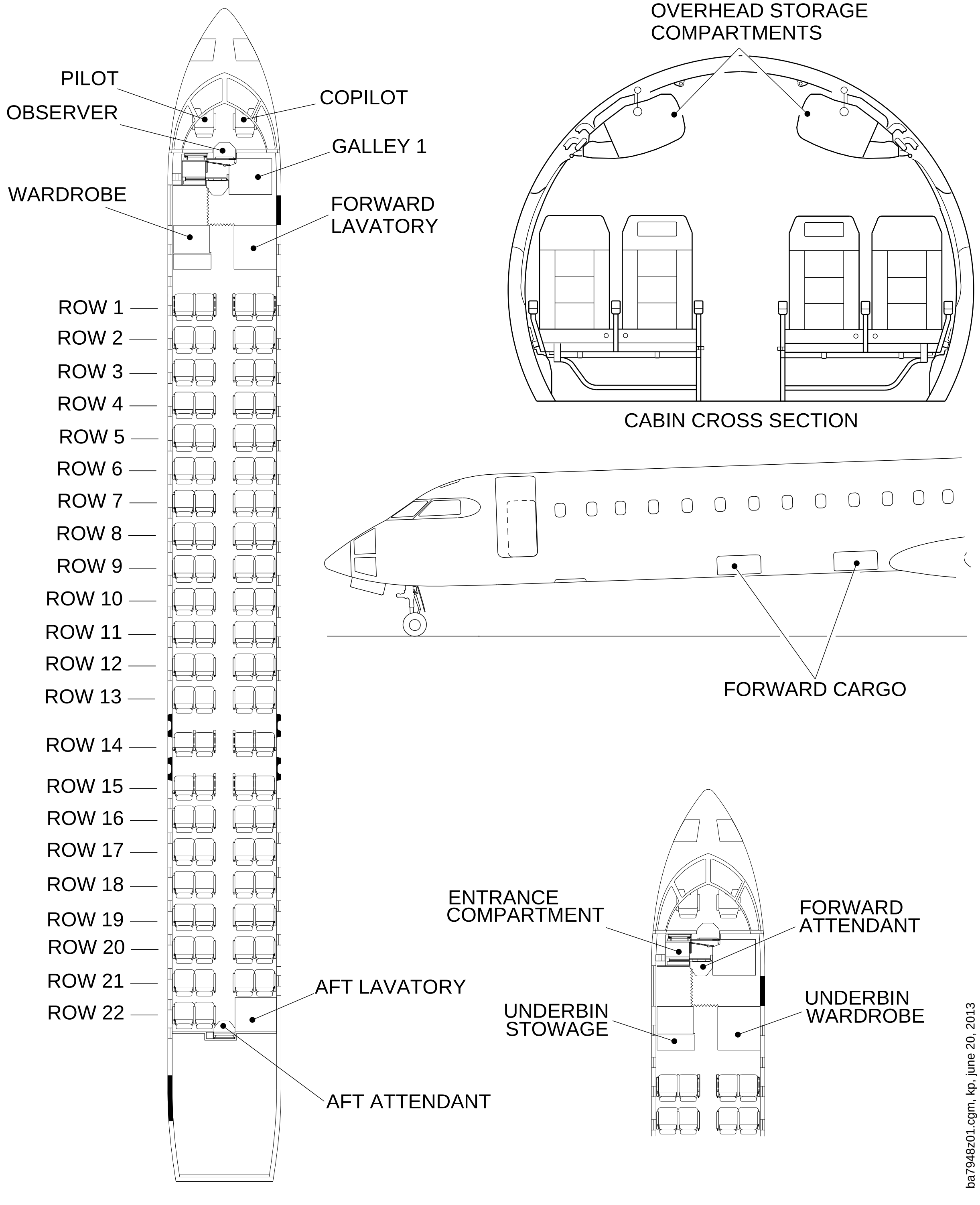
Passenger and Crew Arrangement − 80 Passengers
Figure 8



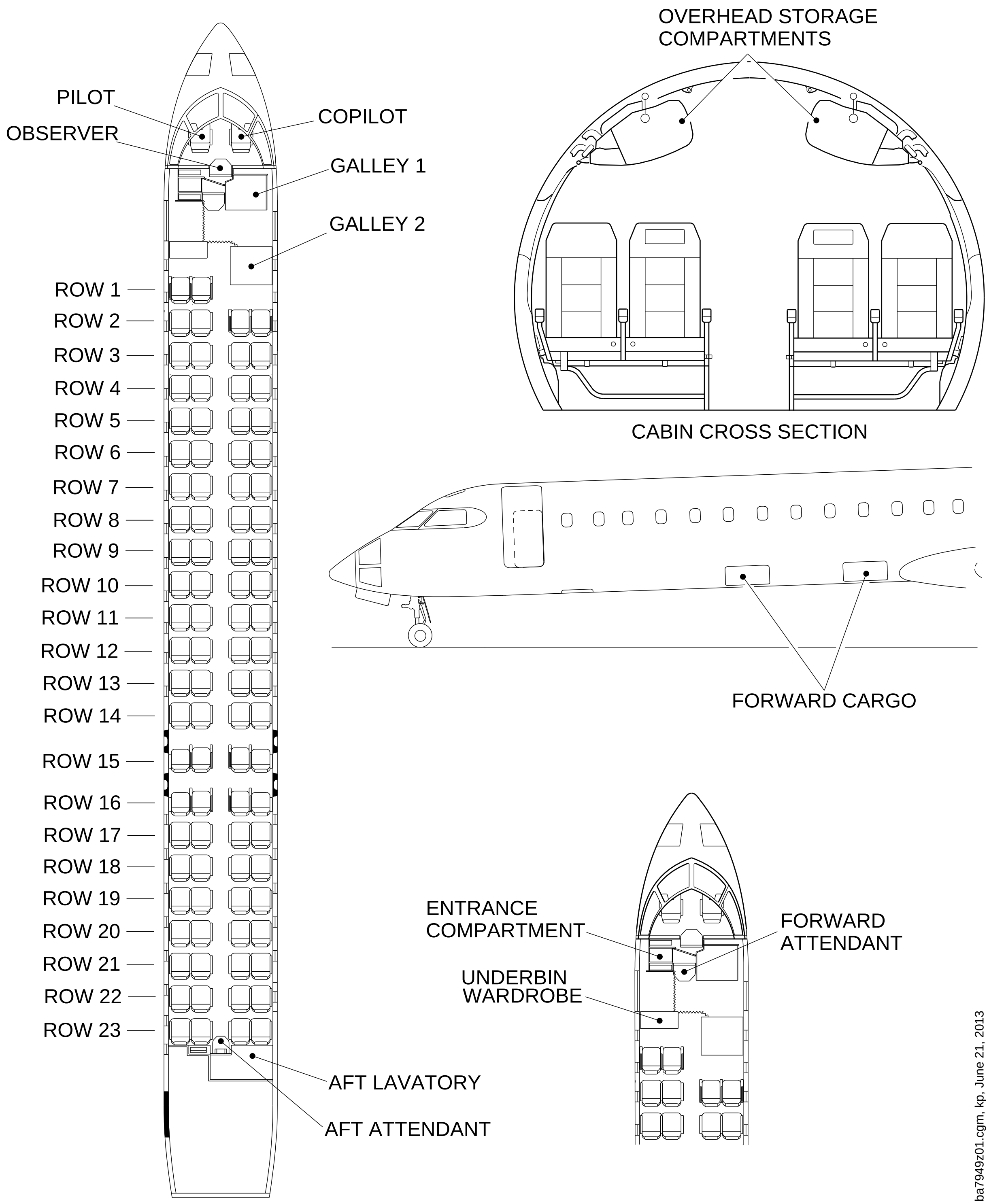
Passenger and Crew Arrangement − 80 Passengers
Figure 9



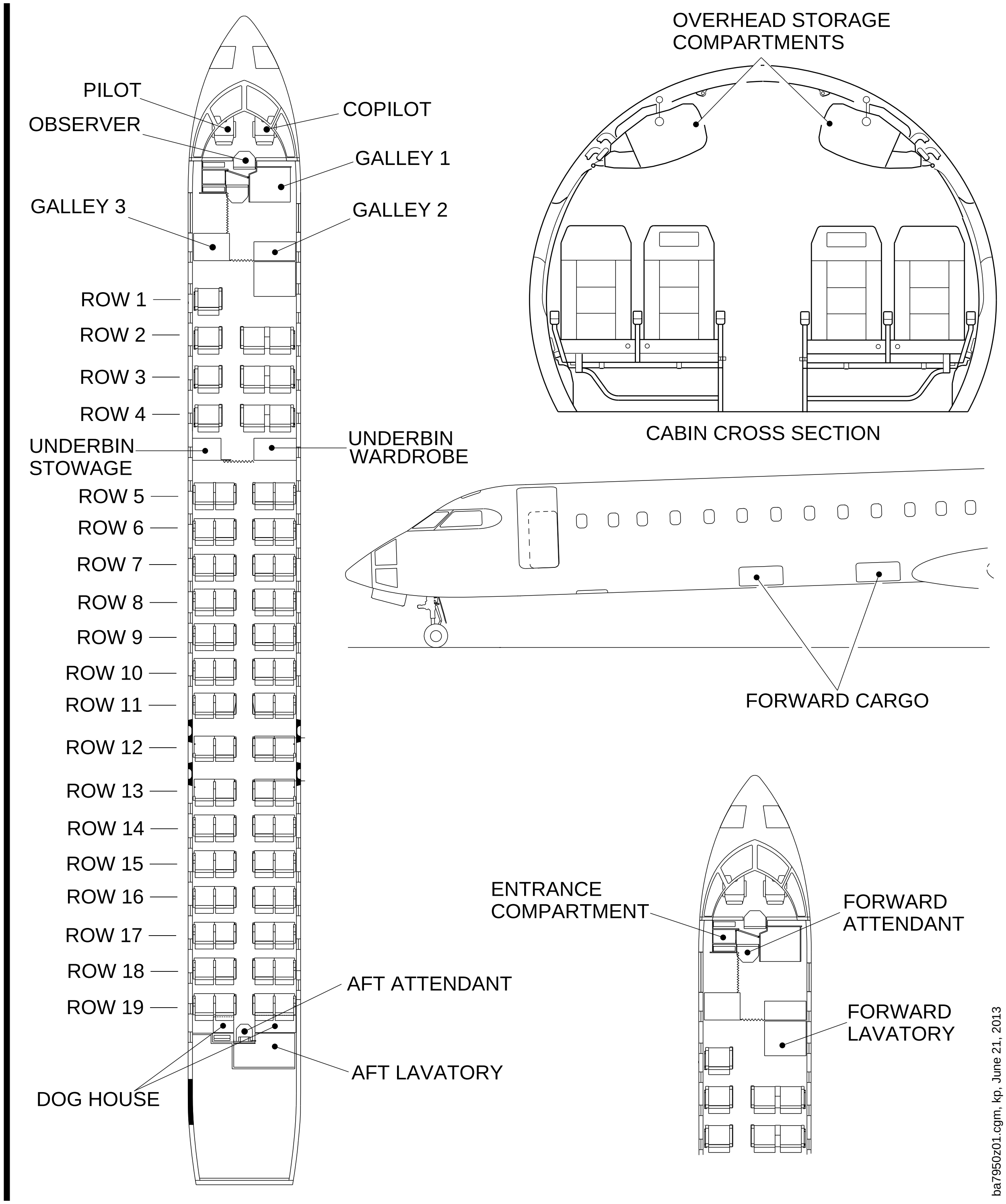
Passenger and Crew Arrangement − 90 Passengers
Figure 10



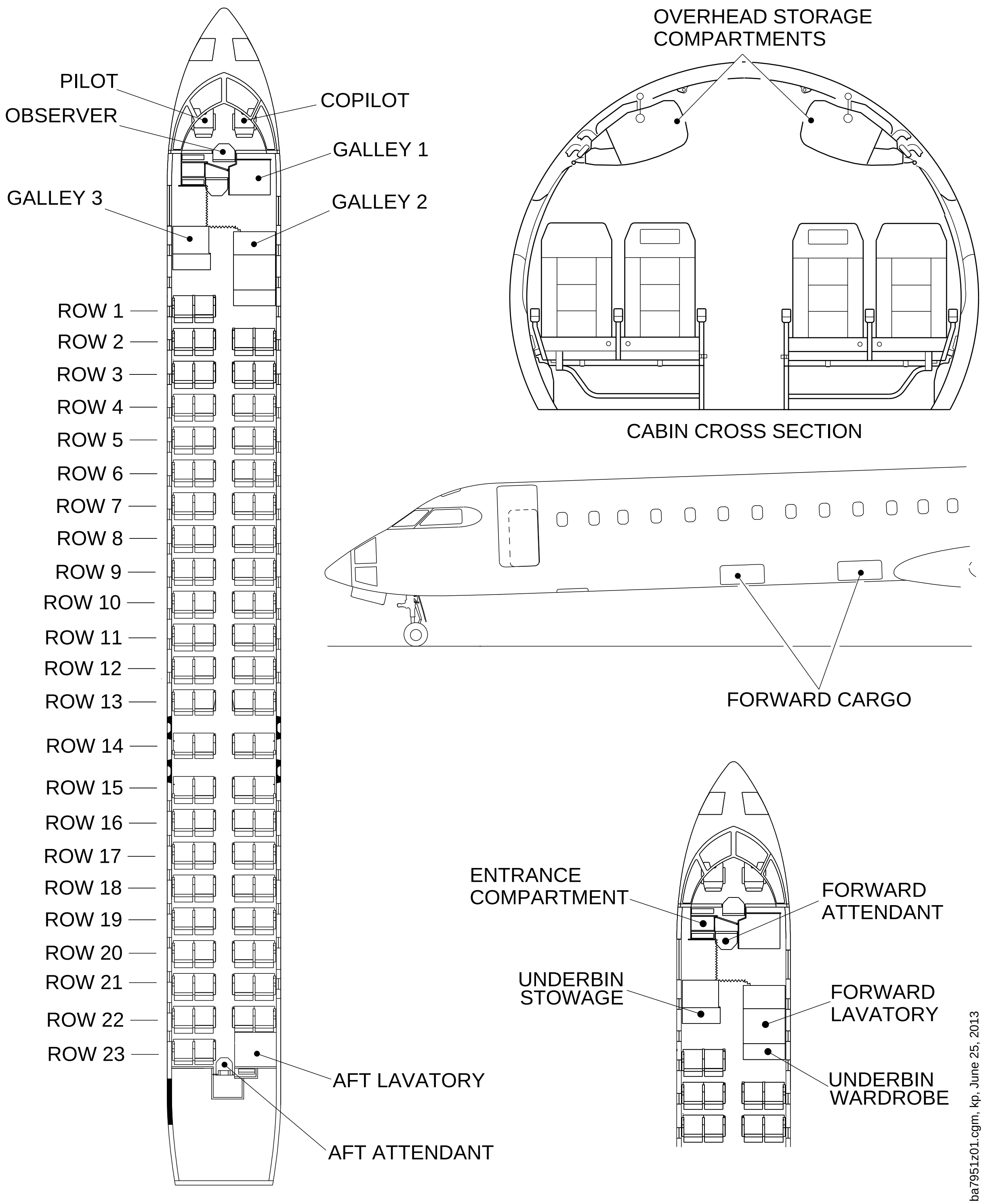
Passenger and Crew Arrangement − 86 Passengers
Figure 11



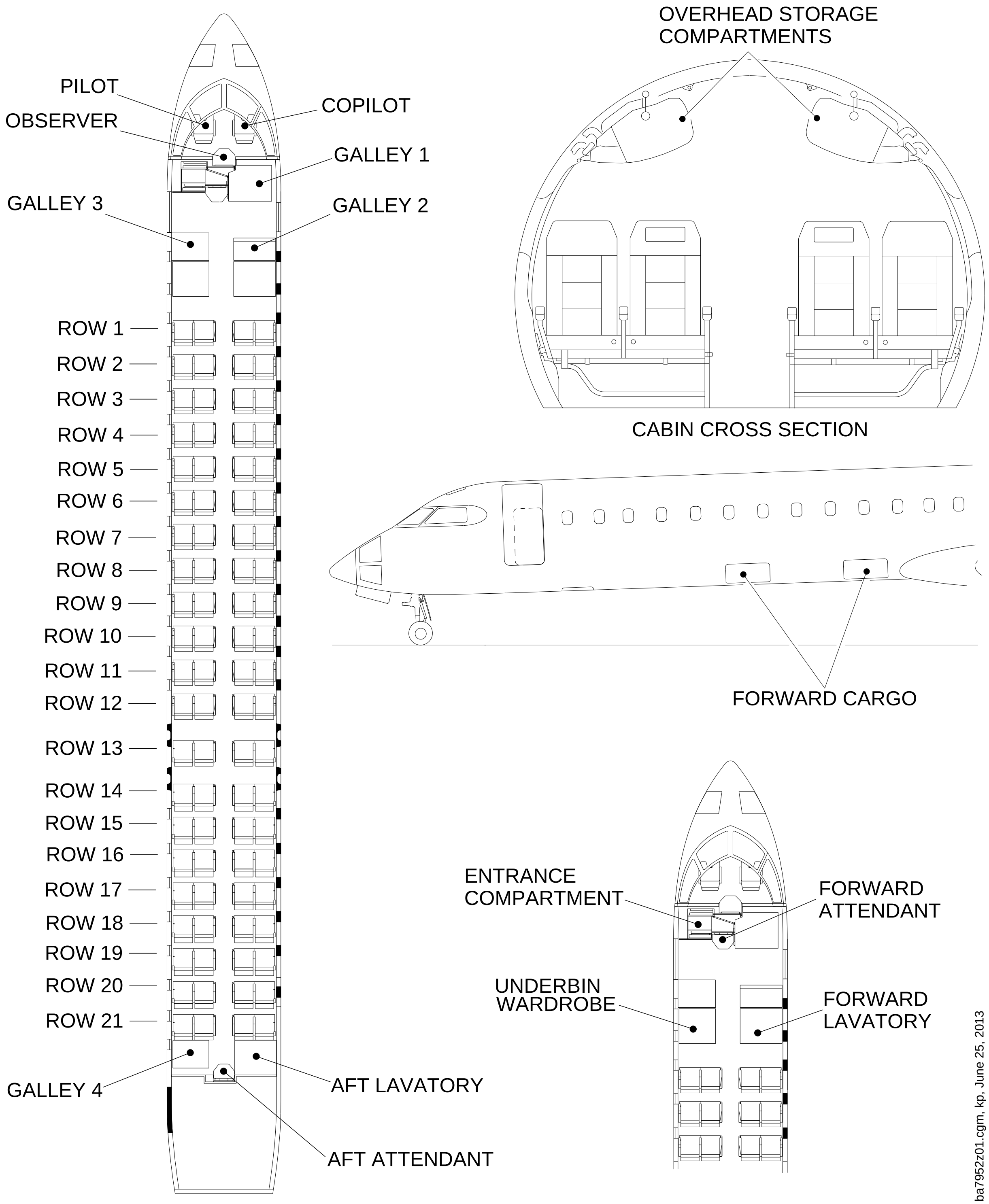
Passenger and Crew Arrangement − 90 Passengers
Figure 12



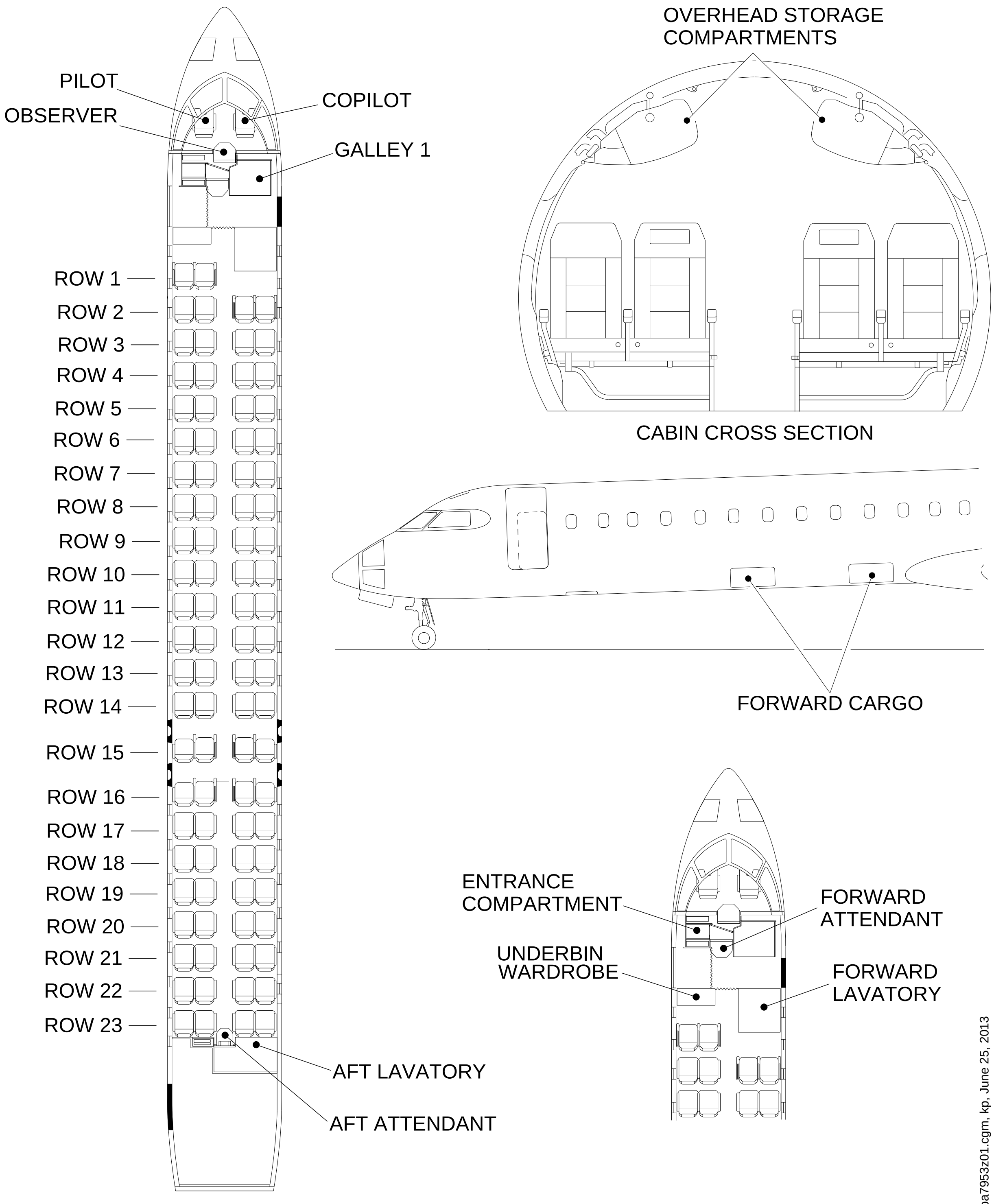
Passenger and Crew Arrangement − 70 Passengers
Figure 13



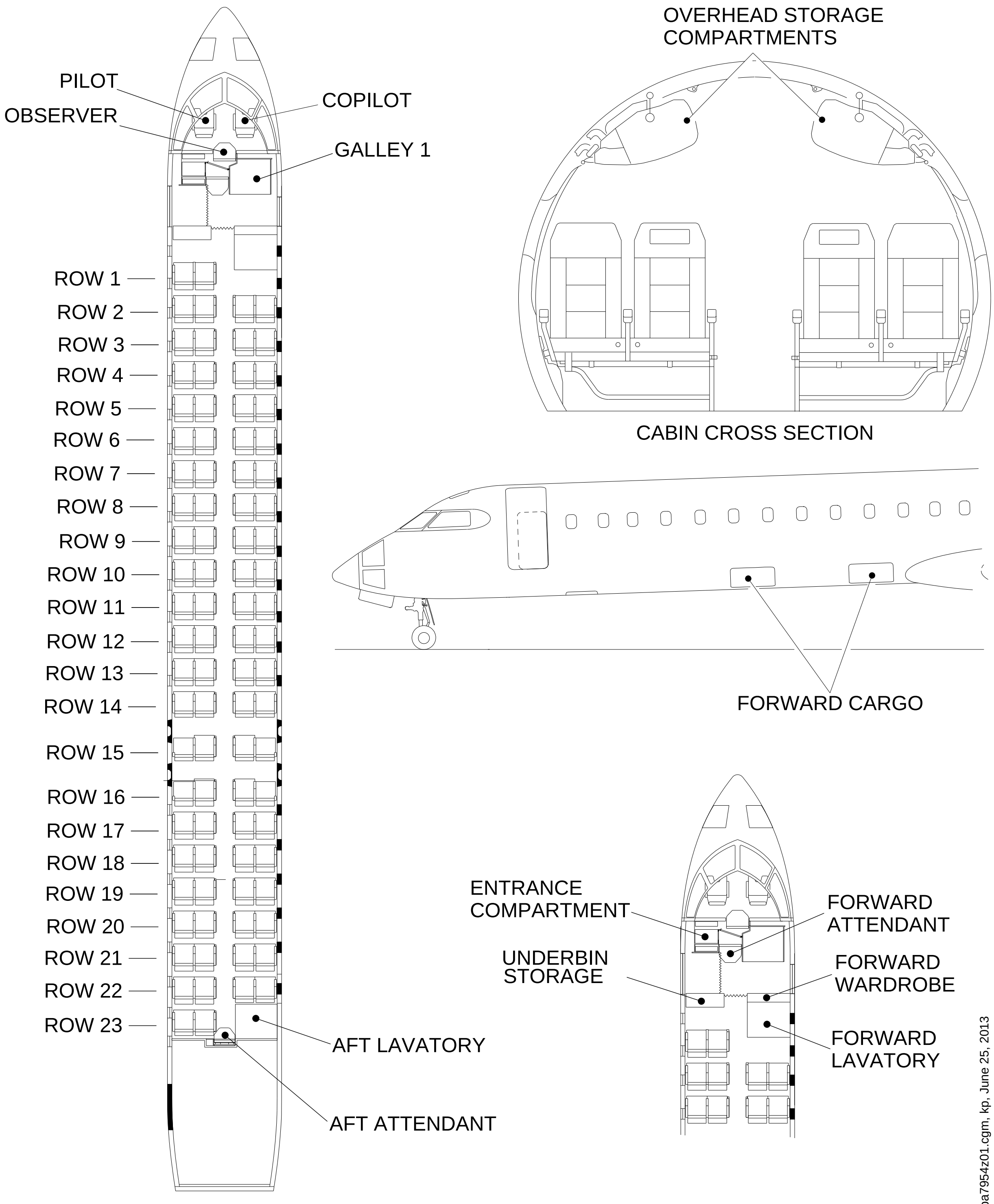
Passenger and Crew Arrangement − 88 Passengers
Figure 14



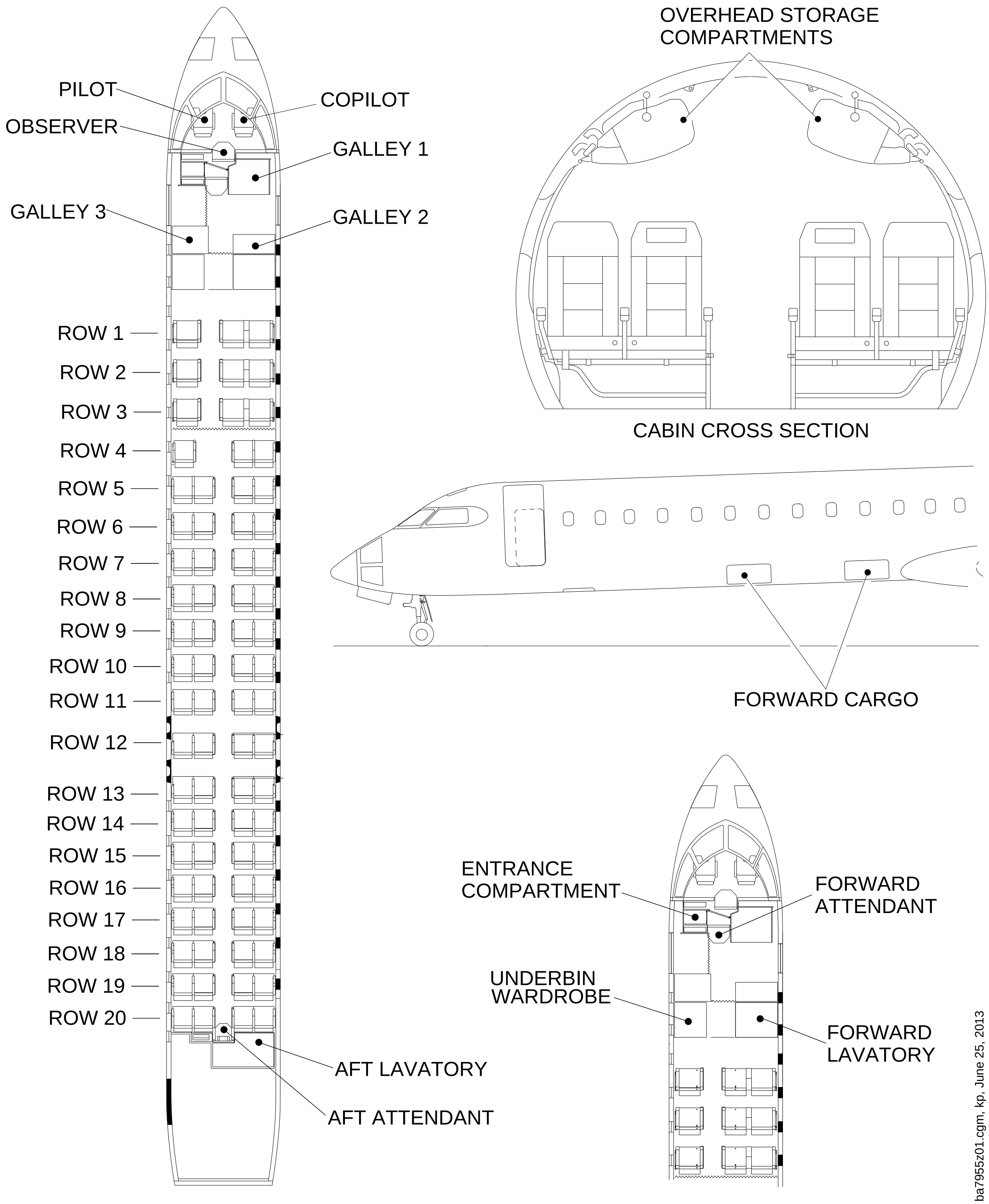
Passenger and Crew Arrangement − 84 Passengers
Figure 15



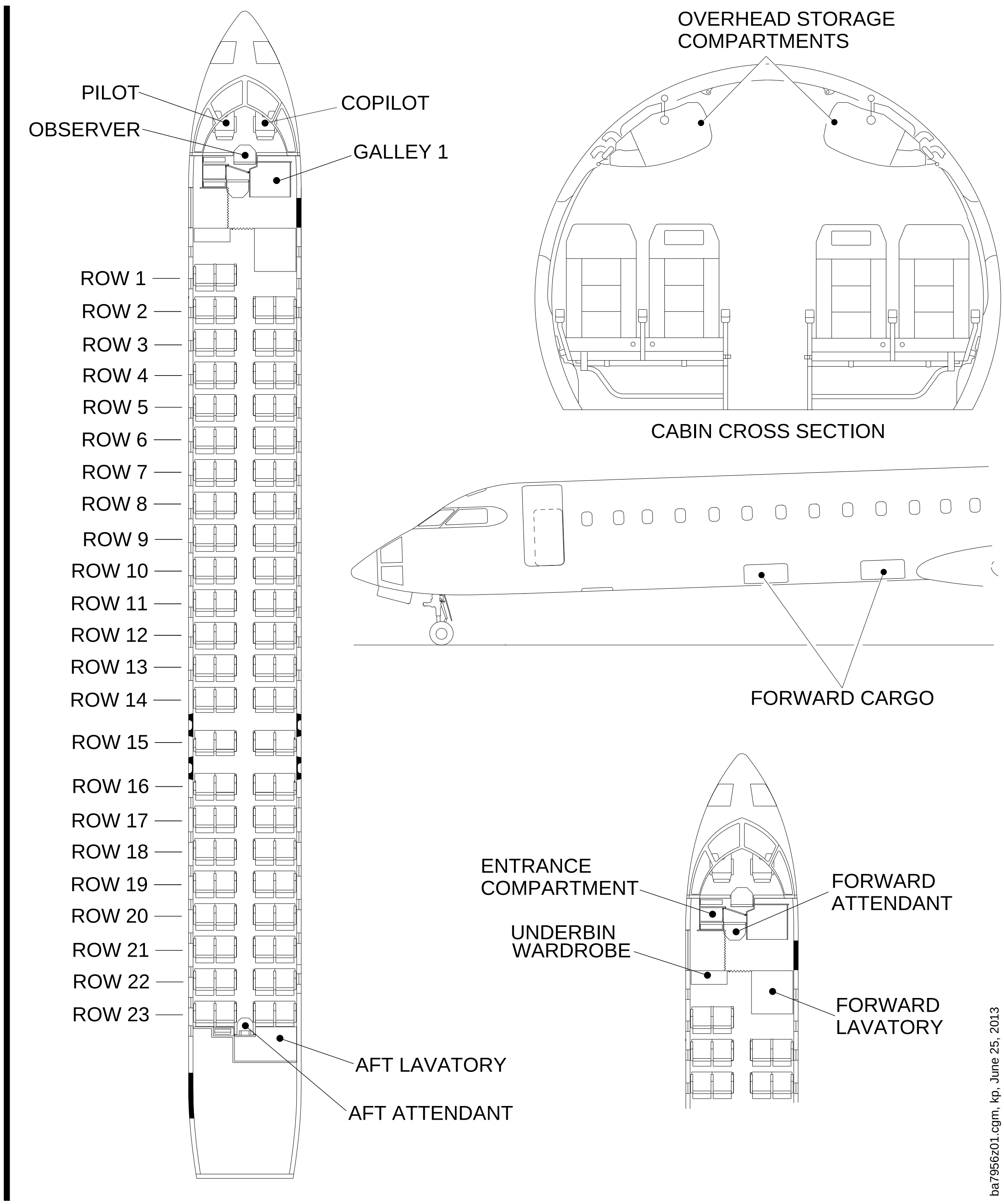
Passenger and Crew Arrangement − 90 Passengers
Figure 16



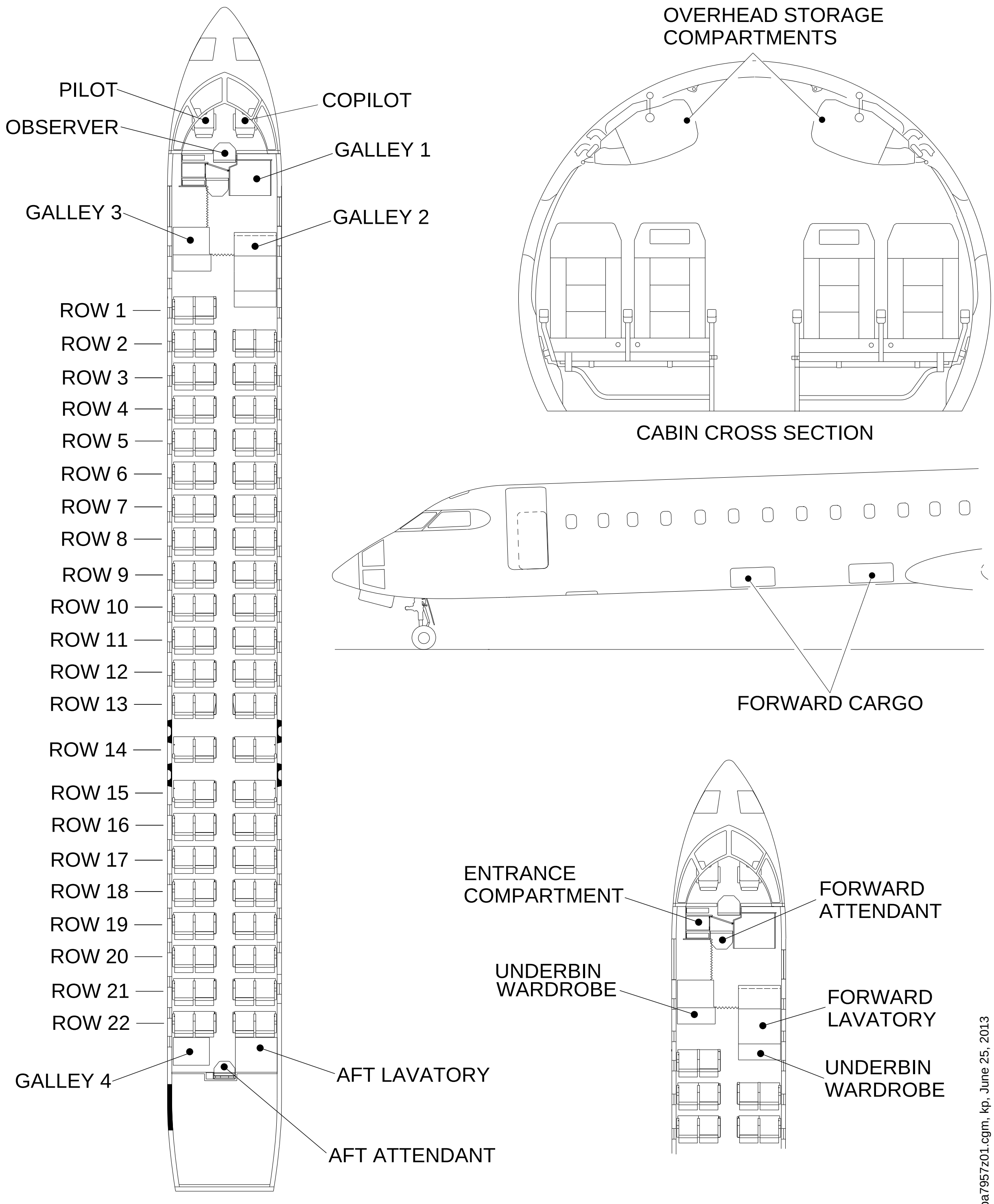
Passenger and Crew Arrangement − 88 Passengers
Figure 17



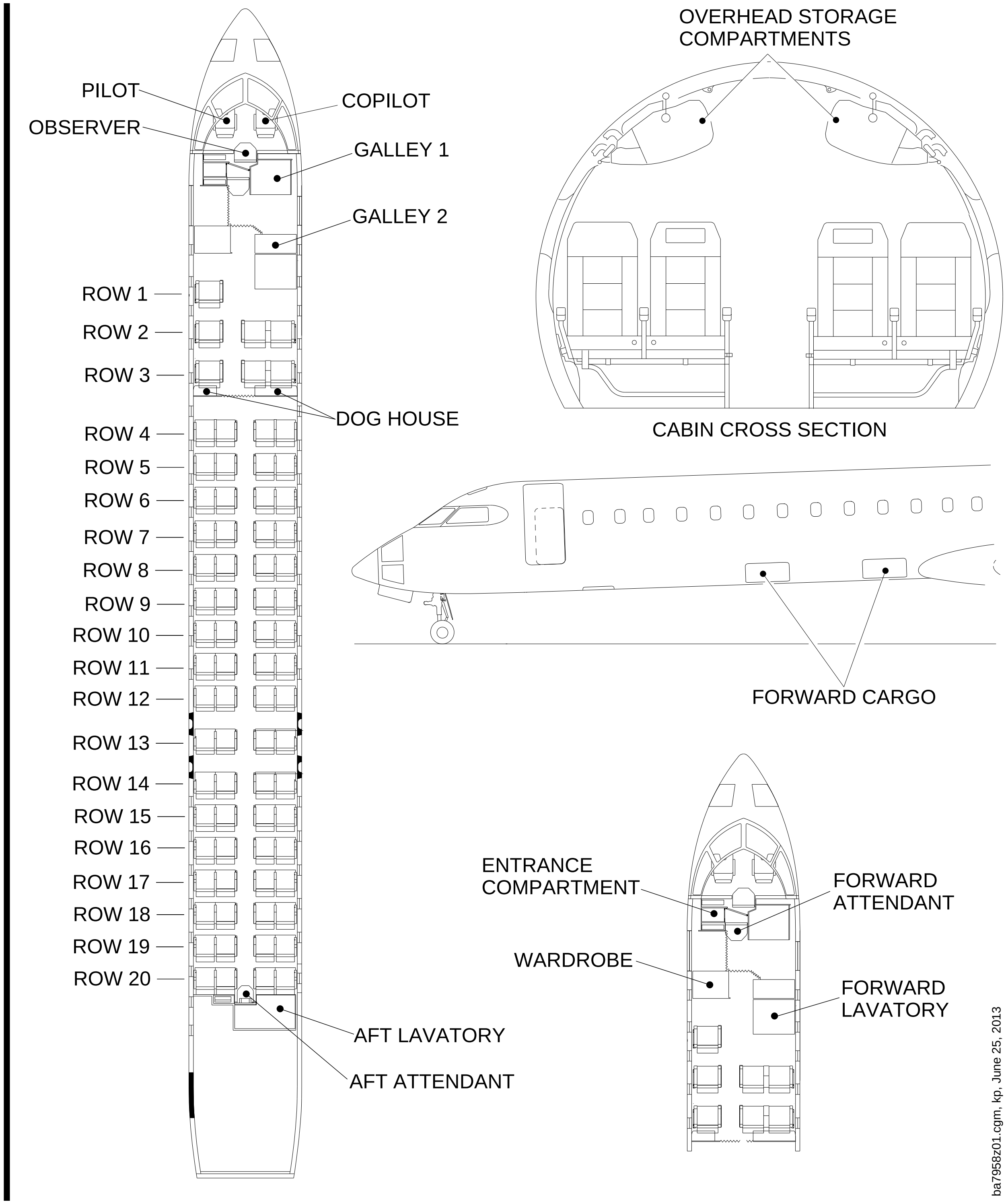
Passenger and Crew Arrangement − 76 Passengers
Figure 18



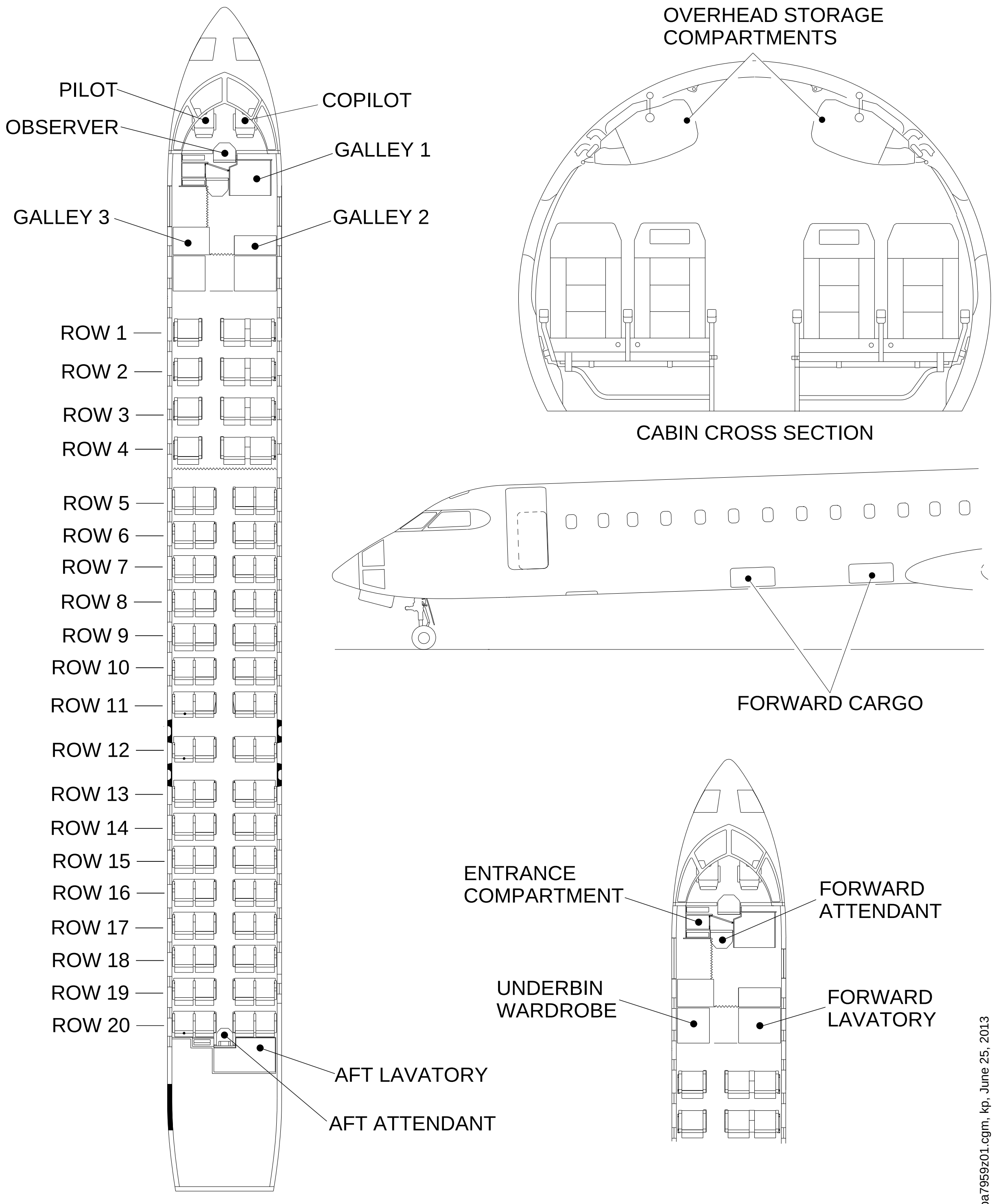
Passenger and Crew Arrangement − 90 Passengers
Figure 19



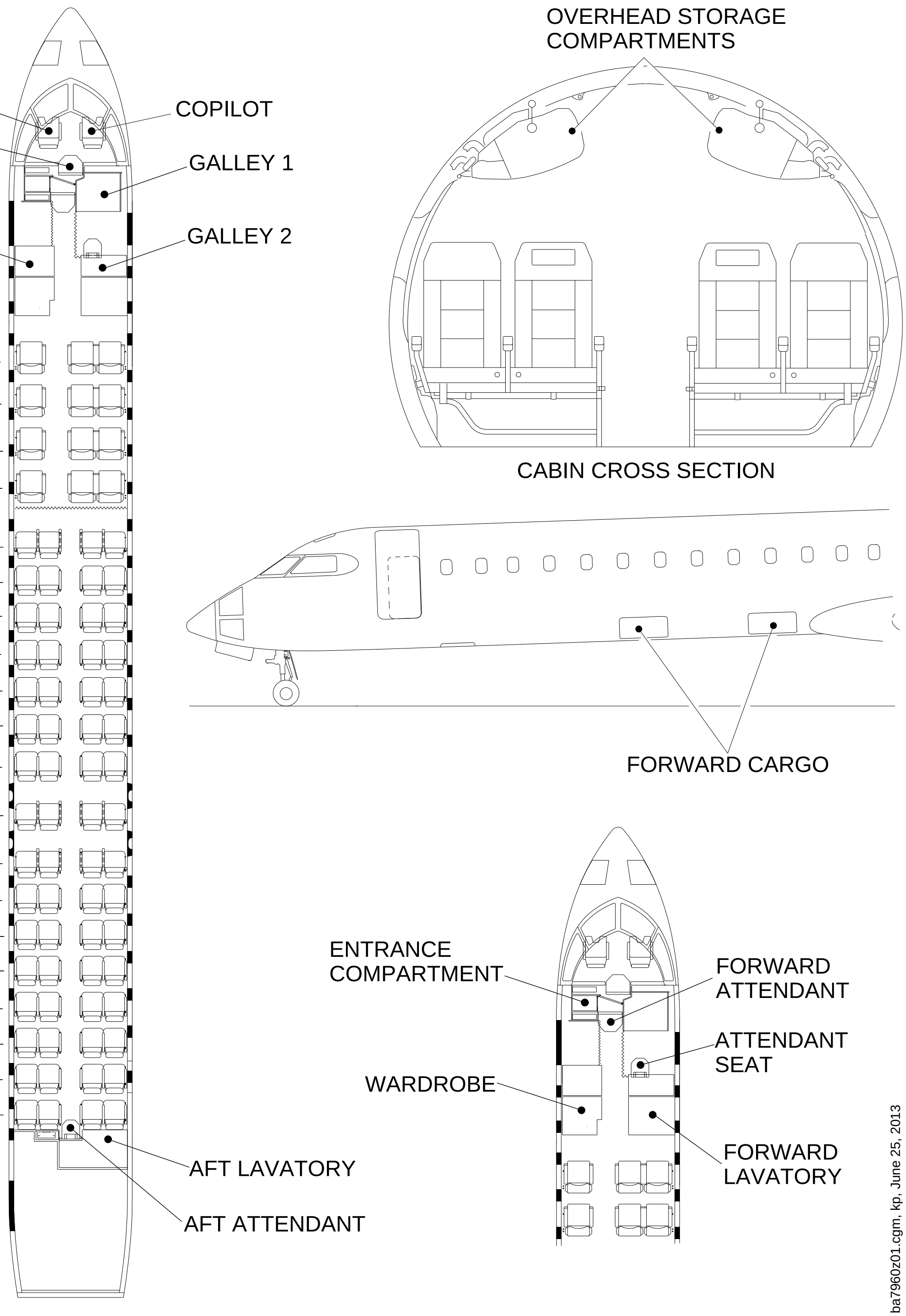
Passenger and Crew Arrangement − 86 Passengers
Figure 20



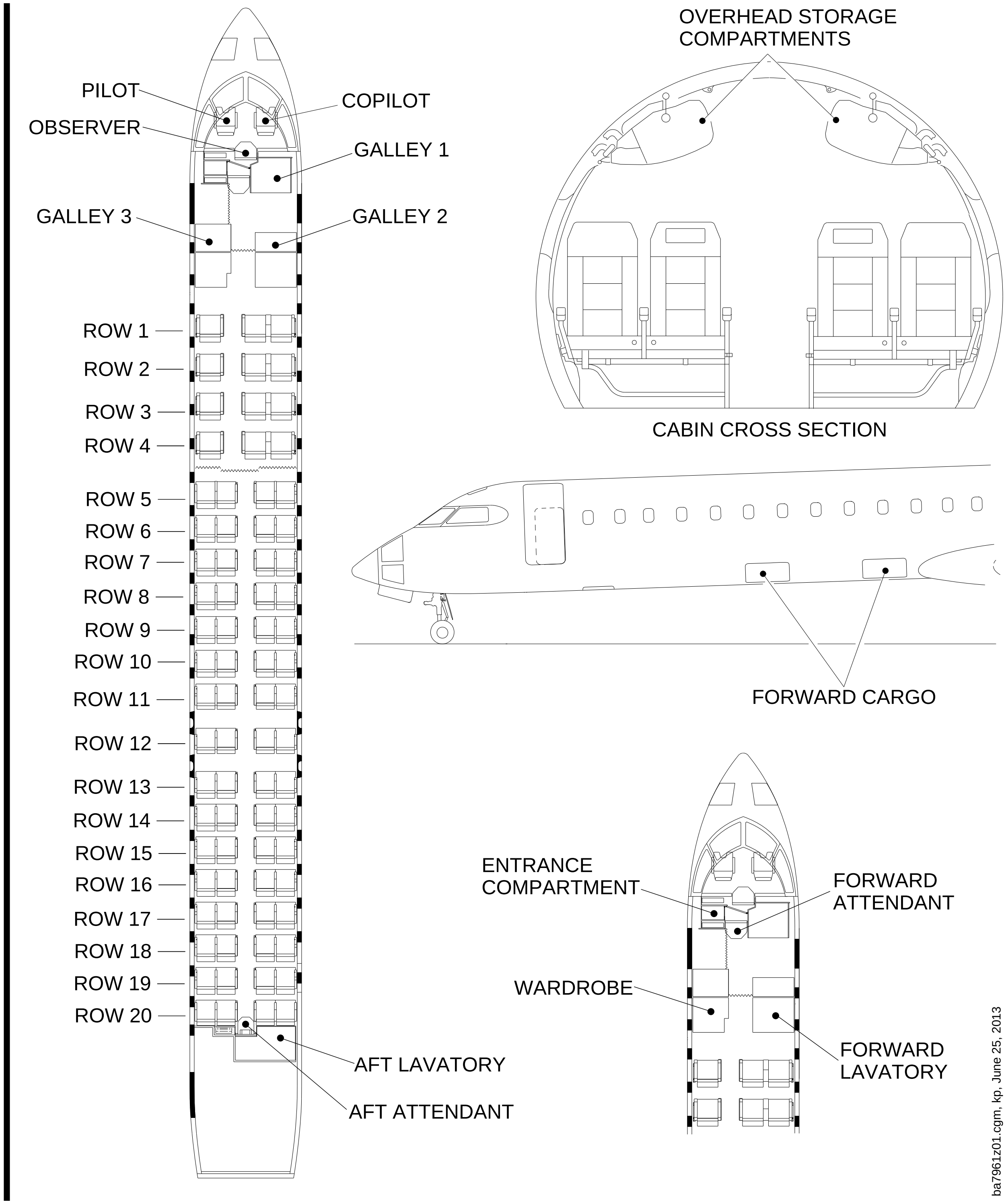
Passenger and Crew Arrangement − 75 Passengers
Figure 21



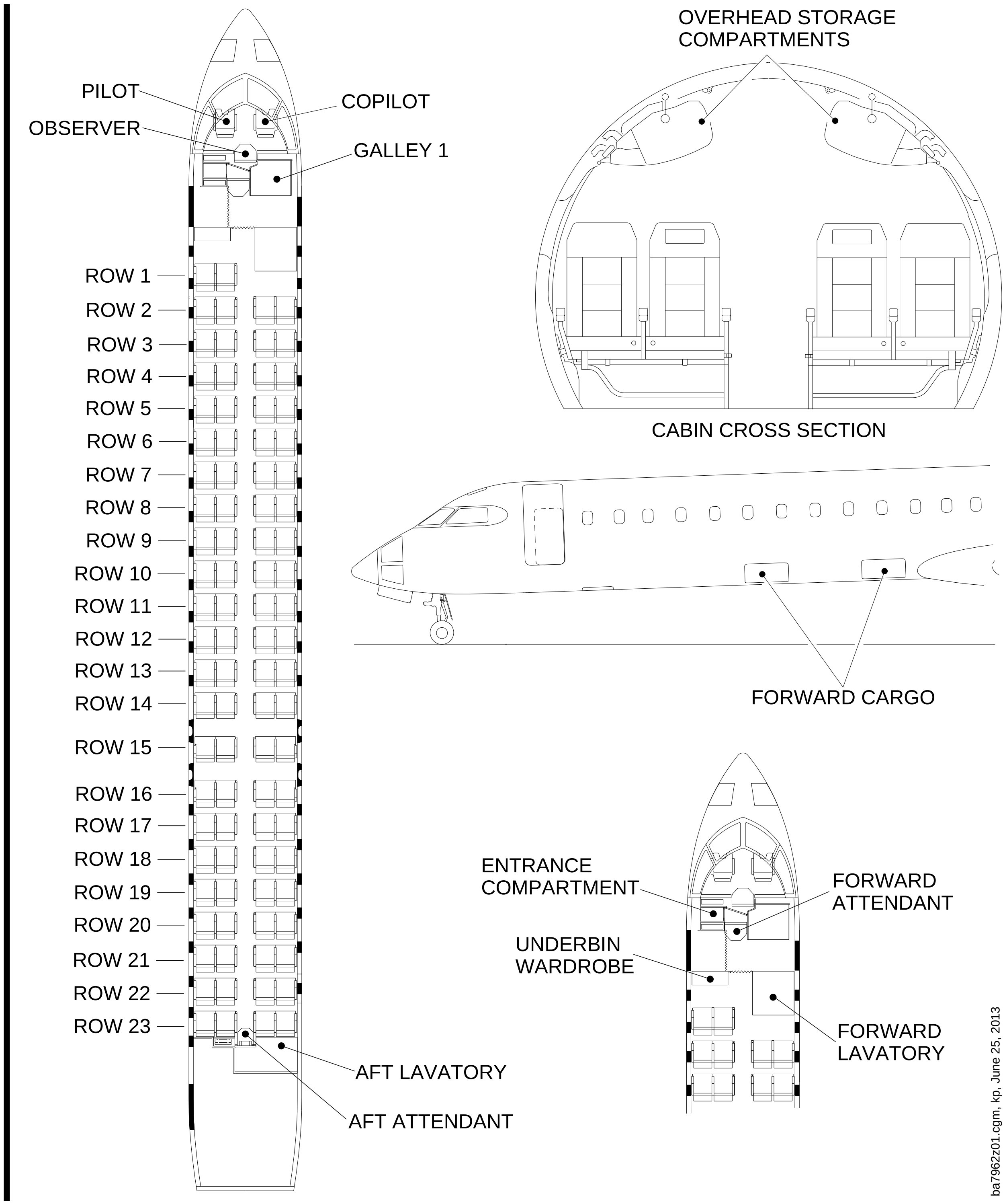
Passenger and Crew Arrangement − 76 Passengers
Figure 22



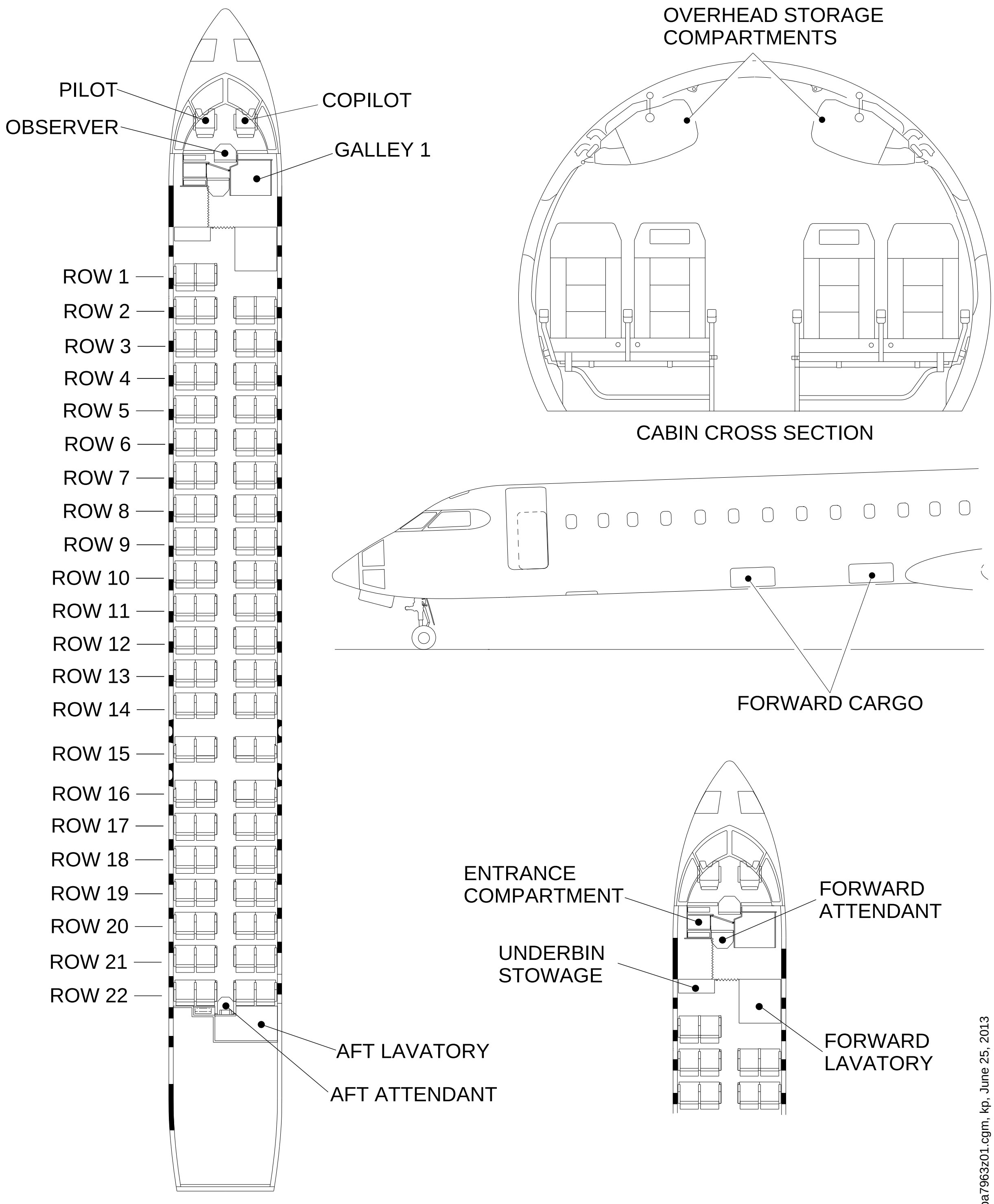
Passenger and Crew Arrangement − 76 Passengers − NEXT GEN
Figure 23



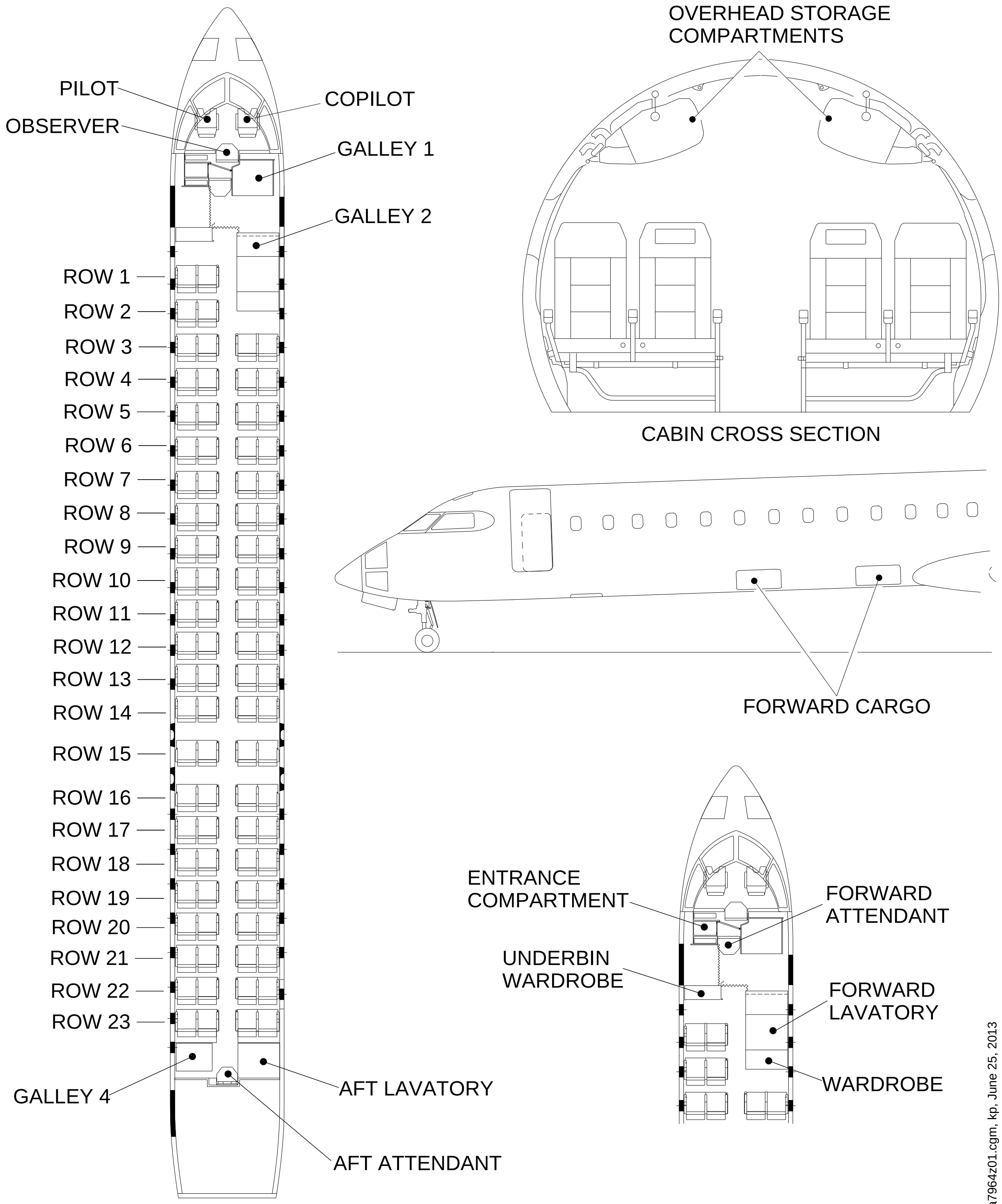
Passenger and Crew Arrangement − 76 Passengers − NEXT GEN
Figure 24



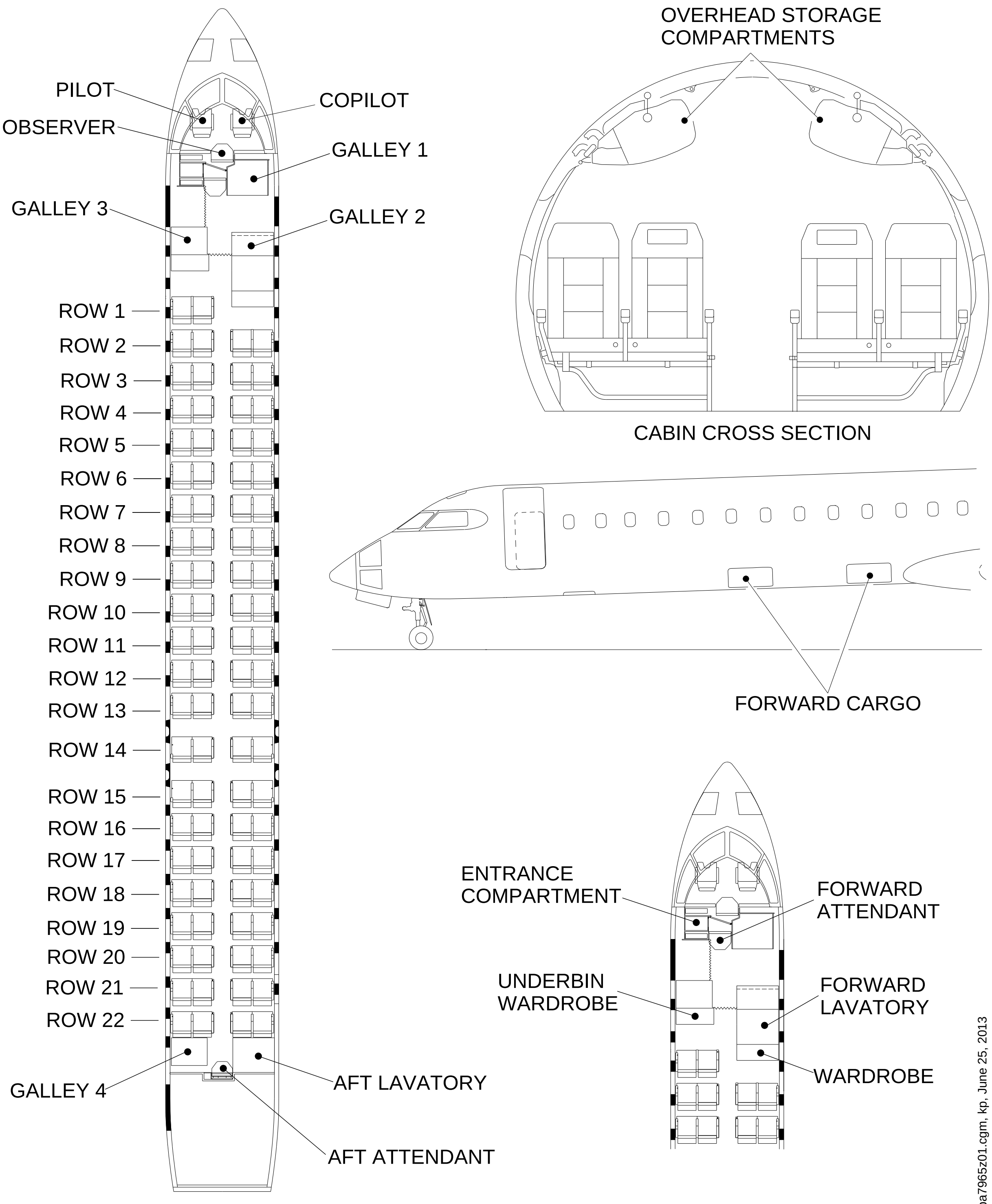
Passenger and Crew Arrangement − 90 Passengers − NEXT GEN
Figure 25



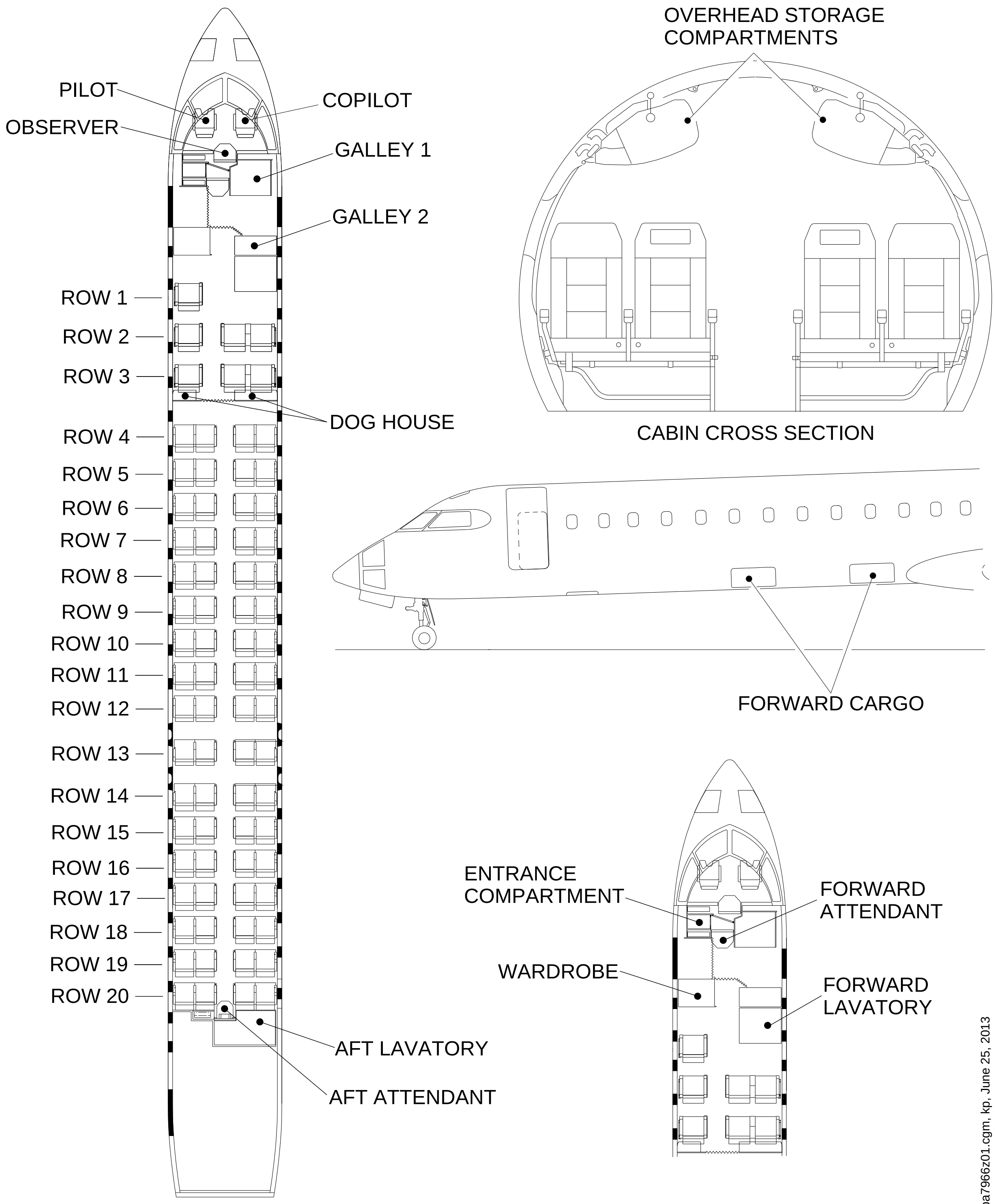
Passenger and Crew Arrangement − 86 Passengers − NEXT GEN
Figure 26



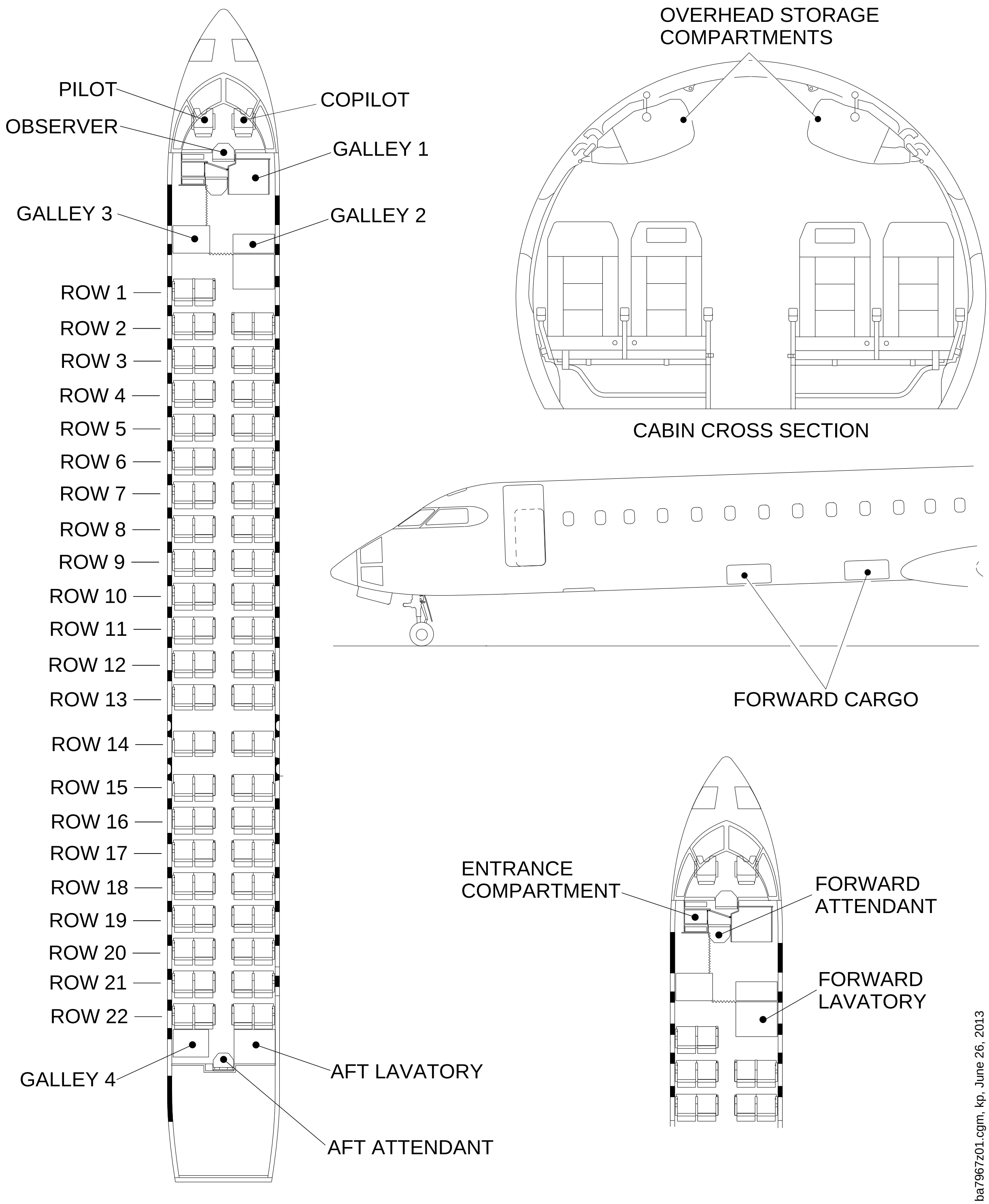
Passenger and Crew Arrangement − 88 Passengers − NEXT GEN
Figure 27



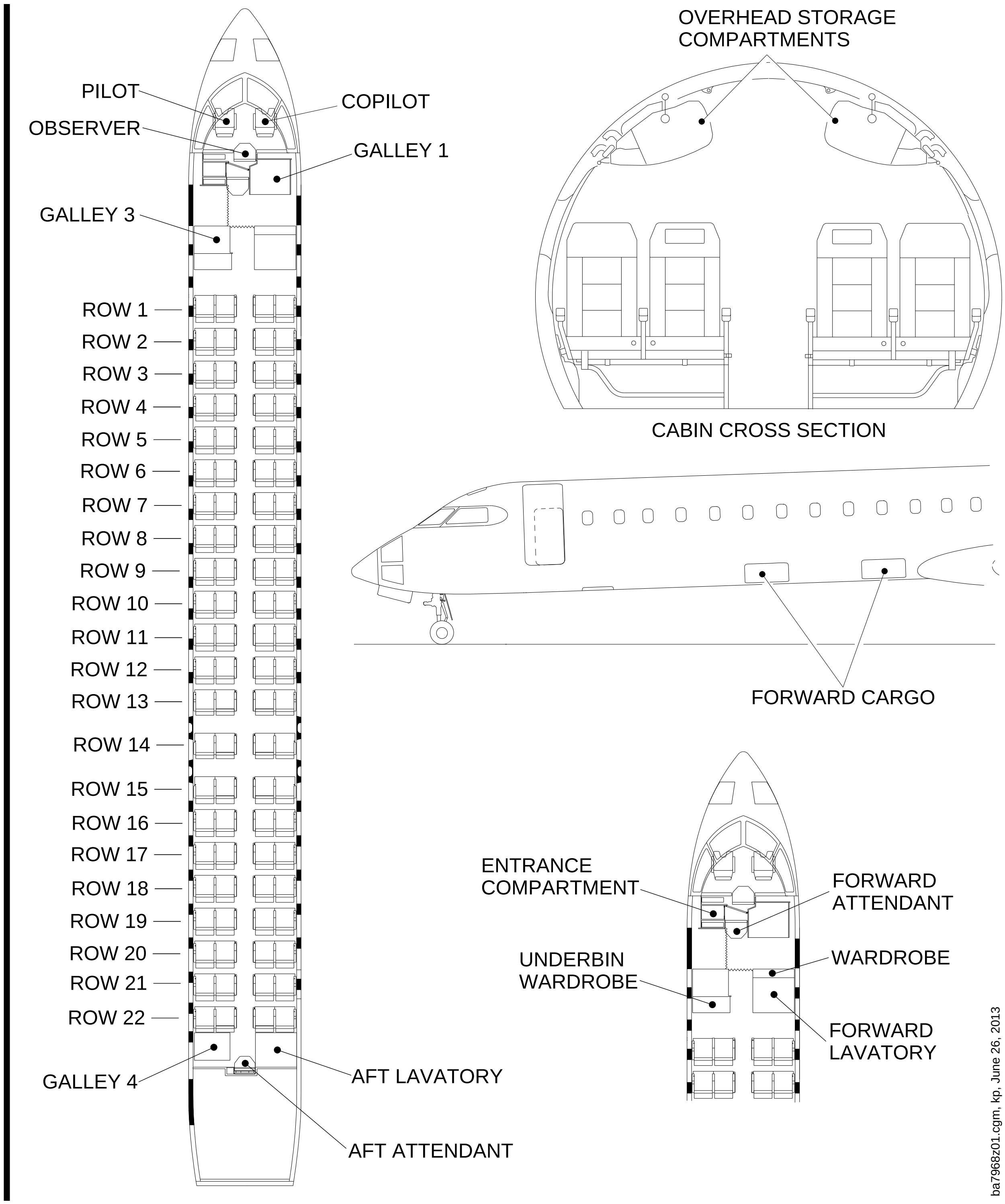
Passenger and Crew Arrangement − 86 Passengers − NEXT GEN
Figure 28



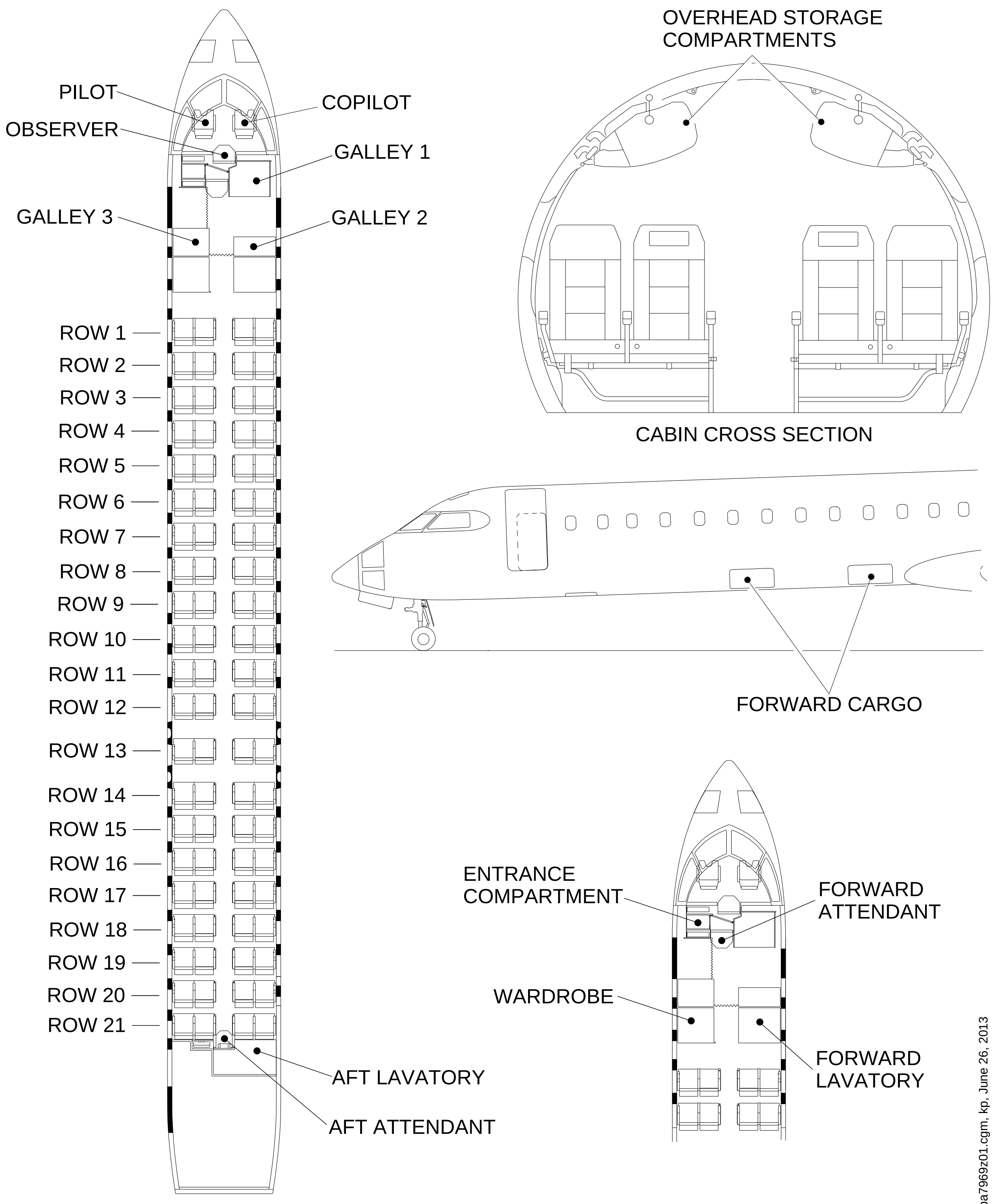
Passenger and Crew Arrangement − 75 Passengers − NEXT GEN
Figure 29



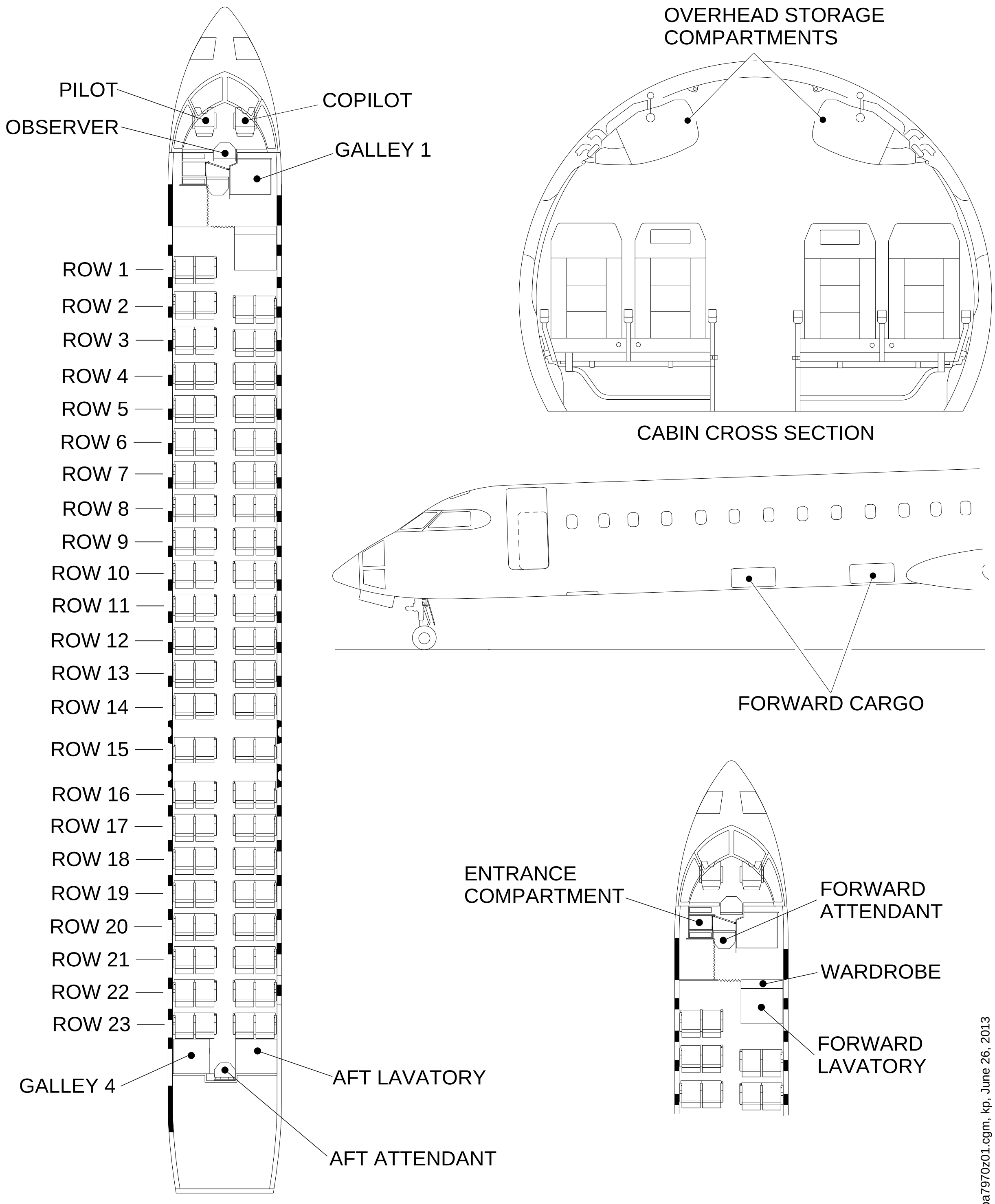
Passenger and Crew Arrangement − 86 Passengers − NEXT GEN
Figure 30



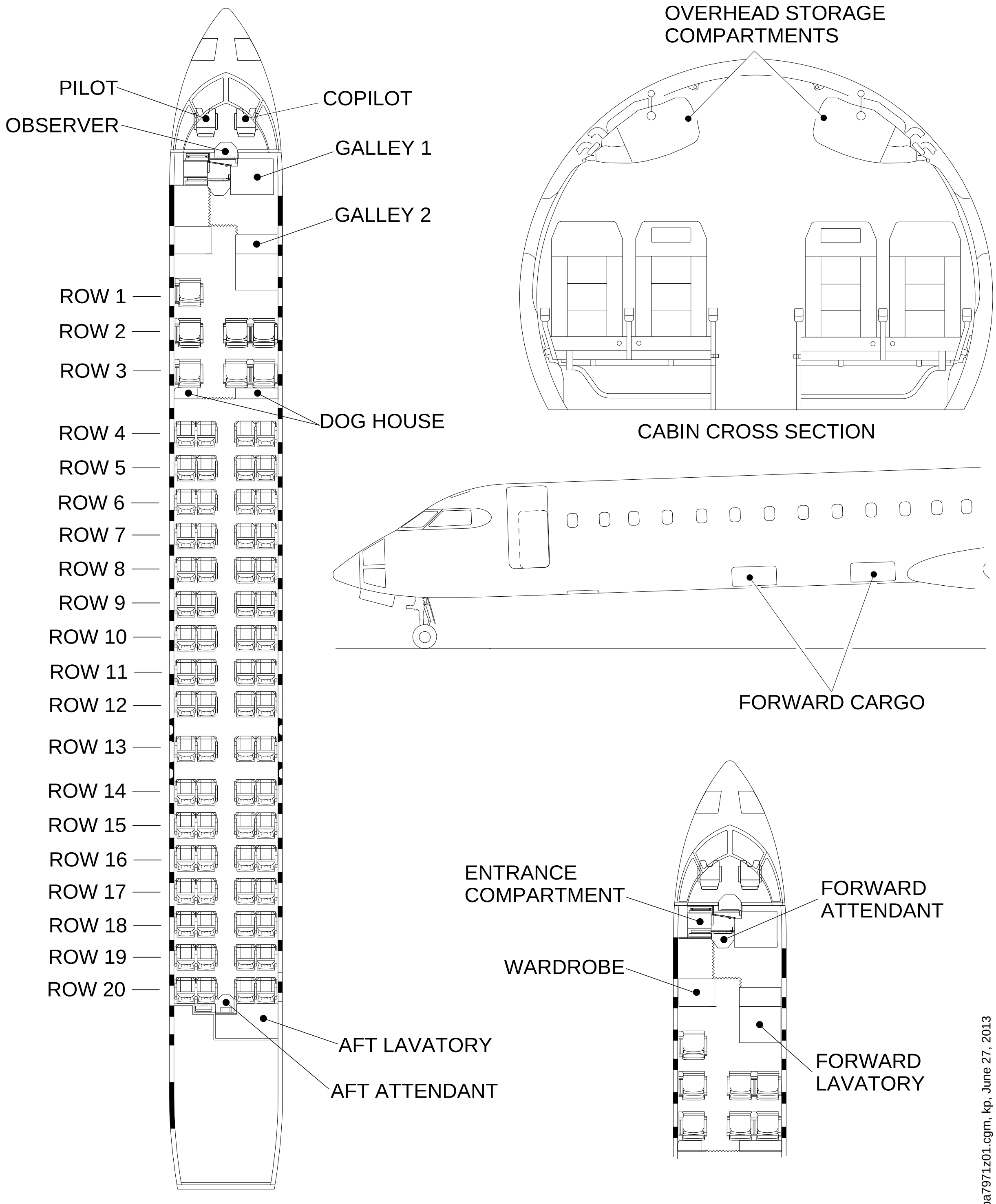
Passenger and Crew Arrangement − 88 Passengers − NEXT GEN
Figure 31



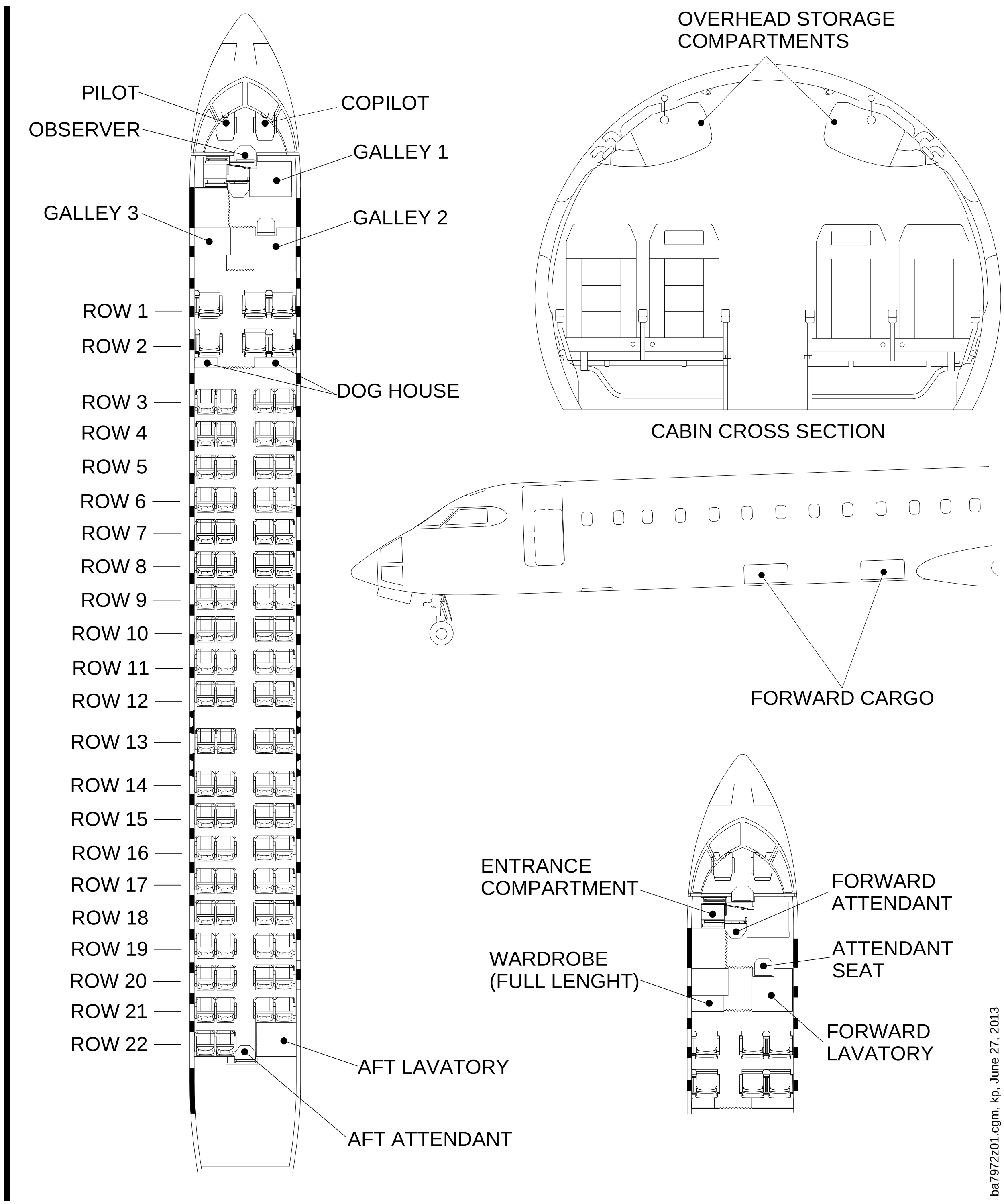
Passenger and Crew Arrangement − 84 Passengers − NEXT GEN
Figure 32



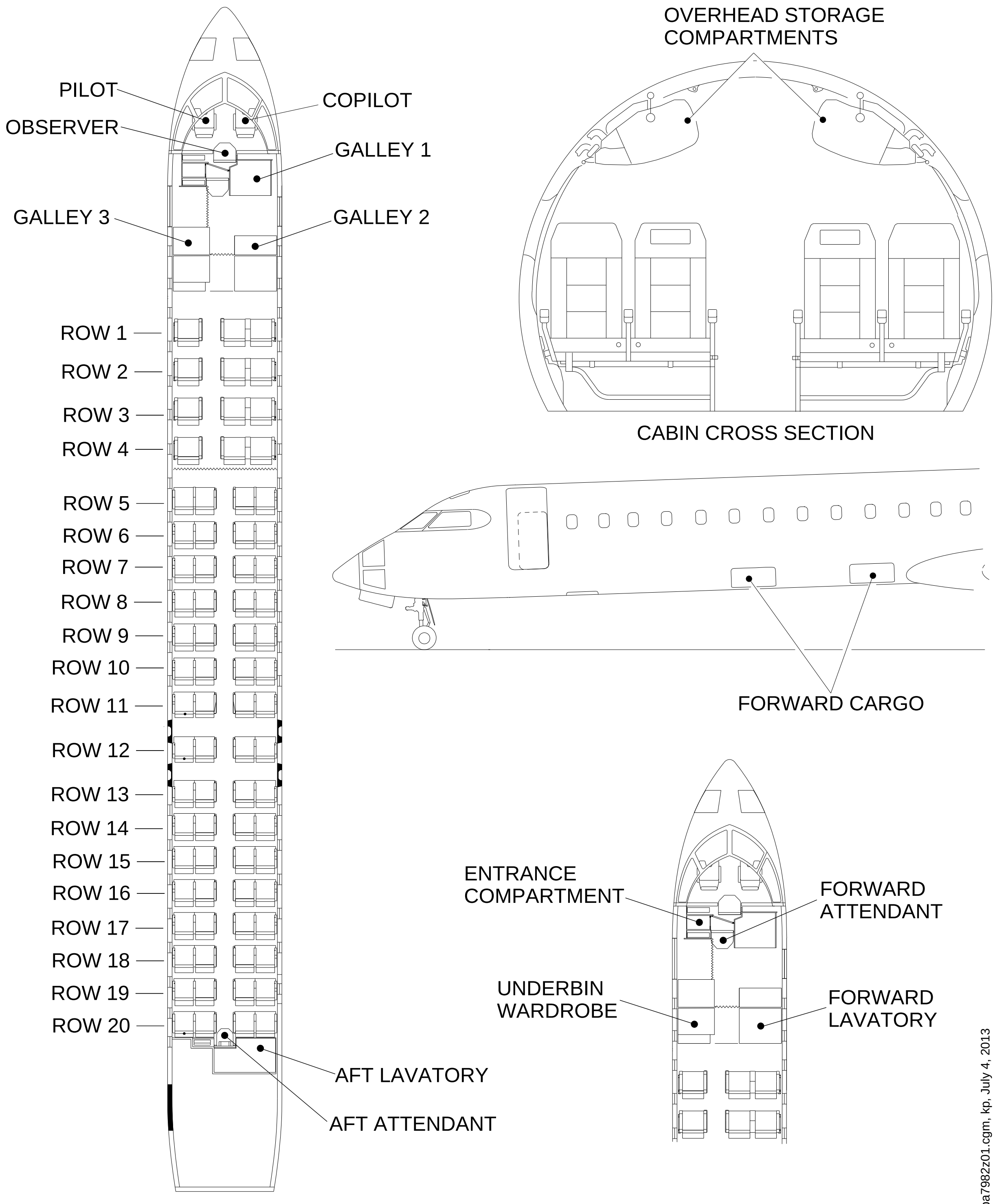
Passenger and Crew Arrangement − 90 Passengers − NEXT GEN
Figure 33



Passenger and Crew Arrangement − 75 Passengers − NEXT GEN
Figure 34



Passenger and Crew Arrangement − 84 Passengers − NEXT GEN
Figure 35



Passenger and Crew Arrangement − 76 Passengers − NEXT GEN
Figure 36

DOOR CLEARANCES

1. Introduction

This subsection gives data on the aircraft door sizes and clearance. This subsection is divided into the chapters that follow:

– General

– Door clearances

2. General

A. The door clearance sheets provide details on the door size and location on the aircraft. A general description of the doors is as follows:

(1) The main passenger door opens outward and down, and has stairs attached to the inner side. The door can be operated manually (internally and externally) for opening and can be manually closed from the outside. The passenger door can also be operated with a power assist system, to close it from the inside of the aircraft.

(2) The overwing emergency exits are plug−type doors that can be opened from the inside or from the outside of the fuselage. The emergency exit doors permit the passengers to exit from the aircraft during an emergency.

(3) The crew escape hatch is provided to permit the pilots to escape the aircraft during an emergency, if the flight compartment is blocked.

(4) The forward and aft cargo compartment doors are semi−plug type that open from the outside of the fuselage and are unlocked by use of an external handle. The doors move inward initially, continue to move outboard from the fuselage, and then swing down on a hinge mechanism resting below the fuselage outer skin. The cargo compartment doors are not accessible from the passenger compartment and are not emergency exits.

(5) The service doors include the galley service door, main avionics compartment door, and the aft equipment compartment door.

(a) The galley service door is a semi−plug type door and is a Type 1 emergency exit. The door is for servicing the galley and is manually opened or closed from inside or outside of the aircraft.

NOTE: For certain aircraft configurations, an optional fuselage plug is installed in the right aft fuselage in place of the aft galley service door to permit additional passenger seating.

(b) The main avionics compartment door is opened from the outside of the fuselage and moves up on a set of four roller arms and then moved fore or aft on a set of tracks.

(c) The aft equipment compartment door, is located outside of the pressurized area of the aircraft. This door provides access to the aft equipment compartment components and has a grilled opening to ventilate the compartment.

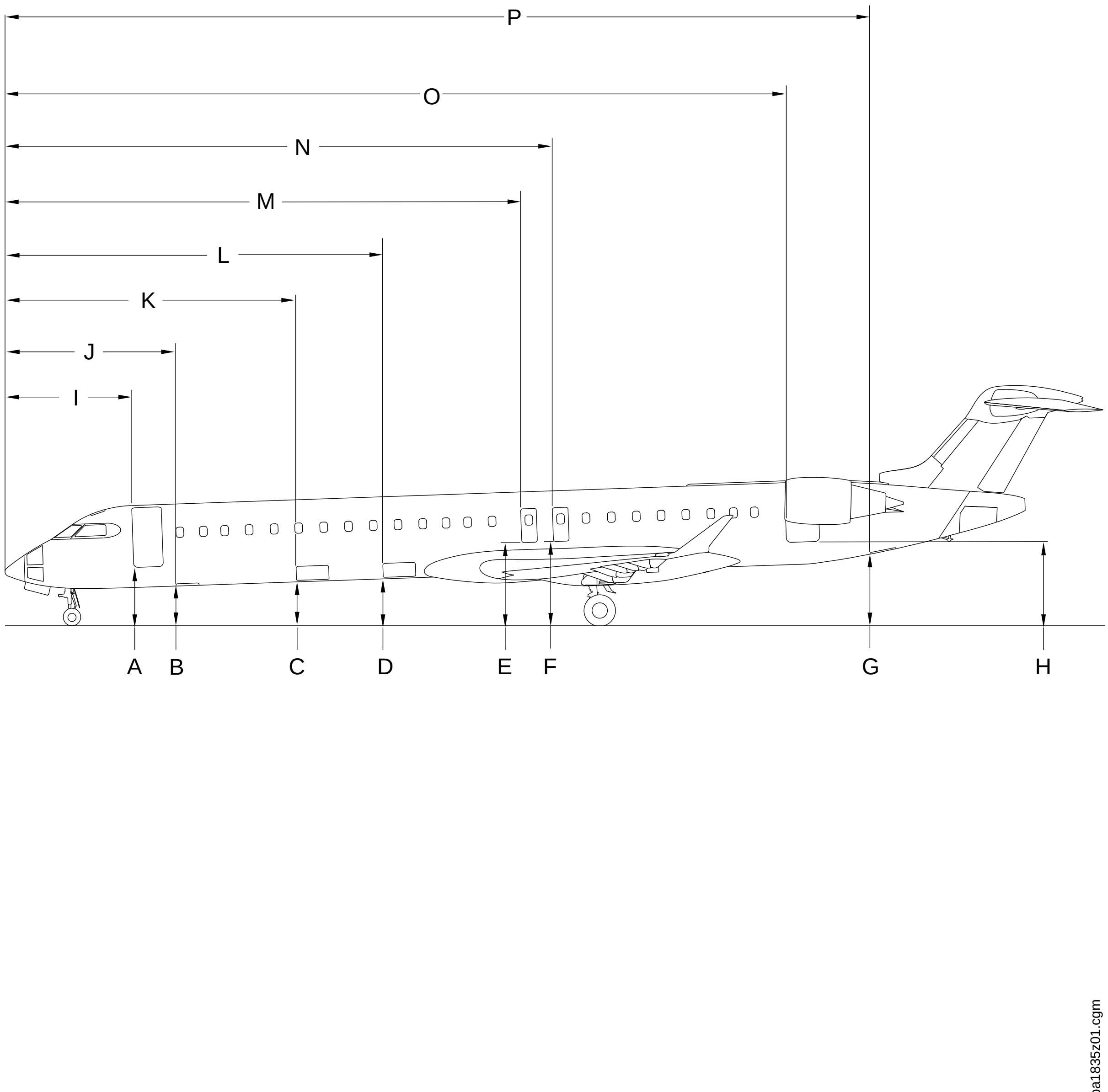
3. Door Clearances

A. This subsection gives data about the clearances between the doors, the access panels, and the ground (refer to Table 1 and Figure 1 for door clearances).

Table 1 − Door Clearances

LOCATION	DESCRIPTION	VALUE
A	Passenger Door Sill to Ground	5 ft. 8 in. (1.73 m)
A	Service Door (RH Side) Sill to Ground	5 ft. 8 in. (1.73 m)
B	Main Avionics Compartment Door to Ground	4 ft. (1.22 m)
C	Forward Cargo Compartment Door Sill to Ground	4 ft. 8 in. (1.42 m)
D	Center Cargo Compartment Door Sill to Ground	4 ft. 10 in. (1.48 m)
E	Forward Overwing Emergency Exit Door Sill to Ground	8 ft. 1 in. (2.46 m)
F	Aft Overwing Emergency Exit Door Sill to Ground	8 ft. 2 in. (2.48 m)
G	Aft Equipment Compartment Door to Ground	6 ft. 5 in. (1.98 m)
H	Aft Cargo Compartment Door Sill to Ground	7 ft. 8 in. (2.35 m)
I	Passenger Door (FWD Side) to Radome	13 ft. 10 in. (4.22 m)
I	Service Door (RH Side) to Radome	14 ft. 7 in. (4.47 m)
J	Main Avionics Compartment Door to Radome	18 ft. 6 in. (5.65 m)
K	Forward Cargo Compartment Door (FWD Side) to Radome	31 ft. 4 in. (9.55 m)

LOCATION	DESCRIPTION	VALUE
L	Center Cargo Compartment Door (FWD Side) to Radome	40 ft. 8 in. (12.40 m)
M	Forward Overwing Emergency Exit (FWD Side) to Radome	55 ft. 7 in. (16.96 m)
N	Aft Overwing Emergency Exit (FWD Side) to Radome	59 ft. (18.00 m)
O	Aft Cargo Compartment Door (FWD Side) to Radome	84 ft. 1 in. (25.64 m)
P	Aft Equipment Compartment Door to Radome	93 ft. 1 in. (28.38 m)



Door Clearances
Figure 1

**ON A/C ALL

CARGO COMPARTMENT CONFIGURATIONS

1. Introduction

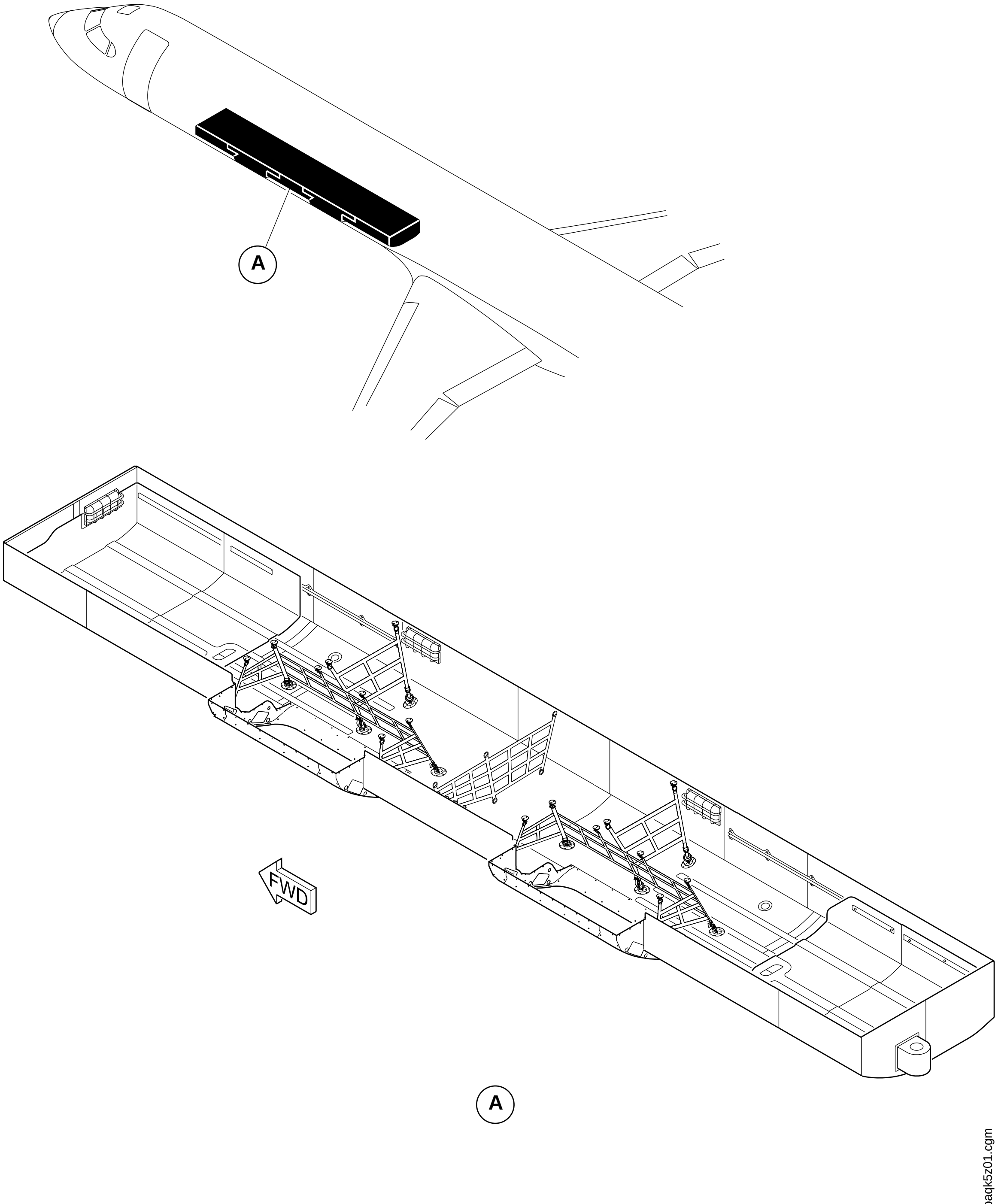
This section contains data about the cargo compartments. This section is divided into the subsections that follow:

– Forward cargo compartment

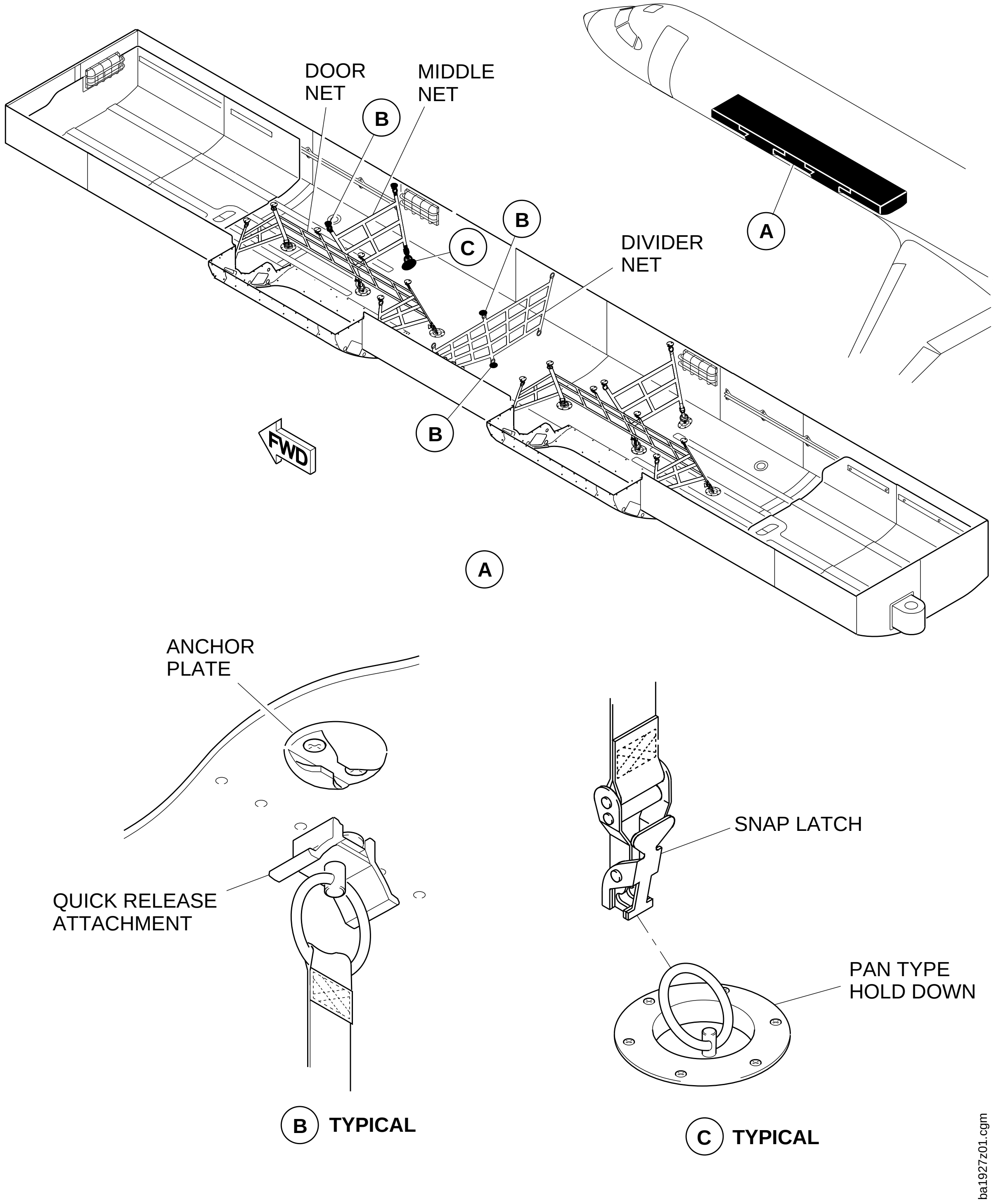
– Aft cargo compartment.

2. Forward Cargo Compartment

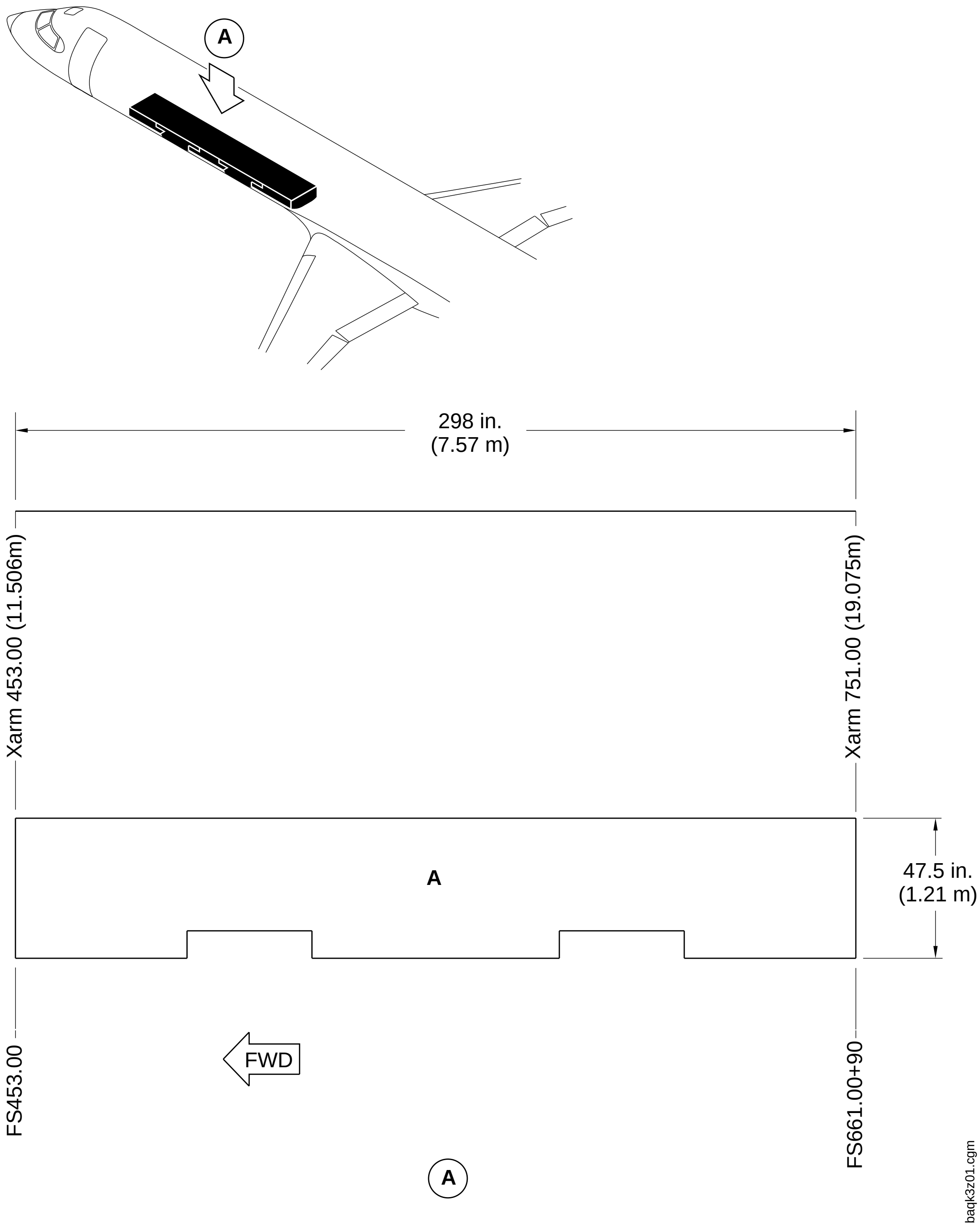
A. This subsection gives data about the forward cargo compartment (refer to Figures 1, 2 and 3).



Forward Cargo Compartment
Figure 1



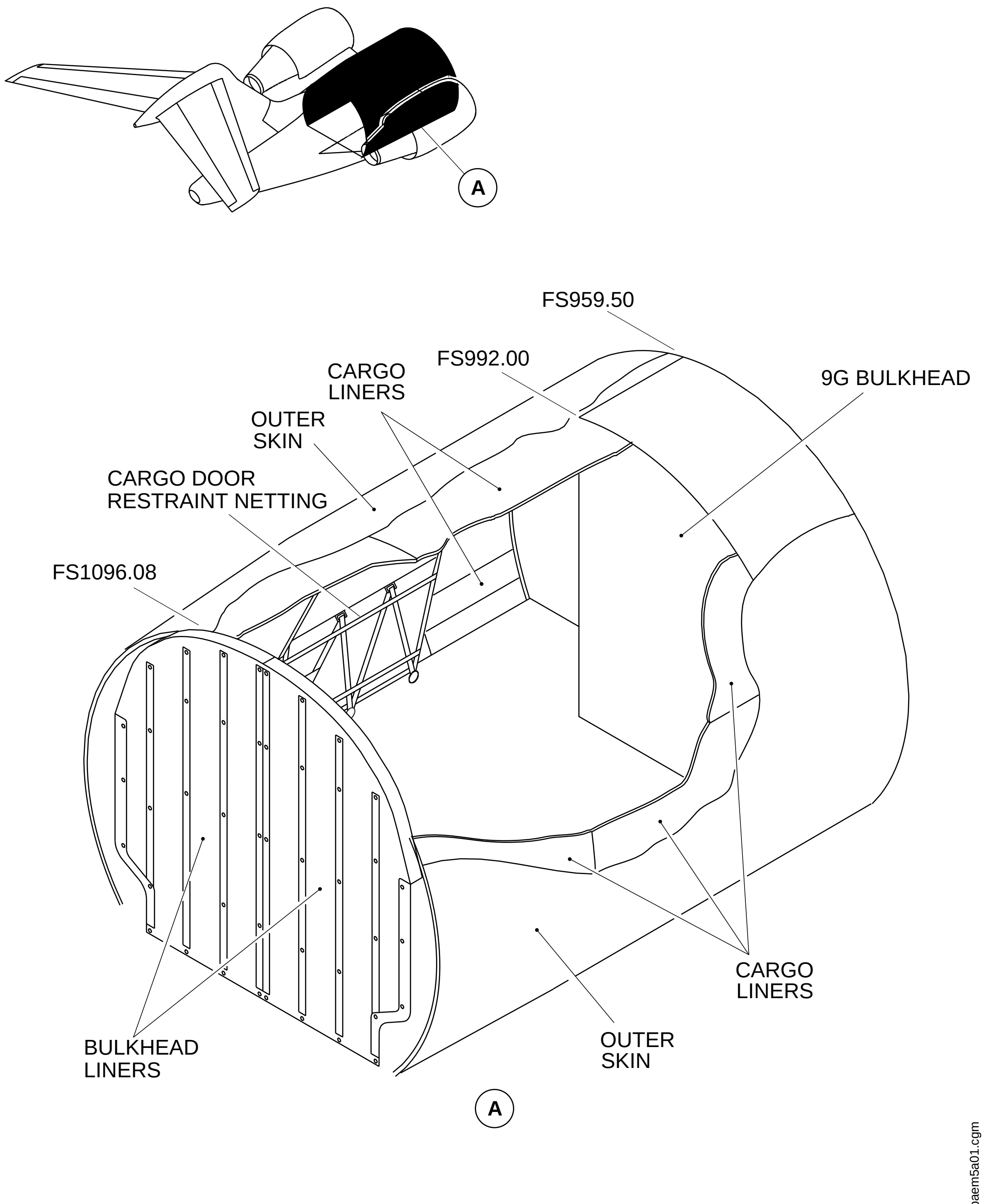
Forward Cargo Compartment
Figure 2



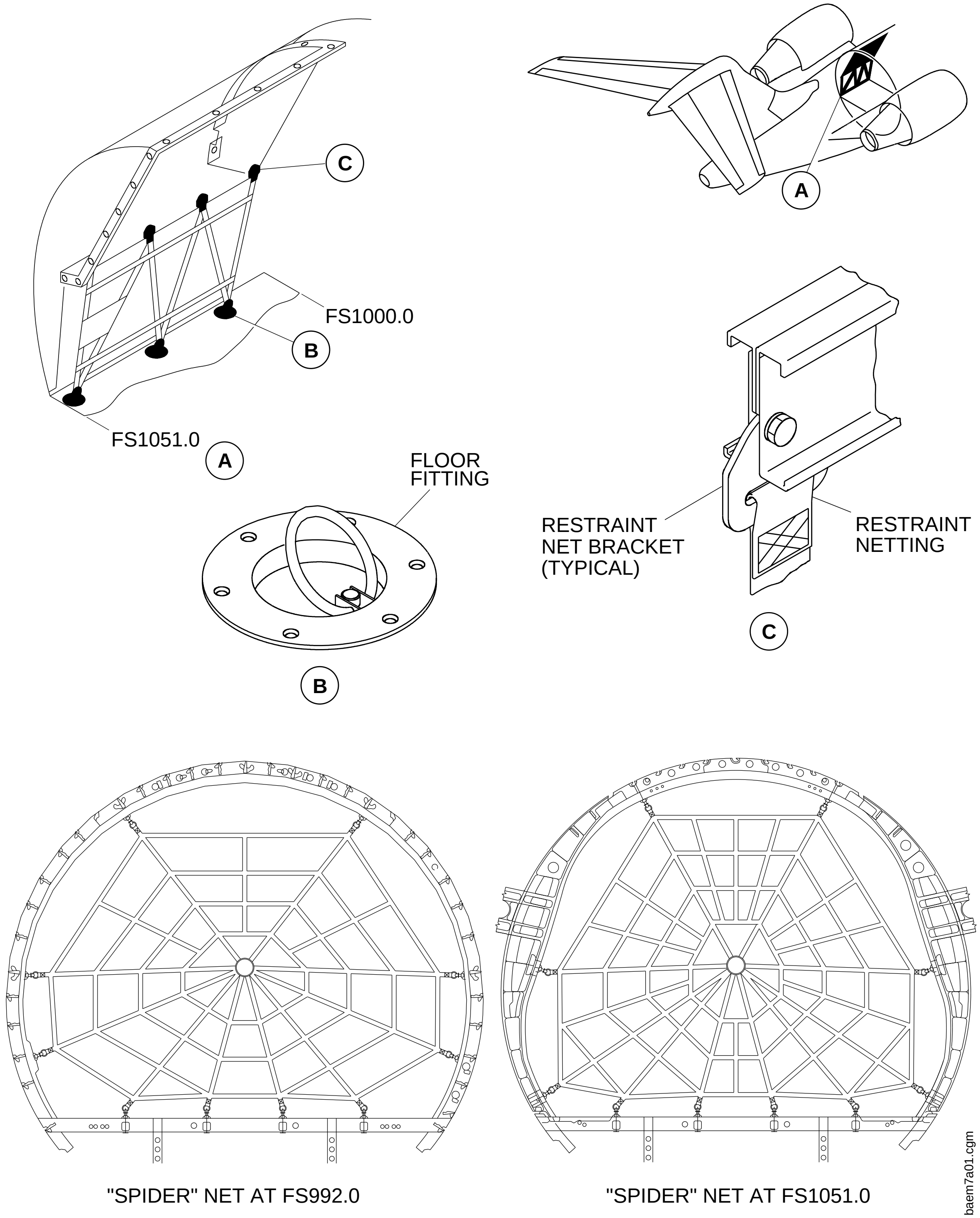
Forward Cargo Floor
Figure 3

3. Aft Cargo Compartment

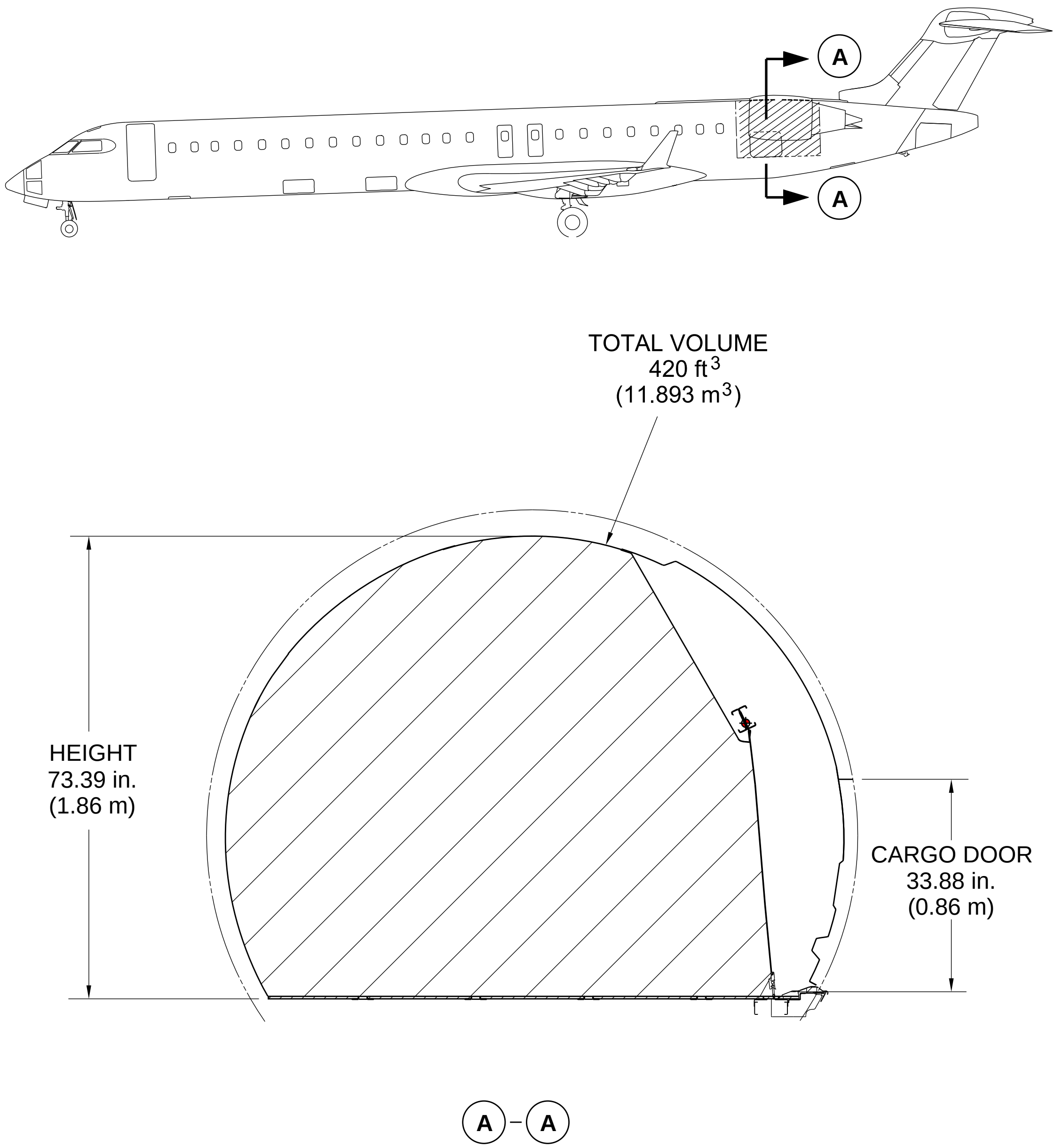
A. This subsection gives data about the aft cargo compartment (refer to Figures 4, 5, 6 and 7).



Aft Cargo Compartment
Figure 4



Aft Cargo Compartment
Figure 5



NOTE:

Dimensions are for reference only.

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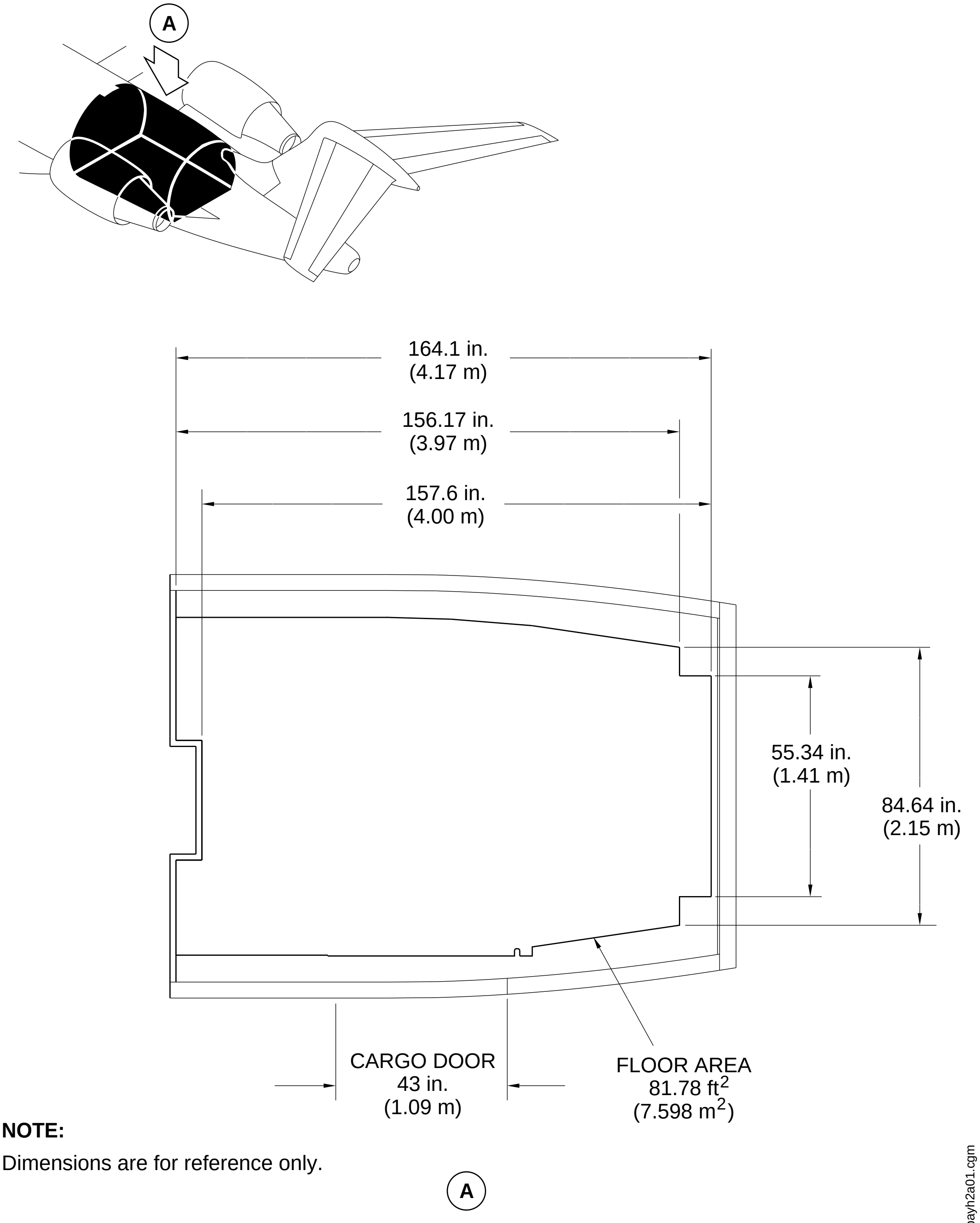
Aft Cargo Shape
Figure 6



NOTE:

Dimensions are for reference only.

Aft Cargo Floor
Figure 7

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AIRCRAFT PERFORMANCE

1. Introduction

This section contains performance data for the aircraft during normal operations:

- Standard day temperature chart
- Payload/range information for specific cruise altitudes and speeds.

This section is divided into the subsections that follow:

- Aircraft Performance − Takeoff field length requirements
- Aircraft Performance − Landing field length requirements.

2. Standard Day Temperature Chart

A. This section contains the performance data as required for airport planning purposes.

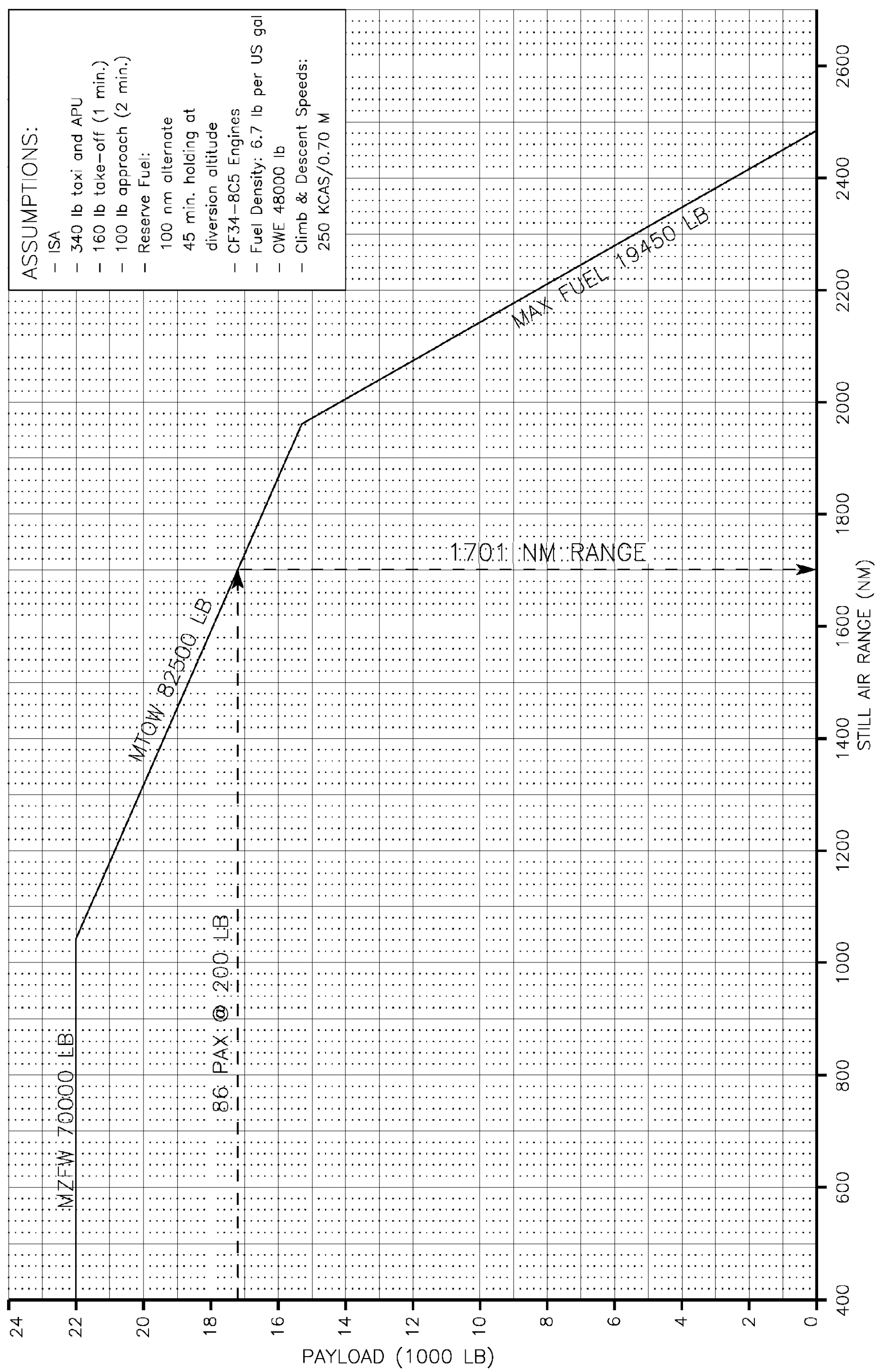
B. The standard day temperatures versus altitudes are given in Table 1 − Standard Day Temperature Chart.

Table 1 − Standard Day Temperature Chart

Elevation		Standard Day Temperature	
Feet (ft)	Meters (m)	°F	°C
0	0	59	15
2000	610	51.9	11.1
4000	1220	44.7	7.1
6000	1830	37.6	3.1
8000	2440	30.5	−0.8
10000	3050	23.3	−4.8

3. Payload/Range

A. Refer to Figures 1 and 2 for the payload/range data.



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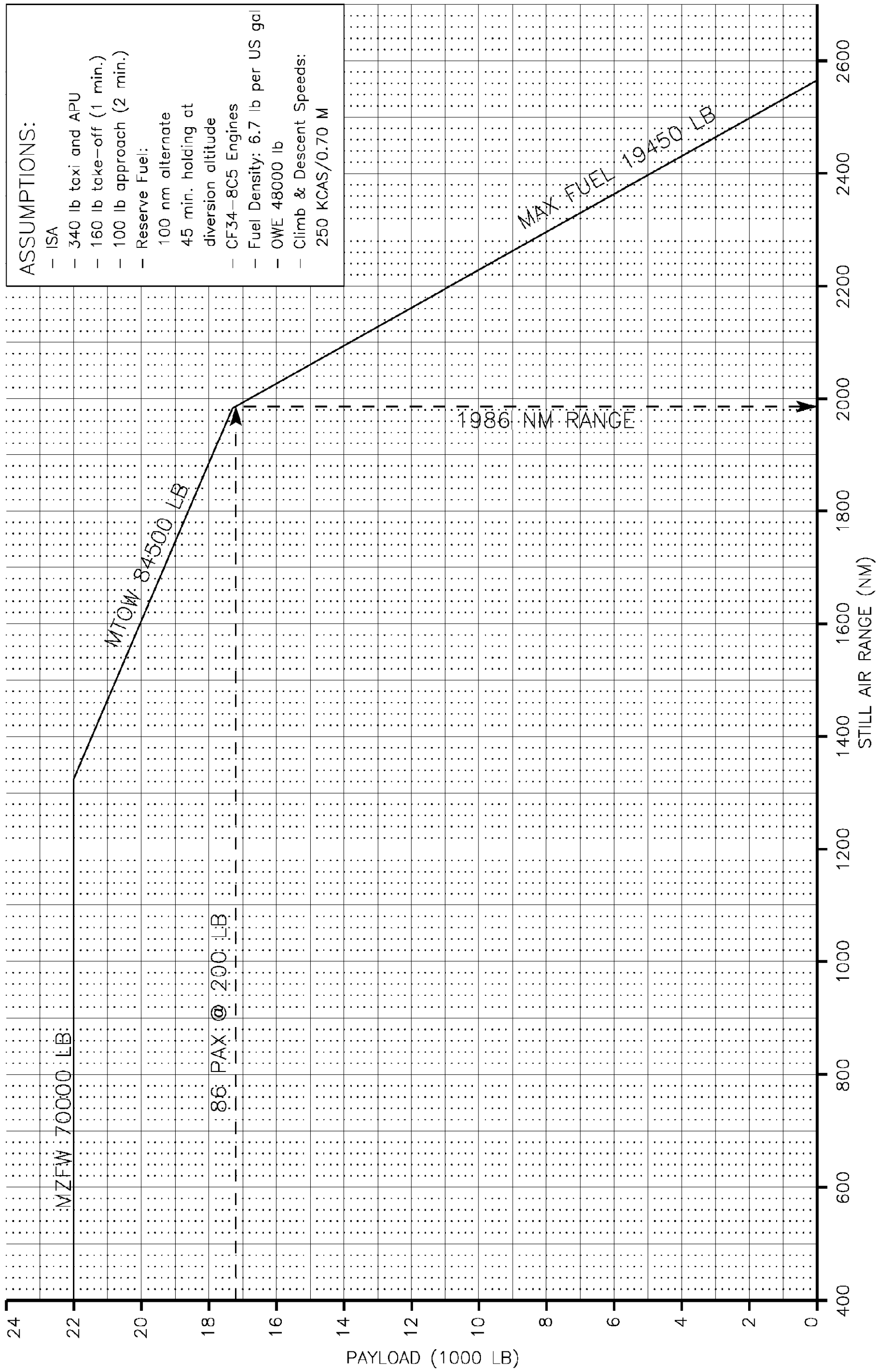
Payload/Range
Figure 1



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Payload/Range
Figure 2

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**ON A/C ALL

TAKEOFF FIELD LENGTH REQUIREMENTS

1. Introduction

This subsection gives data on the aircraft performance and field length requirements related to takeoff during normal operations. This subsection is divided into the chapter that follows:

– FAR takeoff runway length requirements.

**ON A/C 15001−15035, 15038−15039, 15042

2. FAR Takeoff Field Length Requirements

A. For more information about aircraft performance, refer to the Aircraft Flight Manual (CSP C−012).

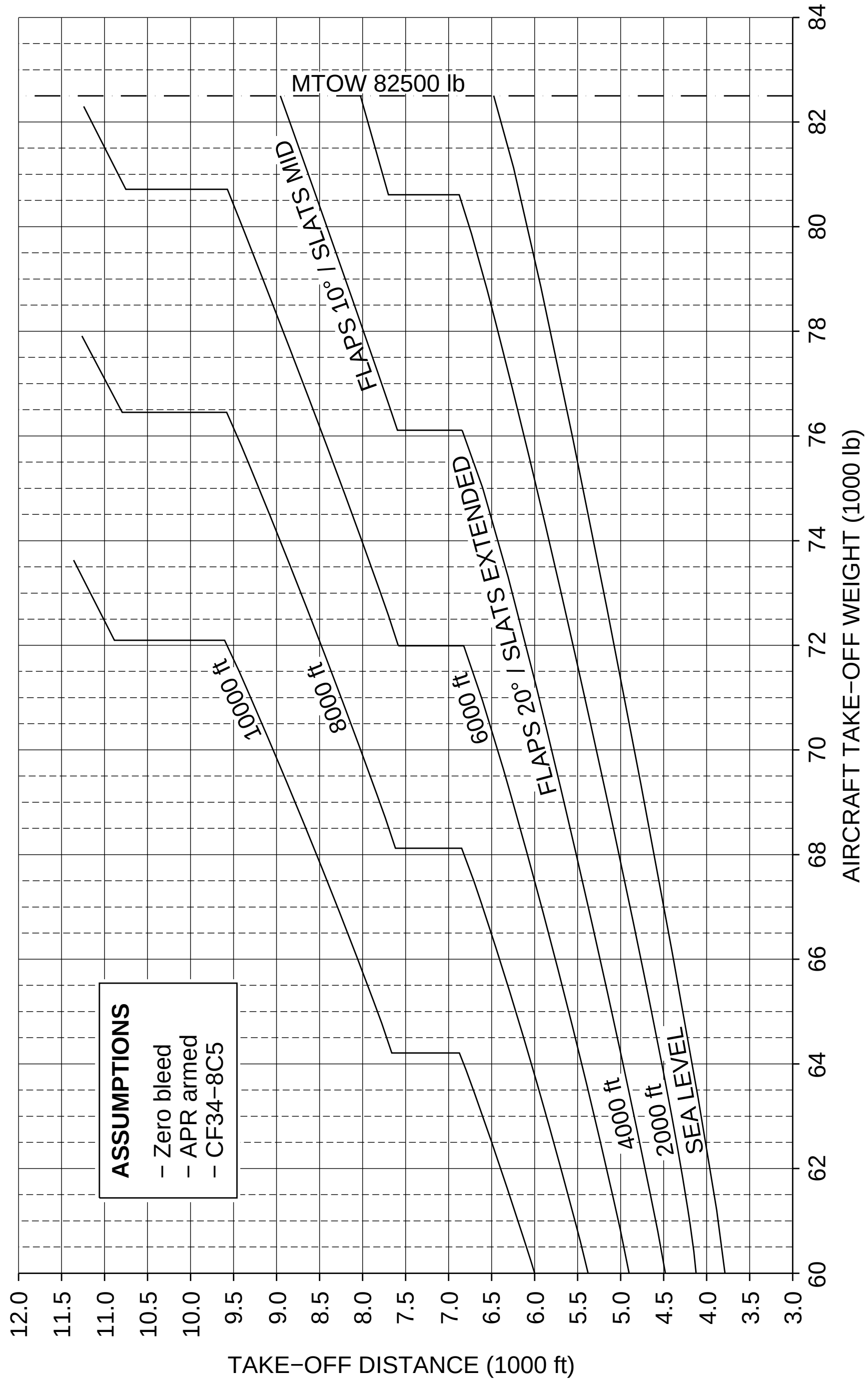
B. Refer to Figure 1 for the takeoff field length ISA.

C. Refer to Figure 2 for the takeoff field length ISA + 15°C.

D. Refer to Figure 3 for the takeoff field length ISA + 20°C.

E. Refer to Figure 4 for the takeoff field length ISA + 25°C.

F. Refer to Figure 5 for the takeoff field length ISA + 30°C.



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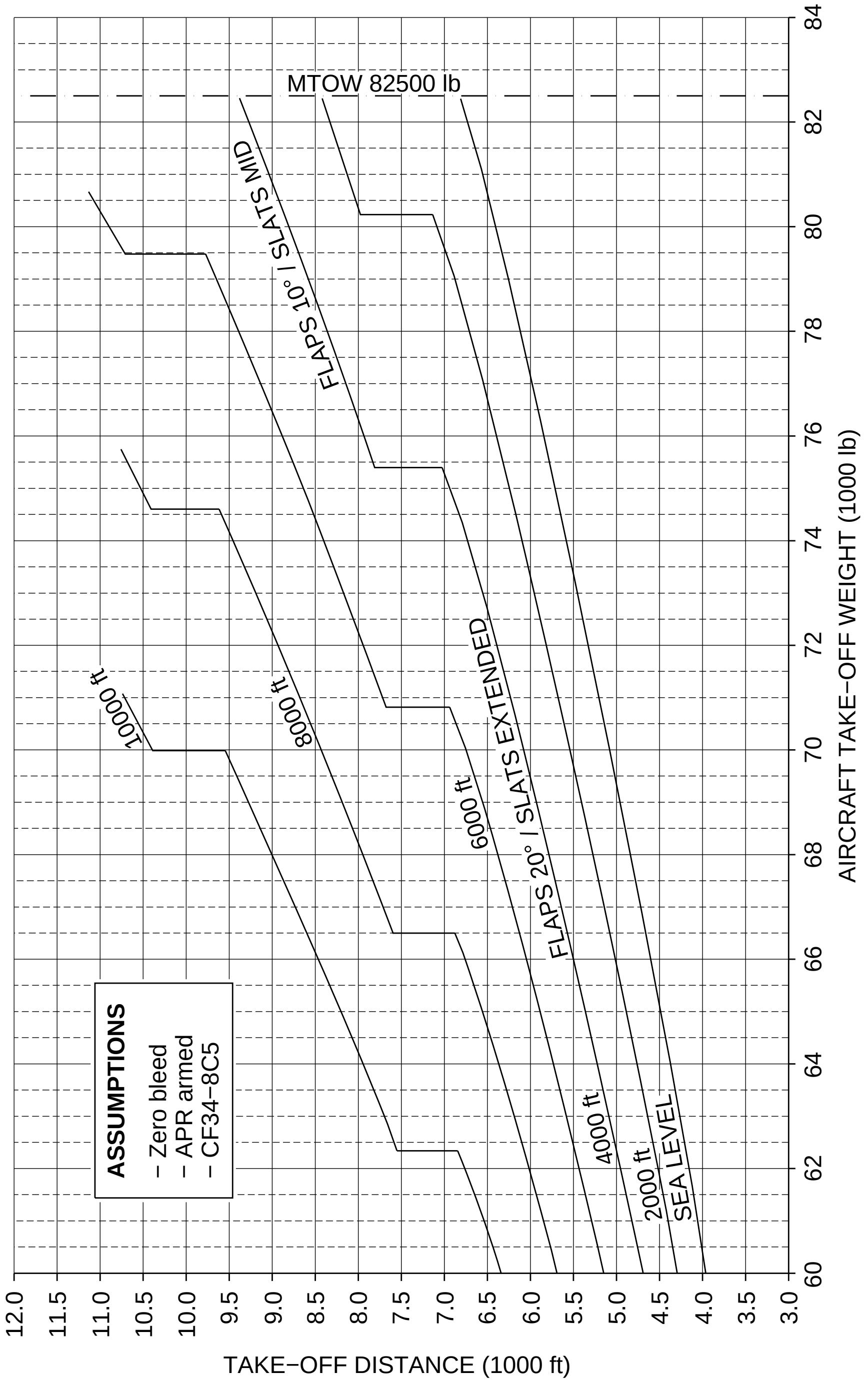
Take−Off Field Length − ISA
Figure 1



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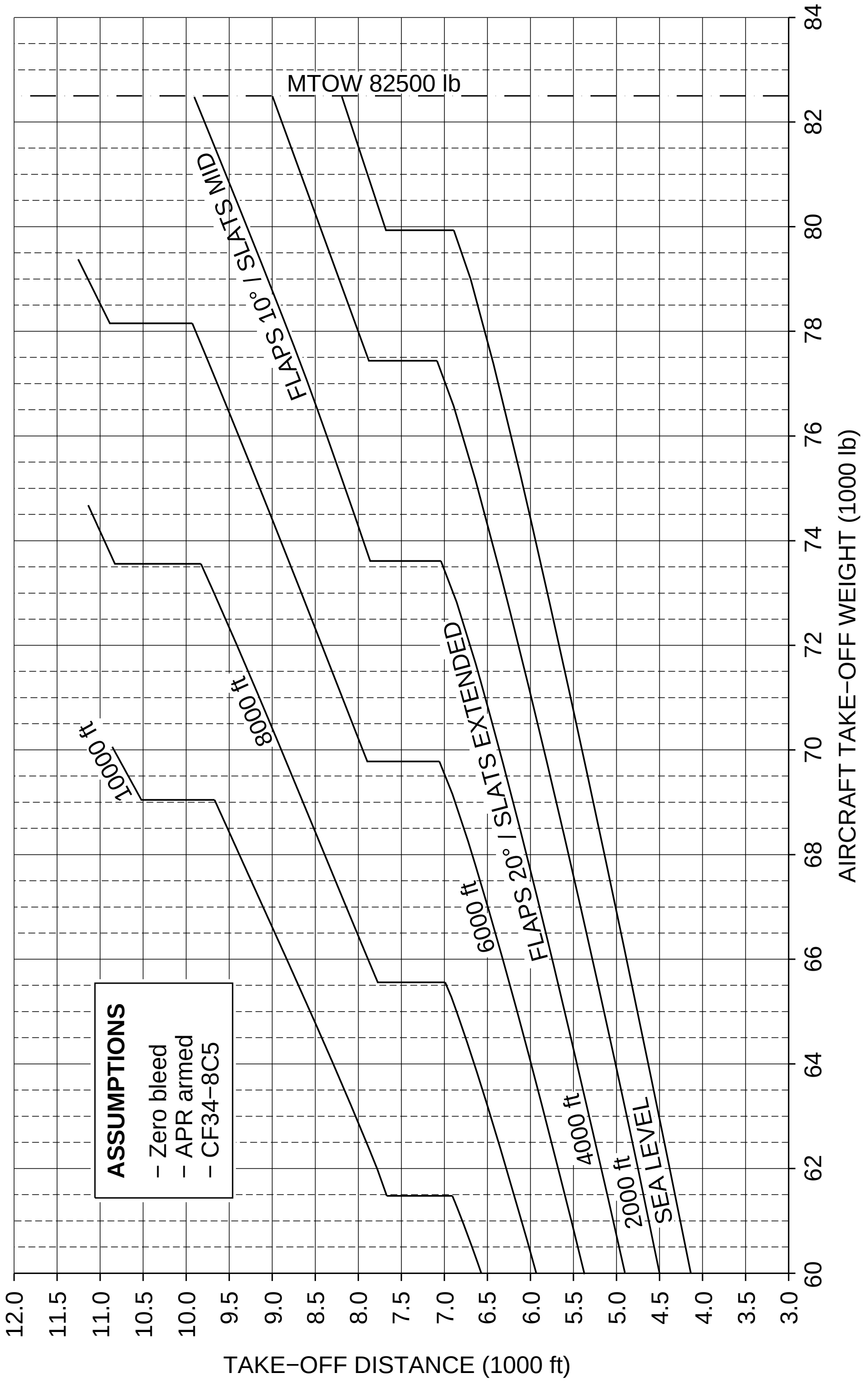
Take−Off Field Length − ISA + 15 Degrees C
Figure 2



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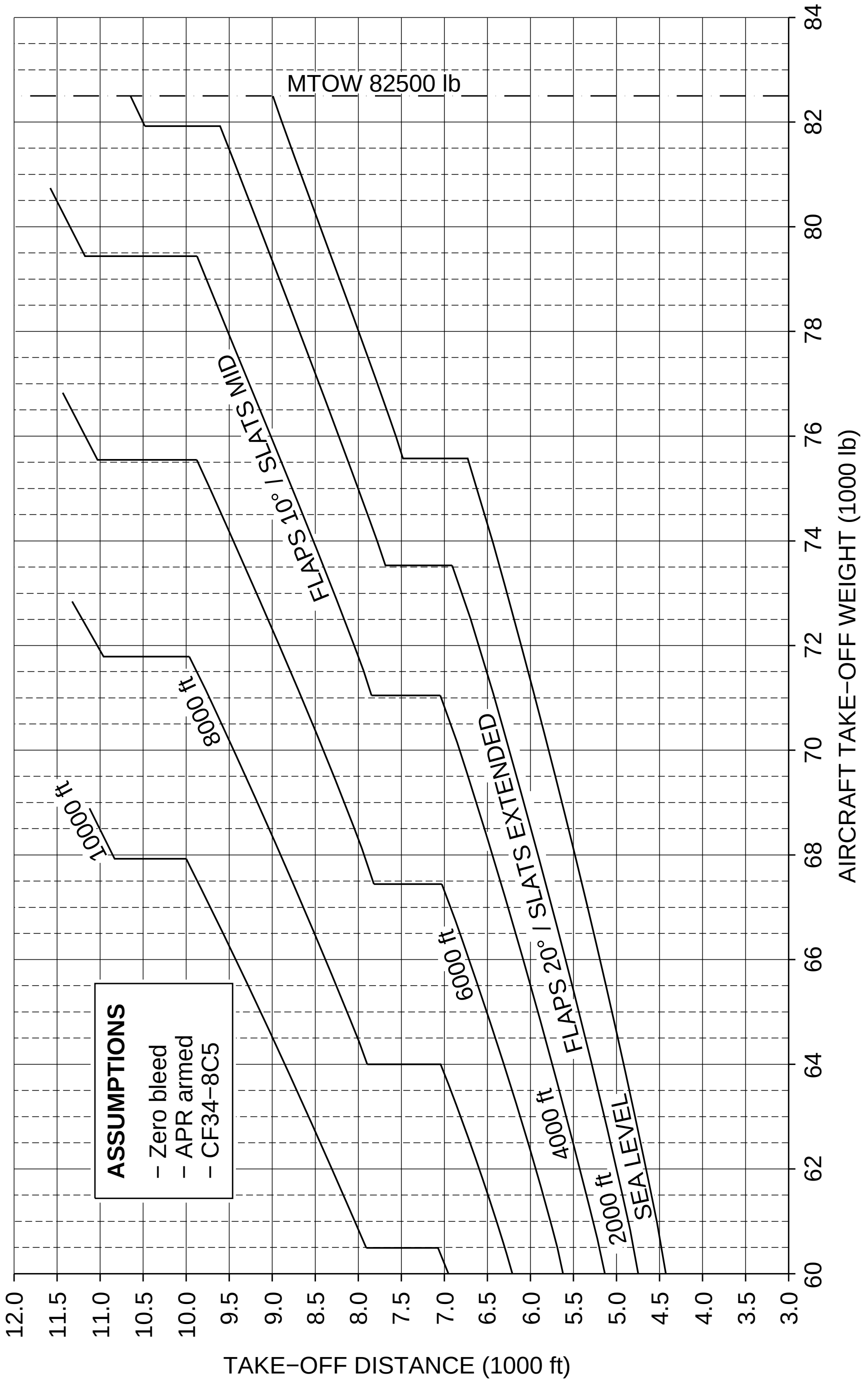
Take−Off Field Length − ISA + 20 Degrees C
Figure 3



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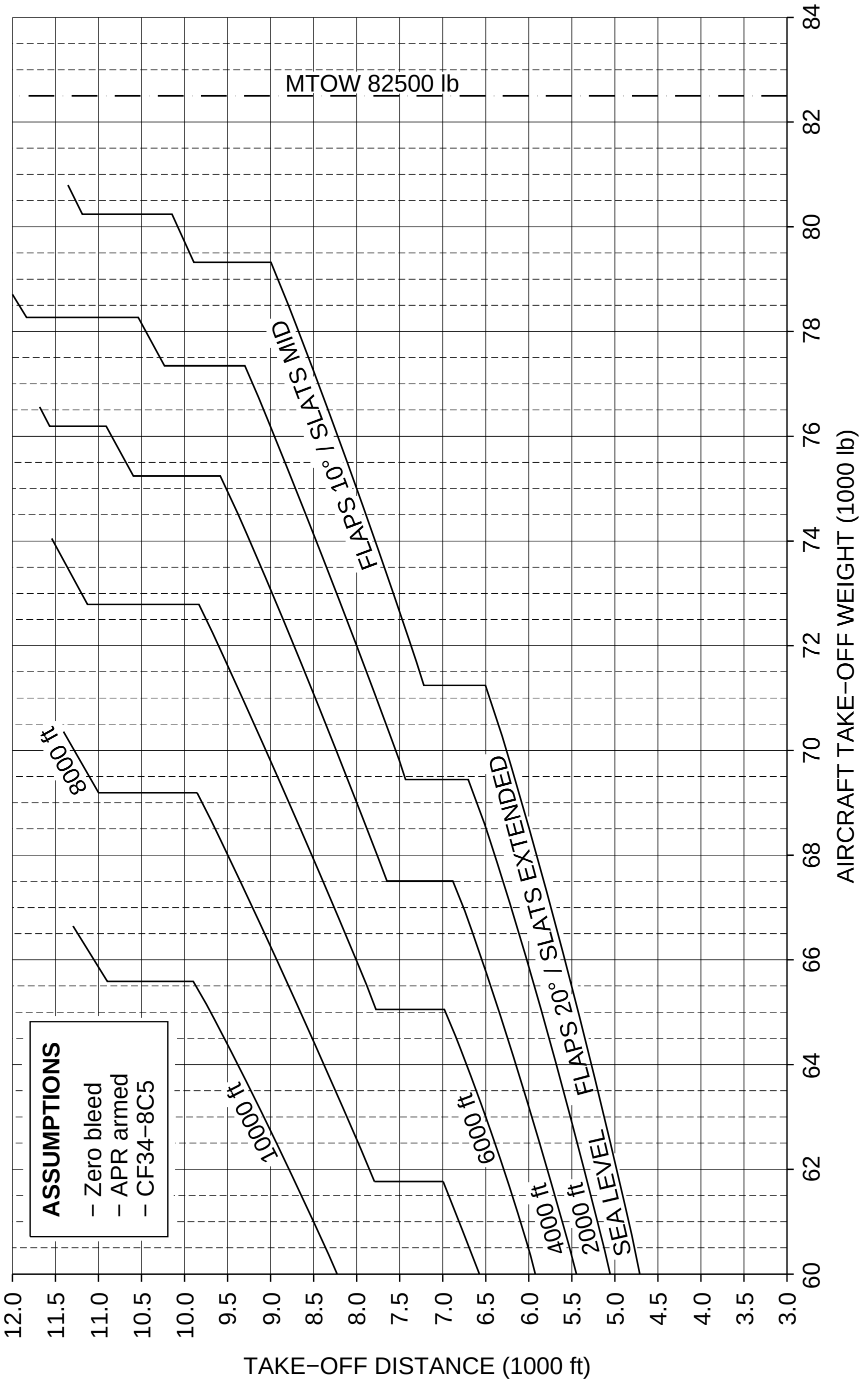
Take−Off Field Length − ISA + 25 Degrees C
Figure 4



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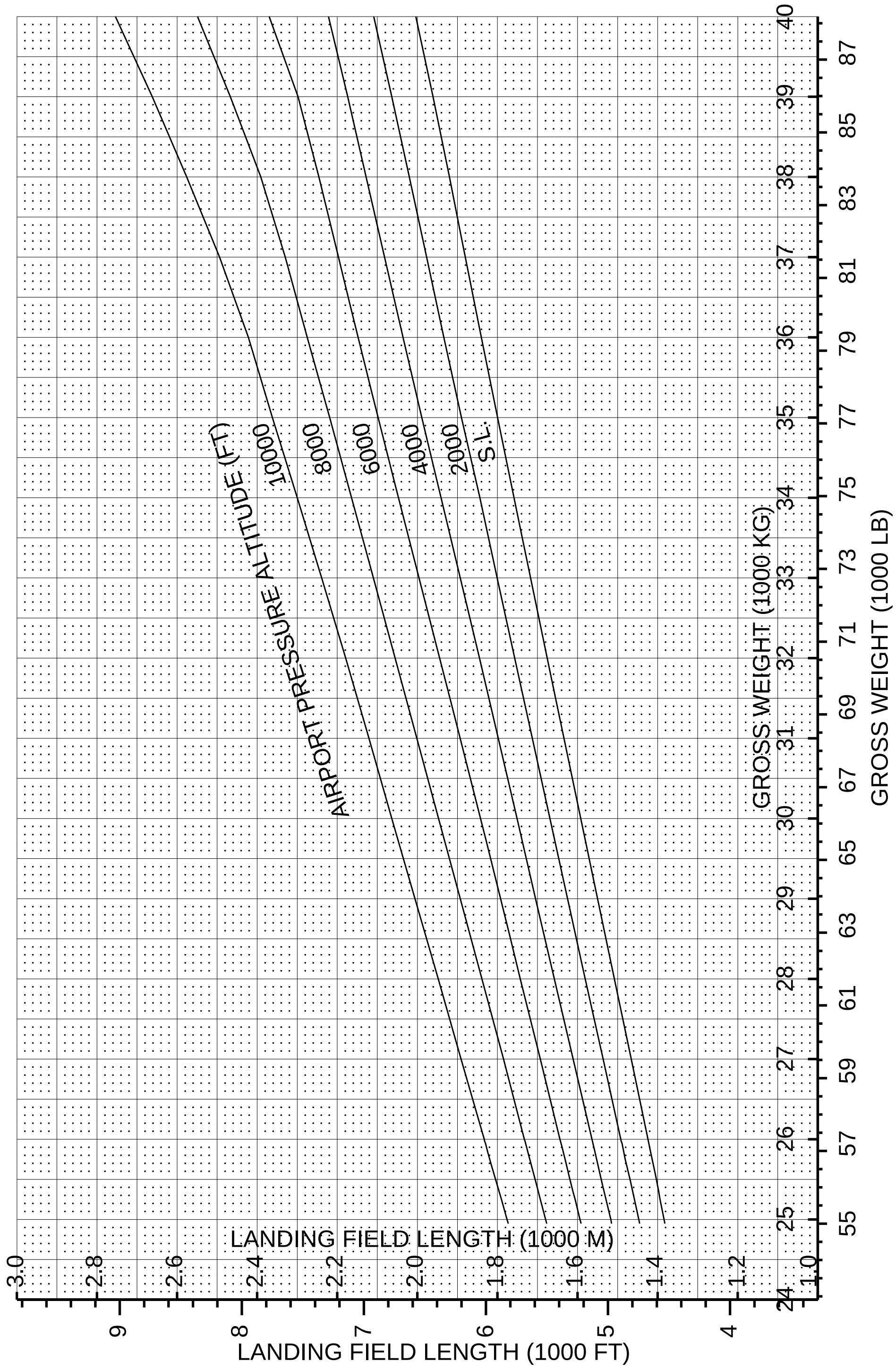
Take−Off Field Length − ISA + 30 Degrees C
Figure 5



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Landing Field Length − Flaps at 45 Degrees/Slats Extended
Figure 6

**ON A/C 15036−15037, 15040−15041, 15043−15990

3. FAR Takeoff Field Length Requirements

A. For more information about aircraft performance, refer to the Aircraft Flight Manual (CSP C−012).

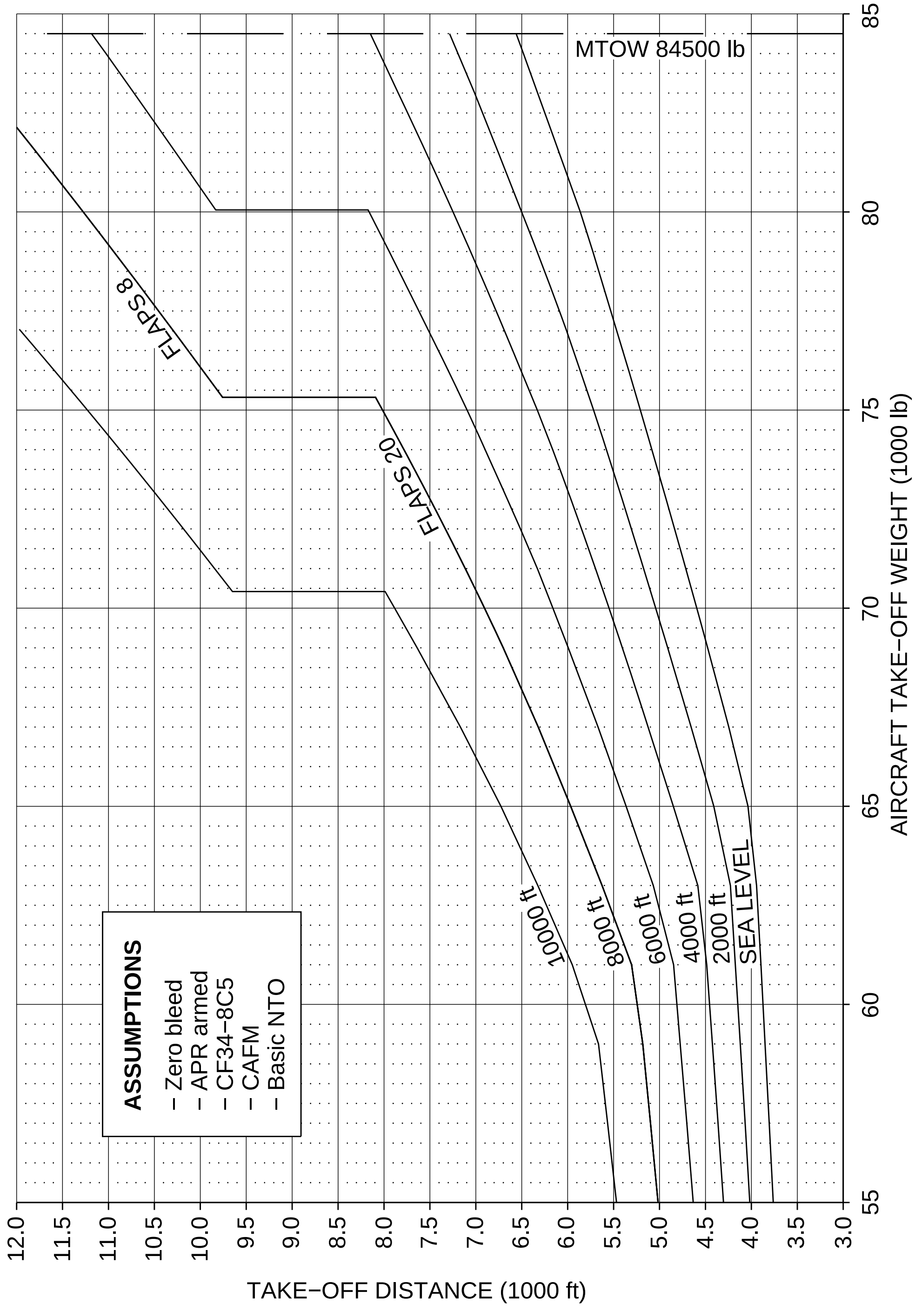
B. Refer to Figure 7 for the takeoff field length ISA.

C. Refer to Figure 8 for the takeoff field length ISA + 15°C.

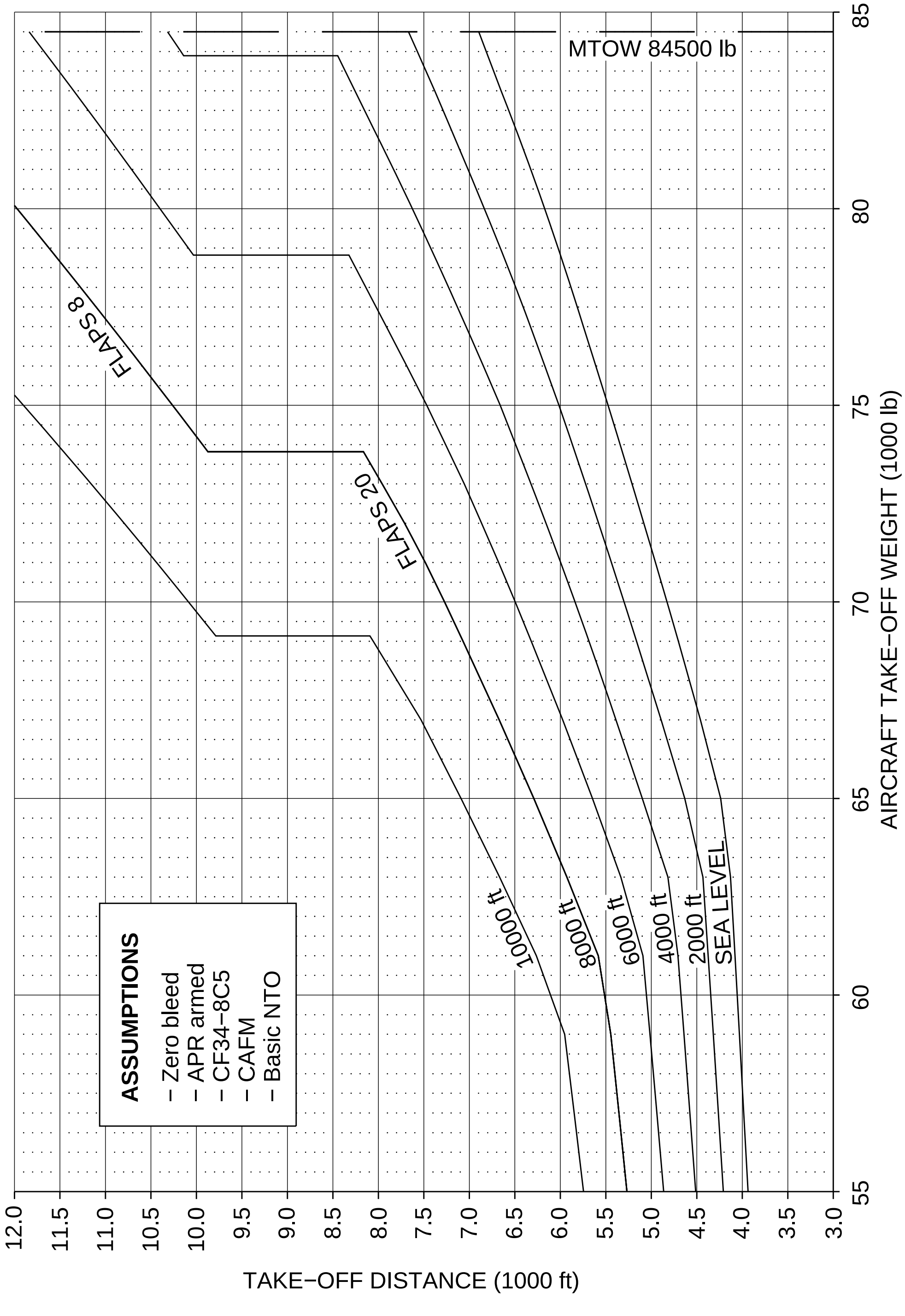
D. Refer to Figure 9 for the takeoff field length ISA + 20°C.

E. Refer to Figure 10 for the takeoff field length ISA + 25°C.

F. Refer to Figure 11 for the takeoff field length ISA + 30°C.



Take−Off Field Length − ISA
Figure 7



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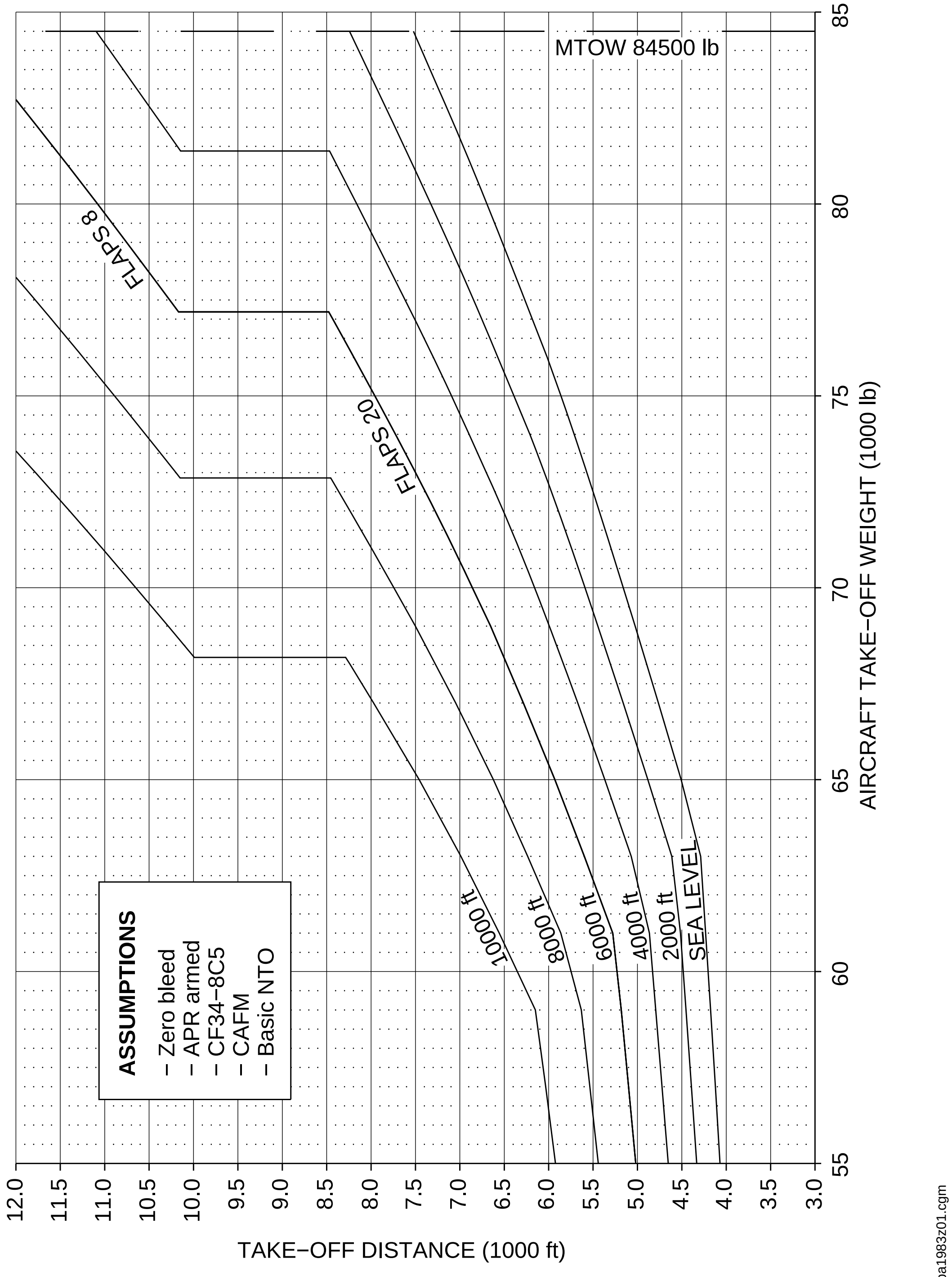
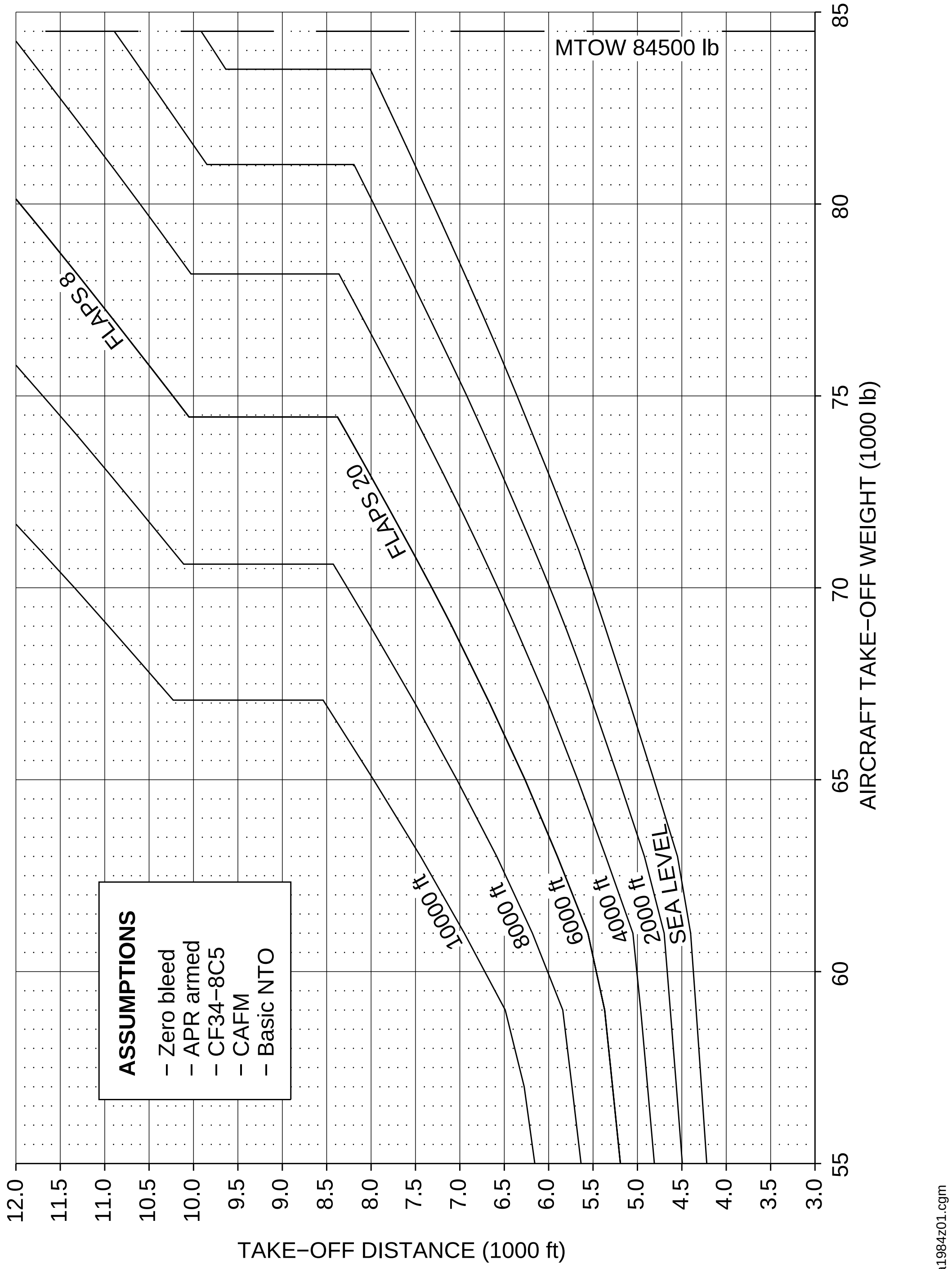
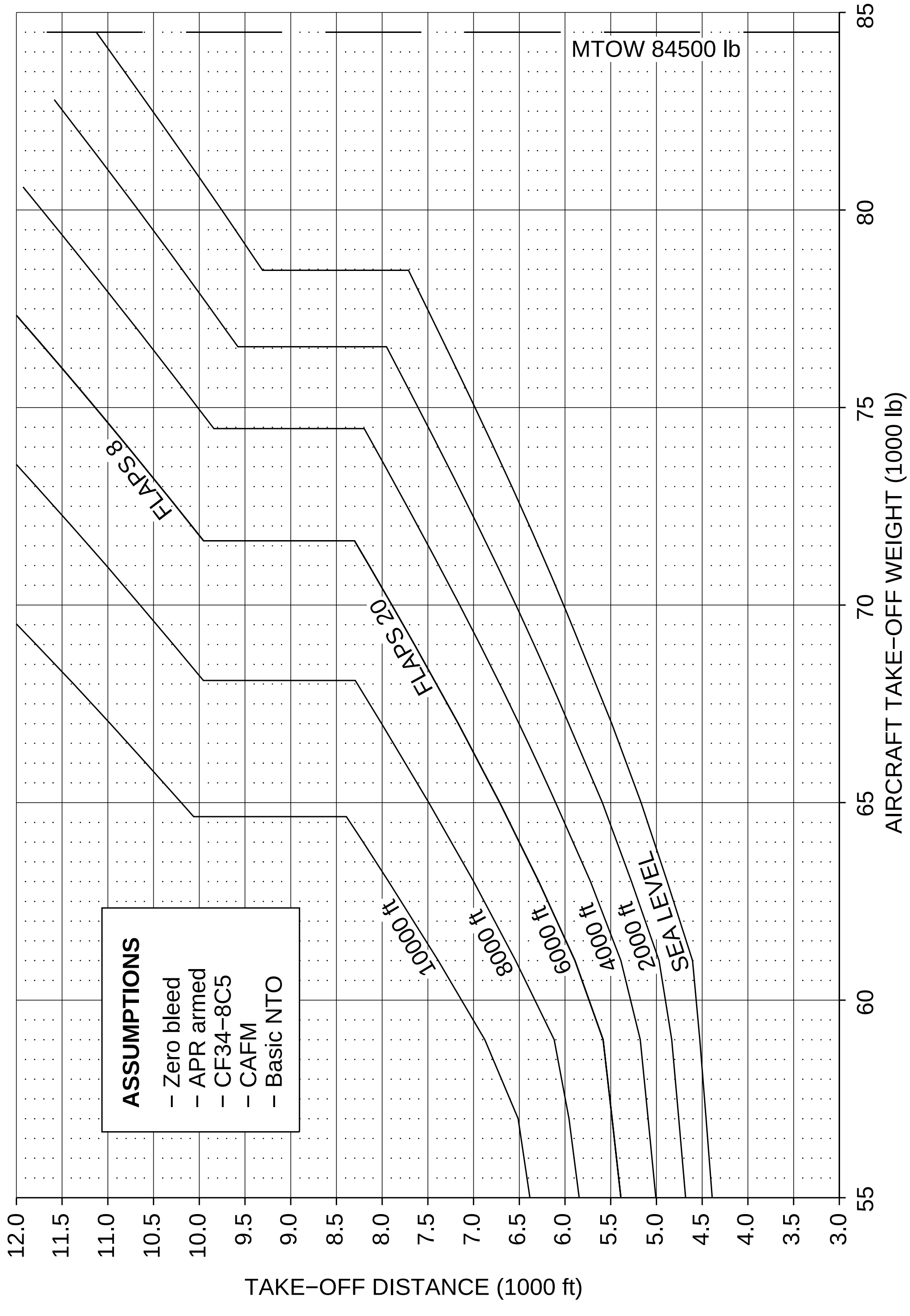
Take−Off Field Length − ISA + 15 Degrees C
Figure 8



Take−Off Field Length − ISA + 20 Degrees C
Figure 9



Take−Off Field Length − ISA + 25 Degrees C
Figure 10



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Take−Off Field Length − ISA + 30 Degrees C
Figure 11

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**ON A/C ALL

LANDING FIELD LENGTH REQUIREMENTS

1. General

This subsection gives data on the aircraft performance and field length requirements related to landing during normal operations. This subsection is divided into the chapters that follow:

– FAR landing field length requirements

– Landing speed restrictions

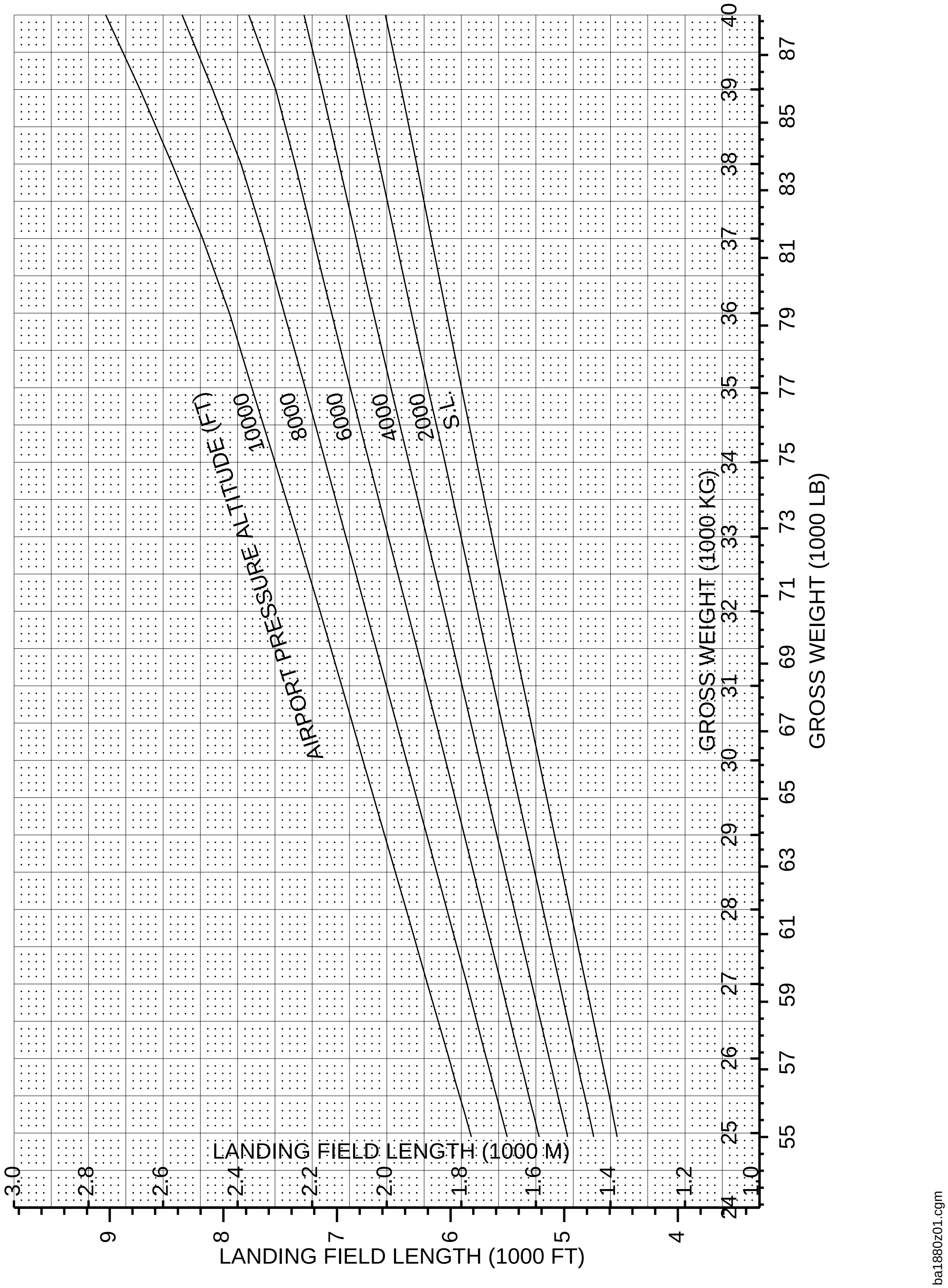
**ON A/C 15001−15035, 15038−15039, 15042

2. FAR Landing Field Length Requirements

NOTE: FAR 25 landing field length versus landing weight are for dry runway and ISA conditions. The actual landing distance on a dry runway is equal to the dry runway landing field length multiplied by 0.6.

A. For more information about landing field, refer to the Aircraft Flight Manual (CSP C−012).

B. Refer to Figure 1 for the dry landing field length with flaps at 45 degrees/slats extended.



Landing Field Length − Flaps at 45 Degrees/Slats Extended
Figure 1

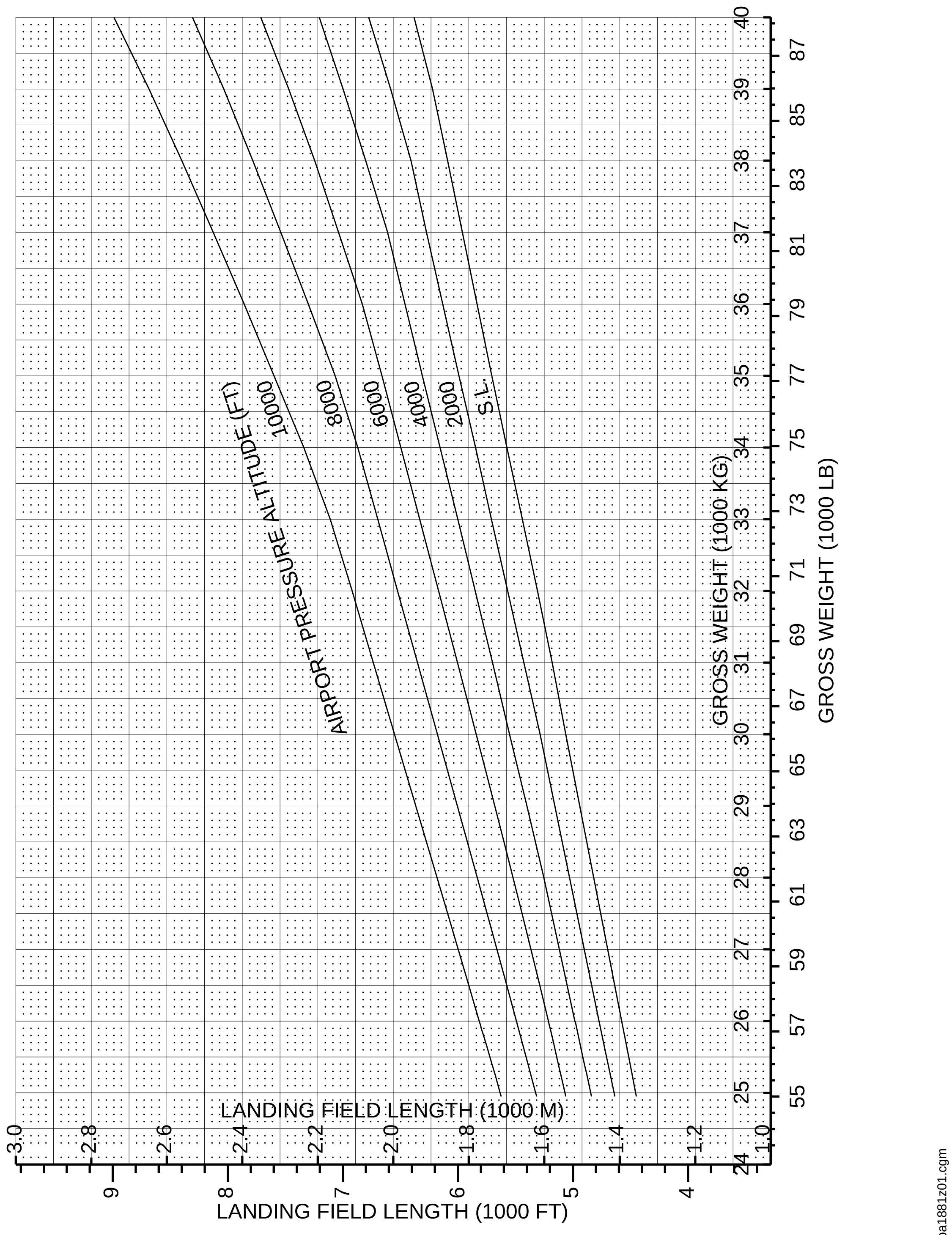
**ON A/C 15036−15037, 15040−15041, 15043−15990

3. FAR Landing Field Length Requirements

NOTE: FAR 25 landing field length versus landing weight are for dry runway and ISA conditions. The actual landing distance on a dry runway is equal to the dry runway landing field length multiplied by 0.6.

A. For more information about landing field, refer to the Aircraft Flight Manual (CSP C−012).

B. Refer to Figure 2 for the dry landing field length with flaps at 45 degrees/slats extended.

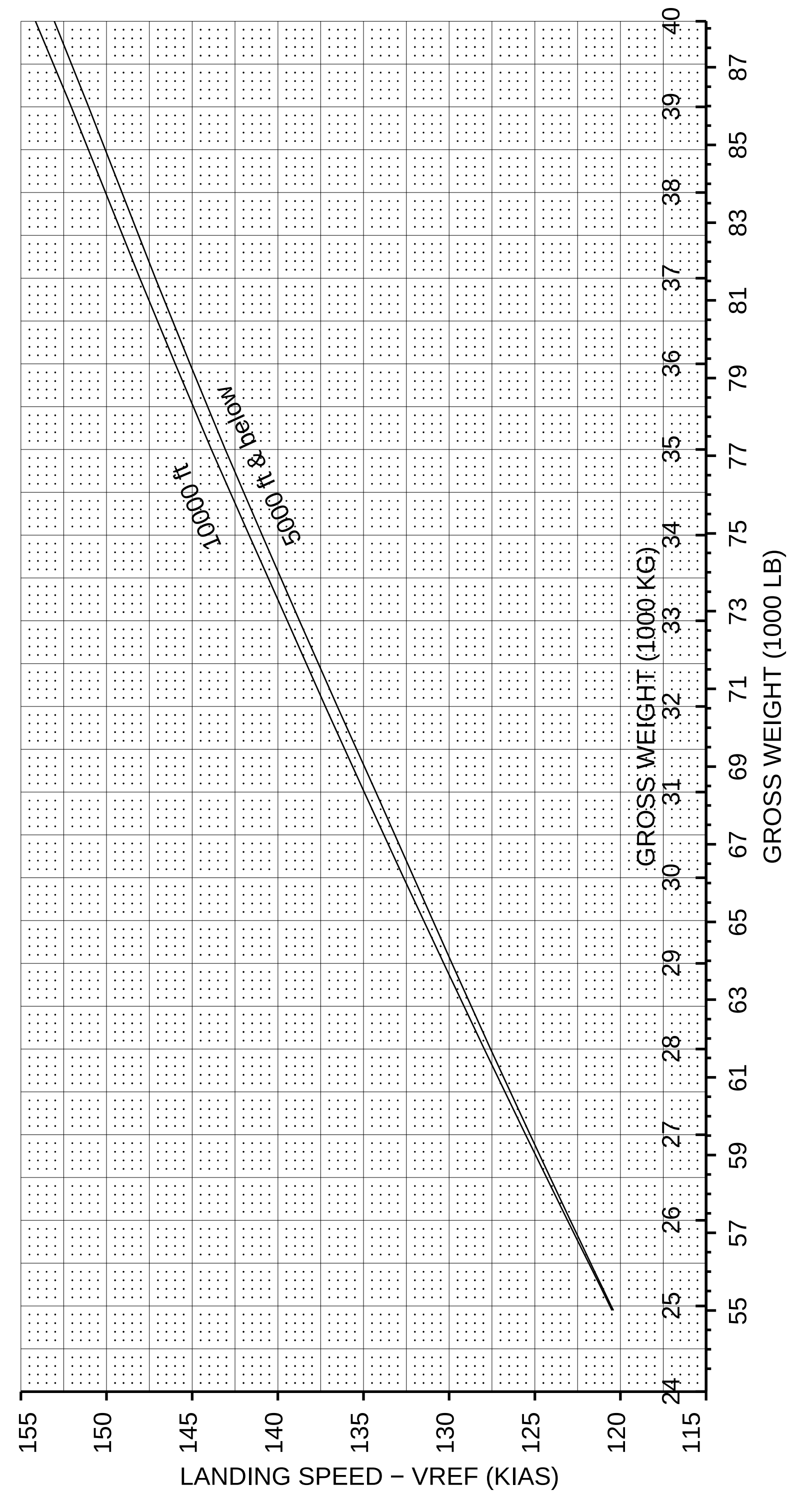


Landing Field Length − Flaps at 45 Degrees/Slats Extended
Figure 2

**ON A/C 15001−15035, 15038−15039, 15042

4. Landing Speed Restrictions

A. Refer to Figure 3 for aircraft landing speed with flaps at 45 degrees/slats extended.

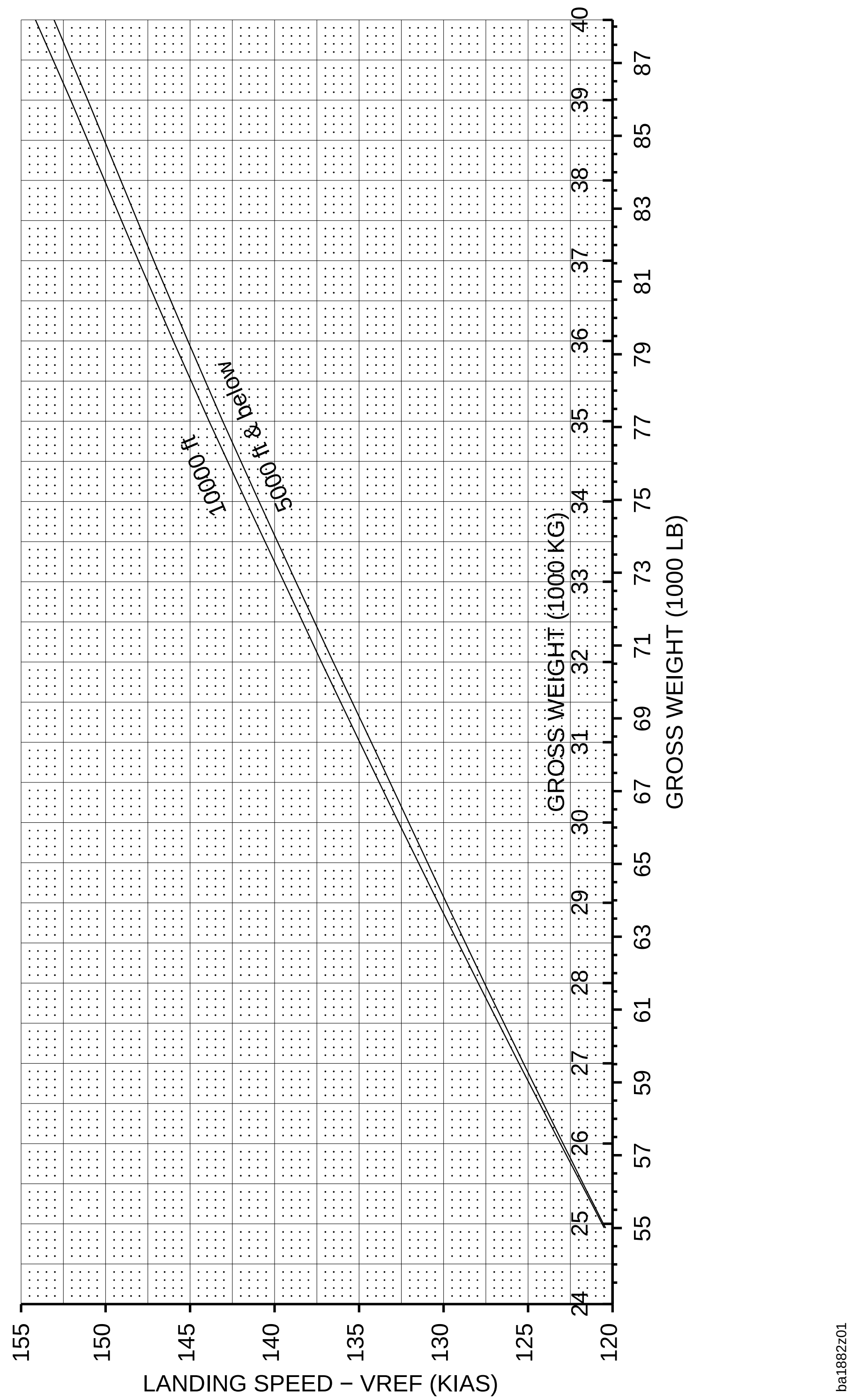


Landing Speed − Flaps at 45 Degrees/Slats Extended
Figure 3

**ON A/C 15036−15037, 15040−15041, 15043−15990

5. Landing Speed Restrictions

A. Refer to Figure 4 for aircraft landing speed with flaps at 45 degrees/slats extended.



Landing Speed − Flaps at 45 Degrees/Slats Extended
Figure 4

**ON A/C ALL

GROUND MANEUVERING

1. Introduction

This section contains data for the ground maneuvering of the aircraft during normal operations. This section is divided into the subsections that follow:

– Landing gear turning radii, including minimum turning radii

– Angles of visibility from the flight compartment

– Runway and taxiway turn paths

2. General

For ease of presentation, this data is taken from the theoretical limits given by the geometry of the aircraft and, where noted, provides for the normal allowance of tire slippage and reflects the turning capability of the aircraft in favorable operating circumstances. This data should only be used as a guideline for the method of determining the turning capabilities and maneuvering characteristics of the aircraft.

For ground maneuvering operations, different airlines can demand more conservative turning procedures be adopted to avoid too much tire wear and reduce possible maintenance problems. Maneuvering limits and performance levels will vary over a wide range of operating circumstances. Changes from the standard operating policies are sometimes necessary to agree with the physical limits found in the maneuvering area. This can include adverse grades, limited access areas or maneuvering in areas where there is a high risk of jet blast damage. For these reasons, airline ground maneuvering operations and limits should be known before you do the actual layout planning.

**ON A/C 15001−15035, 15038−15039, 15042

3. Landing gear turning radii, including minimum turning radii

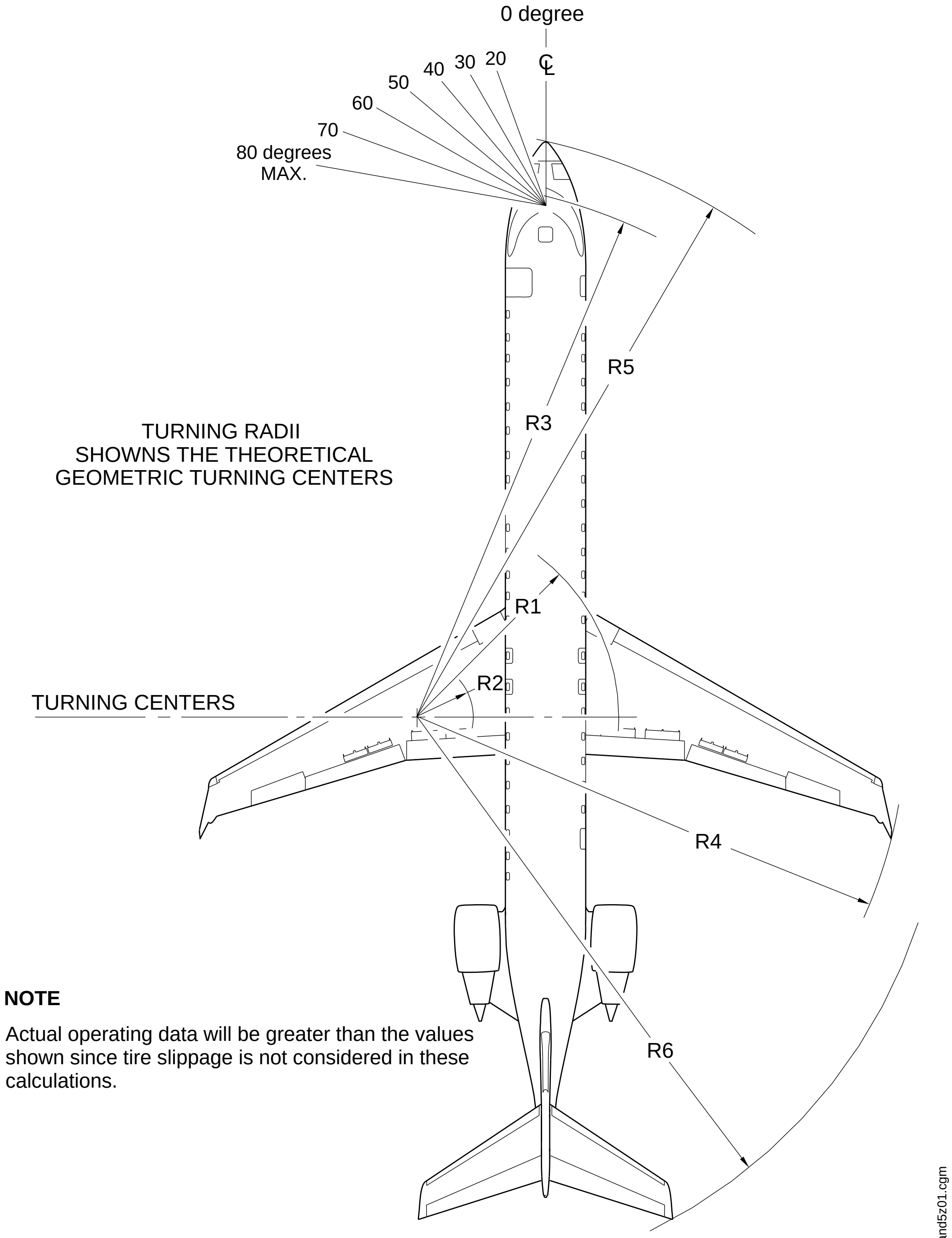
A. This section contains data about the aircraft turning capability and maneuvering characteristics on the ground. The data is based on aircraft performance in good conditions of operation. Thus, the values must be considered theoretical and used only as an aid.

B. Refer to Table 1 for the values to use with Figure 1 to know the minimum turn radii.

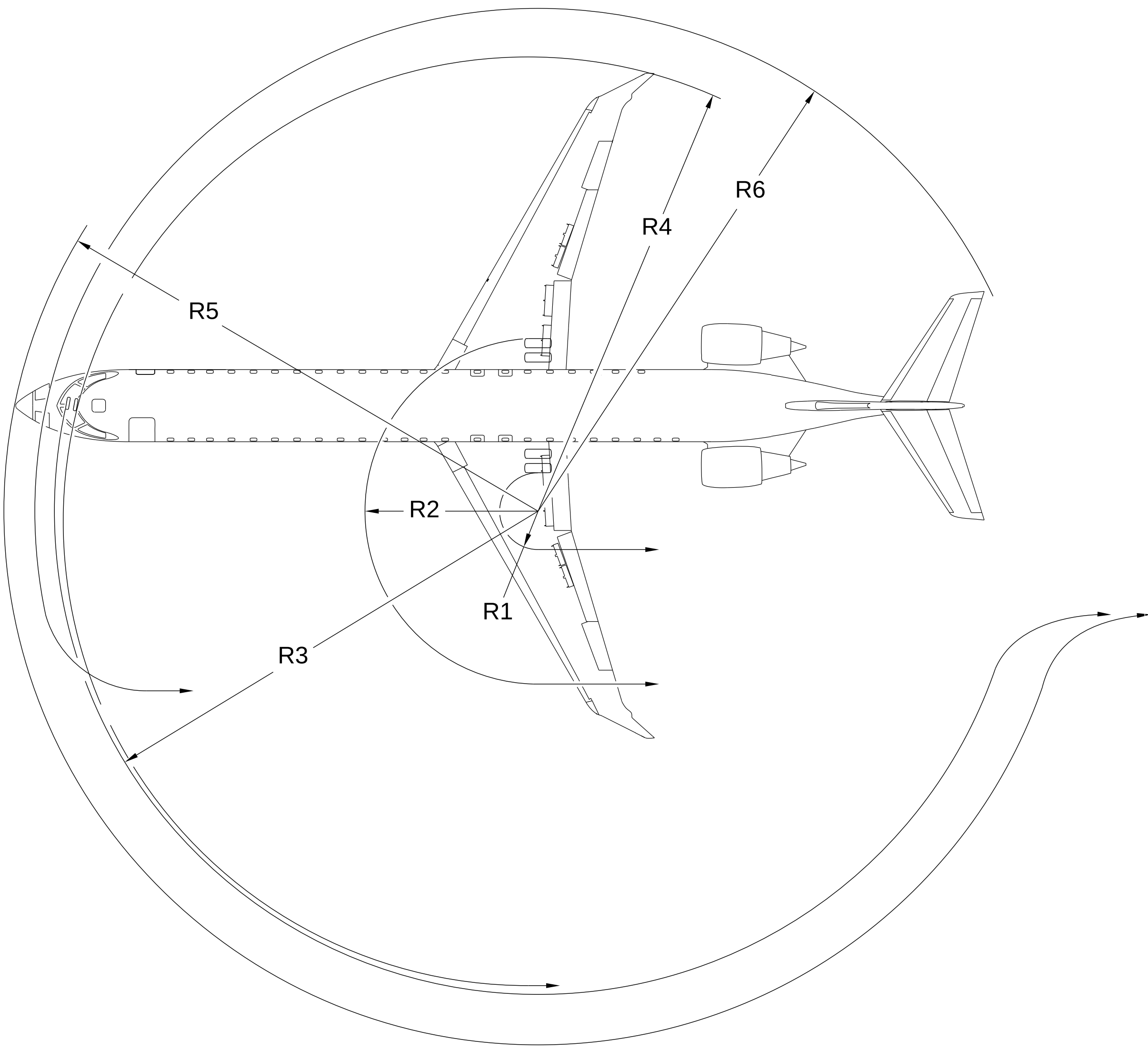
Table 1 − Turn Radii

Angle (Degrees)	20	30	40	50	60	70	80 (3 Degree Slip Angle)
R1	1772.3 in. (45.02 m)	1080.5 in. (27.44 m)	712.3 in. (18.09 m)	471.9 in. (11.99 m)	293.3 in. (7.45 m)	147.7 in. (3.75 m)	56.9 in. (1.45 m)
R2	1969.2 in. (50.02 m)	1277.4 in. (32.45 m)	909.2 in. (23.09 m)	668.8 in. (16.99 m)	490.3 in. (12.45 m)	344.7 in. (8.76 m)	253.8 in. (6.45 m)
R3	2001.9 in. (50.84 m)	1373.0 in. (34.87 m)	1070.6 in. (27.19 m)	900.4 in. (22.87 m)	798.0 in. (20.27 m)	736.6 in. (18.71 m)	711.0 in. (18.06 m)
R4	2329.3 in. (59.16 m)	1673.9 in. (42.52 m)	1270.0 in. (32.26 m)	1030.0 in. (26.16 m)	851.9 in. (21.64 m)	706.8 in. (17.95 m)	616.3 in (15.65 m)
R5	2021.3 in. (51.34 m)	1405.6 in. (35.70 m)	1115.0 in. (28.32 m)	954.5 in. (24.24 m)	859.9 in. (21.84 m)	804.0 in. (20.42 m)	781.0 in. (19.84 m)
R6	2142.9 in. (54.42 m)	1499.8 in. (38.09 m)	1180.2 in. (29.98 m)	989.9 in. (25.14 m)	865.0 in. (21.97 m)	779.8 in. (19.81 m)	736.3 in. (18.70 m)

C. Refer to Figures 1 and 2 for the turn radii with 3 degree slip angle.



Minimum Turn Radii − CRJ900
Figure 1



NOTE

Maximum steering:
− 80 Degree Steering Angle
− 3 Degree Slip.

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Runway and Taxiway Turn Radius − CRJ900
Figure 2

**ON A/C 15036−15037, 15040−15041, 15043−15990

4. Landing gear turning radii, including minimum turning radii

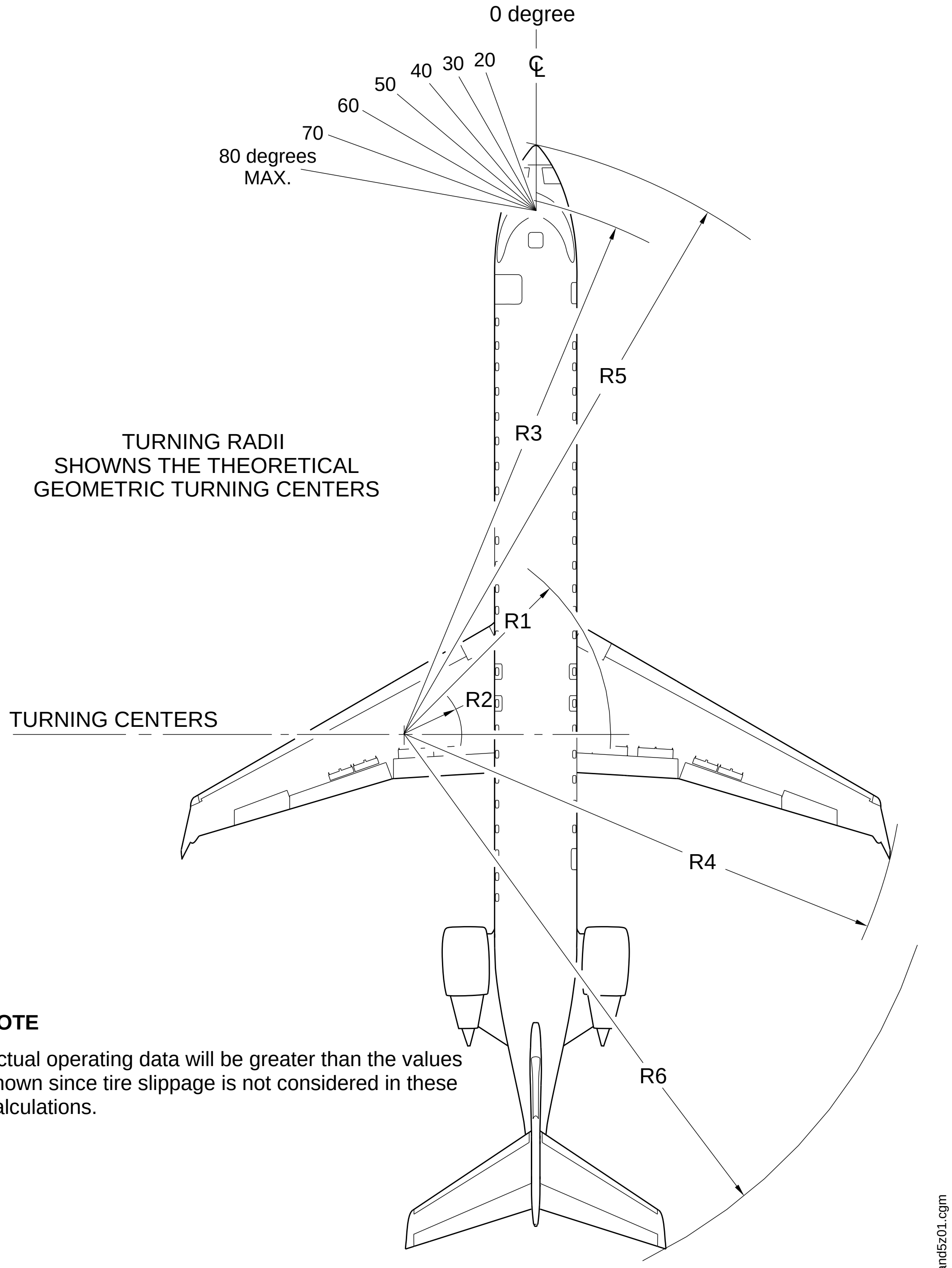
A. This section contains data about the aircraft turning capability and maneuvering characteristics on the ground. The data is based on aircraft performance in good conditions of operation. Thus, the values must be considered theoretical and used only as an aid.

B. Refer to Table 1 for the values to use with Figure 3 to know the minimum turn radii.

Table 1 − Turn Radii

Angle (Degrees)	20	30	40	50	60	70	80 (3 Degree Slip Angle)
R1	1772.3 in. (45.02 m)	1080.5 in. (27.44 m)	712.3 in. (18.09 m)	471.9 in. (11.99 m)	293.3 in. (7.45 m)	147.7 in. (3.75 m)	56.9 in. (1.45 m)
R2	1969.2 in. (50.02 m)	1277.4 in. (32.45 m)	909.2 in. (23.09 m)	668.8 in. (16.99 m)	490.3 in. (12.45 m)	344.7 in. (8.76 m)	253.8 in. (6.45 m)
R3	2001.9 in. (50.84 m)	1373.0 in. (34.87 m)	1070.6 in. (27.19 m)	900.4 in. (22.87 m)	798.0 in. (20.27 m)	736.6 in. (18.71 m)	711.0 in. (18.06 m)
R4	2366.2 in. (60.10 m)	1677.2 in. (42.60 m)	1311.6 in. (33.31 m)	1073.9 in. (27.27 m)	898.3 in. (22.82 m)	756.1 in. (19.20 m)	668.1 in. (16.97 m)
R5	2021.3 in. (51.34 m)	1405.6 in. (35.70 m)	1115.0 in. (28.32 m)	954.5 in. (24.24 m)	859.9 in. (21.84 m)	804.0 in. (20.42 m)	781.0 in. (19.84 m)
R6	2142.9 in. (54.42 m)	1499.8 in. (38.09 m)	1180.2 in. (29.98 m)	989.9 in. (25.14 m)	865.0 in. (21.97 m)	779.8 in. (19.81 m)	736.3 in. (18.70 m)

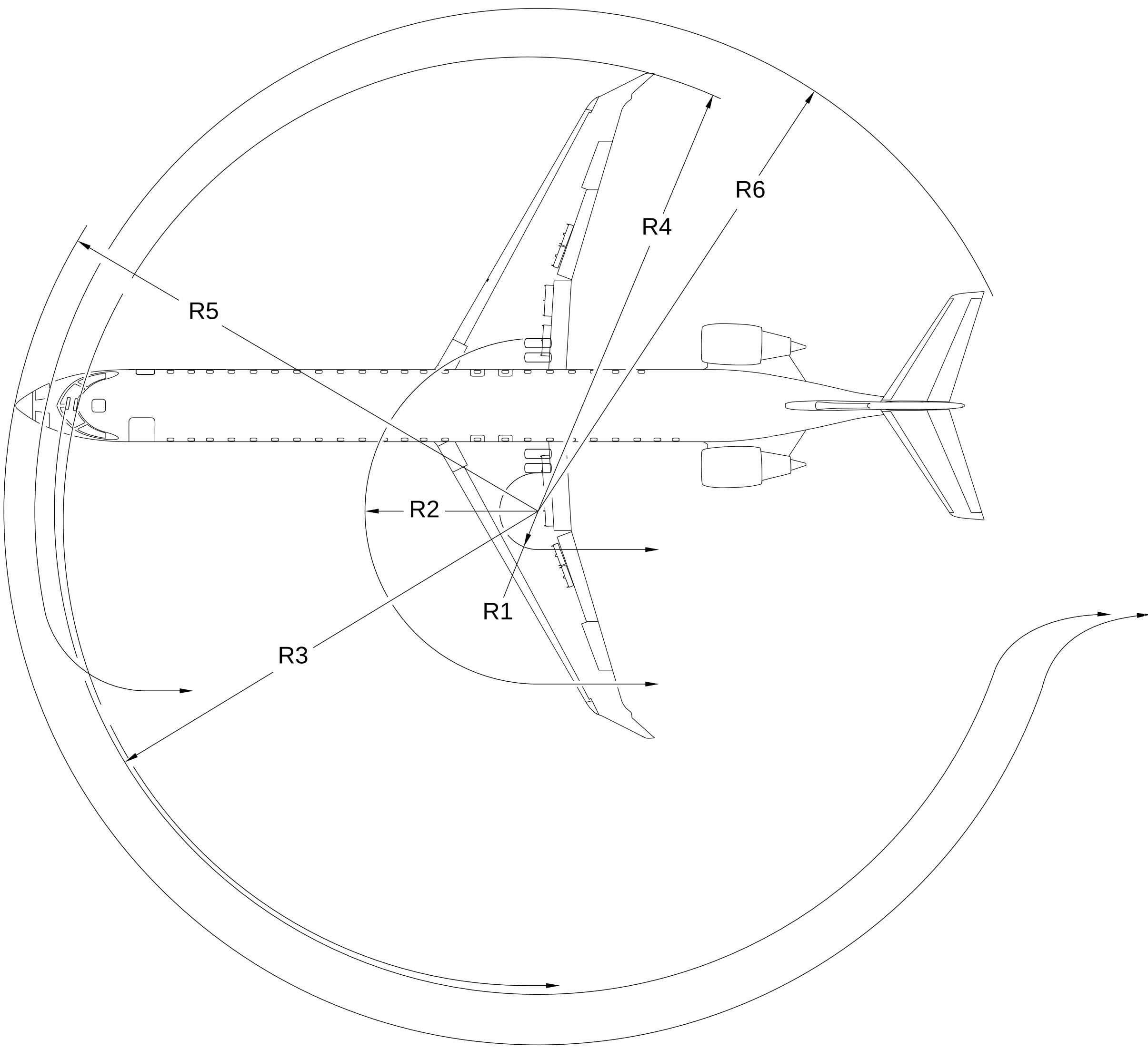
C. Refer to Figures 3 and 4 for the turn radii with 3 degree slip angle.



NOTE

Actual operating data will be greater than the values shown since tire slippage is not considered in these calculations.

Minimum Turn Radii − CRJ900
Figure 3



NOTE

Maximum steering:
− 80 Degree Steering Angle
− 3 Degree Slip.

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Runway and Taxiway Turn Radius − CRJ900
Figure 4

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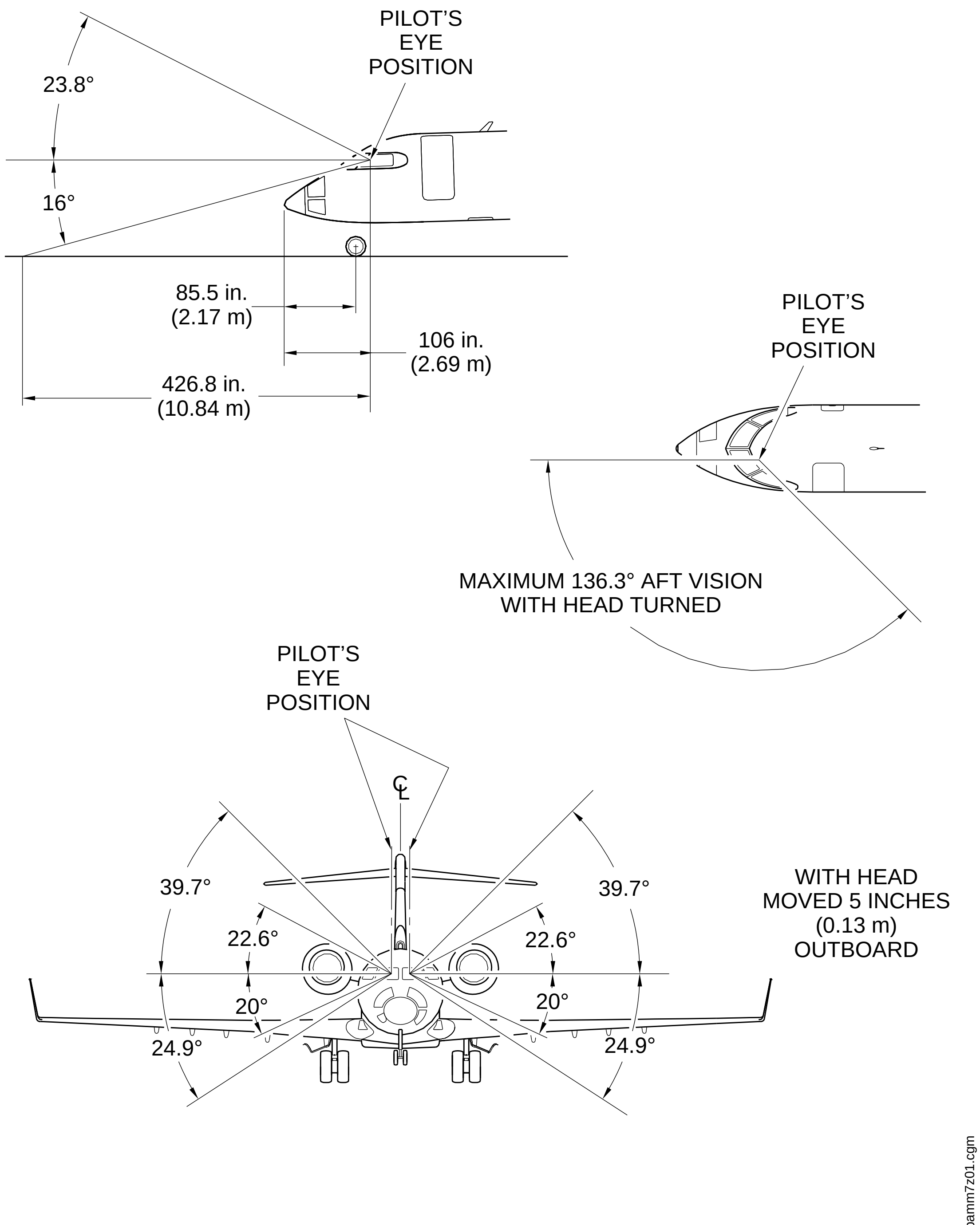
**ON A/C ALL

VISIBILITY FROM FLIGHT COMPARTMENT

1. Visibility from Flight Compartment

A. This subsection gives data about the visibility from the flight compartment.

B. Refer to Figure 1 for the distance you can see from the flight compartment (aircraft at rest).



Distance You Can See from the Flight Compartment
Figure 1

**ON A/C ALL

RUNWAY AND TAXIWAY

1. Introduction

This subsection contains data for the runway and taxiway maneuvering of the aircraft during normal operations. This subsection is divided into the chapters that follow:

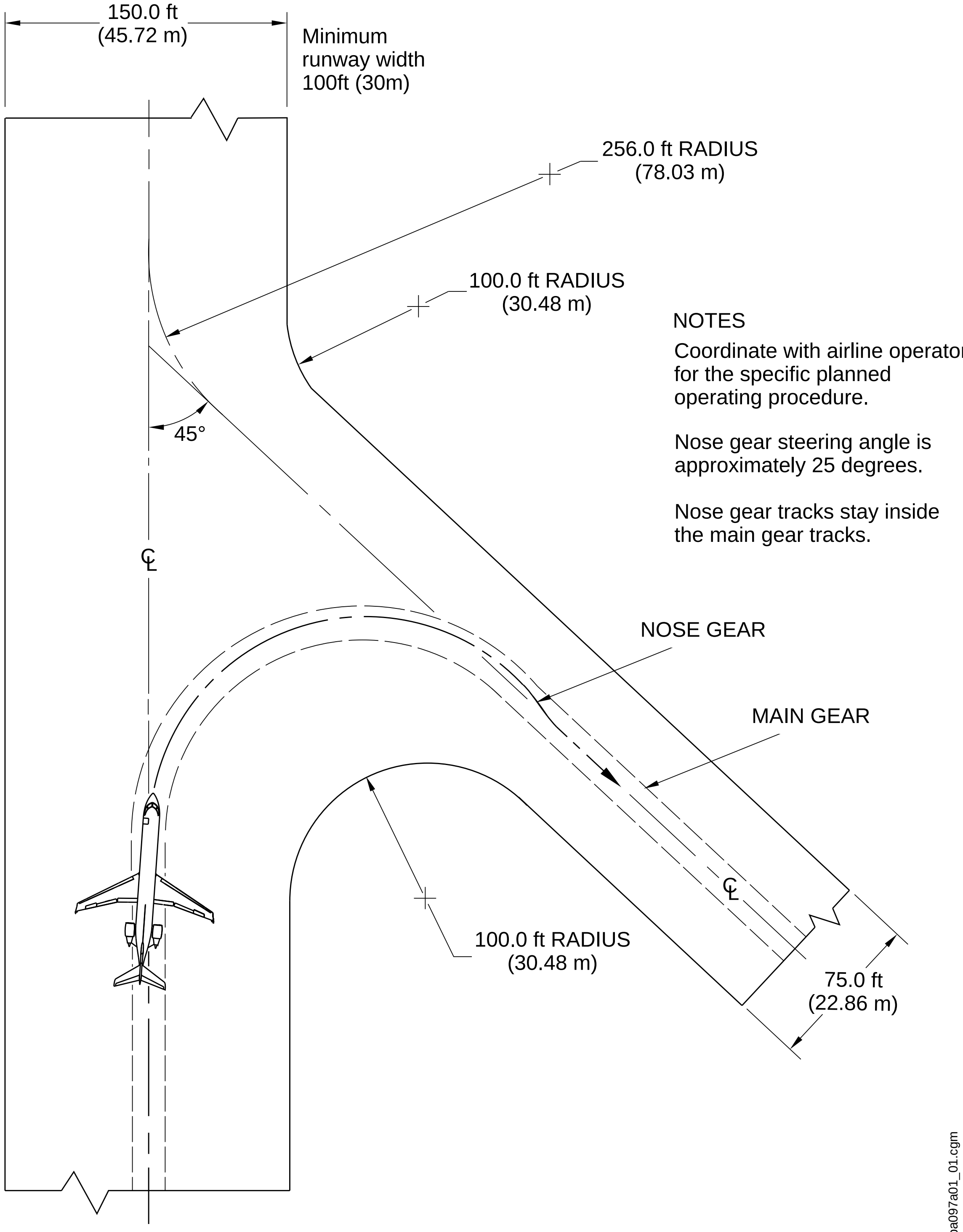
– Runway and taxiway turn paths

– Minimum holding bay (apron) widths.

2. Runway and Taxiway Turn Paths

A. This chapter gives data about the Runway and taxiway turn paths.

B. Refer to Figures 1, 2, and 3 for the 45 and 90 degree turns from runway to taxiway.



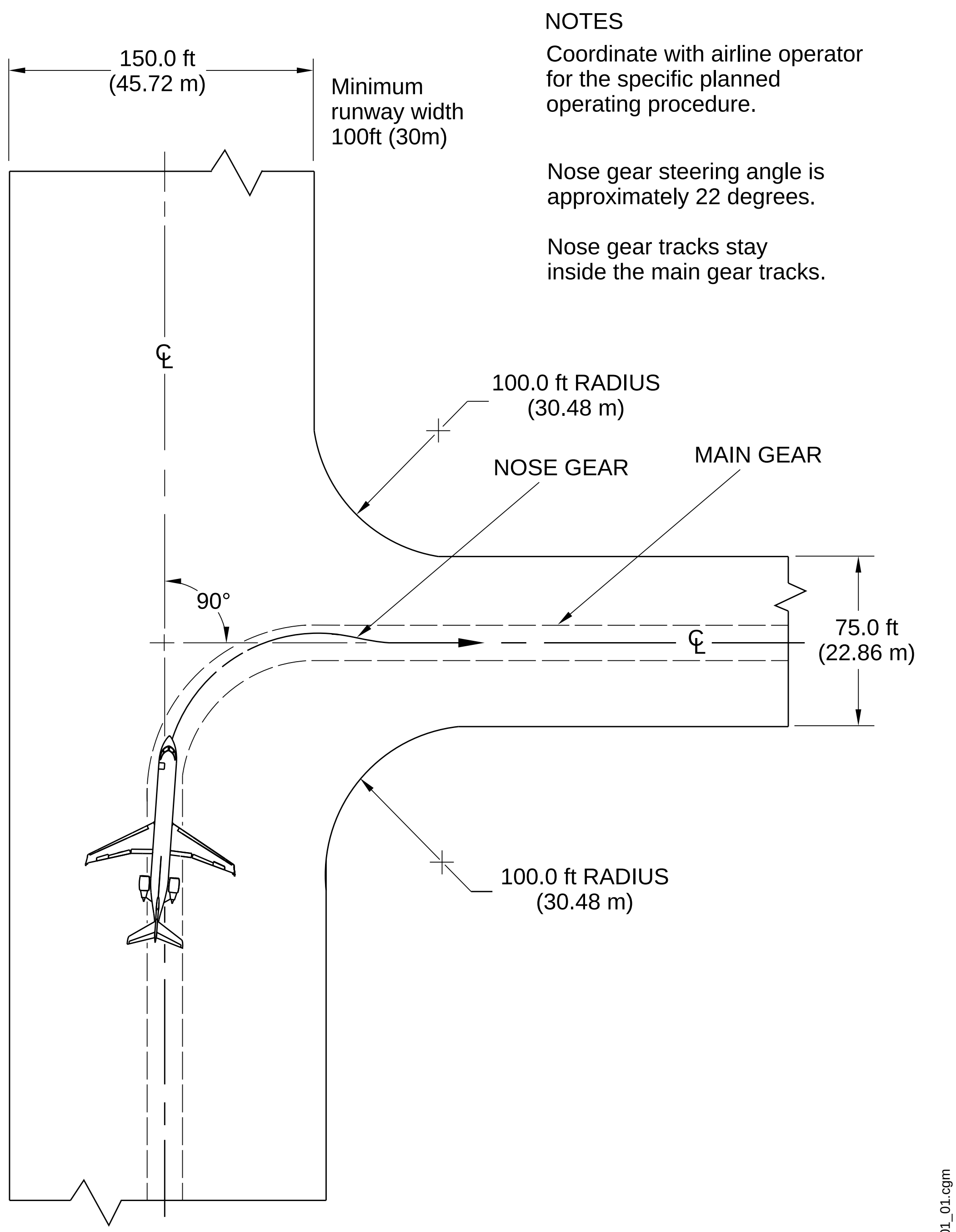
NOTES

Coordinate with airline operator for the specific planned operating procedure.

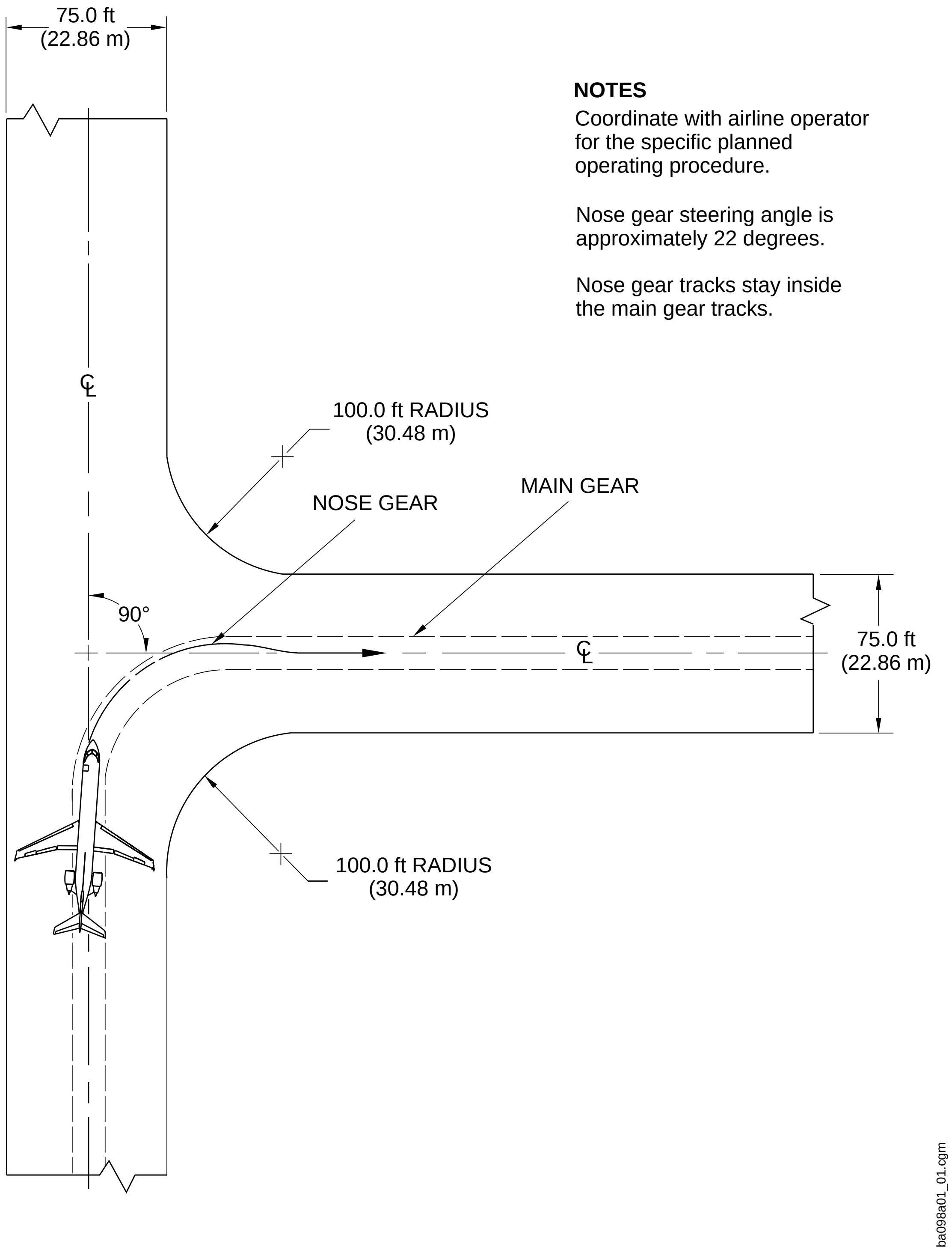
Nose gear steering angle is approximately 25 degrees.

Nose gear tracks stay inside the main gear tracks.

Runway and Taxiway Turn−Paths
Figure 1



90 Degree Turn − Runway to Taxiway
Figure 2

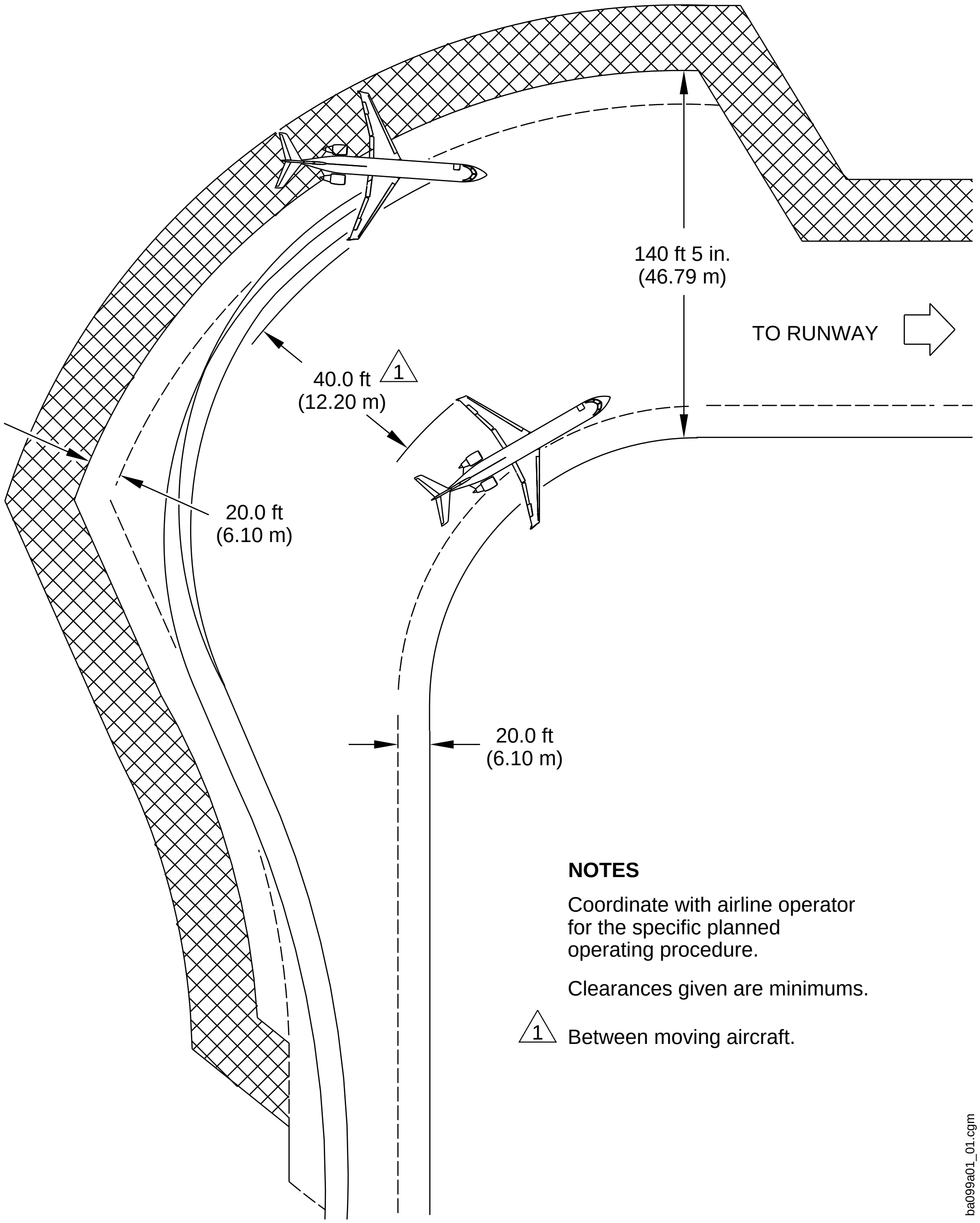


90 Degree Turn − Taxiway to Taxiway
Figure 3

3. Minimum Holding Bay

A. This chapter gives data about the minimum holding bay (apron) widths.

B. Refer to Figure 4 for the runway holding area.



NOTES

Coordinate with airline operator for the specific planned operating procedure.

Clearances given are minimums.

1 Between moving aircraft.

Runway Holding Area
Figure 4

**ON A/C ALL

TERMINAL SERVICING

1. Introduction

A. This section contains the data related to the preparation of an aircraft for flight from a terminal. This data is provided to show the general types of tasks involved in terminal operations. Each airline is special and can operate under have different operating conditions and practices, which can result in changes in the operating procedures and time intervals to do the tasks specified. Because of this, requirements for ground operations should be approved with the specified airline(s) before ramp planning is started. This section is divided into the subsections that follow:

- Ground towing requirements
- Ground servicing connections
- Ground servicing connection data
- Aircraft servicing arrangement
- Terminal operations
- Ground electrical power requirements
- Preconditioned airflow requirements − air conditioning
- Ground pneumatic power requirements − engine starting.

2. Ground Towing Requirements

A. The ground towing requirements for the CRJ900 aircraft are as follows:

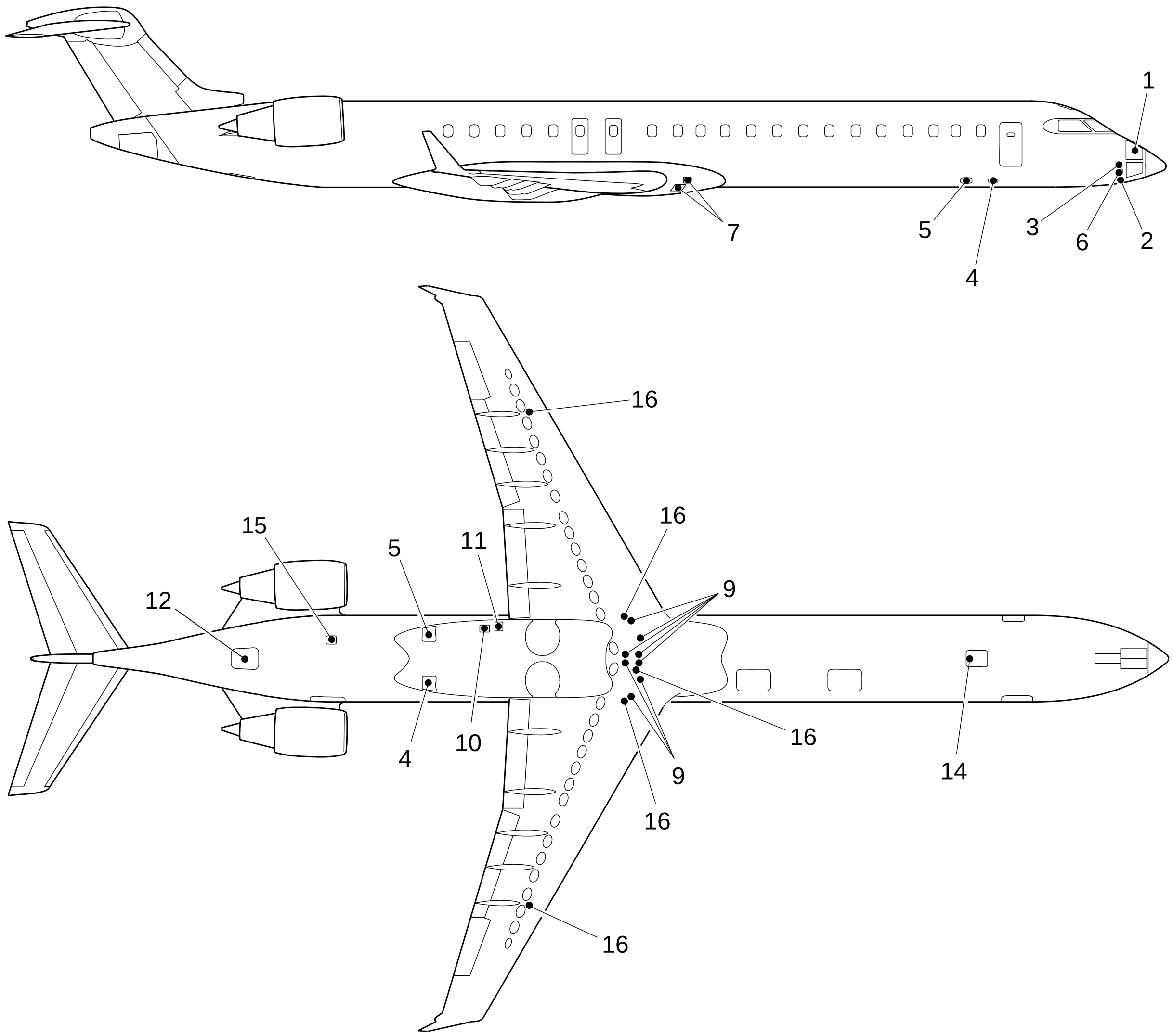
- 8000 lbs drawer pull
- 10000 lbs weight.

B. When ballast is necessary, use G601R072003−1 (3000 lbs) or G601R072004−1 (1420 lbs).

C. The recommended towing vehicle for the CRJ900 is P/N HTLPAG80DDWCN and the recommended towbar is P/N 01−1281−0010. For more information, refer to the Illustrated Tool and Equipment Manual (CSP B−007) and the Aircraft Maintenance Manual (CSP B−001).

3. Ground Servicing Connections

A. Refer to Figure 1 for the ground servicing connection points. For servicing procedures, refer to the Aircraft Maintenance Manual (CSP B−001).



LEGEND

1. ADG oil servicing.
2. AC ground−power connection.
3. Oxygen fill service panel.
4. Forward/aft potable water connection.
5. Forward/aft water waste connections.
6. External service panel with interphone.
7. Refuel−defuel control panel and refuel access door with interphone.
9. Water drain valves.
10. Accumulator pressure fill point access door.
11. Hydraulic system no. 3 service panel access.
12. Access to engine oil replenisment tank and hydraulic systems no. 1 and no. 2 components access and interphone.
14. Interphone.
15. Ground air conditionning connection.
16. Magnetic fuel level indicator.

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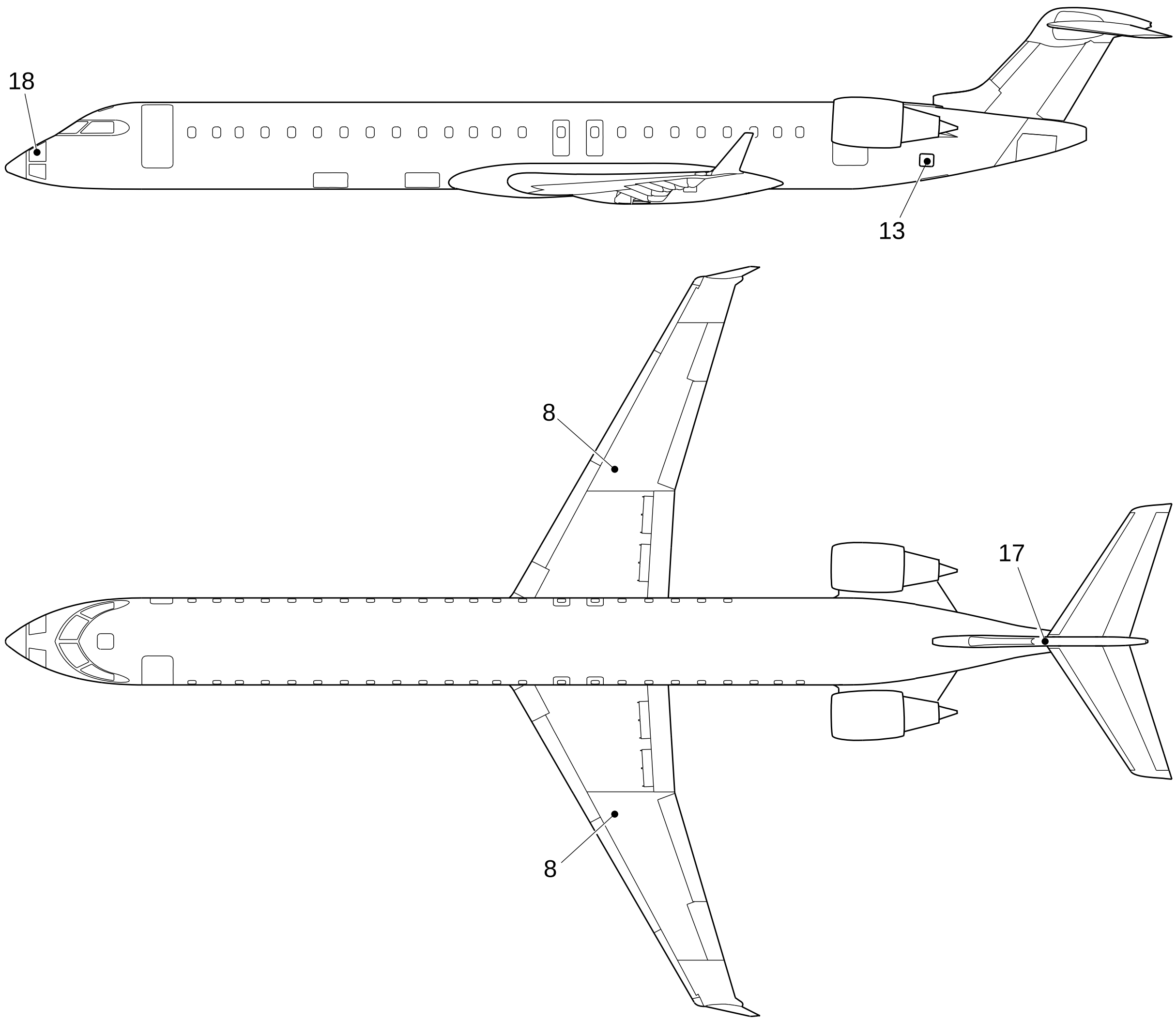
Ground Service Connections
Figure 1 (Sheet 1 of 2)



LEGEND

8. Gravity fuel filler cap of the main tanks.
13. Ground air access.
17. Horizontal stab, trim actuator oil servicing.
18. Hydraulic brake control.

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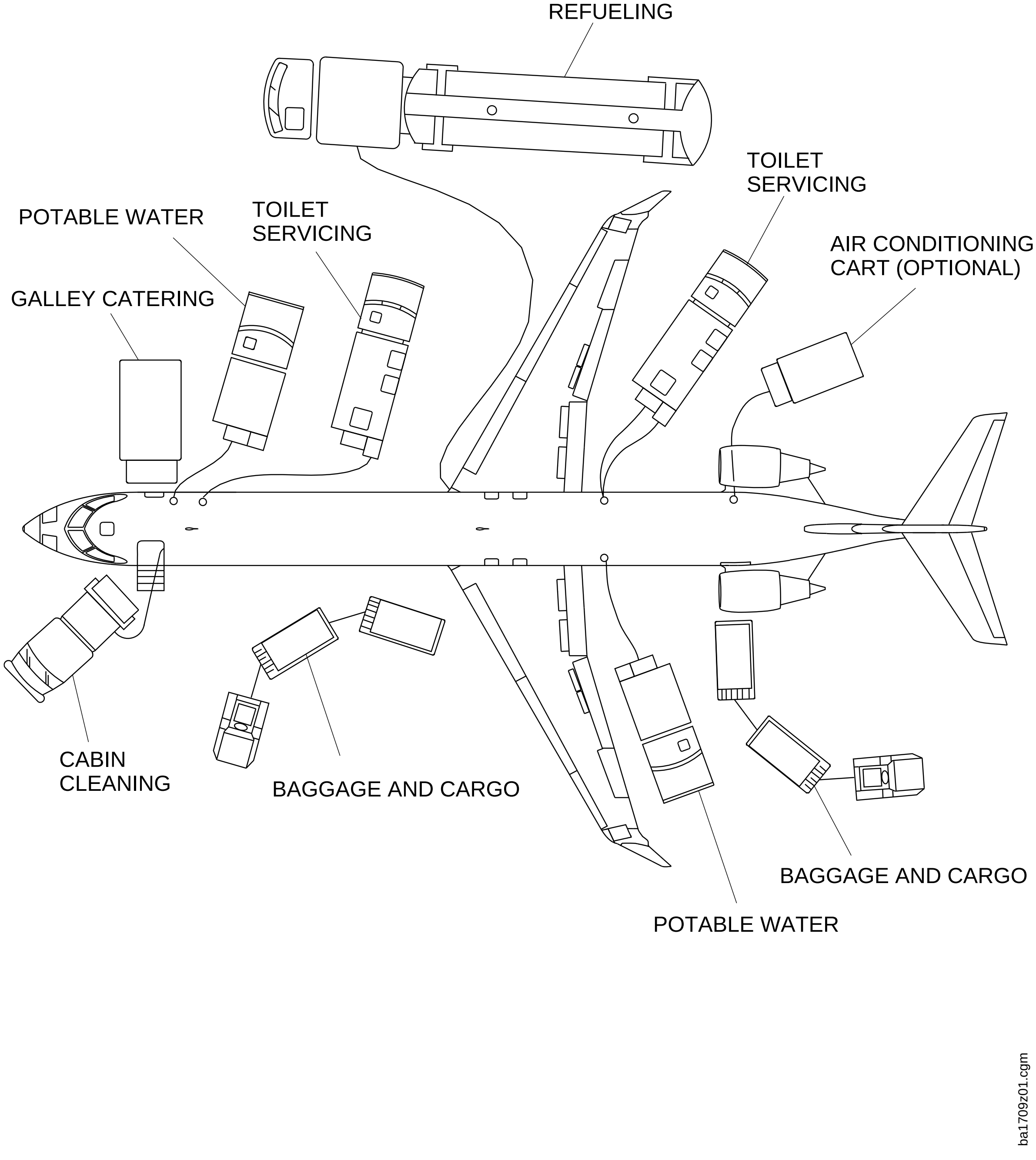
Ground Service Connections
Figure 1 (Sheet 2 of 2)

4. Aircraft Servicing Arrangement

A. for the aircraft servicing arrangement.

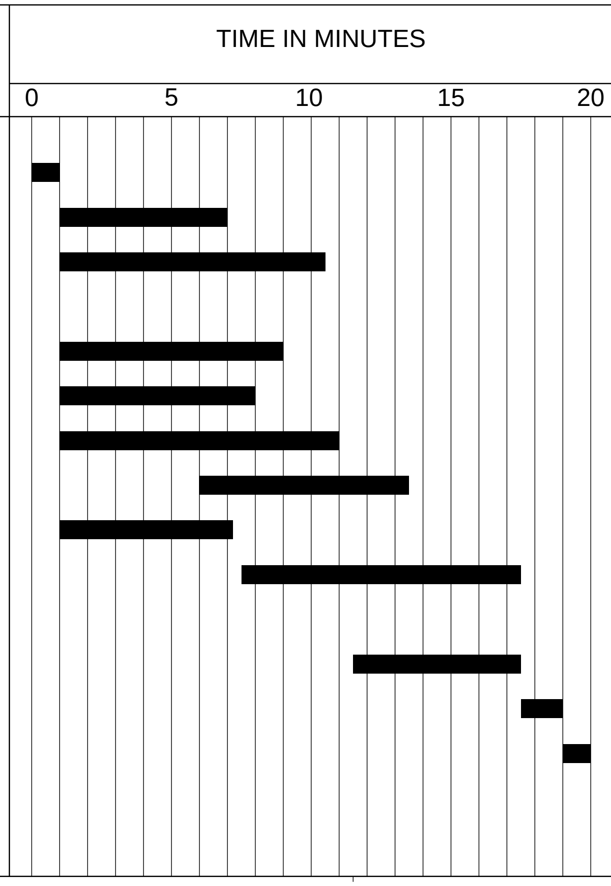


Aircraft Servicing Arrangement
Figure 2

5. Terminal Operations

A. Refer to Figure 3 for the turnaround station operations.

NOTE: Turnaround time based on a maximum of 86 passengers that disembark and embark the aircraft with the typical number of pieces of baggage unloaded and loaded.



TURNAROUND STATION OPERATIONS	TASK TIME
ENGINES RUNDOWN	1.0
DEPLANE PASSENGERS	6.0
UNLOAD BAGGAGE/CARGO	9.5
SERVICE WASTE TANK	8.0
SERVICE POTABLE WATER	7.0
SERVICE GALLEY	10.0
SERVICE AIRPLANE INTERIOR	7.5
FUEL AIRPLANE *	6.2
LOAD CARGO/BAGGAGE	10.0
ENPLANE PASSENGERS	6.0
MONITOR ENGINE START	1.5
CLEAR AIRPLANE FOR DEPARTURE	1.0
TOTAL TURNAROUND TIME (Includes equipment positioning and removal)	20 minutes

* 85% FUEL UPLIFT, REFUELING PRESSURE 50 ± 5 PSI
(344 kPa) AT 295 gpm (1136 Lpm).

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Turnaround Station Operations
Figure 3

6. Ground Electrical Power Requirements

A. The external power system is used to connect AC electrical power from a ground power connection. There are no provisions to connect DC power from an external ground cart. External AC can be used to power the complete AC distribution system or only those buses that provide power to the passenger compartment. The tables show the external AC power requirements data, the external power quality limitations data, the external AC power quality limitations data, and the external AC power requirements data.

B. Refer to Table 1 for the External AC Power Requirements data.

C. Refer to Table 2 for the External Power Quality Limitations data.

D. Refer to Table 3 for the External AC Power Limitations data.

E. Refer to Table 4 for the Voltage Regulation data.

F. Refer to Figure for overcurrent protection.

G. The external AC power requirements are shown in Table 1.

Table 1− External AC Power Requirements

VOLTAGE	FREQUENCY	Phase	KVA
115/200Vac	400Hz	3−Phase	40kVA minimum

H. The external power quality limitations are shown in Table 2.

Table 2− External Power Quality Limitations

PARAMETER	SETTING LIMIT	RESPONSE TIME
Overvoltage (High)	150 V ±2%	< 0.25 SEC
Overvoltage (Normal)	124 V ±2%	0.75 ±0.25 SEC
Undervoltage	106 V ±2%	6.00 ±0.75 SEC
Overfrequency	430 Hz ±2%	< 0.25 SEC
Underfrequency	370 Hz ±2%	< 0.25 SEC
Phase Sequence	A−B−C	< 0.25 SEC

I. The external AC power limitations are shown in Table 3.

Table 3− External AC Power Limitations

CURRENT	LIMITATION
Between 122 A and 130 A	300 SEC
Between 130 A and 250 A	5 SEC
More than 250 A	0.7 SEC

J. The voltage regulation is shown in Table 4.

Table 4− Voltage Regulation

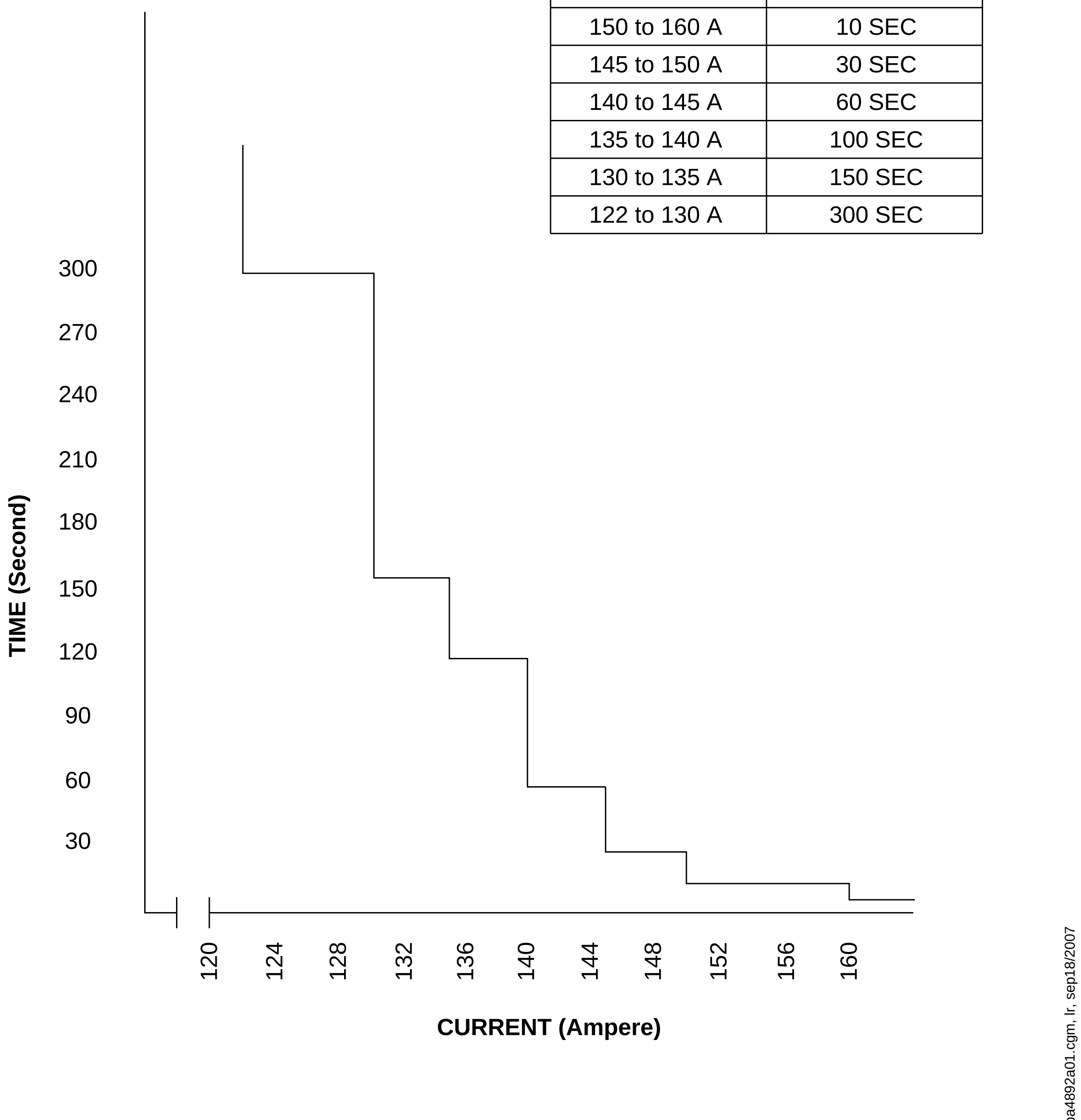
LOAD	LIMITATION	VOLTAGE
0 to 40 kVA	0.75 lag to 1.0 pF	115 ±1.5 V
40 to 45 kVA	0.75 lag to 1.0 pF	115 ±1.5, −2.0 V
45 to 60 kVA	0.75 lag to 1.0 pF	115 ±2.0, −2.5 V

K. Refer to Figure 4 for overcurrent protection.

NOTE

1 Current is ±5 amperes.

CURRENT 1	TIME
> 160 A	5 SEC
150 to 160 A	10 SEC
145 to 150 A	30 SEC
140 to 145 A	60 SEC
135 to 140 A	100 SEC
130 to 135 A	150 SEC
122 to 130 A	300 SEC



Overcurrent Protection Ampere versus Time Delay
Figure 4

7. Preconditioned Airflow Requirements − Air Conditioning

A. The ground air supply requirements for air conditioning and airflow requirements are shown in Table 5.

Table 5 − Preconditioned Airflow Requirements − Air Conditioning

Ground Air Supply − Requirements for Cooling and Heating			
Requirements	**Pressure**	**Airflow**	**Temperature**
To Cool Cabin to 80 °F (26.67 °C) Conditions: 1. Initial cabin temp. is 103 °F (39.44 °C) 2. Outside air temp. is 103 °F (39.44 °C) 3. Galley (s) is (are) off 4. Auto full cold, two packs 5. Total of maximum passengers and crew	35 psi (241.32 kPa)	60 lb/min. (27.2 kg/min.)	Less than 400 °F (204.4 °C)
To Heat Cabin to 75 °F (23.89 °C) Conditions: 1. Initial cabin temp. is 0 °F (−17 °C) 2. Outside cabin temp. is 0 °F (−17 °C) 3. Cloudy day 4. Auto full hot, two packs 5. No crew and passengers	35 psi (241.32 kPa)	70 lb/min. (31.75 kg/min.)	300 − 400 °F (148.9 − 204.4 °C)

8. Ground Pneumatic Power Requirements − Engine Starting

A. The ground air supply requirements for engine starting are shown in Table 6. Refer to AMM 71−00−00−866−806 − Engine Start (with external air) for more details.

Table 6 − Ground Pneumatic Power Requirements − Engine Starting

Ground Air Supply − Requirements for Engine Starting			
Requirements	**Pressure**	**Airflow**	**Temperature**
To Provide Starter Air Pressure Conditions: 1. Time allowed during start (to starter cutout) is 90 seconds. 2. Time−to−IDLE on ground is 45 seconds minimum. 3. No bleed air extraction is permitted during start sequence.	60 p si (413.7 kPa) maximum		

**ON A/C ALL

OPERATING CONDITIONS AND NOISE DATA

1. Introduction

This section gives data on the engine noise levels and the intake and exhaust dangerous areas during normal operations. This section is divided into the subsections that follow:

– Engine dangerous areas − engine intake and exhaust

– Airport and community noise data for powerplants

– Engine emission data

2. General

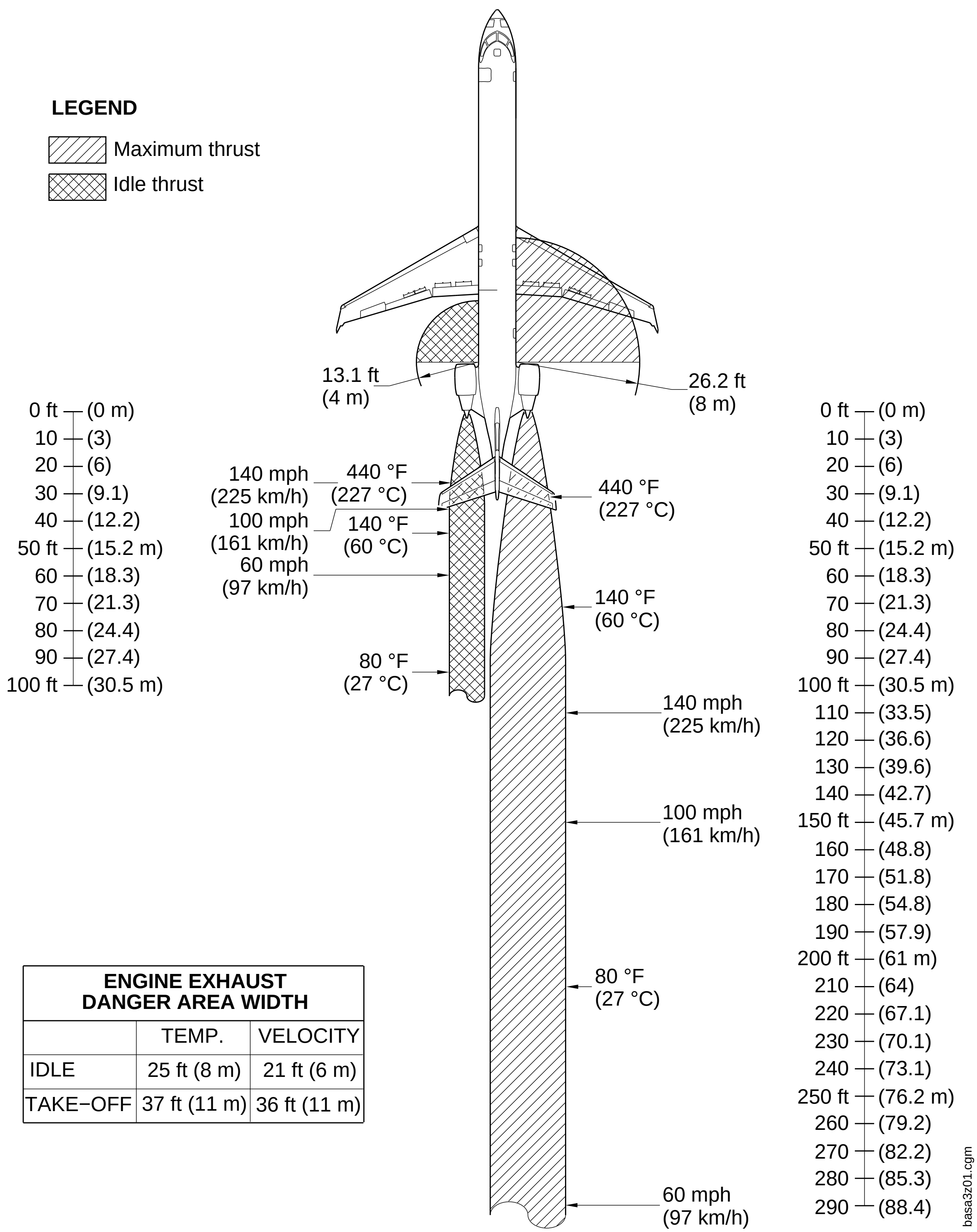
A. Aircraft operating conditions and noise are important to airport and community planners. While an airport is a major element in a community transportation system and is vital to its growth, it must also be accountable to the best interests of the neighborhood in which it is located. This can only be accomplished with proper planning. Because aircraft noise extends beyond the boundaries of the airport, it is important to consider the impact on surrounding communities located near the airport.

B. The CRJ Series aircraft is designed with advanced, quite, turbofan technology. Its noise impact is minimal compared to most commercial aircraft, larger and smaller, currently being operated in a typical airport.

3. Engine Dangerous Areas − Engine Intake and Exhaust

A. This section contains data on the engine intake and exhaust dangerous areas.

B. Refer to Figure 1 for the zones and distances that should be considered dangerous during engine operation.



ENGINE EXHAUST DANGER AREA WIDTH		
	TEMP.	VELOCITY
IDLE	25 ft (8 m)	21 ft (6 m)
TAKE−OFF	37 ft (11 m)	36 ft (11 m)

Engine Intake and Exhaust Danger Areas
Figure 1

**ON A/C 15001−15035, 15038−15039, 15042

4. Airport and Community Noise Data for Powerplants

A. The community noise levels must agree with FAR 36, Stage 3, ICAO Annex 16, Chapter 3, and CAM, Chapter 516.

B. Refer to Table 1a for the demonstrated effective perceived noise levels (EPNdB), limits, and the relative difference (margins) for Model CL−600−2D24, 80500 lb MTOW configuration.

C. Refer to Table 1b for the demonstrated effective perceived noise levels (EPNdB), limits, and the relative difference (margins) for Model CL−600−2D15 long range, 84500 lb MTOW configuration.

D. Refer to Table 2 for the Auxiliary Power Unit (APU) noise measurements.

Table 1a − Engine Noise Levels and Restrictions − 80500 lb MTOW − 73500 lb MLW

Engine Model (Takeoff Power Setting)	**GE CF34−8C5A1 − (NTO + 2%)**				**GE CF34−8C5 − (NTO)**			
Phase of Flight	**Takeoff/ Flyover**	**Sideline/ Lateral**	**Approach**	**Cumulative**	**Takeoff/ Flyover**	**Sideline/ Lateral**	**Approach**	**Cumulative**
Actual Noise Level (EPNdB)	84.34	91.05	93.47	268.9	84.42	90.73	93.47	268.62
AWM 516, ICAO Annex 16 Ch. 3, FAR 36 St. 3 Limits (EPNdB)	89.00	94.17	98.14	N/A	89.00	94.17	98.14	N/A
ICAO Annex 16 Ch. 4, Limits (EPNdB)				271.31				271.31
Margins	4.66	3.12	4.67	2.45	4.58	3.44	4.67	2.69

NOTE: The takeoff configuration is flaps setting 8, which corresponds to a 10 degree flap angle. The landing flap setting is 45 degrees. The approach noise levels were measured with the APU operating at normal power and the engine and APU bleeds on automatic bleed.

Table 1b − Engine Noise Levels and Restrictions − 84500 lb MTOW − 73500 lb MLW

Engine Model (Take−off Power Setting)	GE CF34−8C5A1 − (NTO + 2%)				GE CF34−8C5 − (NTO)			
Phase of Flight	Takeoff/ Flyover	Sideline/ Lateral	Approach	Cumulative	Takeoff/ Flyover	Sideline/ Lateral	Approach	Cumulative
Actual Noise Level (EPNdB)	85.60	90.95	93.47	269.96	85.70	90.62	93.47	269.73
AWM 516, ICAO Annex 16 Ch. 3, FAR 36 St. 3 Limits (EPNdB)	89.00	94.35	98.30	N/A	89.00	94.35	98.30	N/A
ICAO Annex 16 Ch. 4, Limits (EPNdB)				271.65				271.65
Margins	3.40	3.40	4.83	1.63	3.30	3.73	4.83	1.86

NOTE: The takeoff configuration is flaps setting 8, which corresponds to a 10 degree flap angle. The landing flap setting is 45 degrees. The approach noise levels were measured with the APU operating at normal power and the engine and APU bleeds on automatic bleed.

Table 2 − Auxiliary Power Unit (APU) Noise Measurements

Measurement Location	Corrected dB (A) Level with ECS at Maximum Cooling
Aft Lavatory Drain Port	86.0
Worst Case Perimeter Location*	84.0

* Worst case perimeter location is located on the right side of the aircraft at 65 feet, 8 inches from the centerline and 32 feet, 10 inches aft of the rudder trailing edge.

NOTE: Atmospheric conditions during the test: Barometric pressure: 975.3 hPa, relative humidity: 60.1−72.7%, outside temperature: 3.0−4.9 °C.

**ON A/C 15036−15037, 15040−15041, 15043−15990

5. Airport and Community Noise Data for Powerplants

A. The community noise levels must agree with FAR 36, Stage 3, ICAO Annex 16, Chapter 3, and CAM, Chapter 516.

B. Refer to Table 1a for the demonstrated effective perceived noise levels (EPNdB), limits, and the relative difference (margins) for Model CL−600−2D24 extended range, 82500 lb MTOW configuration.

C. Refer to Table 1b for the demonstrated effective perceived noise levels (EPNdB), limits, and the relative difference (margins) for Model CL−600−2D15 long range, 84500 lb MTOW configuration.

D. Refer to Table 2 for the Auxiliary Power Unit (APU) noise measurements.

Table 1a − Engine Noise Levels and Restrictions − 82500 lb MTOW − 73500 lb MLW

Engine Model (Takeoff Power Setting)	GE CF34−8C5A1 − (NTO + 2%)				GE CF34−8C5 − (NTO)			
Phase of Flight	**Takeoff/ Flyover**	**Sideline/ Lateral**	**Approach**	**Cumulative**	**Takeoff/ Flyover**	**Sideline/ Lateral**	**Approach**	**Cumulative**
Actual Noise Level (EPNdB)	84.95	91.01	93.47	269.38	85.33	90.67	93.47	269.19
AWM 516, ICAO Annex 16 Ch. 3, FAR 36 St. 3 Limits (EPNdB)	89.00	94.26	98.22	N/A	89.00	94.35	98.30	N/A
ICAO Annex 16 Ch. 4, Limits (EPNdB)				271.48				271.48
Margins	4.05	3.25	4.75	2.05	3.67	3.59	4.75	2.01
NOTE: The takeoff configuration is flaps setting 8, which corresponds to a 10 degree flap angle. The landing flap setting is 45 degrees. The approach noise levels were measured with the APU operating at normal power and the engine and APU bleeds on automatic bleed.								

Table 1b − Engine Noise Levels and Restrictions − 84500 lb MTOW − 73500 lb MLW

Engine Model (Take−off Power Setting)	GE CF34−8C5A1 − (NTO + 2%)				GE CF34−8C5 − (NTO)			
Phase of Flight	**Takeoff/ Flyover**	**Sideline/ Lateral**	**Approach**	**Cumulative**	**Takeoff/ Flyover**	**Sideline/ Lateral**	**Approach**	**Cumulative**
Actual Noise Level (EPNdB)	85.60	90.95	93.47	269.96	85.70	90.62	93.47	269.73
AWM 516, ICAO Annex 16 Ch. 3, FAR 36 St. 3 Limits (EPNdB)	89.00	94.35	98.30	N/A	89.00	94.35	98.30	N/A
ICAO Annex 16 Ch. 4, Limits (EPNdB)				271.65				271.65
Margins	3.40	3.40	4.83	1.63	3.30	3.73	4.83	1.86

NOTE: The takeoff configuration is flaps setting 8, which corresponds to a 10 degree flap angle. The landing flap setting is 45 degrees. The approach noise levels were measured with the APU operating at normal power and the engine and APU bleeds on automatic bleed.

Table 2 − Auxiliary Power Unit (APU) Noise Measurements

Measurement Location	Corrected dB (A) Level with ECS at Maximum Cooling
Aft Lavatory Drain Port	86.0
Worst Case Perimeter Location*	84.0

* Worst case perimeter location is located on the right side of the aircraft at 65 feet, 8 inches from the centerline and 32 feet, 10 inches aft of the rudder trailing edge.

NOTE: Atmospheric conditions during the test: Barometric pressure: 975.3 hPa, relative humidity: 60.1−72.7%, outside temperature: 3.0−4.9 °C.

6. Engine Emission Data

A. The engine emission data must agree with ICAO Annex 16, Volume 2, Part III, Appendix 3.

B. Refer to Table 3a for the CO, HC, and NOx emission data on CF34−8C5 engines.

C. Refer to Table 3b for the CO, HC, and NOx emission data on CF34−8C5A1 engines.

D. Refer to Table 4a for the smoke emission data on engine Model CF34−8C5.

E. Refer to Table 4b for the smoke emission data on engine Model CF34−8C5A1.

Table 3a − Engine Emission Data − Engine Model CF34−8C5

Type of Emission	Average Characteristic Emission Value (g/kN)	Maximum Allowable Average Emission Value (g/kN)
CO	42.8	118.0
HC	0.5	19.6
NOx	43.0	68.9
NOTE: The average characteristic emission values are given for single engine operation only.		

Table 3b − Engine Emission Data − Engine Model CF34−8C5A1

Type of Emission	Average Characteristic Emission Value (g/kN)	Maximum Allowable Average Emission Value (g/kN)
CO	41.5	118.0
HC	0.5	19.6
NOx	43.7	69.6
NOTE: The average characteristic emission values are given for single engine operation only.		

Table 4a − Engine Smoke Emission Data − Engine Model CF34−8C5

Type of Emission	Average Characteristic Smoke Number	Maximum Allowable Smoke Number
Smoke Number	10.7	27.3

Type of Emission	Average Characteristic Smoke Number	Maximum Allowable Smoke Number
NOTE: The average characteristic smoke number is given for single engine operation only.		

Table 4b − Engine Smoke Emission Data − Engine Model CF34−8C5A1

Type of Emission	Average Characteristic Smoke Number	Maximum Allowable Smoke Number
Smoke Number	12.8	27.2
NOTE: The average characteristic smoke number is given for single engine operation only.		

**ON A/C ALL

PAVEMENT DATA

1. Introduction

This section contains data about the pavement design specifications, including aircraft footprints, pavement loading during standard operations, and aircraft/pavement rating systems. Also given are the flotation classification for different weights, fixed tire pressure, and aft centre−of−gravity (CG), with two recommended methods: Load Classification Number (LCN) and Aircraft Classification Number (ACN). This section is divided into the subsections that follow:

– Pavement chart explanations

– Footprint, tire size and inflation pressure

– Flexible pavement requirements

– Rigid pavement requirements.

2. Pavement Chart Explanations

The pavement requirements for commercial aircraft come from the static analysis loads imposed on the main landing−gear wheels and tires through the shock struts.

NOTE: Make sure that all runways or pavements to be used meet these minimum LCN and ACN requirements.

A. The pavement data necessary for this aircraft are from the fixed analysis of the loads applied to the Main Landing Gear (MLG) struts. The MLG loads are put into Tables 1 to 4.

B. Refer to Figures 1 and 2 to find these loads through the stability limits of the aircraft (at rest on the pavement).

C. Refer to Airplane Flight Manual (CSP C−012) for the maximum permissible CG limits and find the approximate average MLG load per side. Enter the total aircraft weight in the aircraft Weight column at the applicable aircraft CG, and use the applicable multiplier to find the gear load.

D. Flexible pavement design data is based on procedures given in Instruction Report 77−1 “Procedures for Development of CBR Design Curves,” dated June 1977. This report was written for the U.S. Army Corps of Engineers. Also, “Airport Pavement Design and Evaluation” was revised to include the procedures given in FAA Advisory Circular 150/5320−6C dated December 7, 1978.

E. An aircraft will have two Load Classification Numbers (LCN) for any given weight and tire pressure. One for rigid pavement (usually concrete) and the second for flexible pavement (usually layered asphalt).

F. An aircraft will have eight Aircraft Classification Numbers (ACN) for any given weight and tire pressure. Four ACN numbers are given for flexible pavement, one for each subgrade strength. Another four ACN numbers are given for rigid pavement, one for each subgrade strength.

G. The ACN/PCN procedure shows that tire pressure makes a minimum change on the ACN. Unless an airport maximum−pressure is given, a decrease in the aircraft operating weight can make the ACN much better. Thus, operators can decrease the applicable ACN as necessary by a decrease in the aircraft operating weight, and not in the tire pressure.

H. The subgrade categories are divided as follows:

- High strength is characterized by k = 150 MN/m³ for rigid pavement and by CBR = 15 for flexible pavement.
- Medium strength is characterized by k = 80 MN/m³ for rigid pavement and by CBR = 10 for flexible pavement.
- Low strength is characterized by k = 40 MN/m³ for rigid pavement and by CBR = 6 for flexible pavement.
- Ultra low strength is characterized by k = 20 MN/m³ for rigid pavement and by CBR = 3 for flexible pavement.

I. An aircraft with an ACN equal to or less than the reported Pavement Classification Number (PCN) for a given airport can operate without restrictions.

J. Tables 1 and 2 show the LCN and ACN load data, the Equivalent Single−Wheel Load (ESWL) compared to the pavement thickness for flexible pavement. Tables 3 and 4 show the LCN and ACN load data for the loads against the radius of relative stiffness for rigid pavements.

Main Gear Load (Approx. Average)										
A/C C.G.		Multiplier	MLG Load (per side − lb)					A/C Weight	MLG Load	Comment
MAC	X−Arm		A/C Weight (lb)					(lb)	(per side)	
(%)	(inch)		50000	60000	70000	80000	85000		(lb)	
6	841.24	0.450	22500	27000	31500	36000	38250			
7	842.42	0.451	22550	27060	31570	36080	38335			
8	843.75	0.452	22600	27120	31640	36160	38420			
9	845.09	0.453	22650	27180	31710	36240	38505			
10	846.42	0.454	22700	27240	31780	36320	38590			
11	847.75	0.455	22750	27300	31850	36400	38675			
12	849.08	0.456	22800	27360	31920	36480	38760			
13	850.41	0.457	22850	27420	31990	36560	38845			
14	851.75	0.458	22900	27480	32060	36640	38930			
15	853.08	0.459	22950	27540	32130	36720	39015			
16	854.41	0.460	23000	27600	32200	36800	39100			
17	855.74	0.461	23050	27660	32270	36880	39185			
18	857.07	0.462	23100	27720	32340	36960	39270			
19	858.41	0.463	23150	27780	32410	37040	39355			
20	859.74	0.463	23150	27780	32410	37040	39355			
21	861.07	0.464	23200	27840	32480	37120	39440			
22	862.40	0.465	23250	27900	32550	37200	39525			
23	863.73	0.466	23300	27960	32620	37280	39610			
24	865.06	0.467	23350	28020	32690	37360	39695			
25	866.40	0.468	23400	28080	32760	37440	39780			
26	867.73	0.469	23450	28140	32830	37520	39865			
27	869.06	0.470	23500	28200	32900	37600	39950			
28	870.39	0.471	23550	28260	32970	37680	40035			
29	871.72	0.472	23600	28320	33040	37760	40120			
30	873.06	0.473	23650	28380	33110	37840	40205			
31	874.39	0.474	23700	28440	33180	37920	40290			
32	875.72	0.475	23750	28500	33250	38000	40375			
33	877.05	0.476	23800	28560	33320	38080	40460			
34	878.38	0.477	23850	28620	33390	38160	40545			CAUTION: Towing NOT Allowed When less than 2000 lb on Nose Landing Gear
35	879.71	0.478	23900	28680	33460	38240	40630			
36	881.05	0.479	23950	28740	33530	38320	40715			
37	882.38	0.480	24000	28800	33600	38400	40800			
38	883.71	0.481	24050	28860	33670	38480	40885			
39	885.04	0.482	24100	28920	33740	38560	40970			
40	886.37	0.483	24150	28980	33810	38640	41055			
41	887.71	0.484	24200	29040	33880	38720	41140			
42	889.04	0.485	24250	29100	33950	38800	41225			
43	890.37	0.486	24300	29160	34020	38880	41310			
44	891.70	0.487	24350	29220	34090	38960	41395			
45	893.03	0.488	24400	29280	34160	39040	41480			
46	894.37	0.489	24450	29340	34230	39120	41565			
47	895.70	0.490	24500	29400	34300	39200	41650			
48	897.03	0.491	24550	29460	34370	39280	41735			
49	898.36	0.492	24600	29520	34440	39360	41820			* DANGER of Tip Over (Nose WOW < 500 lb)
50	899.69	0.493	24650	29580	34510	39440	41905			
51	901.02	0.494	24700	29640	34580	39520	41990			
52	902.36	0.495	24750 *	29700	34650	39600	42075			
53	903.69	0.496	24800 *	29760 *	34720	39680	42160			
54	905.02	0.497	24850 *	29820 *	34790 *	39760 *	42245			
55	906.35	0.498	24900 *	29880 *	34860 *	39840 *	42330 *			
56	907.68	0.499	24950 *	29940 *	34930 *	39920 *	42415 *			

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Center of Gravity Limits − Main Landing Gear
Figure 1

Nose Gear Load (Approx. Average)										
A/C C.G.		Multiplier	NLG Load (per side − lb)					A/C Weight	NLG Load	Comment
MAC	X−Arm		A/C Weight (lb)					(lb)	(per side)	
(%)	(inch)		50000	60000	70000	80000	85000		(lb)	
6	841.09	0.100	5000	6000	7000	8000	8500			
7	842.42	0.098	4900	5880	6860	7840	8330			
8	843.75	0.096	4800	5760	6720	7680	8160			
9	845.09	0.095	4750	5700	6650	7600	8075			
10	846.42	0.093	4650	5580	6510	7440	7905			
11	847.75	0.091	4550	5460	6370	7280	7735			
12	849.08	0.089	4450	5340	6230	7120	7565			
13	850.41	0.087	4350	5220	6090	6960	7395			
14	851.75	0.085	4250	5100	5950	6800	7225			
15	853.08	0.083	4150	4980	5810	6640	7055			
16	854.41	0.081	4050	4860	5670	6480	6885			
17	855.74	0.079	3950	4740	5530	6320	6715			
18	857.07	0.077	3850	4620	5390	6160	6545			
19	858.41	0.075	3750	4500	5250	6000	6375			
20	859.74	0.073	3650	4380	5110	5840	6205			
21	861.07	0.071	3550	4260	4970	5680	6035			
22	862.40	0.069	3450	4140	4830	5520	5865			
23	863.73	0.067	3350	4020	4690	5360	5695			
24	865.06	0.065	3250	3900	4550	5200	5525			
25	866.40	0.063	3150	3780	4410	5040	5355			
26	867.73	0.061	3050	3660	4270	4880	5185			
27	869.06	0.059	2950	3540	4130	4720	5015			
28	870.39	0.057	2850	3420	3990	4560	4845			
29	871.72	0.055	2750	3300	3850	4400	4675			
30	873.06	0.053	2650	3180	3710	4240	4505			
31	874.39	0.052	2600	3120	3640	4160	4420			
32	875.72	0.050	2500	3000	3500	4000	4250			
33	877.05	0.048	2400	2880	3360	3840	4080			
34	878.38	0.046	2300	2760	3220	3680	3910			CAUTION: Towing NOT Allowed When less than 2000 lb on Nose Landing Gear
35	879.71	0.044	2200	2640	3080	3520	3740			
36	881.05	0.042	2100	2520	2940	3360	3570			
37	882.38	0.040	2000	2400	2800	3200	3400			
38	883.71	0.038	1900	2280	2660	3040	3230			
39	885.04	0.036	1800	2160	2520	2880	3060			
40	886.37	0.034	1700	2040	2380	2720	2890			
41	887.71	0.032	1600	1920	2240	2560	2720			
42	889.04	0.030	1500	1800	2100	2400	2550			
43	890.37	0.028	1400	1680	1960	2240	2380			
44	891.70	0.026	1300	1560	1820	2080	2210			
45	893.03	0.024	1200	1440	1680	1920	2040			
46	894.37	0.022	1100	1320	1540	1760	1870			
47	895.70	0.020	1000	1200	1400	1600	1700			
48	897.03	0.018	900	1080	1260	1440	1530			
49	898.36	0.016	800	960	1120	1280	1360			* DANGER of Tip Over (Nose WOW < 500 lb)
50	899.69	0.014	700	840	980	1120	1190			
51	901.02	0.012	600	720	840	960	1020			
52	902.36	0.010	500 *	600	700	800	850			
53	903.69	0.008	400 *	480 *	560	640	680			
54	905.02	0.007	350 *	420 *	490 *	560	595			
55	906.35	0.005	250 *	300 *	350 *	400 *	425 *			
56	907.68	0.003	150 *	180 *	210 *	240 *	255 *			

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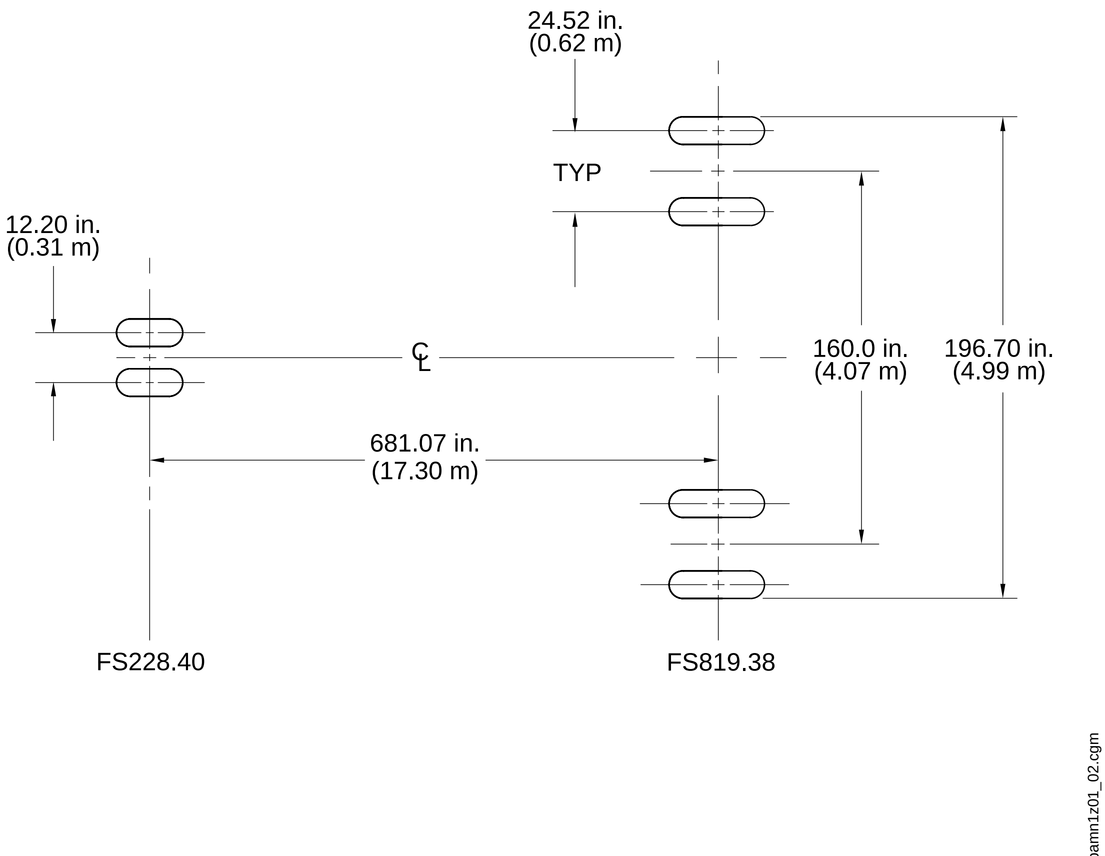
Center of Gravity Limits − Nose Landing Gear
Figure 2

3. Footprint, Tire Size and Inflation Pressure

A. This section defines the flotation classification for different weights, fixed tire pressure, and aft CG, with two recommended methods: LCN and ACN classification systems.

B. Refer to Figure 3 for the aircraft footprint, tire size and inflation pressure.

TIRE TYPE :	NOSE : H20.5 x 6.75 − 10 12 PR
	MAIN : H36 x 12.0 − 18 18 PR
UNLOADED TIRE PRESSURE :	NOSE: 143 psi
	MAIN : 162 psi
MAIN GEAR CONFIGURATION : DUAL WHEEL	



Footprint, Tire Size and Inflation Pressure
Figure 3

4. Flexible Pavement Requirements

A. The pavement data necessary for this aircraft are from the fixed analysis of the loads applied to the Main Landing Gear (MLG) struts. Refer to Figures to find these loads through the stability limits of the aircraft (at rest on the pavement). The MLG loads are put into the pavement design tables (Table 1 and Table 2).

B. Flexible pavement design−data is based on procedures set out in Instruction Report 77 −1 "Procedures for Development of CBR Design Curves" dated June 1977. This report was written for the U.S. Army Corps of Engineers. Also, "Airport Pavement Design and Evaluation" changed to include the procedures given in FAA Advisory Circular 150/5320−6C dated December 7, 1978.

C. An aircraft will have two Load Classification Numbers (LCN) for any given weight and tire pressure. One for rigid pavement (usually concrete) and the second for flexible pavement (usually layered asphalt).

D. The tables show the LCN and loads, and the Equivalent Single−Wheel Load (ESWL) compared to the pavement thickness for flexible pavement.

E. Refer to Airplane Flight Manual (CSP C−012) for the maximum permissible CG limits and find the approximate average MLG load per side. Enter the total aircraft weight in the aircraft Weight column at the applicable aircraft CG, and use the applicable multiplier to find the gear load.

F. Refer to Table 1 for the LCN Flexible Pavement data.

G. Refer to Table 2 for the ACN Flexible Pavement data.

H. The data included in the tables that follow is related to the International Civil Aviation Organization (ICAO) Document No. 9157−AN/901, Aerodrome Design Manual (Part 3 − Pavement), Second Edition 1983.

Table 1 − LCN Flexible Pavement

Aircraft Weight	Pavement Thickness							
	10 in.		15 in.		20 in.		30 in.	
	0.25 m		0.38 m		0.51 m		0.76 m	
	ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
82500 lb (37421 kg)	21816 lb (9896 kg)	32.5	25344 lb (11496 kg)	37.5	28188 lb (12786 kg)	42.5	32746 lb (14853 kg)	50
85000 lb (38555 kg)	21950 lb (9956 kg)	32.7	25495 lb (11564 kg)	37.7	28355 lb (12862 kg)	42.8	32940 lb (14941 kg)	50.3

Table 2 − ACN Flexible Pavement

Aircraft Weight	Subgrade Categories			
	Ultra Low Strength CBR=3	Low Strength CBR=6	Medium Strength CBR=10	High Strength CBR=15
	ACN	ACN	ACN	ACN
82500 lb (37421 kg)	26.01	23.38	20.64	19.72
85000 lb (38555 kg)	26.2	23.5	20.7	19.9

I. If the aircraft LCN for weight, tire pressure, and pavement (relative stiffness of thickness) is not more than 10% above the published pavement LCN, then the aircraft is allowed “unlimited” use of a runway.

J. If the aircraft LCN is not in the limits, the aircraft can be considered for occasional use.

5. Rigid Pavement Requirements

A. The pavement data necessary for this aircraft are from the fixed analysis of the loads applied to the Main Landing Gear (MLG) struts. Refer to Figures to find these loads through the stability limits of the aircraft (at rest on the pavement). The MLG loads are put into the pavement design tables (Table 3 and Table 4).

B. An aircraft will have two Load Classification Numbers (LCN) for any given weight and tire pressure. One for rigid pavement (usually concrete) and the second for flexible pavement (usually layered asphalt).

C. The tables show the LCN and loads against the radius of relative−stiffness for rigid pavements.

D. Refer to Airplane Flight Manual (CSP C−012) for the maximum permissible CG limits and find the approximate average MLG load per side. Enter the total aircraft weight in the aircraft Weight column at the applicable aircraft CG, and use the applicable multiplier to find the gear load.

E. Refer to Table 3 for the LCN Rigid Pavement data.

F. Refer to Table 4 for the ACN Rigid Pavement data.

G. The data included in the tables that follow is related to the International Civil Aviation Organization (ICAO) Document No. 9157−AN/901, Aerodrome Design Manual (Part 3 − Pavement), Second Edition 1983.

Table 3 − LCN Rigid Pavement

Aircraft Weight	Tire Pressure	Radius of Relative Stiffness					
		30 in.		40 in.		50 in.	
		0.76 m		1.02 m		1.27 m	
		ESWL	LCN	ESWL	LCN	ESWL	LCN
82500 lb (37421 kg)	167 psi (1151 kPa)	28664 lb (13002 kg)	43	30208 lb (13702 kg)	45	31167 lb (14137 kg)	47
85000 lb (38555 kg)	168 psi (1158 kPa)	28835 lb (13079 kg)	43.3	30390 lb (13785 kg)	45.3	31250 lb (14175 kg)	47.3

Table 4 − ACN Rigid Pavement

Aircraft Weight	Subgrade Categories							
	Ultra Low Strength K=20 N/m³		Low Strength K=40 N/m³		Medium Strength K=80 N/m³		High Strength K=150 N/m³	
	Pavement Thickness	ACN	Pavement Thickness	ACN	Pavement Thickness	ACN	Pavement Thickness	ACN
82500 lb (37421 kg)	10.04 in. (255.01 mm)	25.9	9.45 in. (240.03 mm)	24.9	8.82 in. (224.02 mm)	23.7	8.19 in. (208.02 mm)	22.7
85000 lb (38555 kg)	10.08 in. (256.03 mm)	26.0	9.46 in. (240.28 mm)	25.0	8.84 in. (224.53 mm)	23.8	8.21 in. (208.53 mm)	22.8

H. If the aircraft LCN for weight, tire pressure, and pavement (relative stiffness of thickness) is not more than 10% above the published pavement LCN, then the aircraft is allowed “unlimited” use of a runway.

I. If the aircraft LCN is not in the limits, the aircraft can be considered for occasional use.

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**ON A/C ALL

DERIVATIVE AIRCRAFT

1. General

A. The aircraft Models CL−600−2D15 and CL−600−2D24 are the most recent additions to the Canadair Regional Jet family. They are the derivatives of the Canadair Regional Jet Model CL−600−2C10.

B. The CL−600−2D15 and CL−600−2D24 can accommodate 74 and 86 passengers in addition to the crew.

C. For more information on airport planning for these models, refer to Airport Planning Manual (CSP C−020) or contact Bombardier Aerospace Regional Aircraft.

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**ON A/C ALL

SCALED DRAWINGS

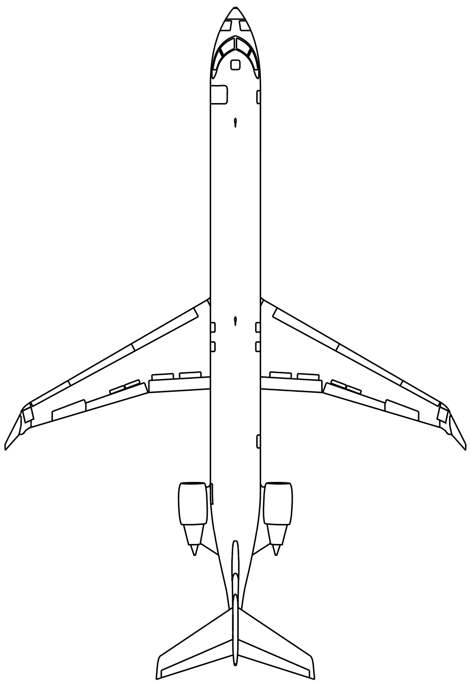
1. General

A. This section contains the scaled drawings. They can be used to plan and verify runway, ramp, and maintenance facility layouts.

B. Refer to Figure 1 for the US Standard scaled drawing.

C. Refer to Figure 2 for the Metric scaled drawing.

SCALE
1 INCH = 32 FEET



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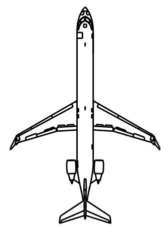
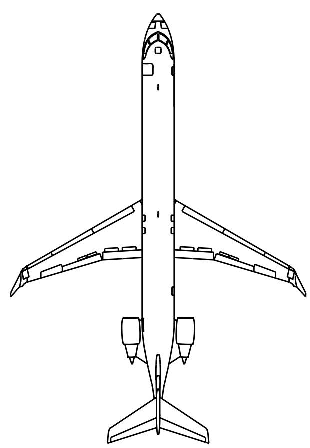


SCALE
1 INCH = 50 FEET



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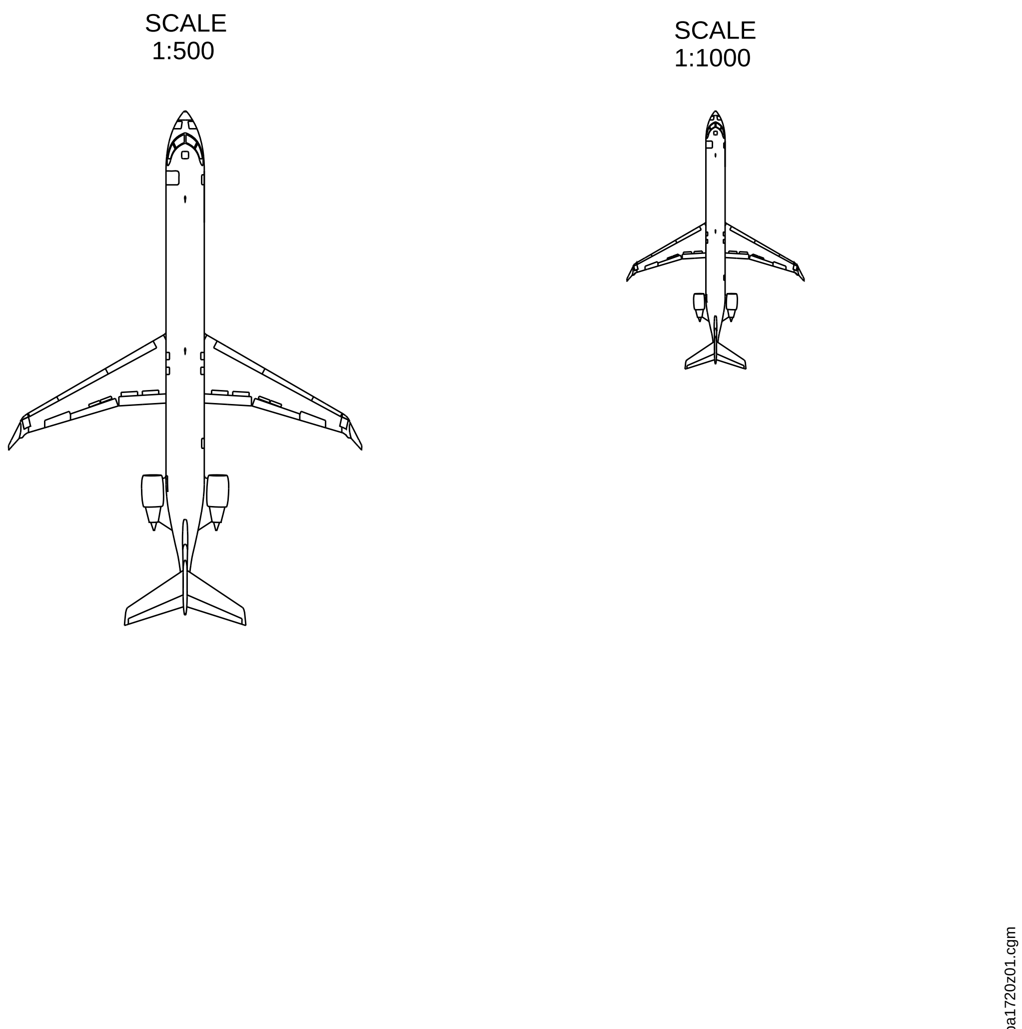
Scaled Drawing − US Standard
Figure 1



Scaled Drawing − Metric
Figure 2

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