

PRELIMINARY

747-8

Airport Compatibility



November 2005

Specific airport compatibility questions concerning commercial aircraft should be forwarded to:

Airport Technology

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Voice 1-425-237-0126, Fax 1-425-237-8281

E-mail: AirportTechnology@Boeing.com

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Introduction

This brochure provides airport compatibility data for the 747-8 Family. This information is intended solely for airport planning purposes. All information in this brochure is preliminary and may change during development and testing.

The 747-8 is the latest derivative of the 747 family of airplanes and is being developed in both passenger and freighter versions. Based upon the 747-400, the passenger version is stretched 140 inches (356 cm) and has a higher gross weight, 960,000 lb (435,449 Kg) MTOW. These changes will increase the passenger count to approximately 450 and the design range to approximately 8,000 NMi. The freighter version stretches the 747-400ER Freighter 220 inches (559 cm), increasing revenue payload almost 40,000 lbs (18 metric tonnes). To improve performance and reduce noise and emissions, the 747-8 will use the new quiet, efficient GEnx engines being developed for the 787. Further noise and performance improvements are due to changes to the 747-400 wing, including raked wingtips. These combined improvements will lower noise, reduce fuel burn and operating costs, and allows the 747-8 to continue to be the fastest flying aircraft (Mach .855). The raked wingtip will increase the 747's wingspan from today's 213 feet (64.9 meters) to 224 feet 7 inches (68.5 meters) jig position. The 747-8 will see noise reductions in both takeoff and approach, compared to today's 747-400s. The 747-8 will enter into service in 2009.

General Airplane Characteristics

747-8 Intercontinental

CHARACTERISTICS	UNITS	747-400	747-400ER	747-8
MAX DESIGN TAXI WEIGHT	POUNDS	878,000	913,000	963,000
	KILOGRAMS	398,254	414,130	436,809
MAX DESIGN TAKEOFF WEIGHT	POUNDS	875,000	910,000	960,000
	KILOGRAMS	396,893	412,769	435,449
MAX DESIGN LANDING WEIGHT	POUNDS	652,000	581,000 / 652,000 ⁽³⁾	652,000
	KILOGRAMS	295,742	263,537 / 295,742	295,742
MAX DESIGN ZERO FUEL WEIGHT	POUNDS	555,000	542,000 / 555,000 ⁽³⁾	610,000
	KILOGRAMS	251,744	245,847 / 251,744	276,691
MAX STRUCTURAL PAYLOAD	POUNDS	156,200	136,700 / 148,100 ⁽³⁾	161,100
	KILOGRAMS	70,851	62,006 / 67,177	73,074
SEATING CAPACITY	THREE-CLASS	416	416	450
		23FC + 80 BC + 313 EC	23FC + 80 BC + 313 EC	24 FC + 85 BC + 341 EC
MAX CARGO		30 LD-1 OR 5 96" PALLETS + 14 LD-1	1 BODY TANK + 28 LD-1 OR 4 96" PALLETS + 14 LD1 OR 2 BODY TANKS + 24 LD-1	18 LD-1/LD-3 + 18 LD-1/LD-3 OR 6 96" PALLETS + 18 LD-1/LD-3
MAXIMUM FUEL CAPACITY	US GALLONS	57,065 ⁽²⁾	60,305 ⁽³⁾ / 63,545 ⁽³⁾	60,171 ⁽⁴⁾
	LITERS	216,014	228,279 / 240,544	227,772

NOTES:

- (1) INCLUDES CUSTOMER OPTIONS ALLOWANCE (3,600 LB); GE ENGINES; NO IFE ALLOWANCE
- (2) INCLUDES TAIL FUEL, GE ENGINES
- (3) BASIC (1 AUX TANK) / MAX (2 AUX TANKS)
- (4) INCLUDES 3,300 GAL TAIL FUEL, 787 ENGINES

General Airplane Characteristics

747-8 Freighter

CHARACTERISTICS	UNITS	747-400F	747-400ERF	747-8
MAX DESIGN TAXI WEIGHT	POUNDS	878,000	913,000	963,000
	KILOGRAMS	398,254	414,130	436,809
MAX DESIGN TAKEOFF WEIGHT	POUNDS	875,000	910,000	960,000
	KILOGRAMS	396,893	412,769	435,449
MAX DESIGN LANDING WEIGHT	POUNDS	652,000 ⁽¹⁾	653,000 ⁽¹⁾	742,000
	KILOGRAMS	295,742	296,196	336,566
MAX DESIGN ZERO FUEL WEIGHT	POUNDS	610,000 ⁽²⁾	611,000 ⁽²⁾	702,000
	KILOGRAMS	276,691	277,145	318,422
MAX STRUCTURAL PAYLOAD	POUNDS	248,300	248,600 ⁽⁴⁾	295,200
	KILOGRAMS	112,627	112,763	133,900
MAX CARGO	CUBIC FEET	27,467	27,467	29,426
	CUBIC METERS	777.8	777.8	833.3
MAXIMUM FUEL CAPACITY	US GALLONS	53,765 ⁽³⁾	53,765 ⁽³⁾	56,871 ⁽⁵⁾
	LITERS	203,523	203,523	215,280

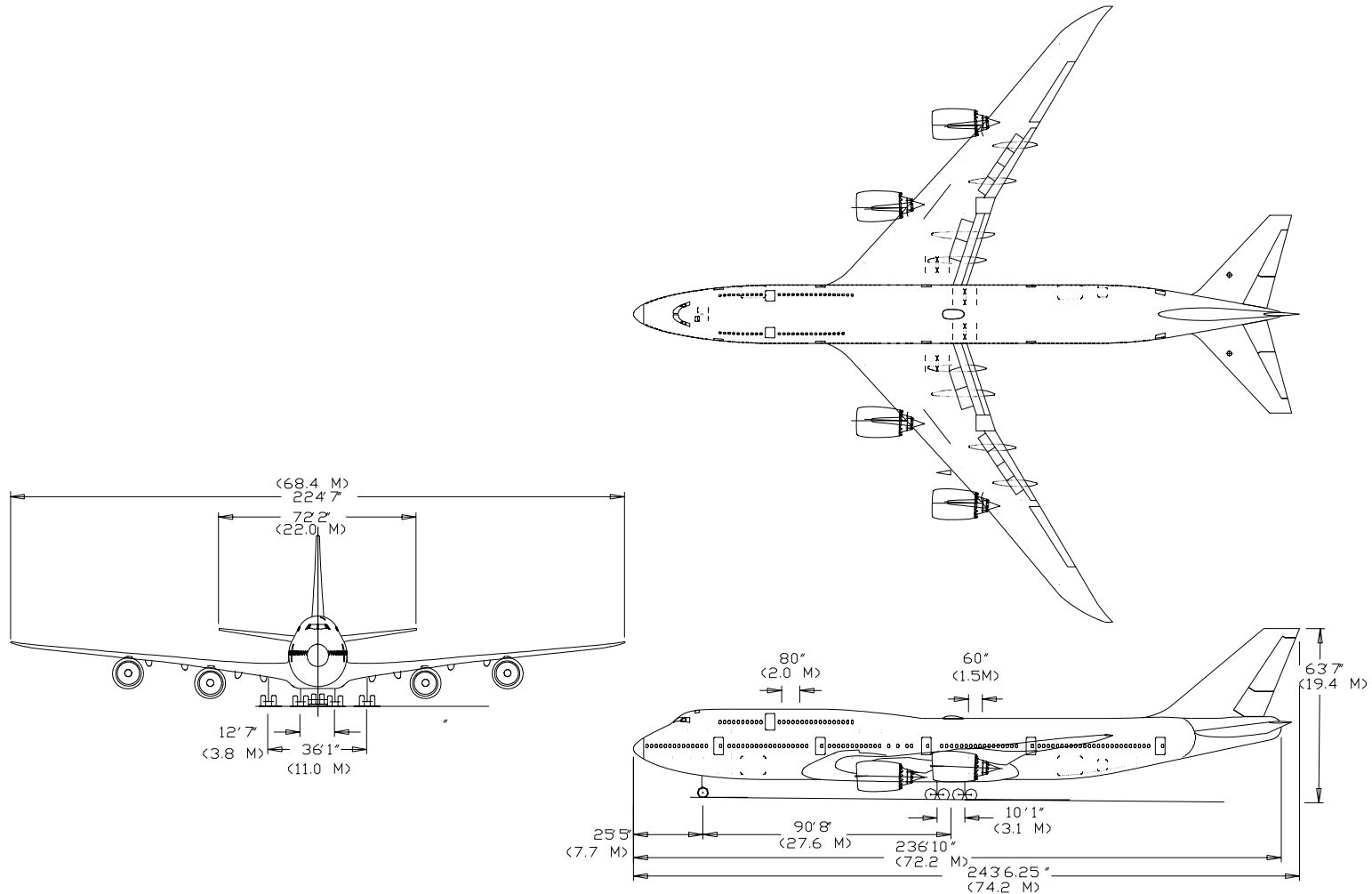
NOTES:

- (1) OPTION FOR 666,000 LB (302,093 KG)
- (2) OPTION FOR 635,000 (288,031 KG) ONLY WITH 811,000 (367,863 KG) MTOW
- (3) GE ENGINES
- (4) OPTION FOR 272,600 LB (123,649 KG) ONLY WITH 811,000 LB (367,863 KG) MTOW.
- (5) NEW 787 ENGINES

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General Arrangement

747-8 Intercontinental



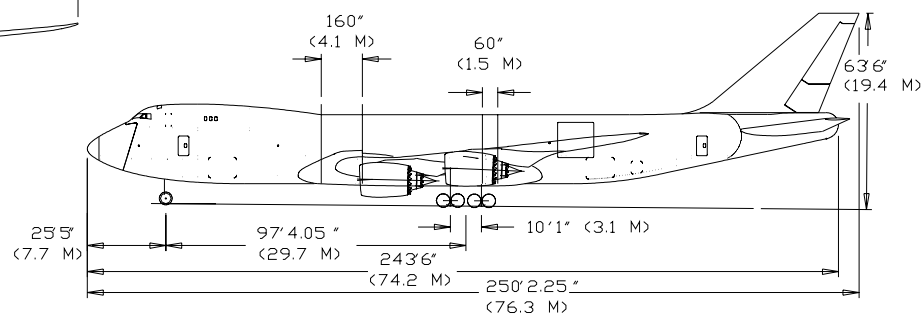
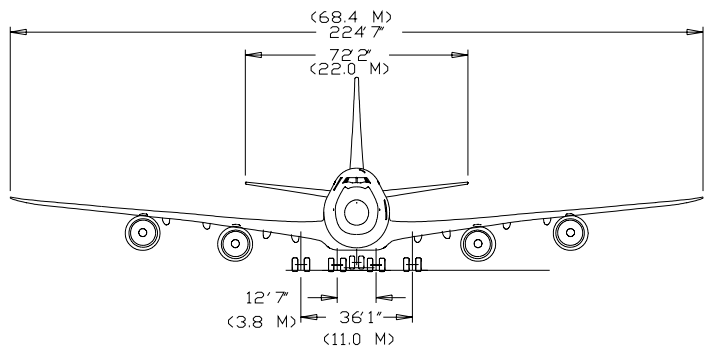
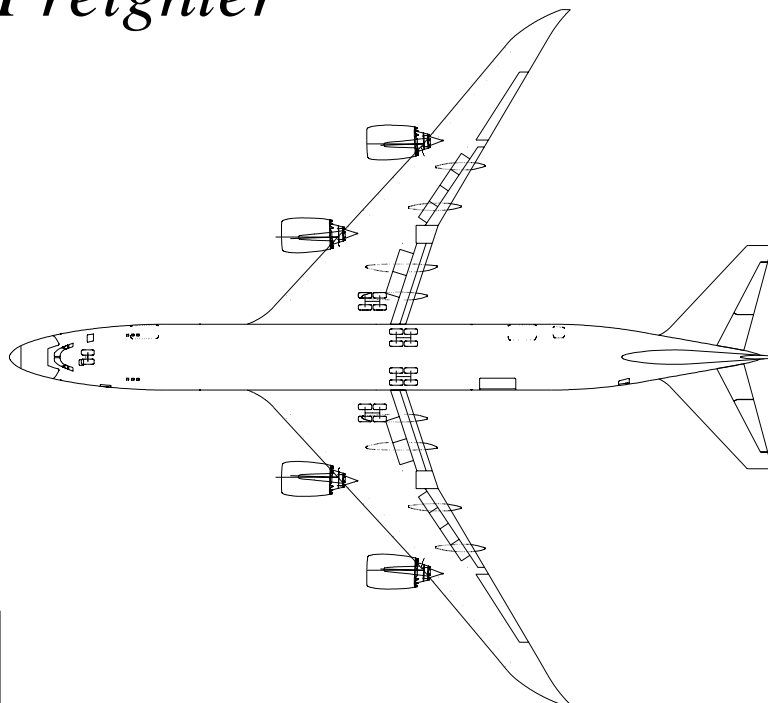
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General Arrangement

747-8 Freighter



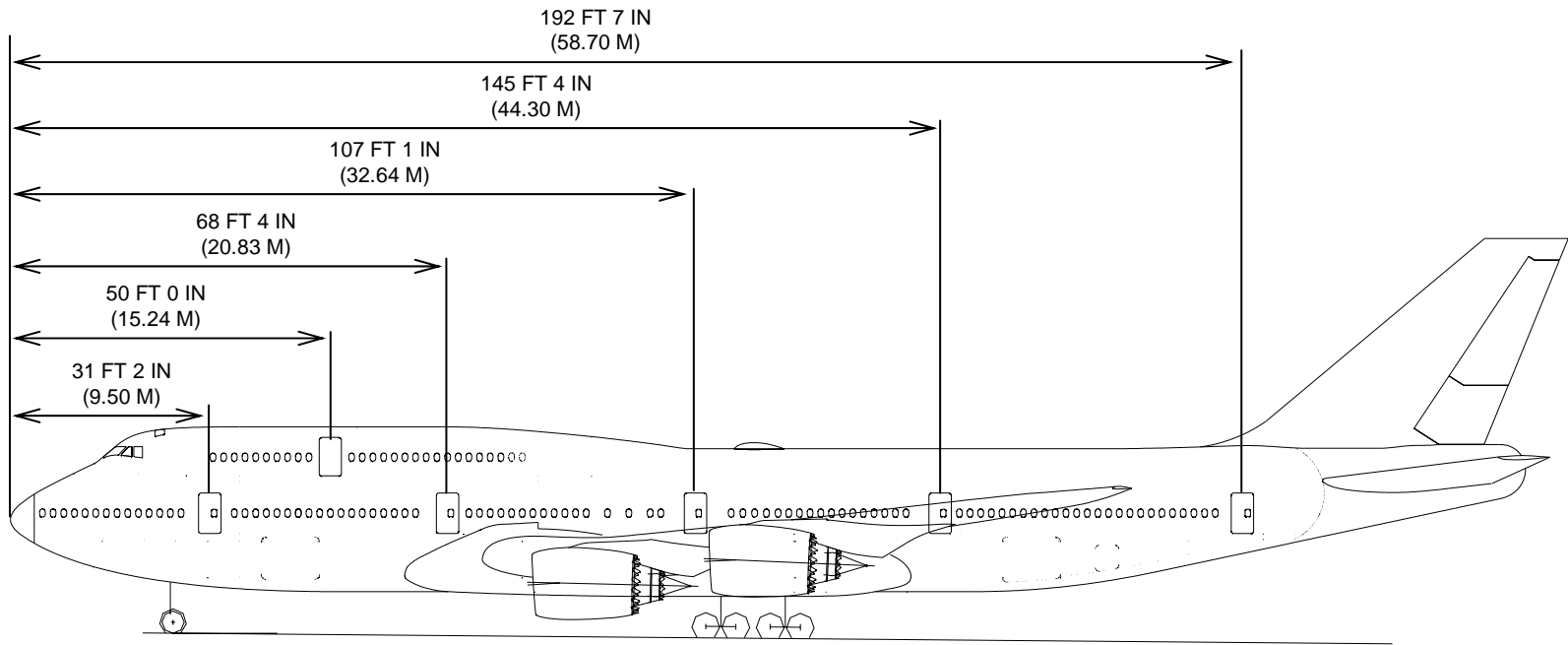
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Door Locations

747-8 Intercontinental



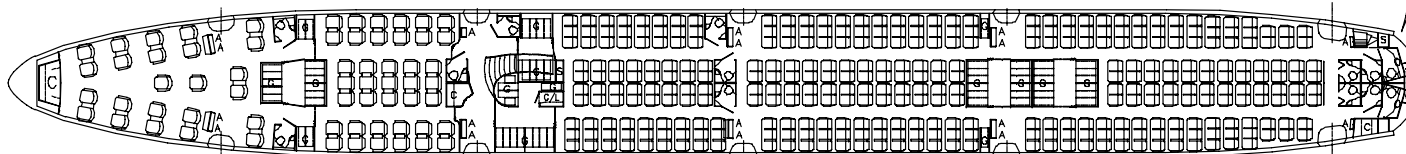
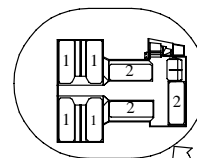
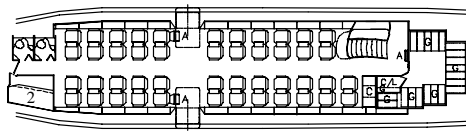
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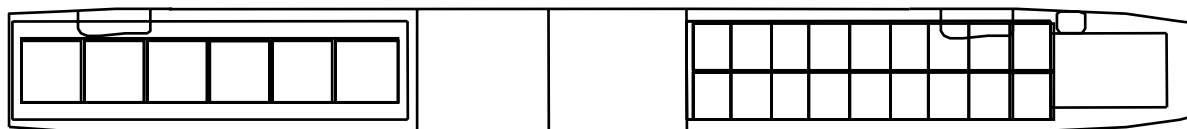
Interior Arrangement

747-8 Intercontinental

747-8
24 first
85 business
341 economy



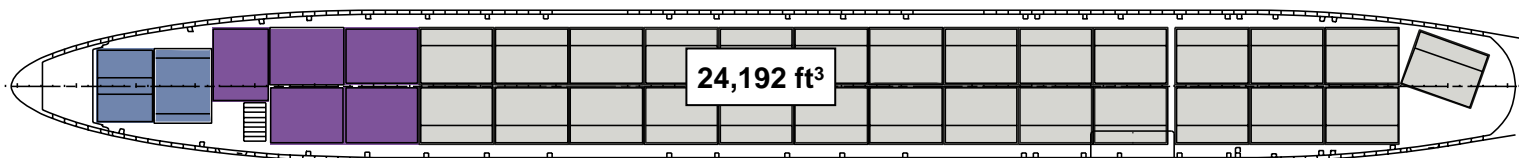
450 passengers



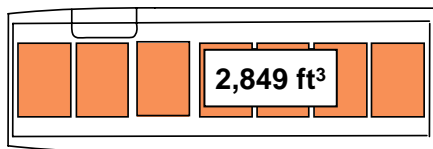
Interior Arrangement

747-8 Freighter

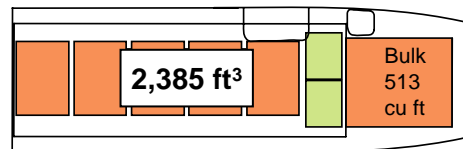
Main deck



34 pallets



Forward lower lobe



Aft lower lobe

- (27) 96-in x 125-in contoured pallets (740 ft³)
- (5) 96-in x 125-in x 8-ft contoured pallets (613 ft³)
- (2) 96-in x 125-in x 8-ft contoured pallets (540 + 607 ft³)
- (12) 96-in x 125-in contoured pallets (407 ft³)
- (2) LD-1/3 containers (175 ft³)

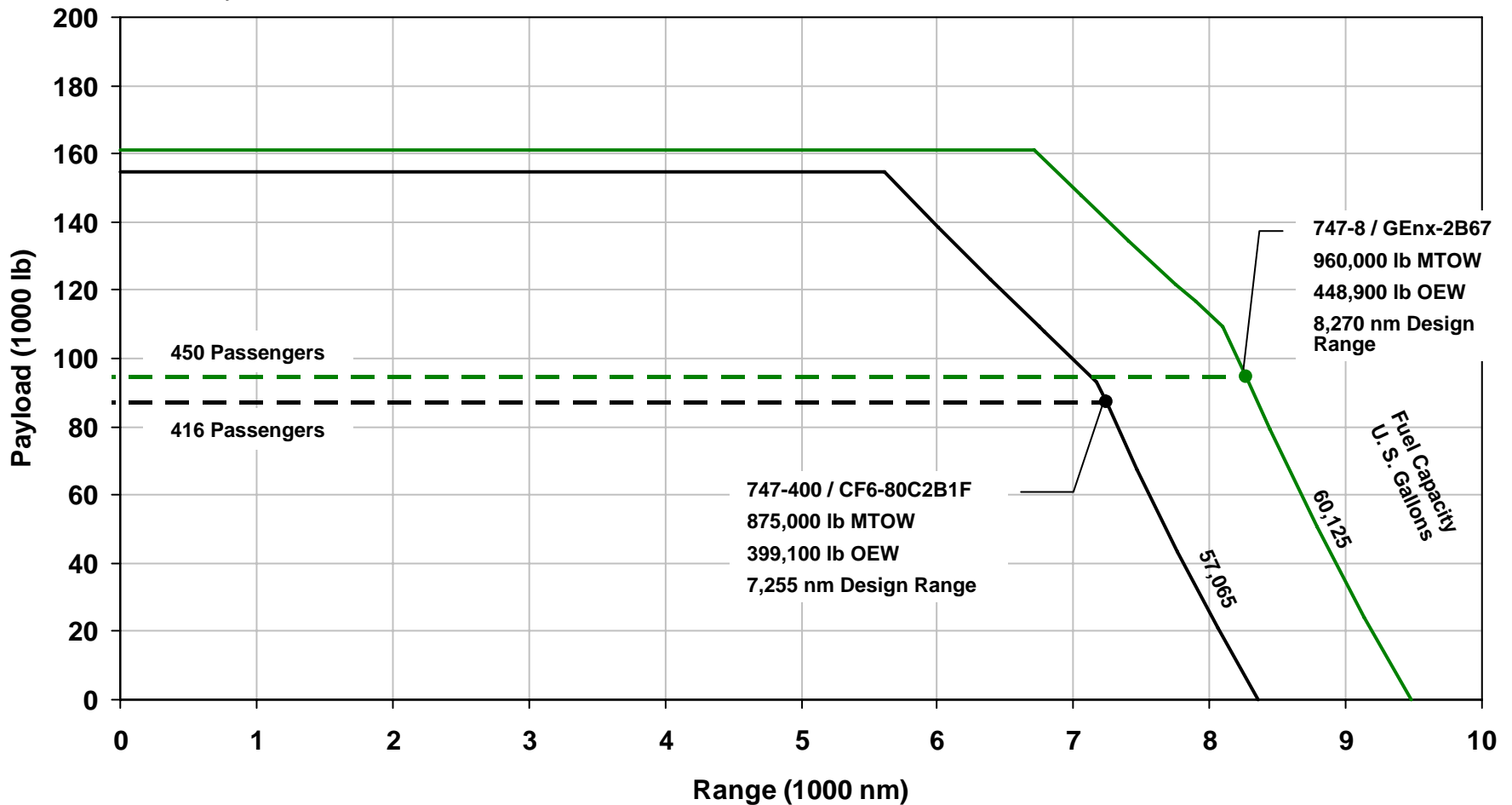
Total volume* = 29,426 ft³ (833 m³)

* Excludes bulk cargo

Payload Range Capability

747-8 Intercontinental

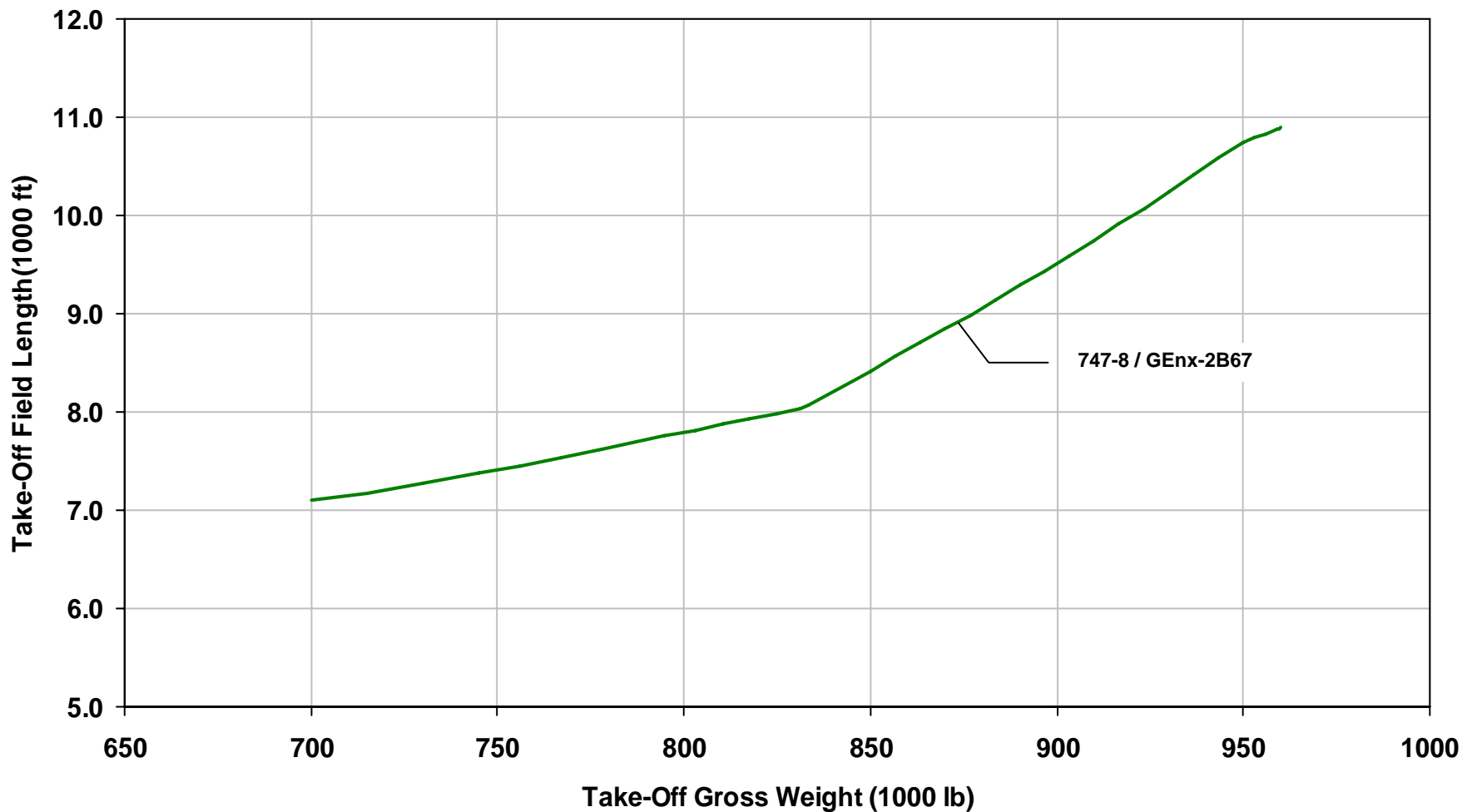
- Typical Mission Rules
- Nominal Fuel Flow
- Standard Day
- Passenger Allowance: 210 lb / pax
- Fuel Density: 6.7 lb / USG



Take-off Field Length

747-8 Intercontinental

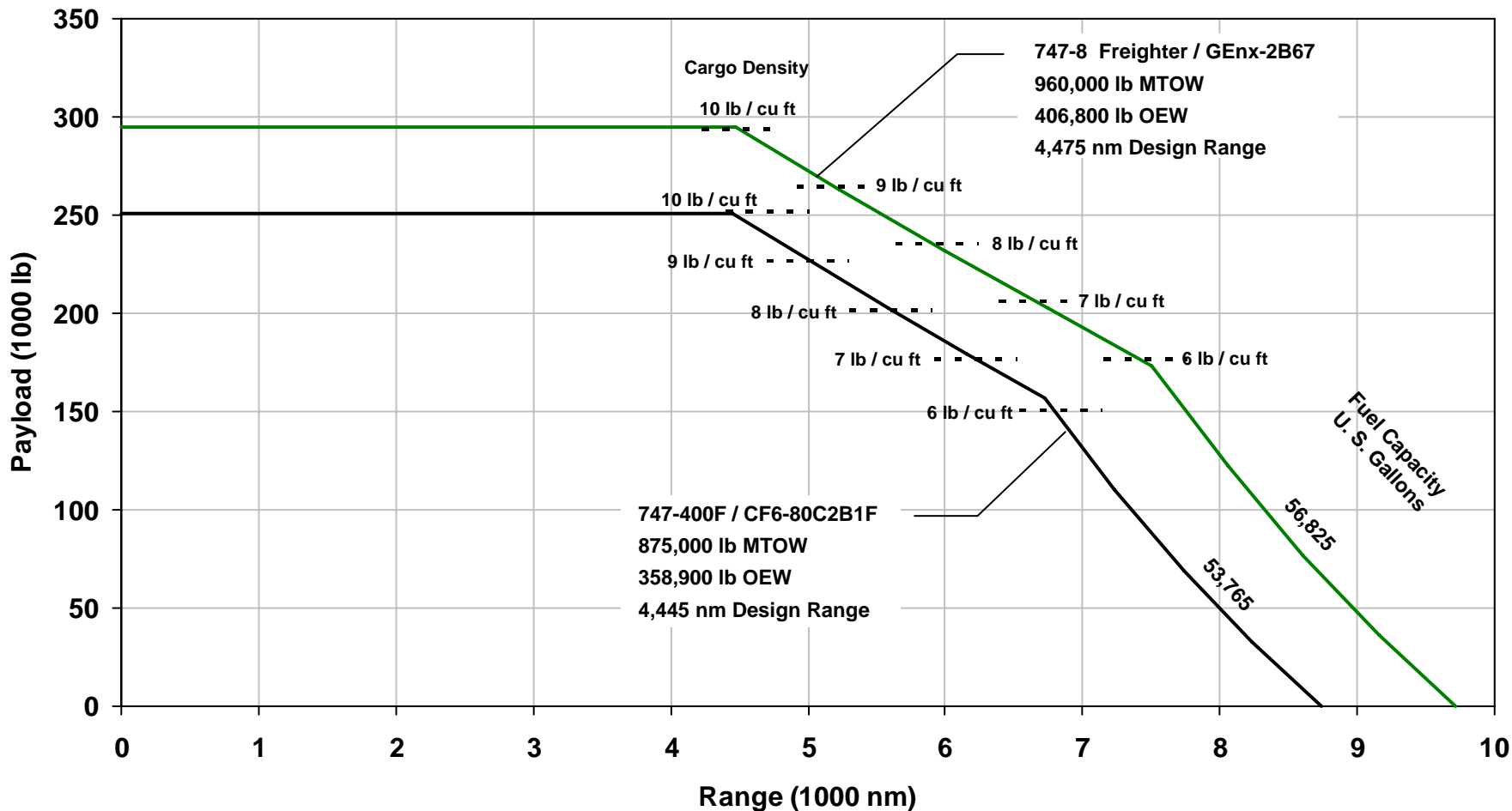
- Sea Level
- ISA+27F (15C)
- Optimum Take-Off



Payload Range Capability

747-8 Freighter

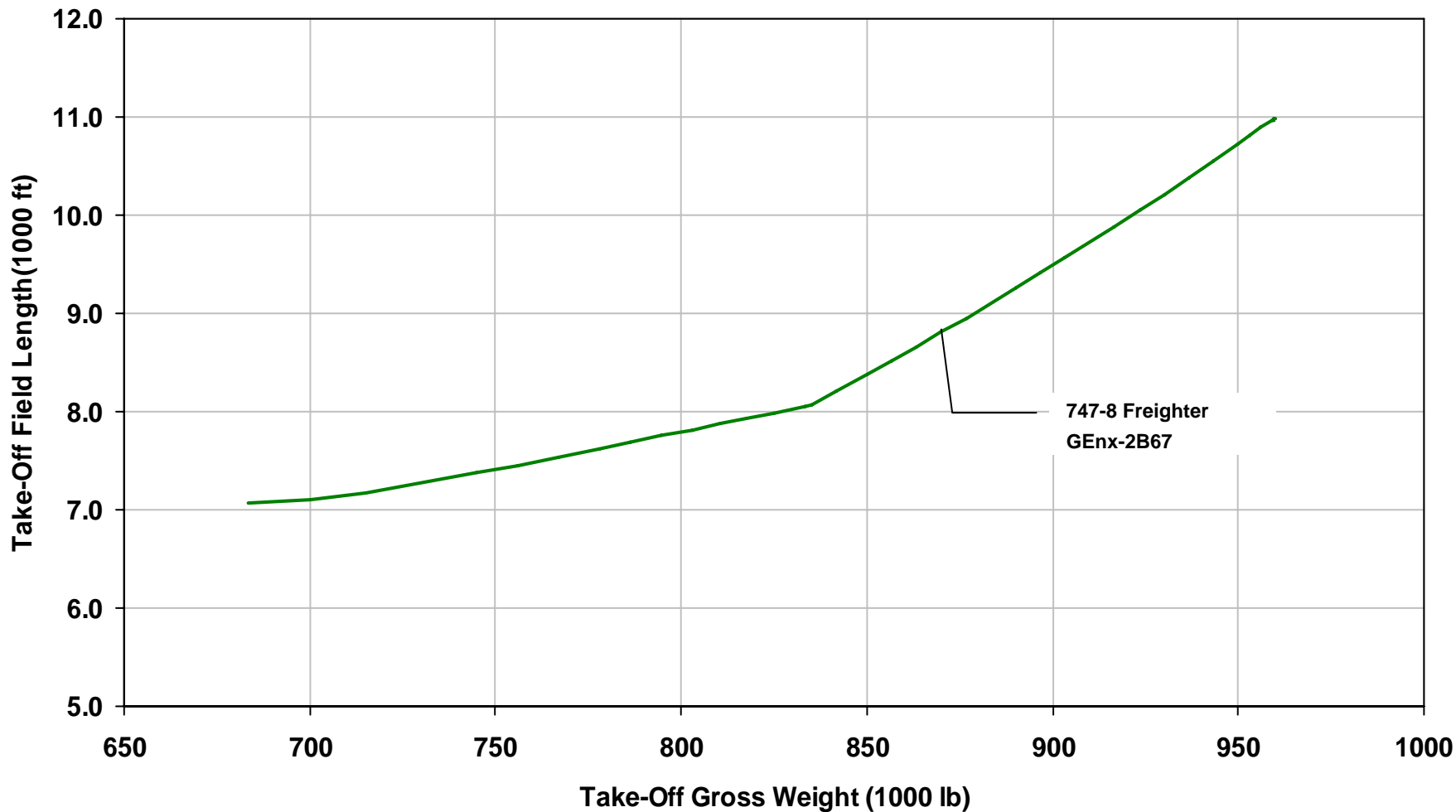
- Typical Mission Rules
- Nominal Fuel Flow
- Standard Day
- Fuel Density: 6.7 lb / USG



Take-off Field Length

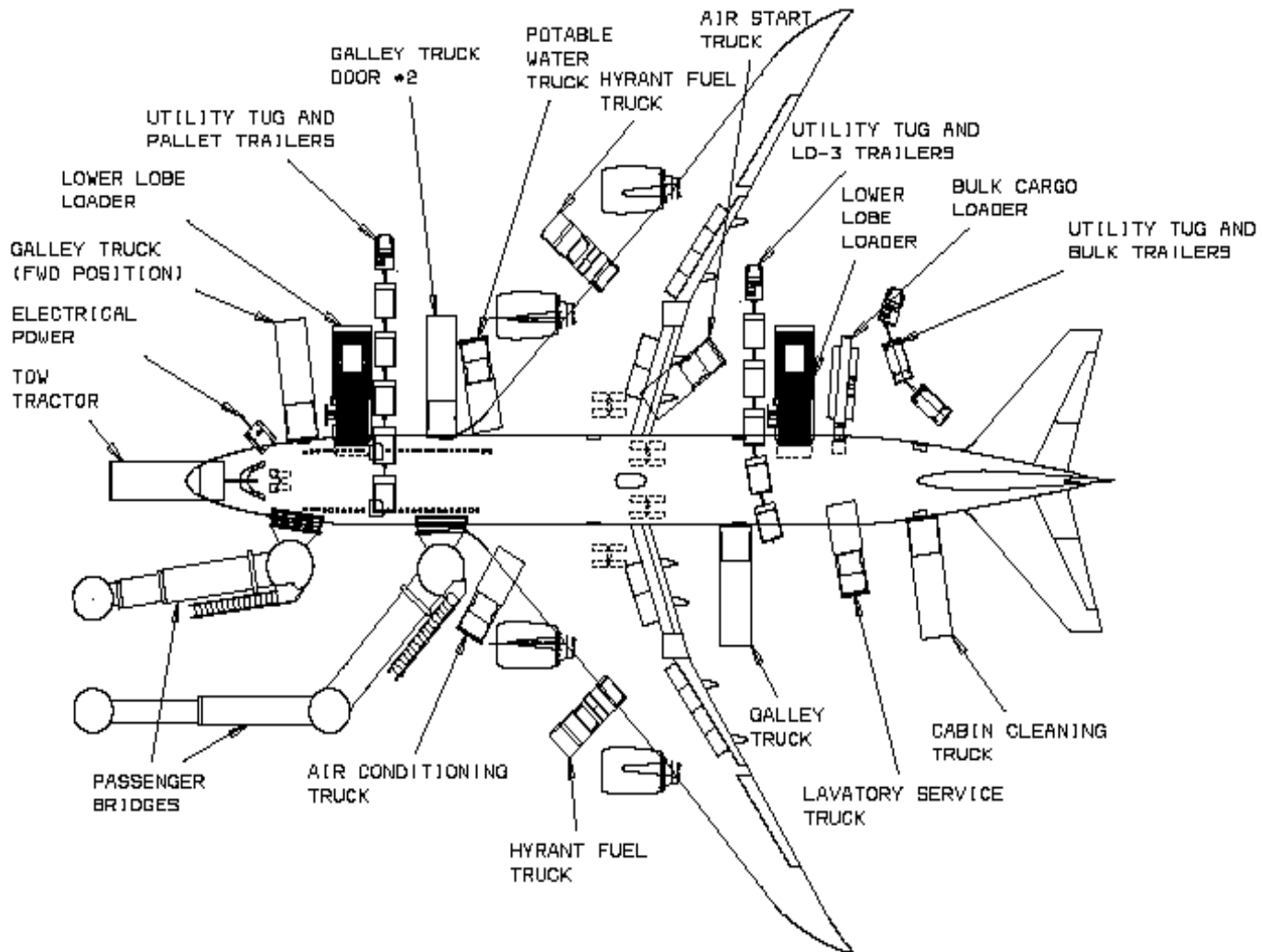
747-8 Freighter

- Sea Level
- ISA+27F (15C)
- Optimum Take-Off



Ground Servicing

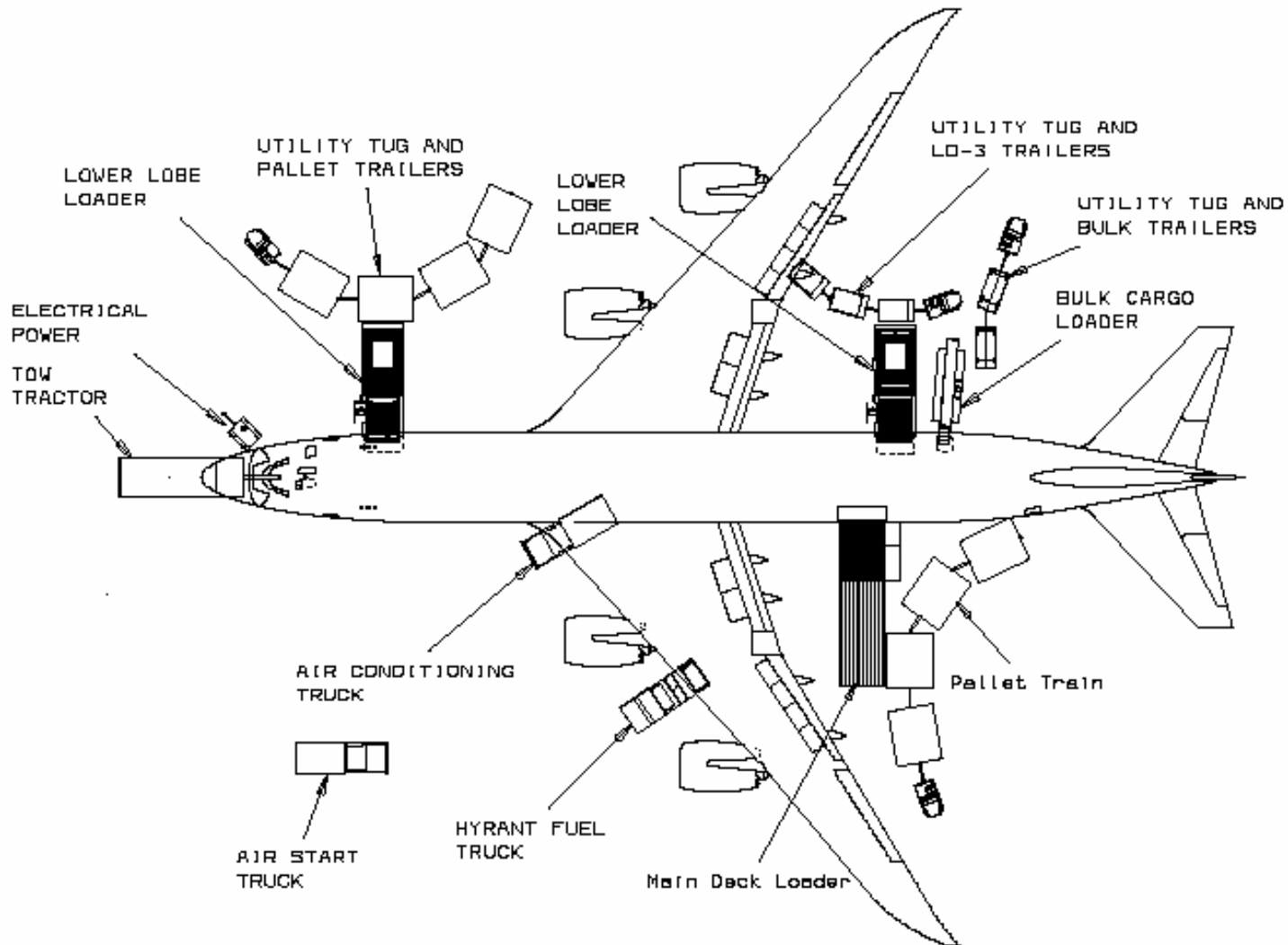
747-8 Intercontinental



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Ground Servicing

747-8 Freighter



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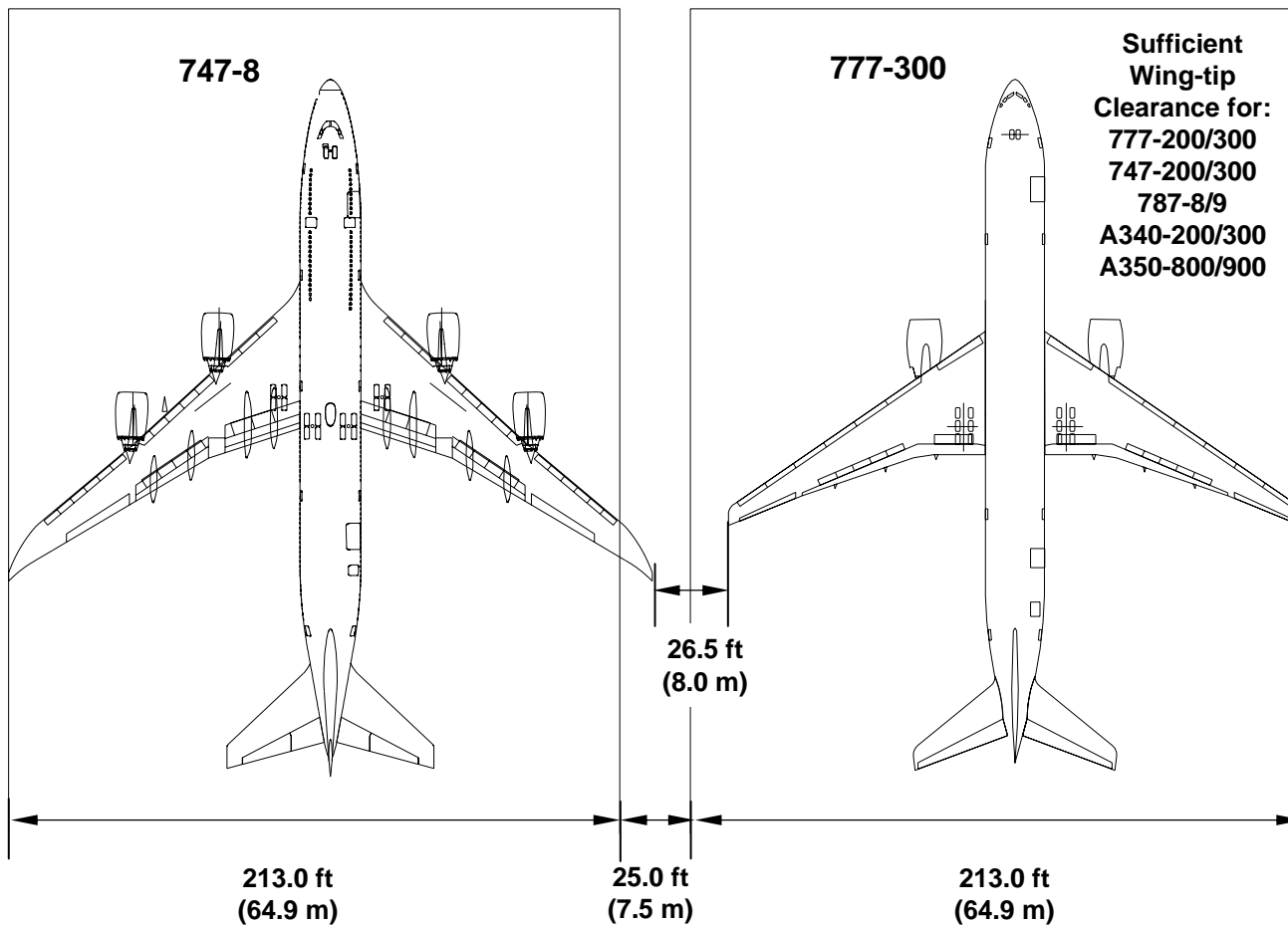


Parking

747-8 Intercontinental

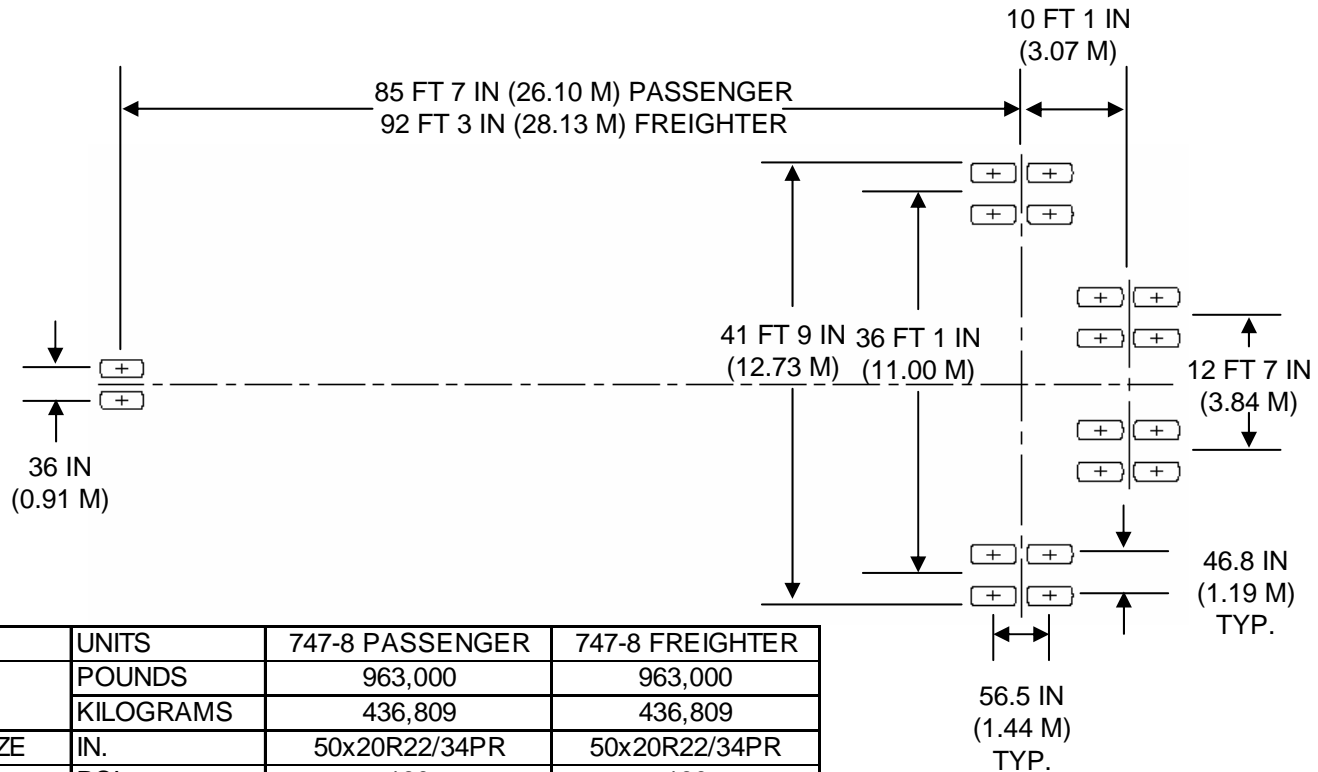
747-400 Gate

747-400 Gate



Landing Gear Footprint

747-8 Intercontinental and Freighter



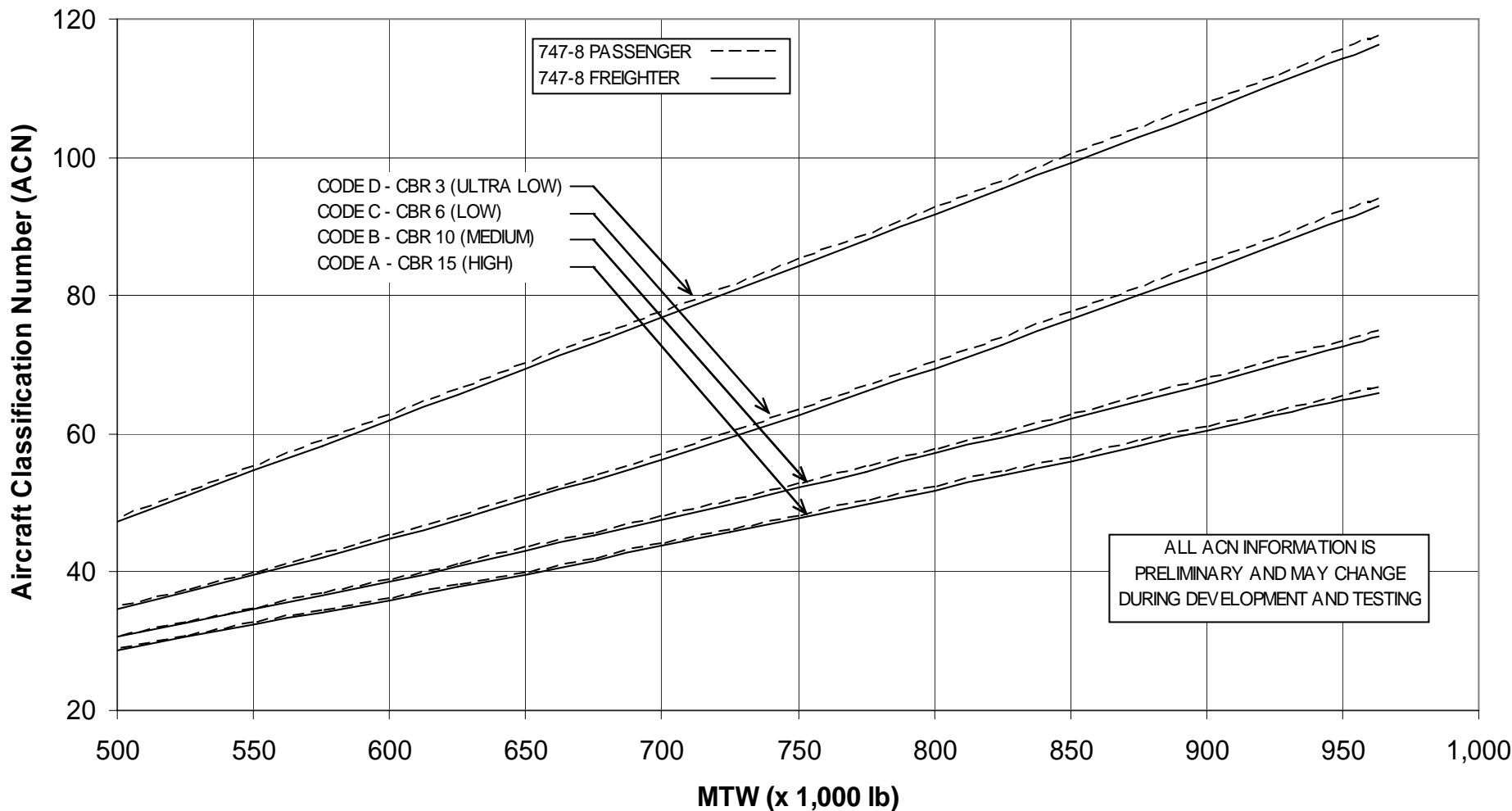
CHARACTERISTICS	UNITS	747-8 PASSENGER	747-8 FREIGHTER
MAX DESIGN TAXI WEIGHT	POUNDS	963,000	963,000
	KILOGRAMS	436,809	436,809
NOSE GEAR TIRE SIZE	IN.	50x20R22/34PR	50x20R22/34PR
NOSE GEAR TIRE PRESSURE	PSI	190	190
	KG/CM ²	13.36	13.36
WING GEAR TIRE SIZE	IN.	52x21R22/36PR	52x21R22/36PR
	PSI	220	220
WING GEAR TIRE PRESSURE	KG/CM ²	15.47	15.47
	IN.	52x21R22/36PR	52x21R22/36PR
BODY GEAR TIRE PRESSURE	PSI	220	220
	KG/CM ²	15.47	15.47

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Aircraft Classification Number (ACN)

Flexible Pavement

747-8 Intercontinental and Freighter



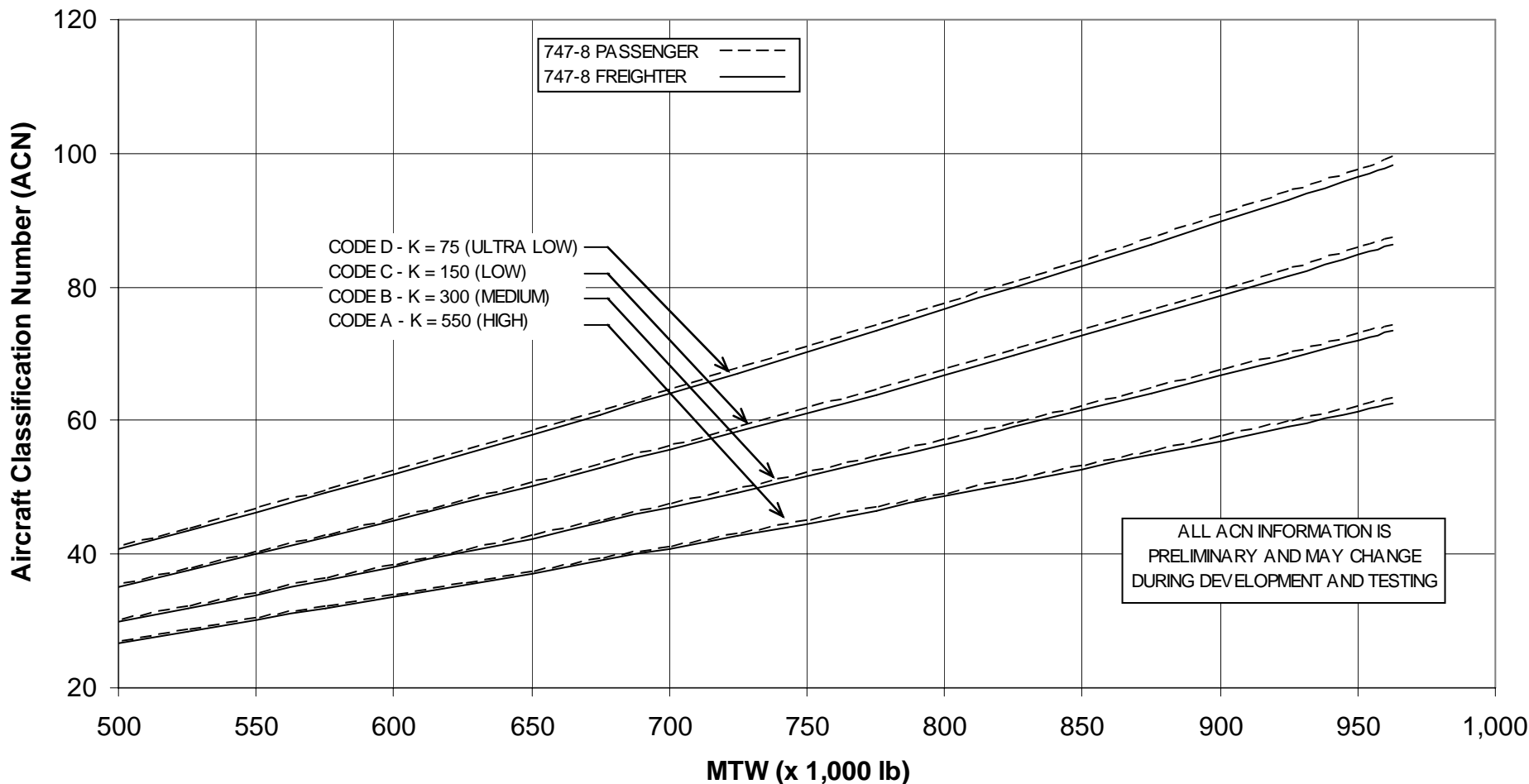
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Aircraft Classification Number (ACN)

Rigid Pavement

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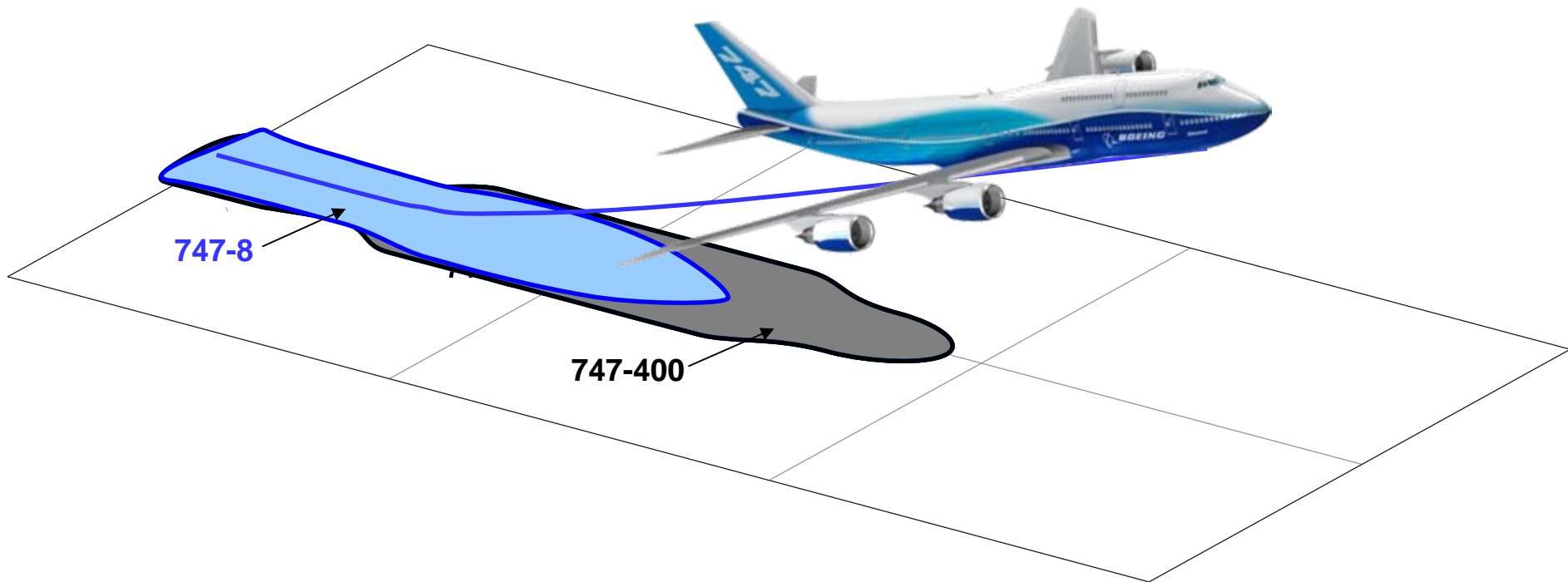


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Noise Footprint

747-8 Intercontinental and Freighter

Noise area reduced by more than 30% over the 747-400



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