747-8

Airport Compatibility

January 2008

Specific airport compatibility questions concerning commercial aircraft should be forwarded to:
Airport Technology
Boeing (Seattle, WA)
Voice 1-425-237-0126, Fax 1-425-237-8281
E-mail: AirportTechnology@Boeing.com

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 747-8 has a higher gross weight, 975,000 lb (442,252 Kg) MTOW and will be 18 ft 4 in (5.6 m) longer. The passenger version will have a passenger count of 465, and the freighter will have an increase of almost 40,000 lb (18 metric tones) over the 747-400F. To improve performance and reduce noise and emissions, the 747-8 will use the new quiet, efficient GEnx engines being developed for the 787. Additional noise and performance improvements are a result of 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 5 inches (68.4 meters). 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	978,000
	KILOGRAMS	398,254	414,130	443,613
MAX DESIGN TAKEOFF WEIGHT	POUNDS	875,000	910,000	975,000
	KILOGRAMS	396,893	412,769	442,253
MAX DESIGN LANDING WEIGHT	POUNDS	652,000	581,000 / 652,000 (2)	682,000
	KILOGRAMS	295,742	263,537 / 295,742	309,350
MAX DESIGN ZERO FUEL WEIGHT	POUNDS	555,000	542,000 / 555,000 (2)	642,000
	KILOGRAMS	251,744	245,847 / 251,744	291,206
MAX STRUCTURAL PAYLOAD	POUNDS	156,200	136,700 / 148,100 (2)	169,100
	KILOGRAMS	70,851	62,006 / 67,177	76,702
SEATING CAPACITY	THREE-CLASS	416 23FC + 80 BC + 313 EC	416 23FC + 80 BC + 313 EC	467 25 FC + 89 BC + 353 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	38 LD-1 OR 7 96" PALLETS + 16 LD-1
MAXIMUM FUEL CAPACITY	US GALLONS	57,065 (1)	60,305 (2) / 63,545 (2)	63.510 (1)
	LITERS	216,014	228,279 / 240,544	240,411

NOTES:

(1) INCLUDES TAIL FUEL, GE ENGINES

(2) BASIC (1 AUX TANK) / MAX (2 AUX TANKS)

General Airplane Characteristics

747-8 Freighter

CHARACTERISTICS	UNITS	747-400F	747-400ERF	747-8
MAX DESIGN TAXI WEIGHT	POUNDS	878,000	913,000	978,000
	KILOGRAMS	398,254	414,130	443,613
MAX DESIGN TAKEOFF WEIGHT	POUNDS	875,000	910,000	975,000
	KILOGRAMS	396,893	412,769	442,253
MAX DESIGN LANDING WEIGHT	POUNDS	652,000 (1)	653,000 (1)	757,000
	KILOGRAMS	295,742	296,196	343,369
MAX DESIGN ZERO FUEL WEIGHT	POUNDS	610,000 (2)	611,000 (2)	717,000
	KILOGRAMS	276,691	277,145	325,226
MAX STRUCTURAL PAYLOAD	POUNDS	248,300	248,600 (3)	295,800
	KILOGRAMS	112,627	112,763	134,173
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	53,765	60,210
	LITERS	203,523	203,523	227,920

NOTES:

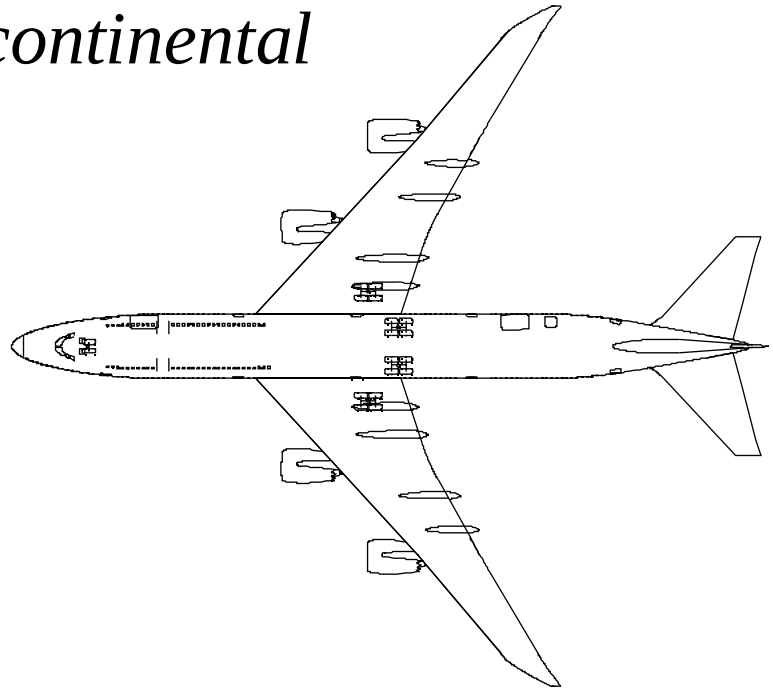
(1) OPTION FOR 666,000 LB (302,093 KG)

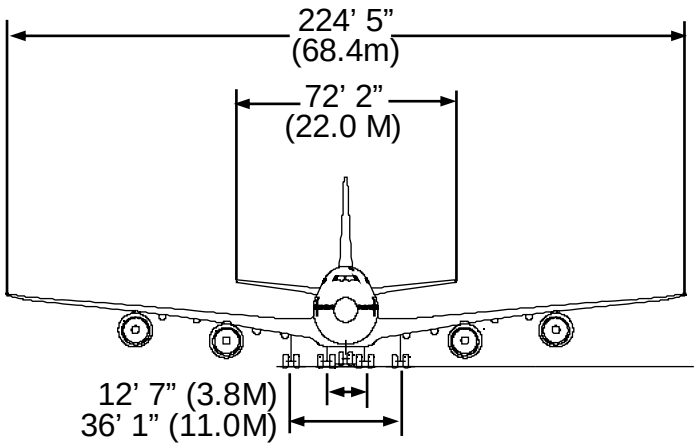
(2) OPTION FOR 635,000 (288,031 KG) ONLY WITH 811,000 (367,863 KG) MTOW

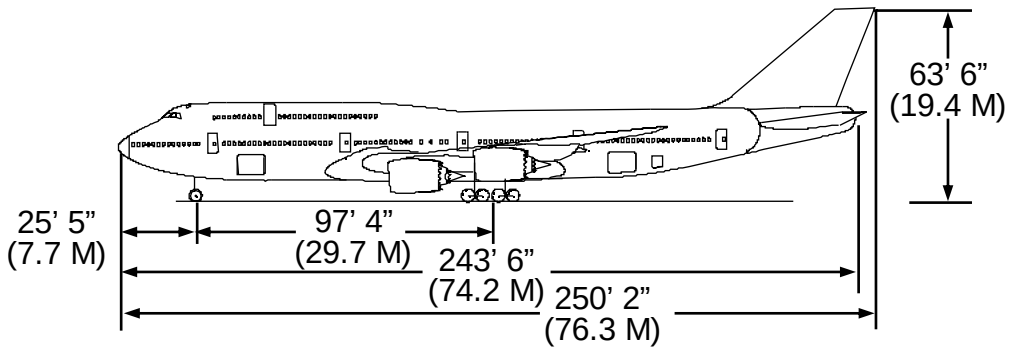
(3) OPTION FOR 272,600 LB (123,649 KG) ONLY WITH 811,000 LB (367,863 KG) MTOW.

General Arrangement

747-8 Intercontinental

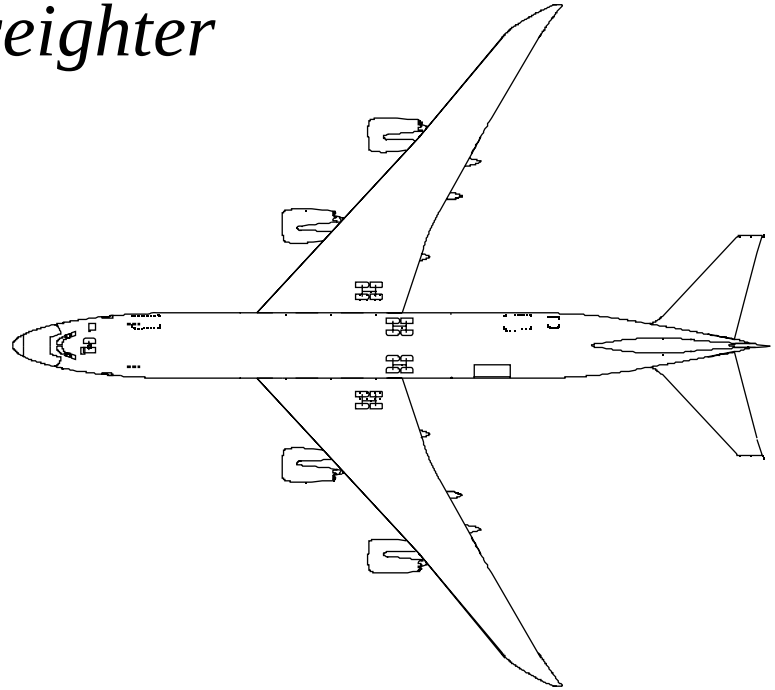


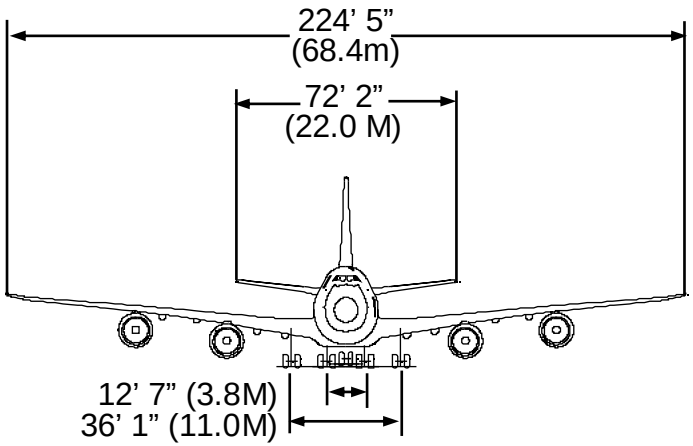


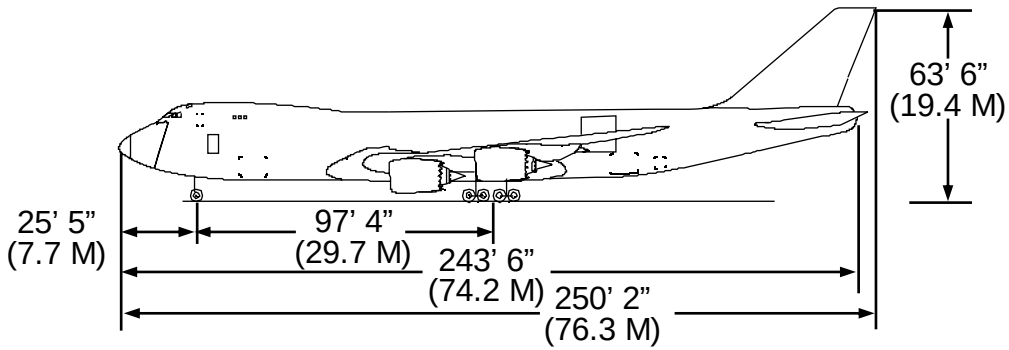


General Arrangement

747-8 Freighter

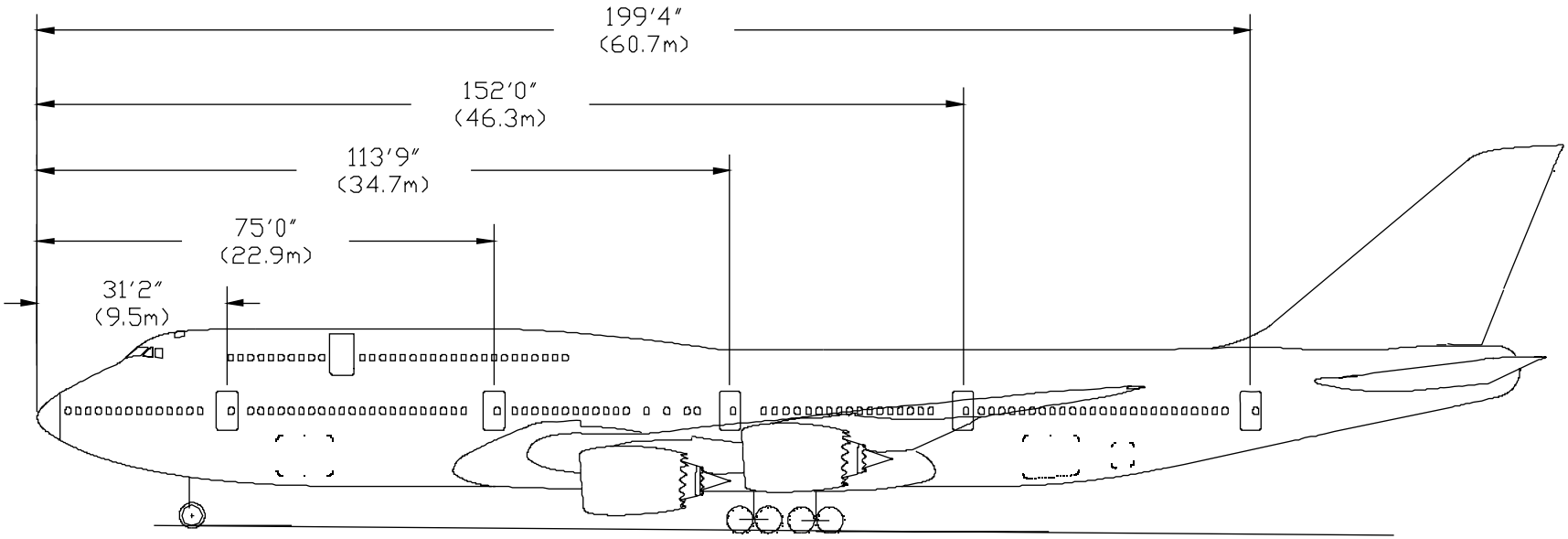






Door Locations

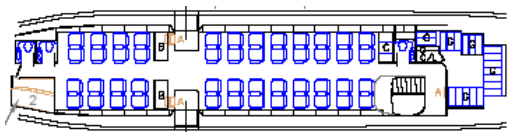
747-8 Intercontinental

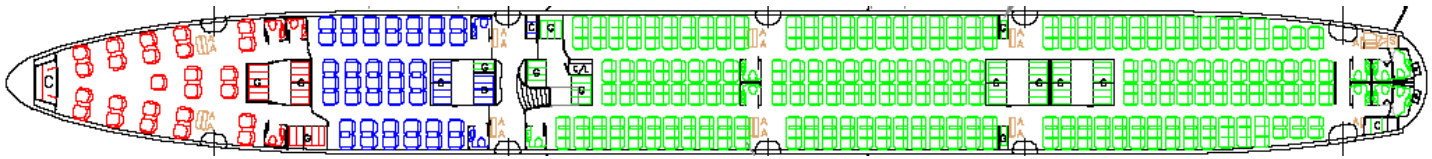


Interior Arrangement

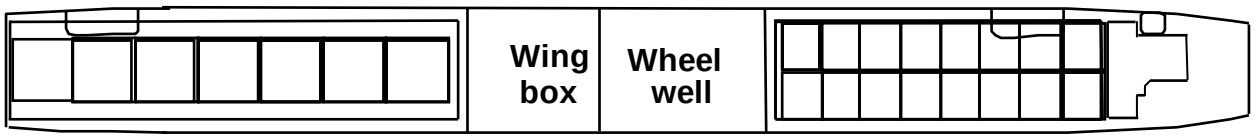
747-8 Intercontinental

25 first
89 business
353 economy





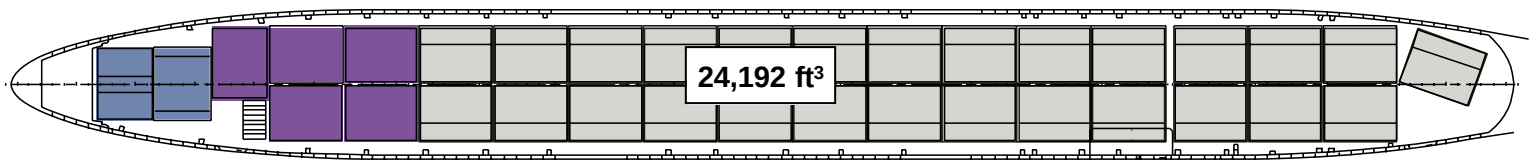
467 Passengers



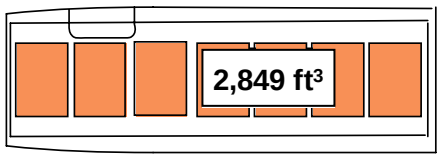
Interior Arrangement

747-8 Freighter

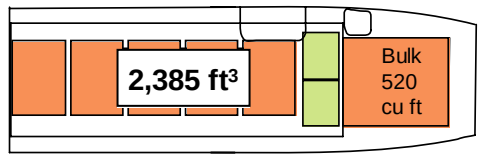
Main deck



34 pallets



Forward lower lobe



Aft lower lobe

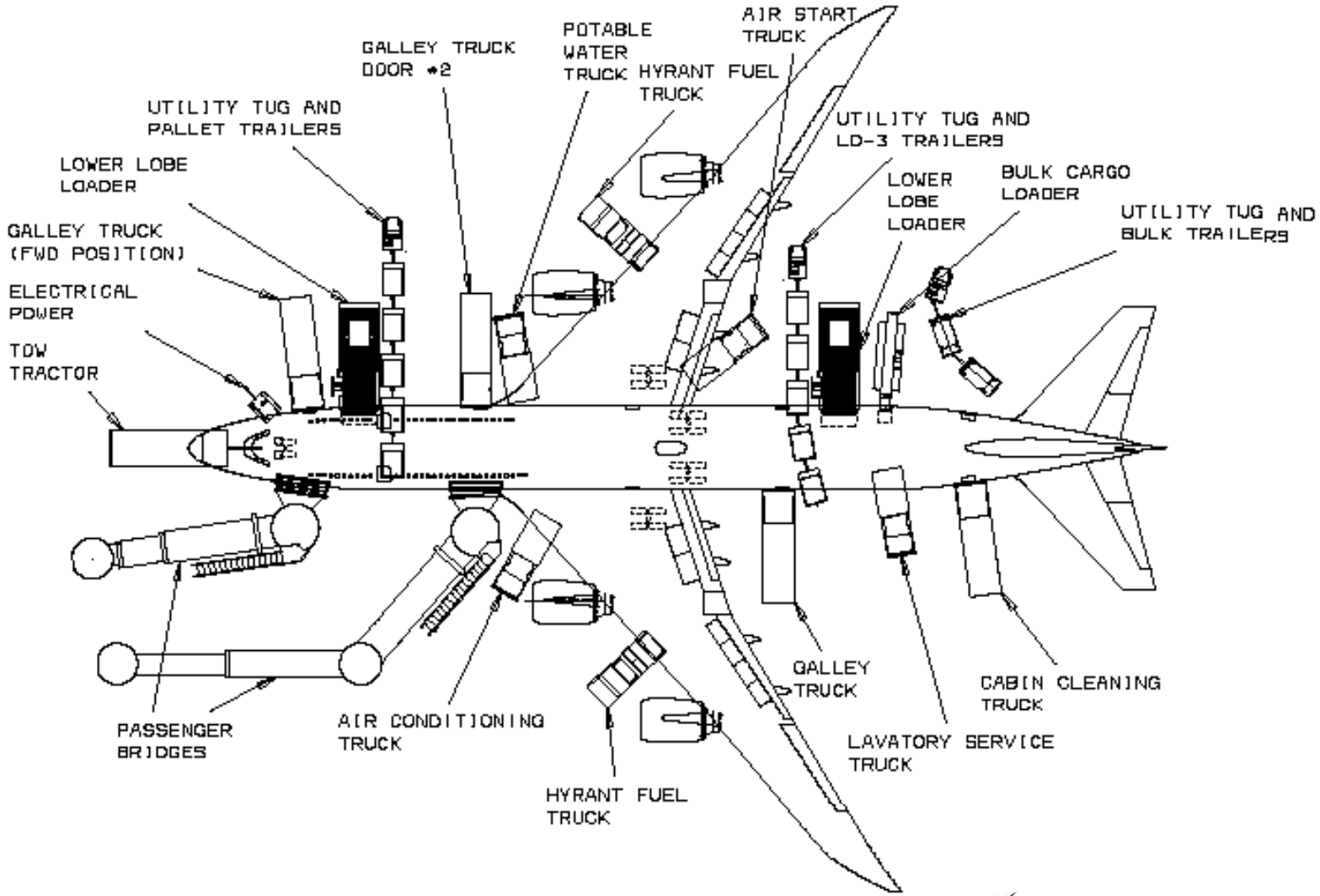
- **(27) 96-in x 125-in contoured pallets (740 ft³)**
- **(5) 96-in x 125-in x 8-ft contoured pallets (613 ft³)**
- **(2) 96-in x 125-in x 8-ft contoured pallets (540 ft³ + 607 ft³)**
- **(12) 96-in x 125-in contoured pallets (407 ft³)**
- **(2) LD-1/3 containers (175 ft³)**

Total volume* = 29,426 ft³ (833 m³)

*** Excludes bulk cargo**

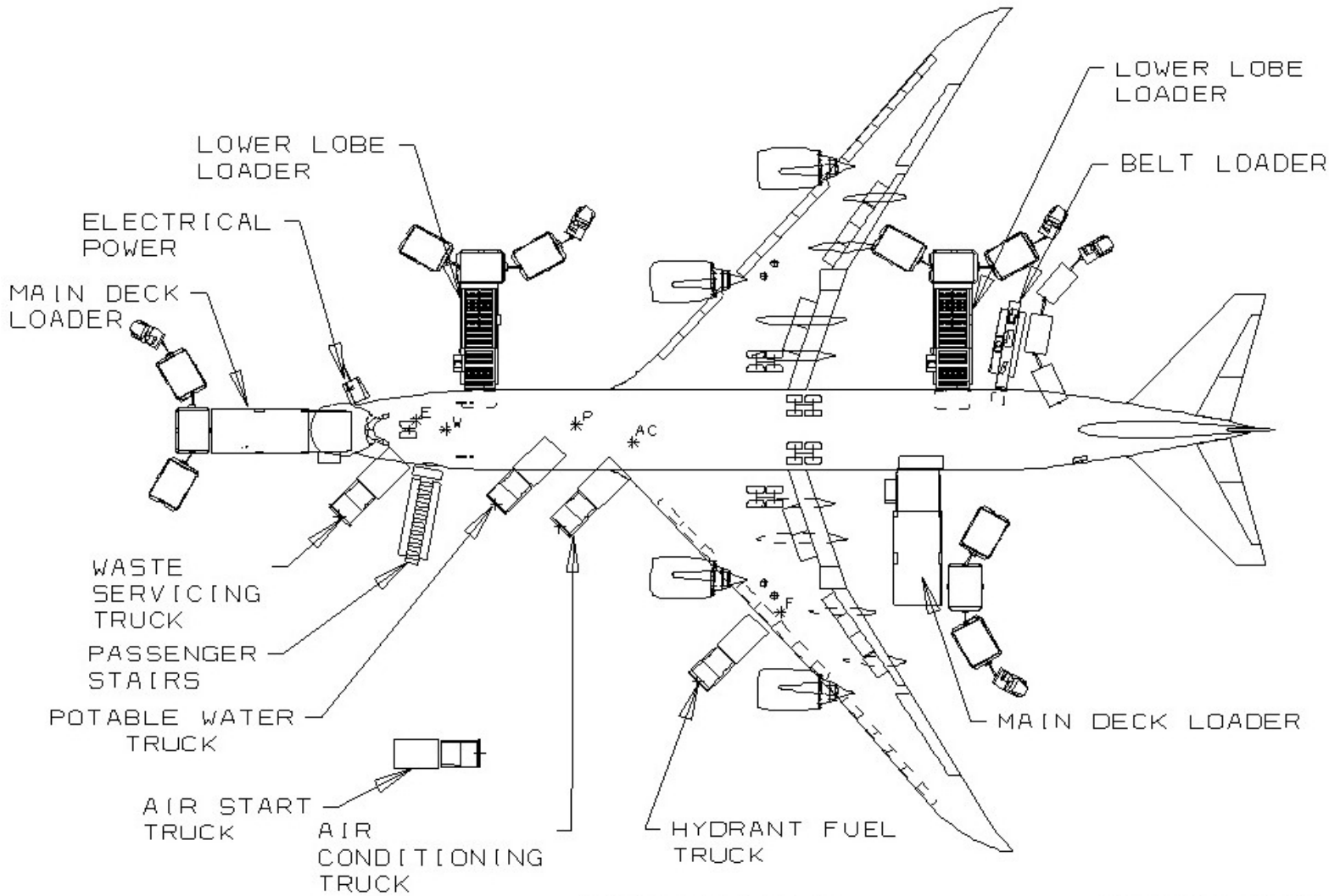
Ground Servicing

747-8 Intercontinental



Ground Servicing

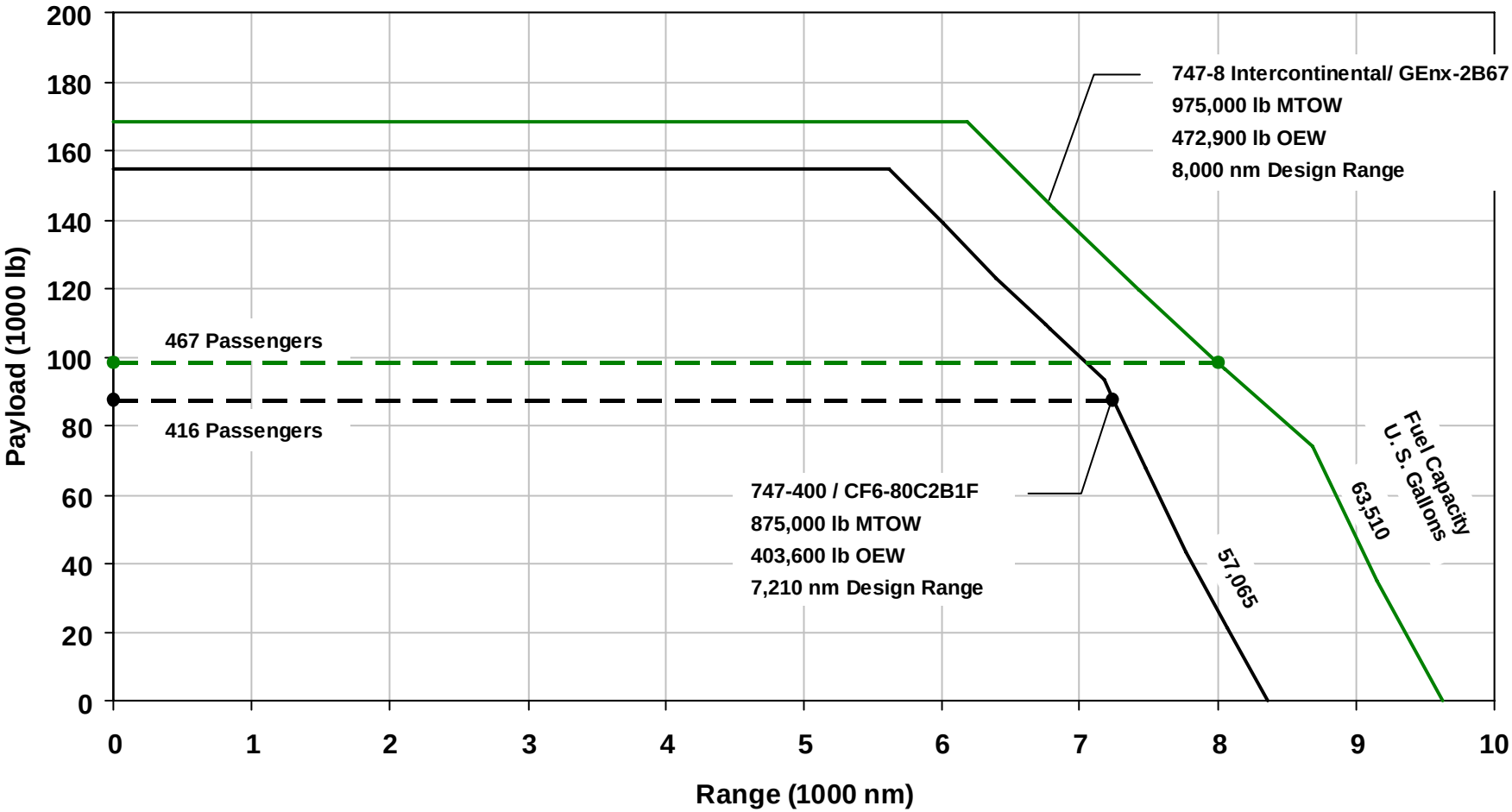
747-8 Freighter



Payload Range Capability

747-8 Intercontinental

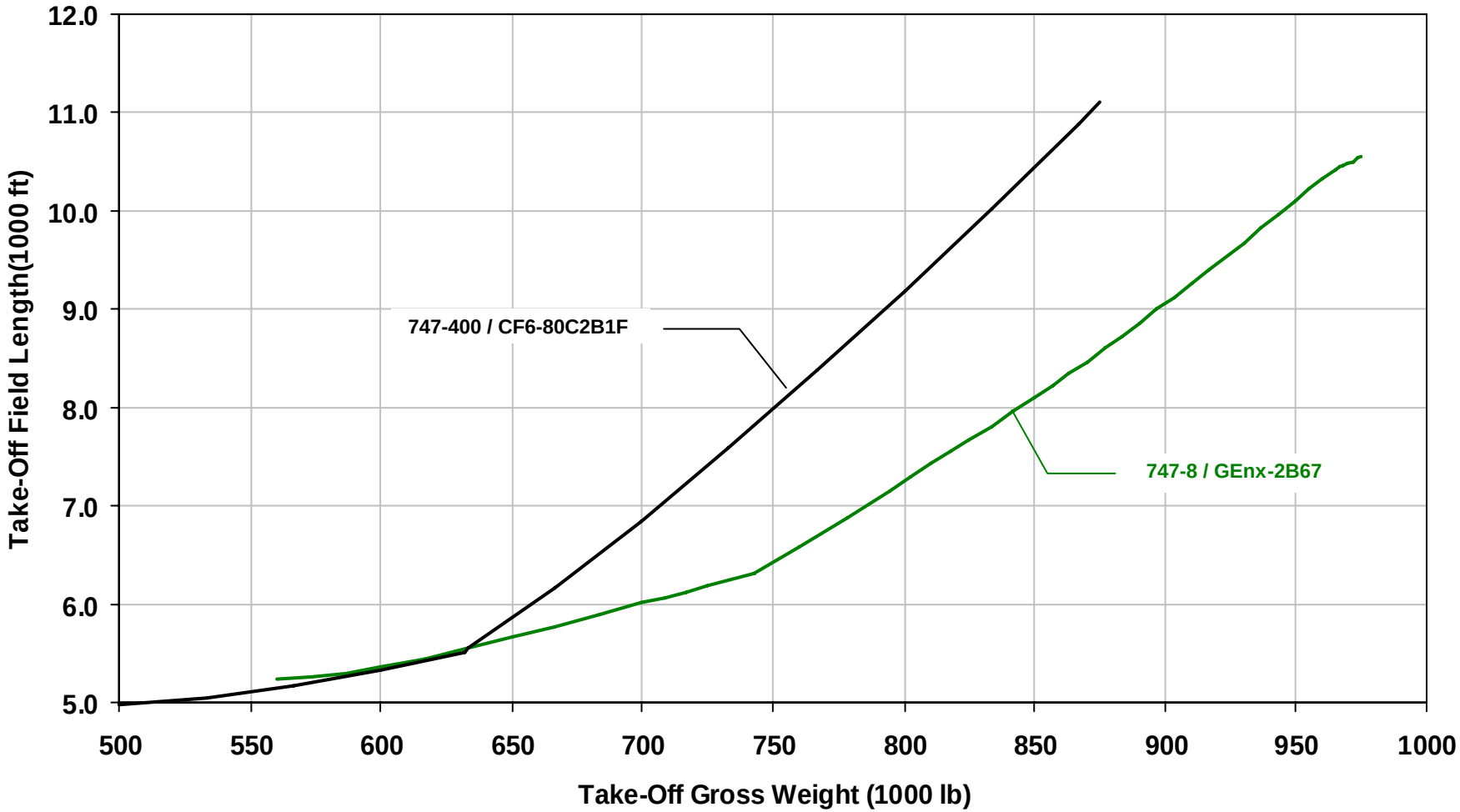
- Typical Mission Rules
- Nominal Fuel Flow
- Standard Day
- Passenger Allowance: 210 lb / pax
- Fuel Density: 6.7 lb / USG



Take-off Field Length

747-8 Intercontinental

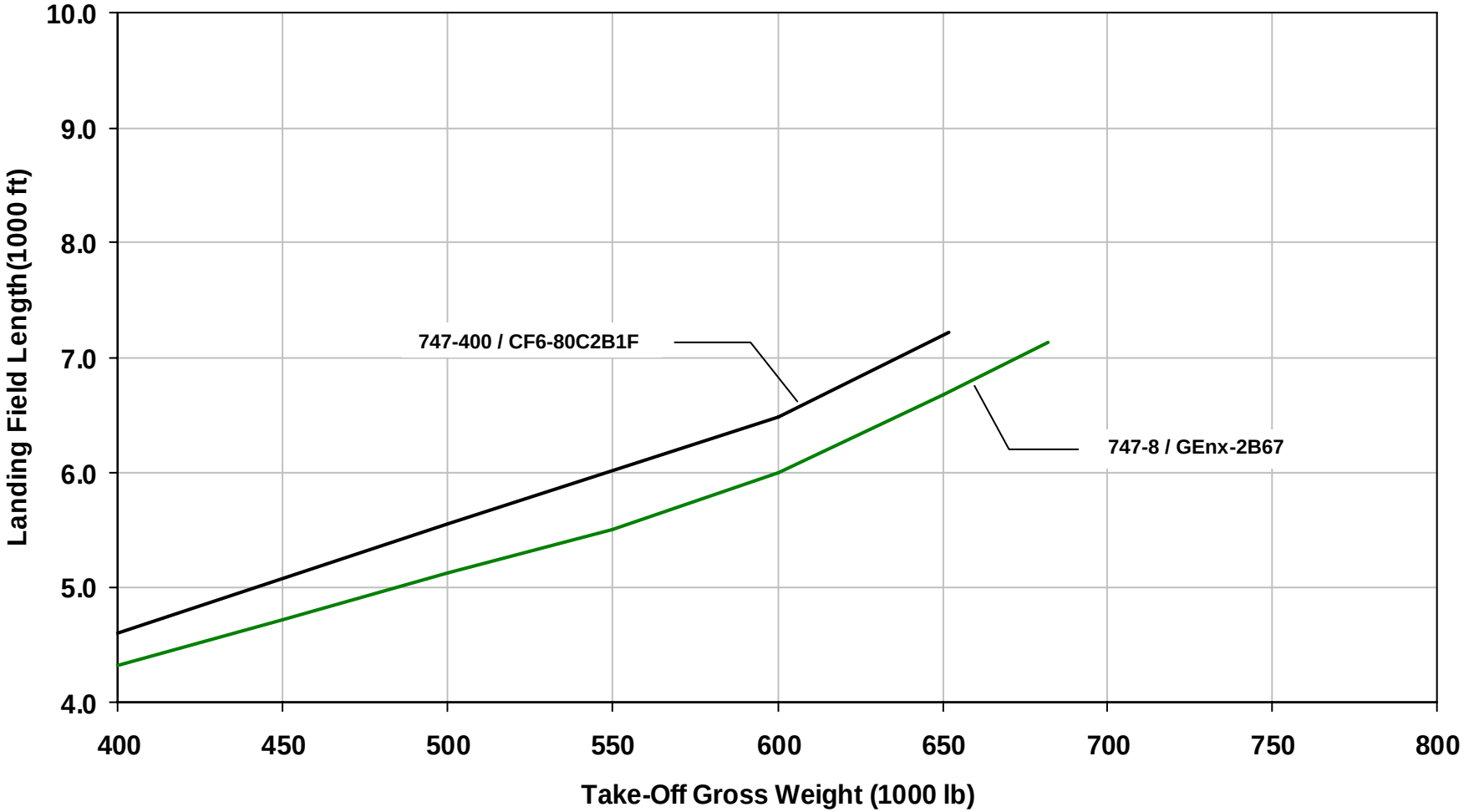
- Sea Level
- ISA+27F (15C)
- Optimum Take-Off



Landing Field Length

747-8 Intercontinental

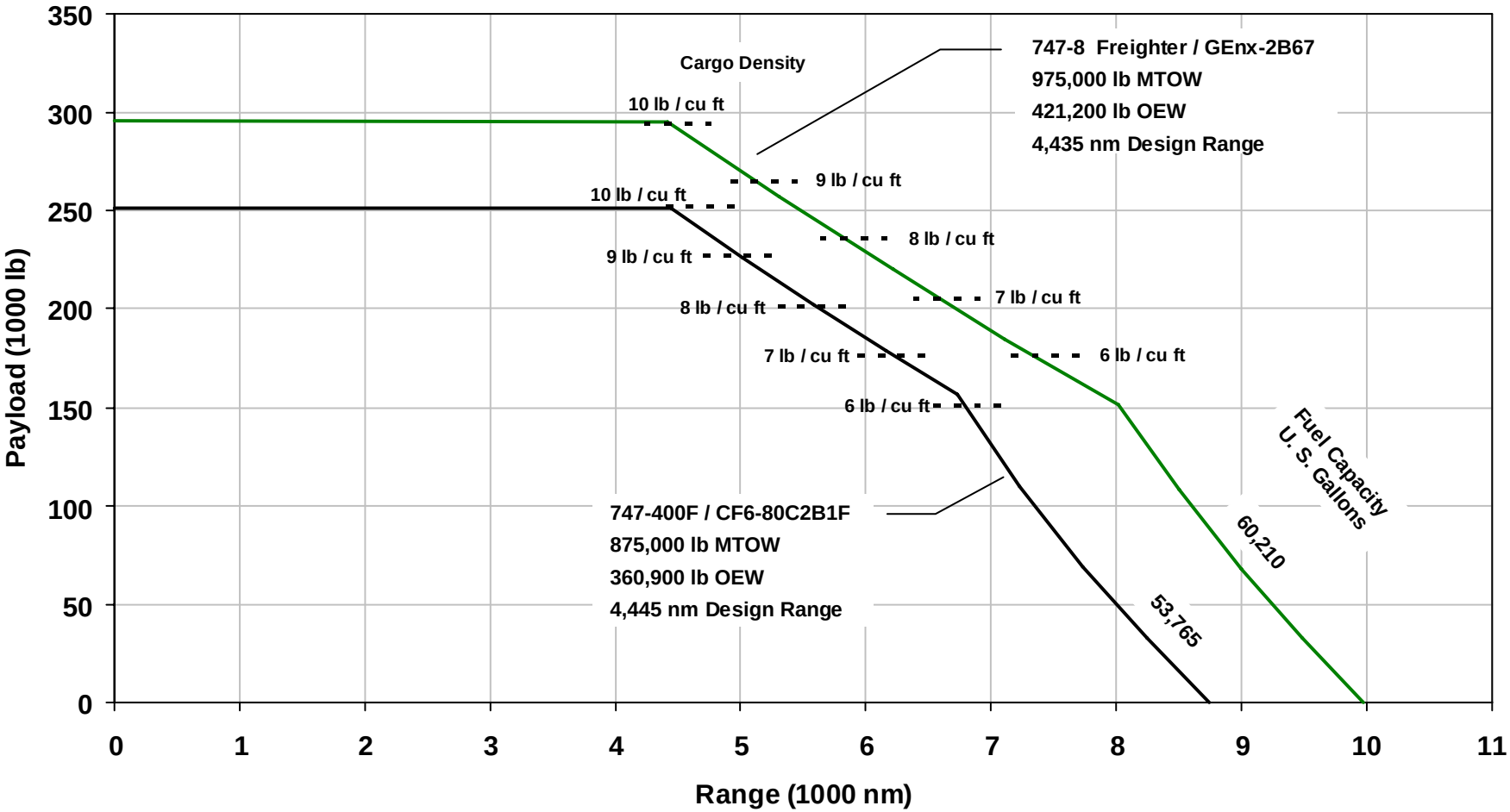
- Sea Level
- Standard Day
- Flaps 30



Payload Range Capability

747-8 Freighter

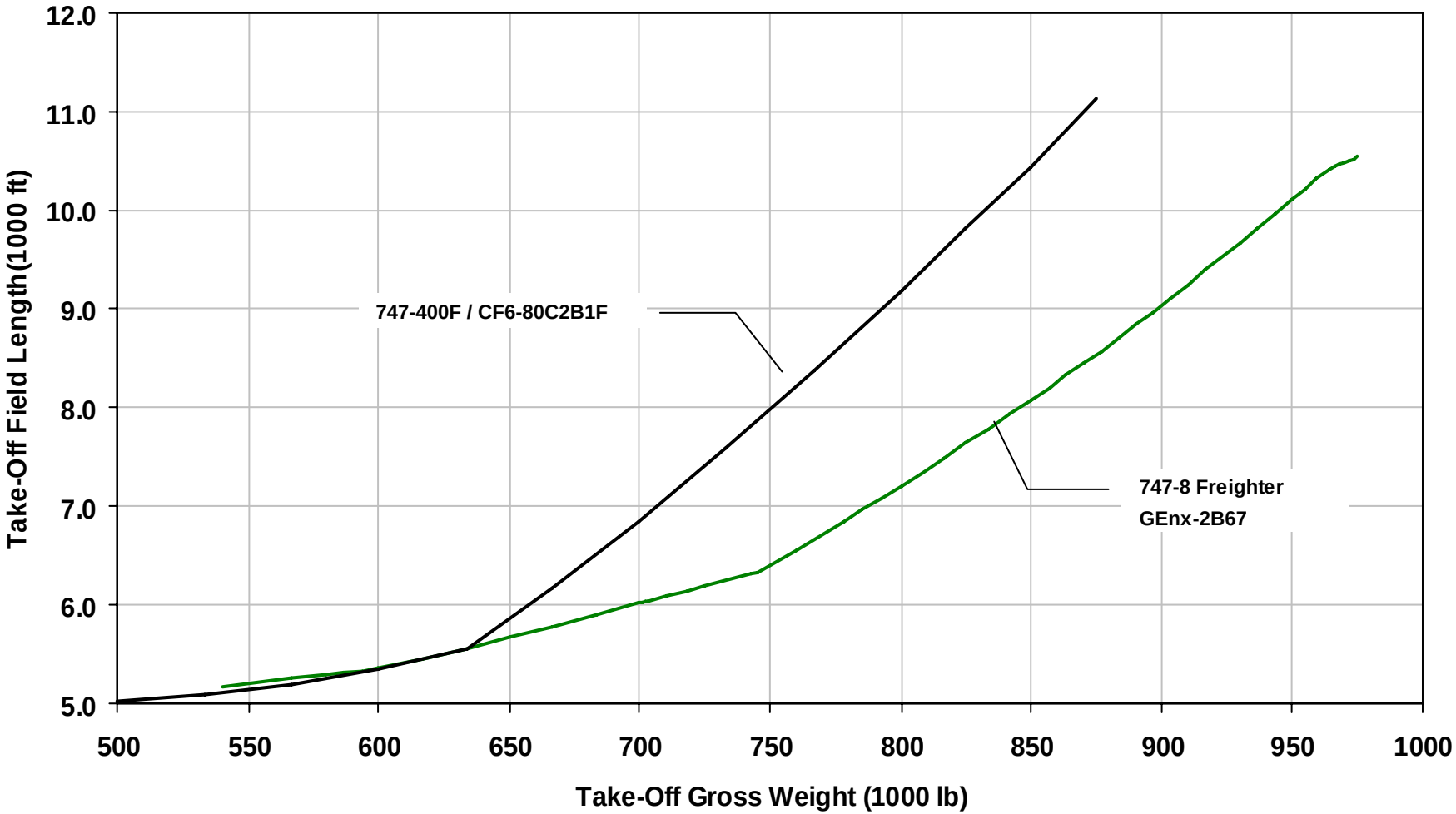
- Typical Mission Rules
- Nominal Fuel Flow
- Standard Day
- Fuel Density: 6.7 lb / USG



Take-off Field Length

747-8 Freighter

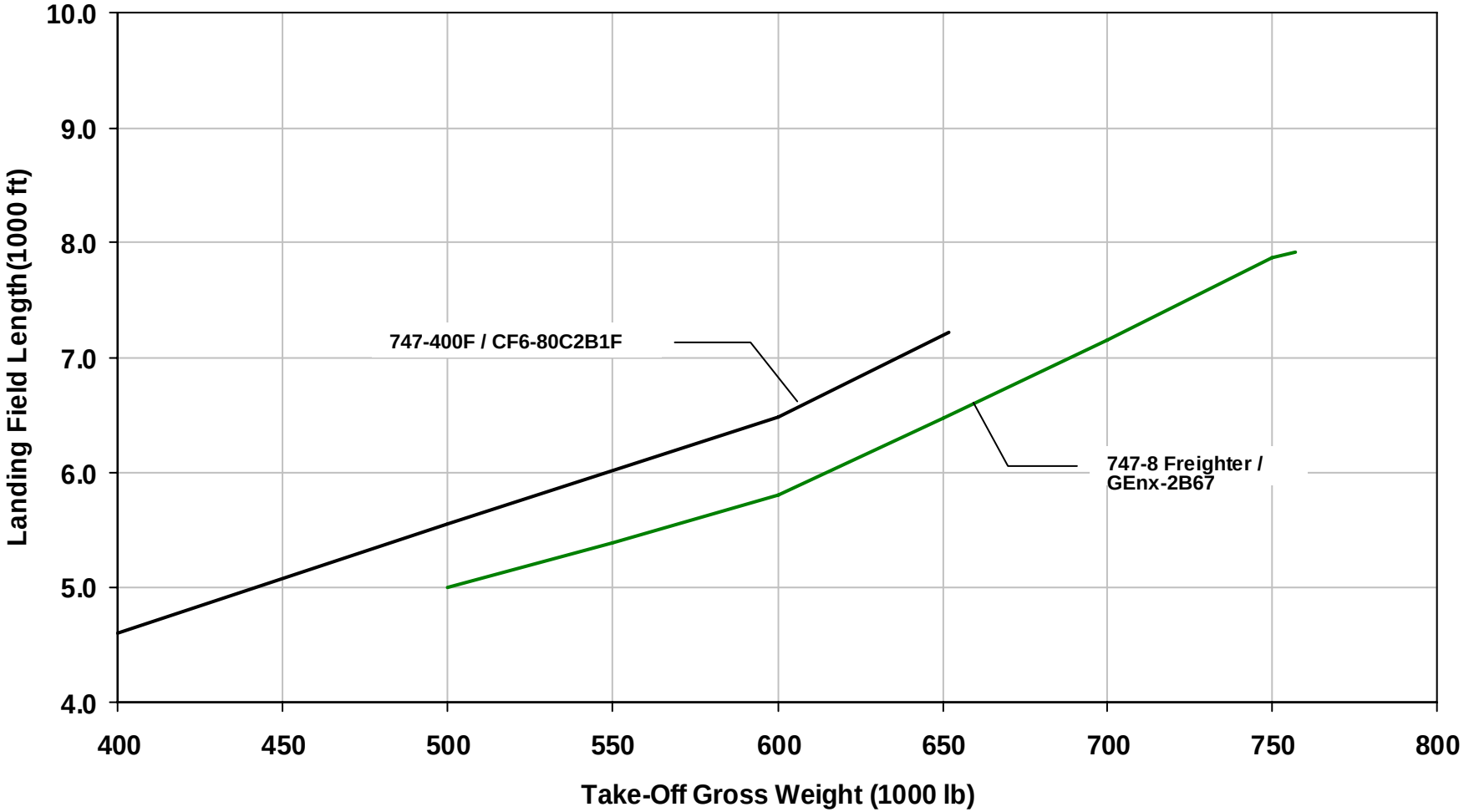
- Sea Level
- ISA+27F (15C)
- Optimum Take-Off



Landing Field Length

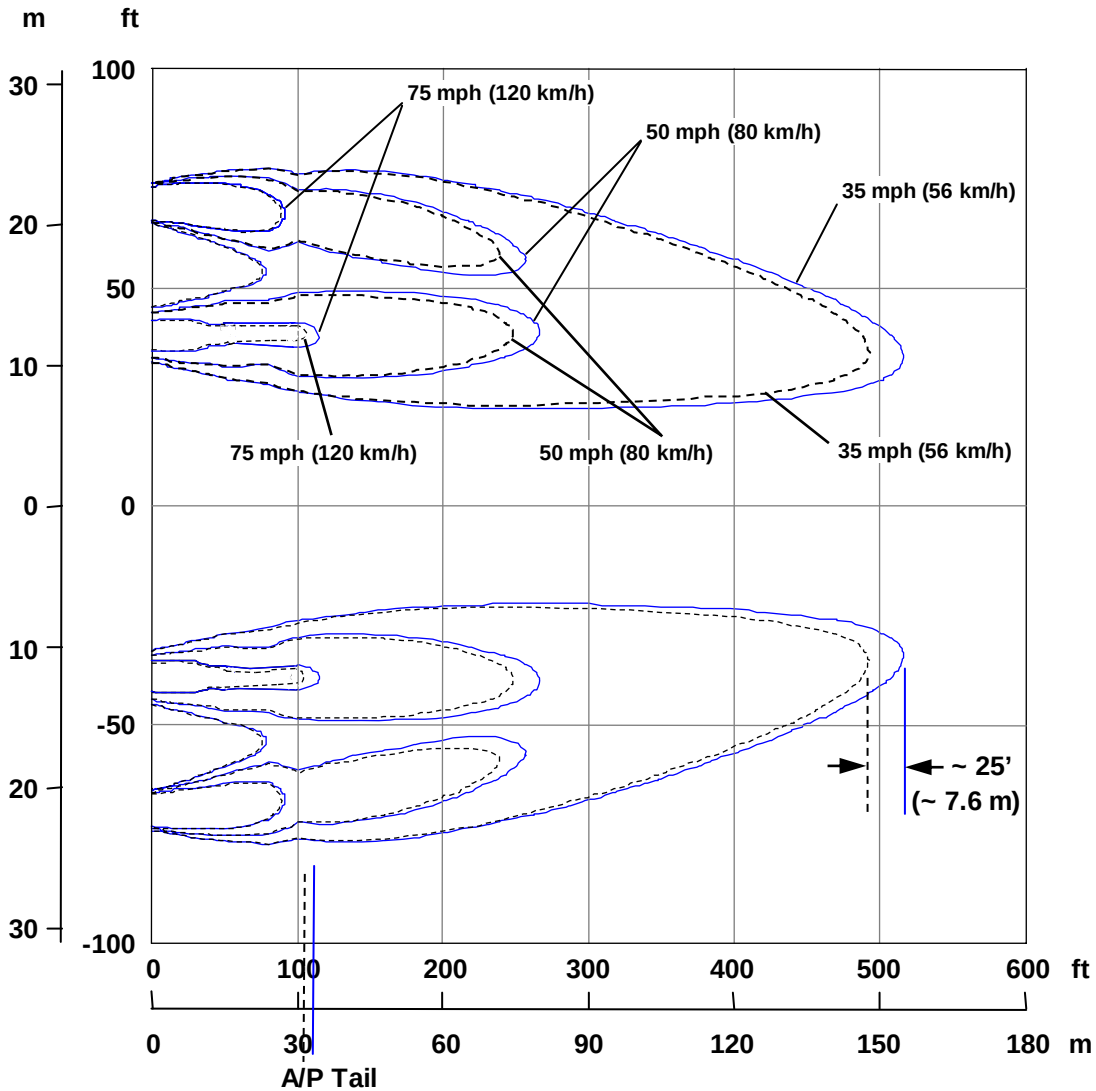
747-8 Freighter

- Sea Level
- Standard Day
- Flaps 30



Breakaway Exhaust Velocity Contours

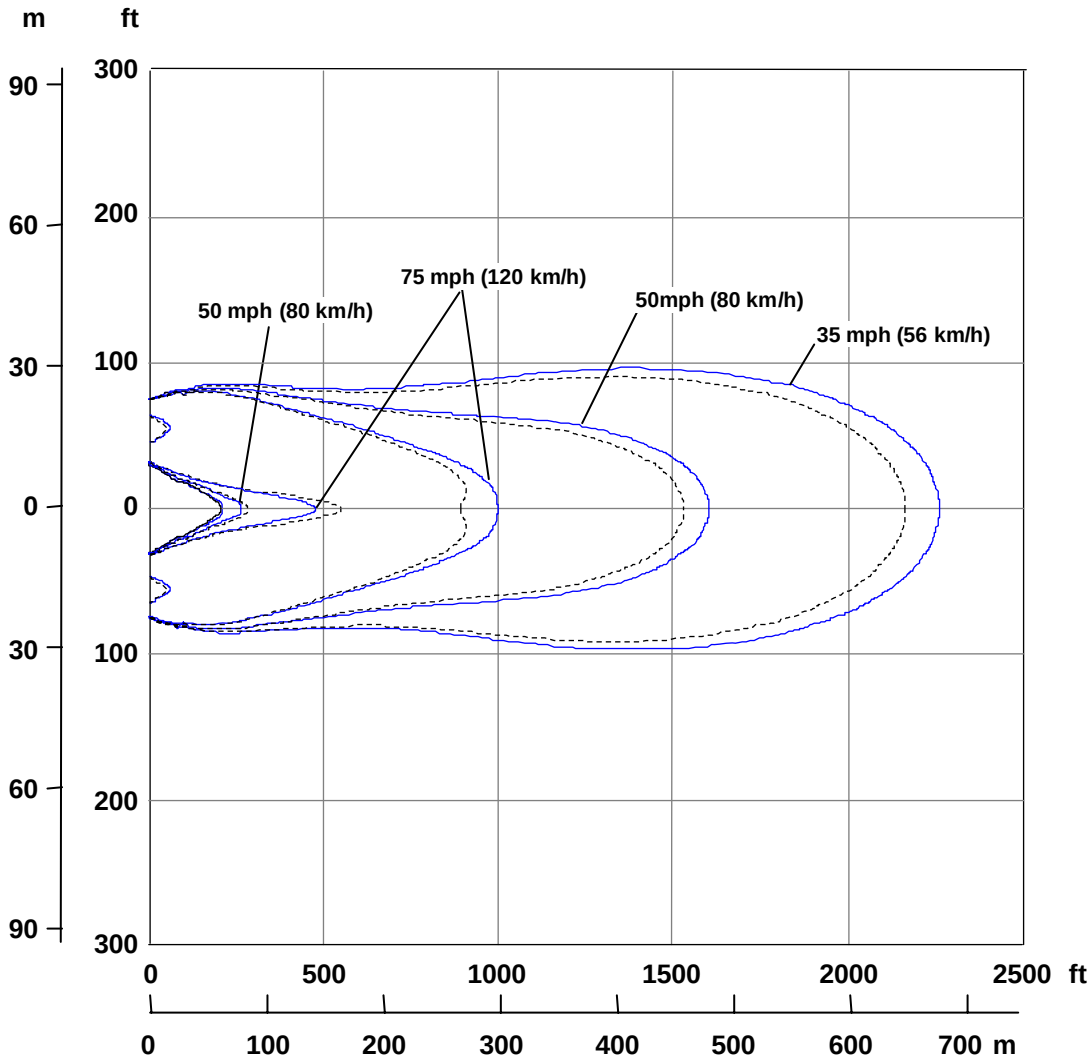
747-8
747-400



- Sea level, standard day
- Static A/P
- No wind
- All engines running
- Level tarmac

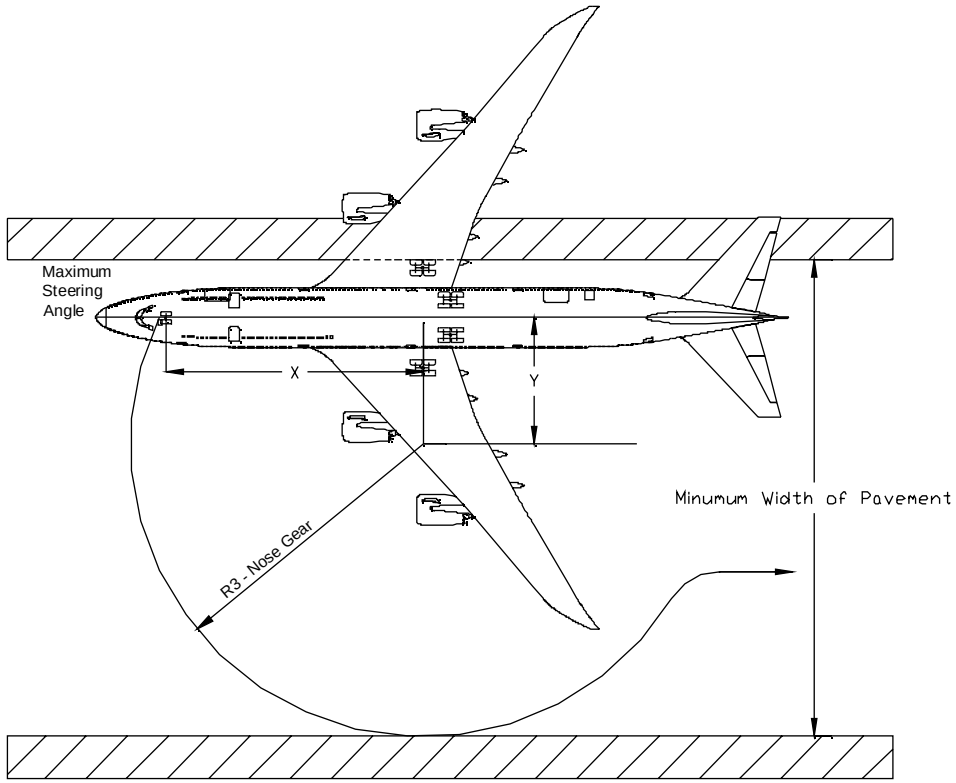
Takeoff Thrust Exhaust Velocity Contours

747-8
747-400



- Sea level, standard day
- Static A/P
- No wind
- All engines running

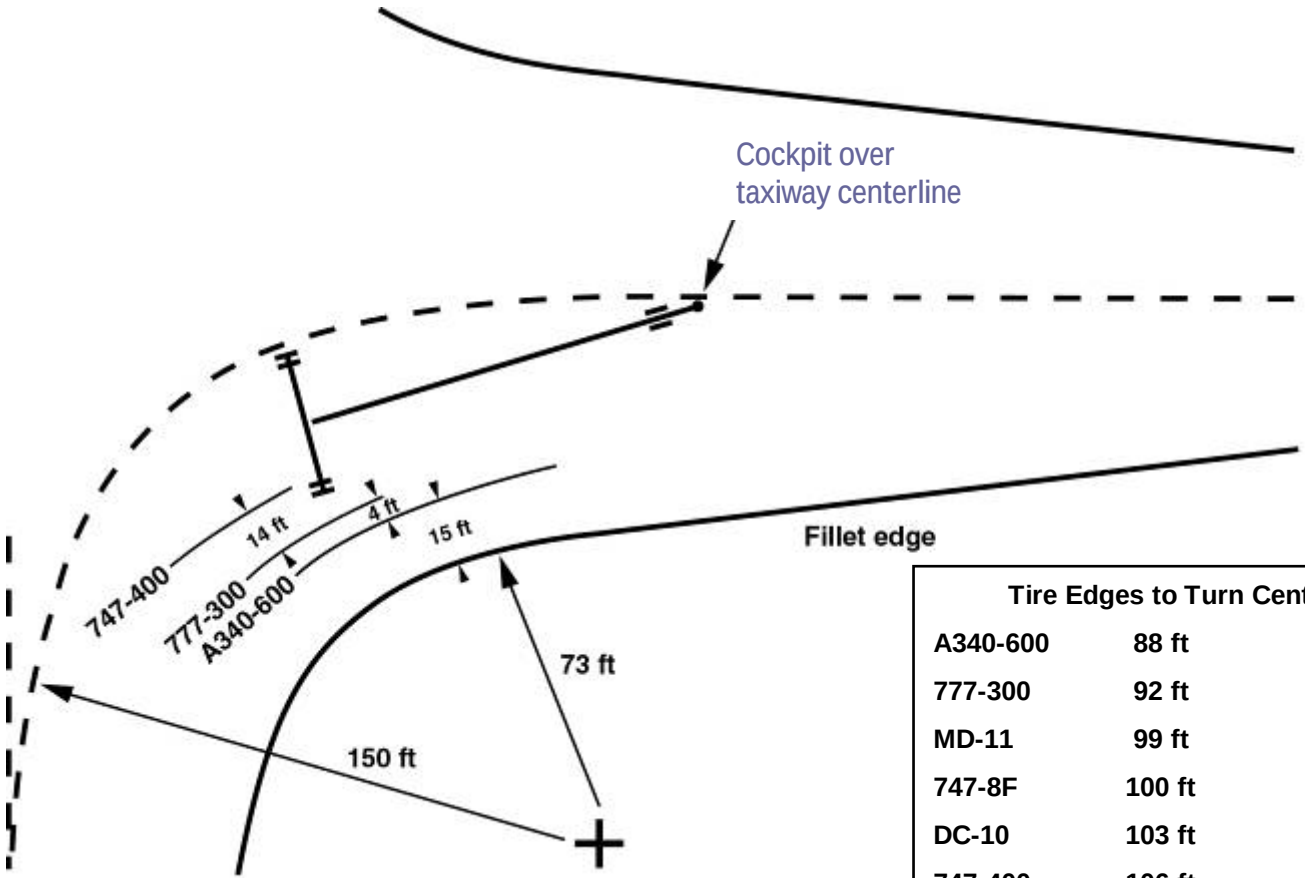
Minimum Width of Pavement for 180º Turn



	747-400F	747-8F	777-300ER
ICAO Code	E	F	E
Maximum steering angle, no differential braking	47 m 154 ft	52 m 172ft	57 m 185 ft

U-turn width required can be reduced by using differential braking and / or asymmetrical thrust.

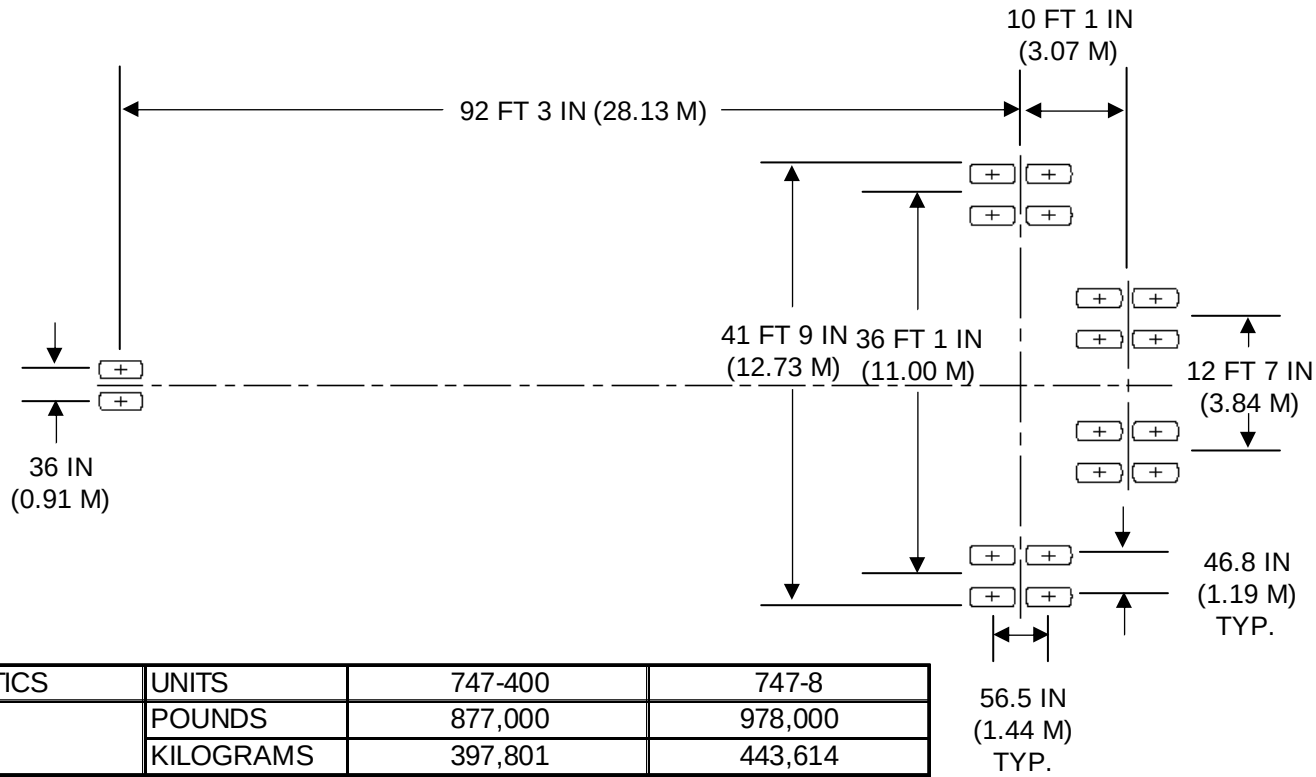
747-8 Fillet Requirement



Tire Edges to Turn Center		
A340-600	88 ft	26.8 m
777-300	92 ft	28.0 m
MD-11	99 ft	30.2 m
747-8F	100 ft	30.5 m
DC-10	103 ft	31.4 m
747-400	106 ft	32.3 m

Landing Gear Footprint

747-8



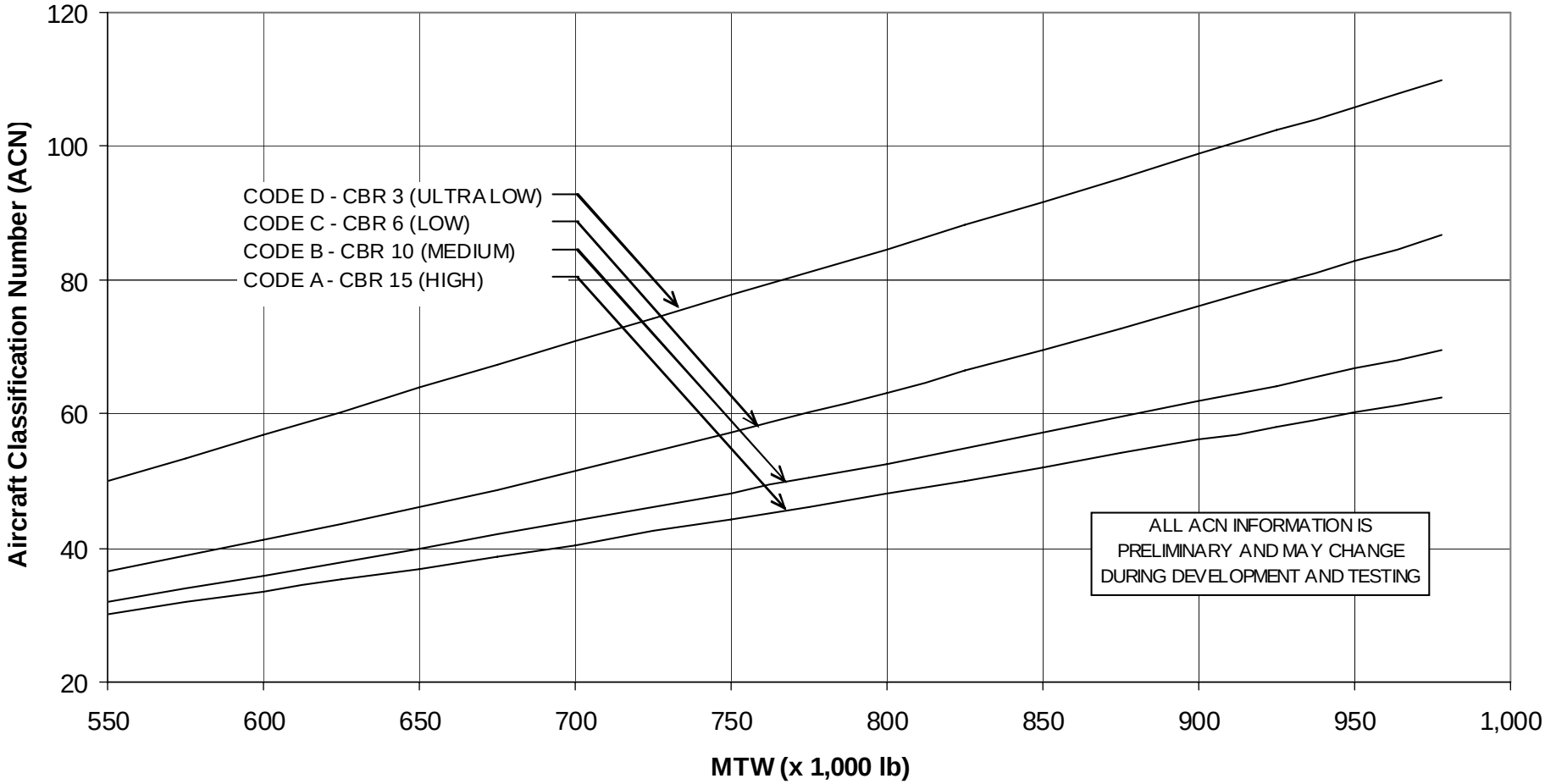
CHARACTERISTICS	UNITS	747-400	747-8
MAX DESIGN	POUNDS	877,000	978,000
TAXI WEIGHT	KILOGRAMS	397,801	443,614
NOSE GEAR TIRE SIZE	IN.	49x17, 32 PR	50x20R22/26PR
NOSE GEAR TIRE	PSI	200	166
PRESSURE	KG/CM^2	14.06	11.67
MAIN GEAR TIRE SIZE	IN.	H49x19.0 - 22 32 PR	52x21R22/36PR
MAIN GEAR TIRE	PSI	200	220
PRESSURE	KG/CM^2	14.06	15.47

* OPTION: 49X19.0-20, 32PR OR 34PR AT 185 PSI (13.01 KG/CM^2) OR H49X19.0-22, 32PR AT 175 PSI (12.30 $KG.CM^2$)

Aircraft Classification Number (ACN)
Flexible Pavement

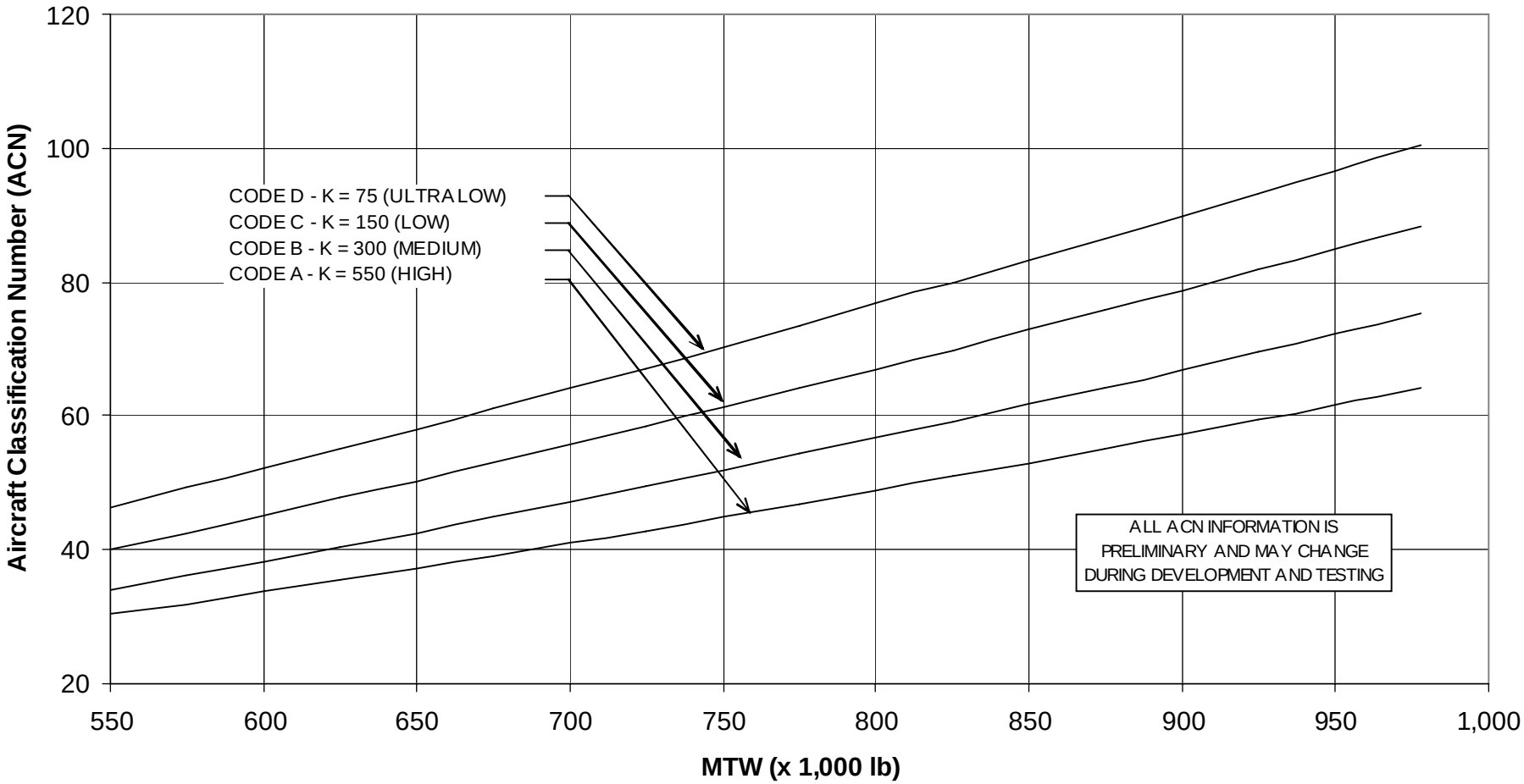
747-8 Intercontinental and Freighter

FLEXIBLE ACN'S ARE BASED ON ALPHA FACTORS APPROVED BY ICAO IN OCTOBER 2007



Aircraft Classification Number (ACN)
Rigid Pavement

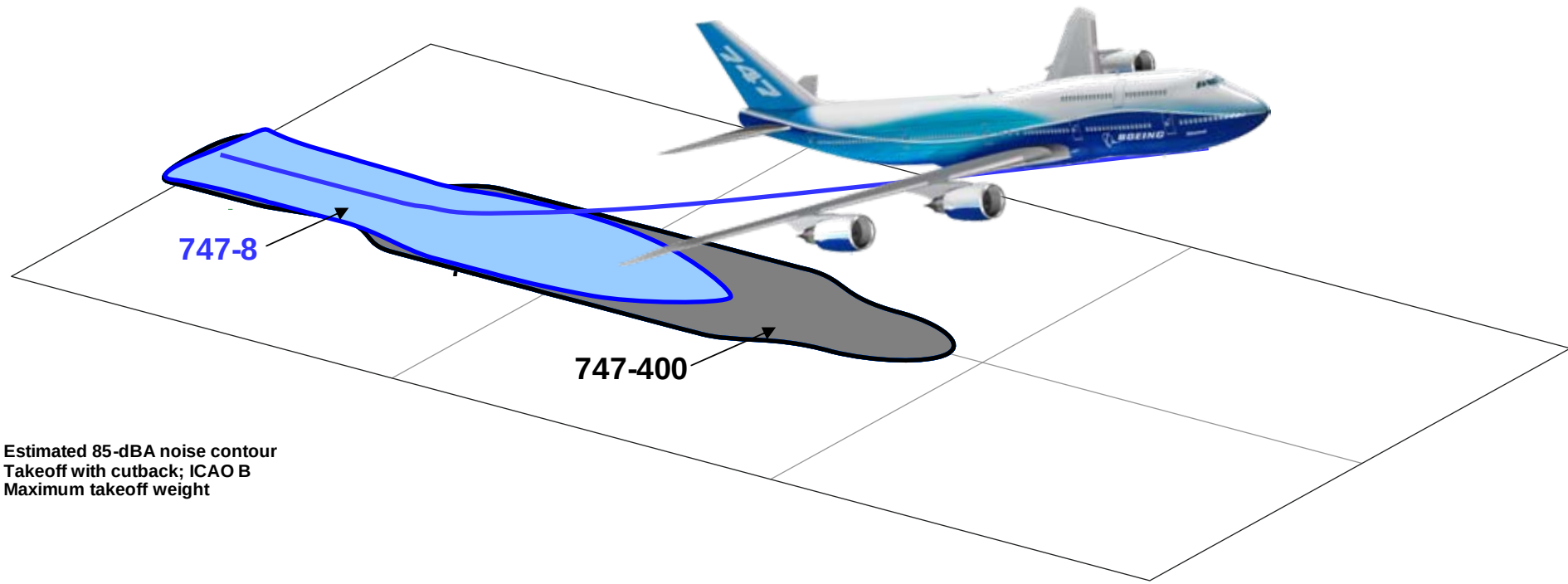
747-8 Intercontinental and Freighter



Noise Footprint

747-8 Intercontinental and Freighter

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



Estimated 85-dBA noise contour
Takeoff with cutback; ICAO B
Maximum takeoff weight