



777X Airport Compatibility Brochure

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

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Introduction

The 777X information in this brochure is intended solely for airport planning purposes. All information for the 777X models is preliminary and subject to change during development and testing.

The 777-9X is a derivative of the 777-300ER with a new composite wing. Since the larger wingspan places the 777X into ICAO Aerodrome Reference Code F, all 777X models include folding wing tips, allowing the 777X to operate in airport taxiway and apron/gate system as a Code E aircraft with wingtips folded.

The 777-8X is a shortened-body derivative of the 777-9X, retaining the same wingspan and folding wing tip. A freighter version is being considered using the -8X airframe and may be available 18-24 months after the -8X enters service.

The 777-9X is planned to be delivered in 2020, with the 777-8X to be delivered several years later.

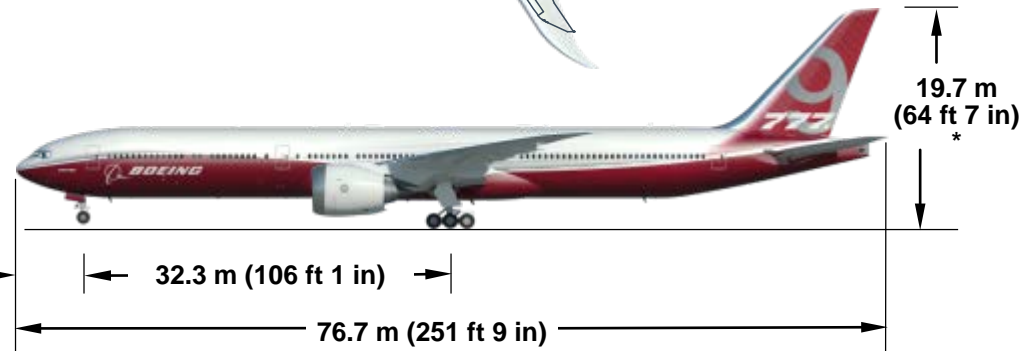
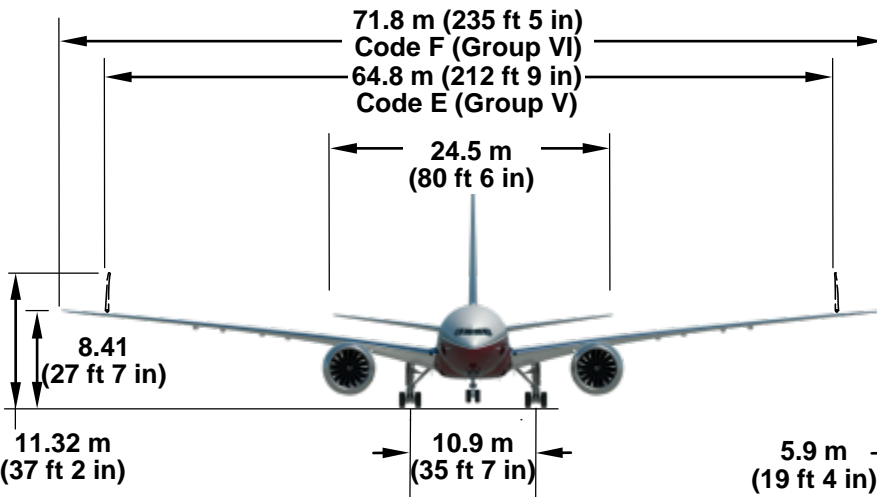
Dimensions shown are preliminary and may change during configuration development

777-9X general arrangement

777-300ER
(black) compared
to the 777-9X



The folded wing has the same
wingspan as the 777-300ER



* Estimate maximum tail height under normal loading conditions

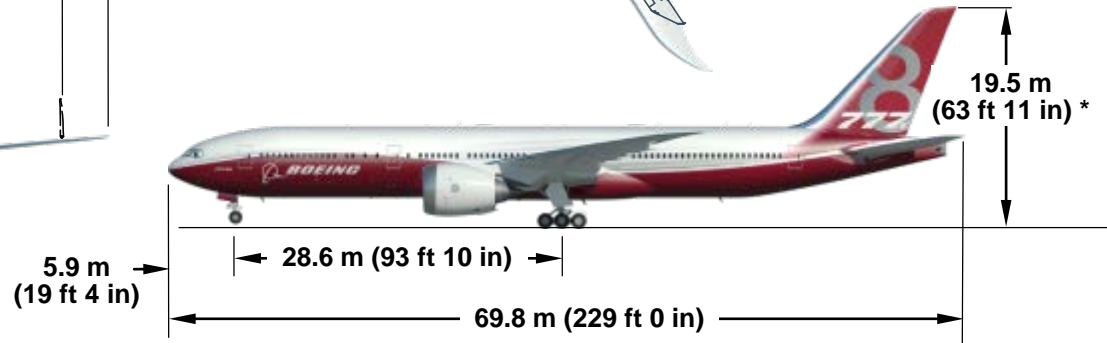
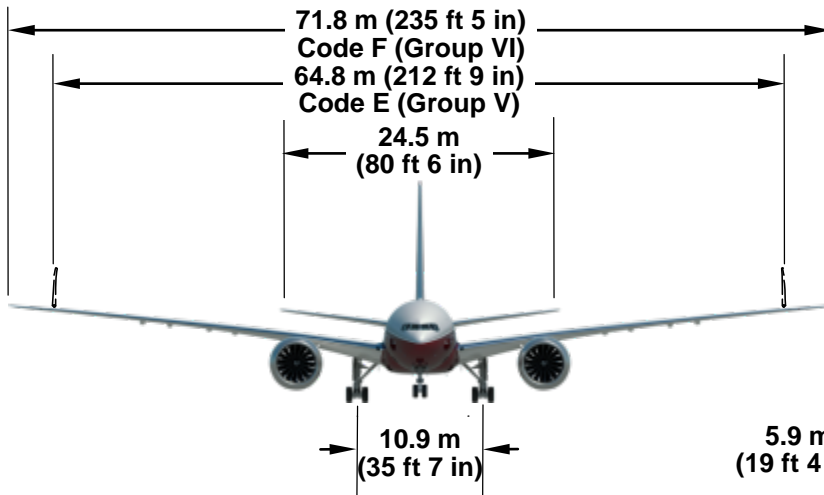
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777-8X general arrangement

777-200LR (black)
compared to the
777-9X



The folded wing has the same
wingspan as the 777-300ER



* Estimate maximum tail height under normal loading conditions

Dimensions shown are preliminary and may change during configuration development

777-9X compared to the 777-300ER

- Compared to the 777-300ER, the 777-9X
 - Overall length is 2.9 m (9.4 ft) longer
 - Folded wingspan same, unfolded wingspan is 7 m (22.8 ft) wider
 - Horizontal stabilizer is 3.0 m (9.9 ft) wider
 - Wheelbase is 1.1 m (3.6 ft) longer
 - Distance from the nose to the nose landing gear remains the same
 - Engine to fuselage centerline is 1.0 m (3.3 ft) further outboard
 - Vertical tail max. height is < 1.0 m (< 3.0 ft) higher
 - Main landing gear width is 0.2 m (6 in) narrower

Dimensions shown are preliminary and may change during configuration development

777X general characteristics

CHARACTERISTICS	UNITS	777-9X	777-8X
Max Design Taxi Weight	LB	777,000	777,000
	KG	352,441	352,441
Max Design Takeoff Weight	LB	775,000	775,000
	KG	351,534	351,534

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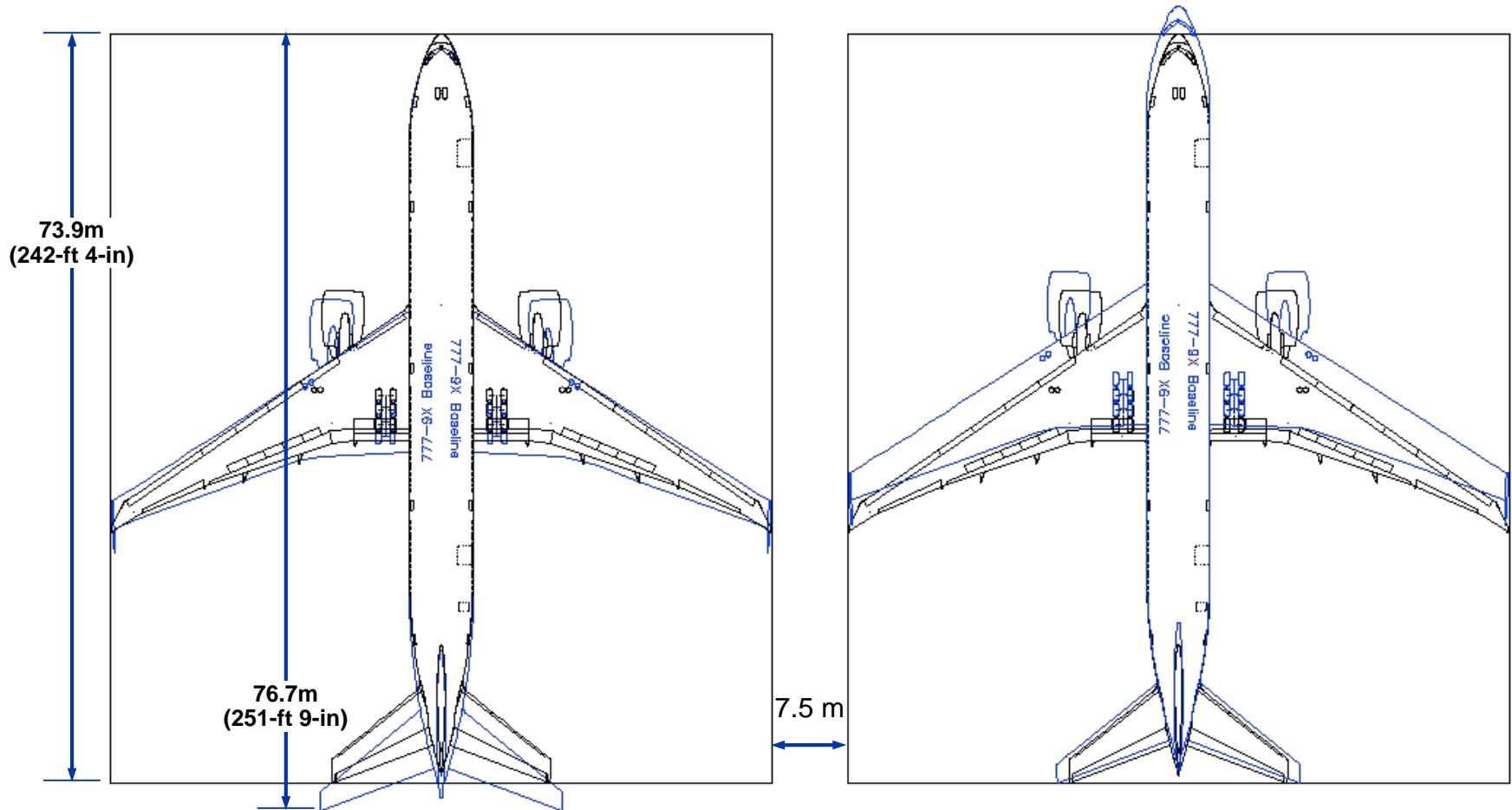
777X at today's airports

	777-300ER (FT/M)	777-9X (FT/M)	777-8X (FT/M)
Wing Span, Wing Tips Extended	N/A	235.4 / 71.8	235.4 / 71.8
ICAO Code Letter		F	F
FAA Design Group		VI	VI
Wing Span, Wing Tips Folded	212.8 / 64.8	212.8 / 64.8	212.8 / 64.8
ICAO Code Letter	E	E	E
FAA Design Group	V	V	V
Overall Length	242.3 / 73.9	251.8 / 76.7	229.0 / 69.8
RFF Category (ICAO)	9	10	9
ARFF Index (FAA)	E	E	E

Dimensions shown are preliminary and may change during configuration development

777-9X parking at a 777-300ER gate

- No requirement to down-size adjacent gate
- At many gates increased length of the 777X can be accommodated by moving aircraft forward towards the terminal (additional space available in the front of aircraft nose)

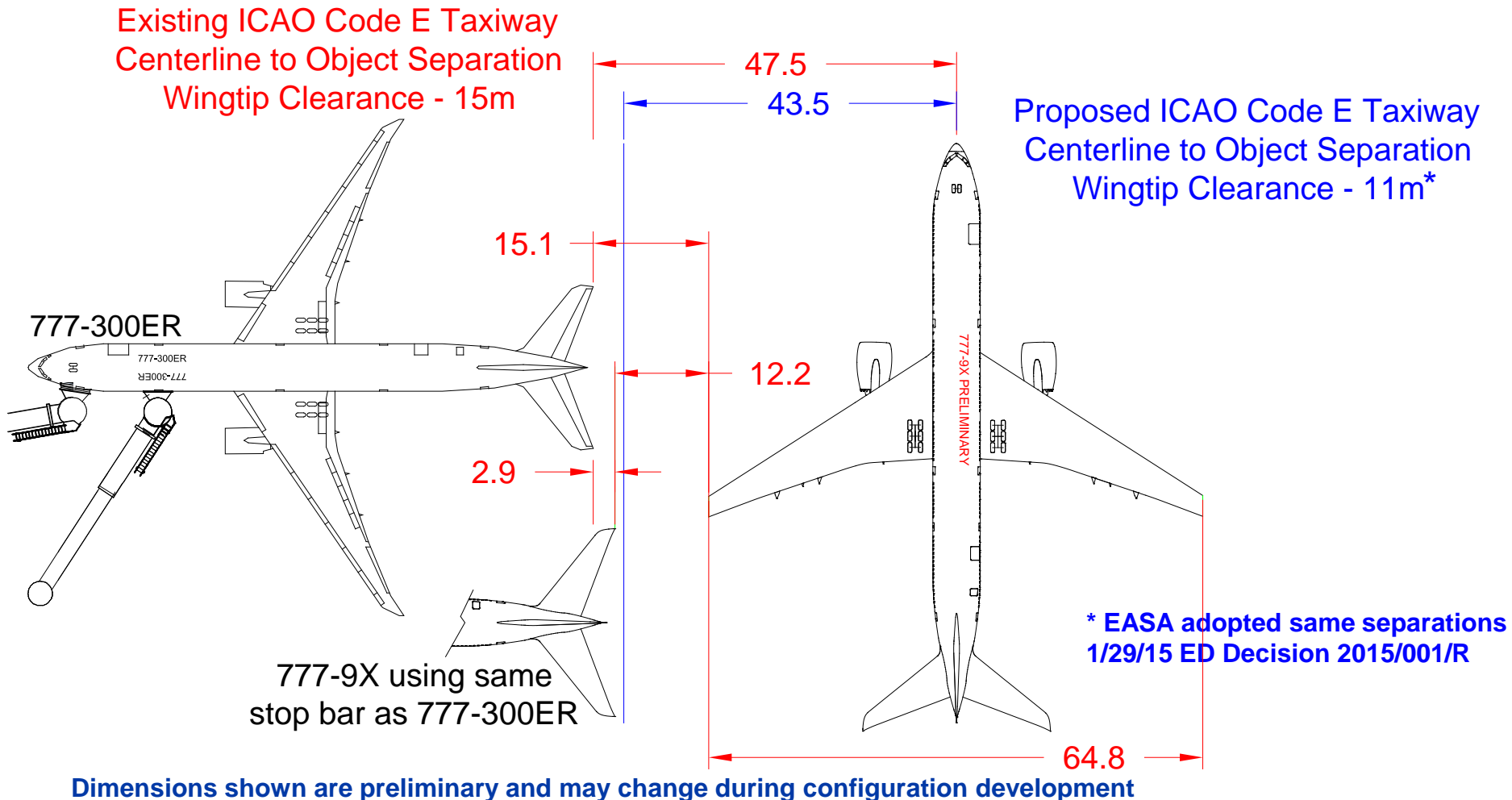


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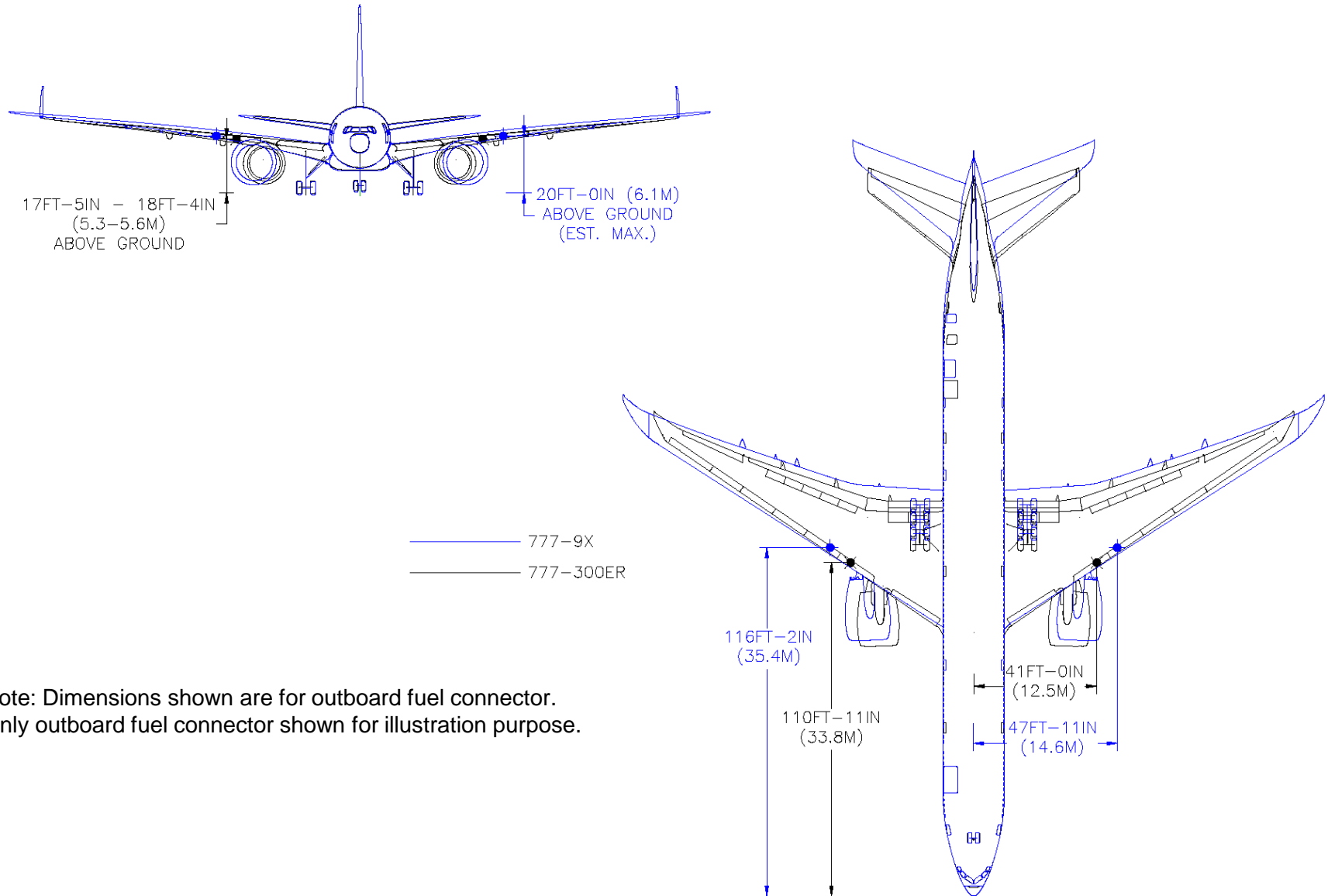
777-9X parking at a 777-300ER gate

- No requirement to down-size adjacent gate with FWT
- Expected ICAO wingtip separation standard change (in 2016) provides relief at gates that do not have service road aft of the parking limit line

Taxiway to Object Code E Separation (m)



777-9X fuel connectors comparison with 777-300ER

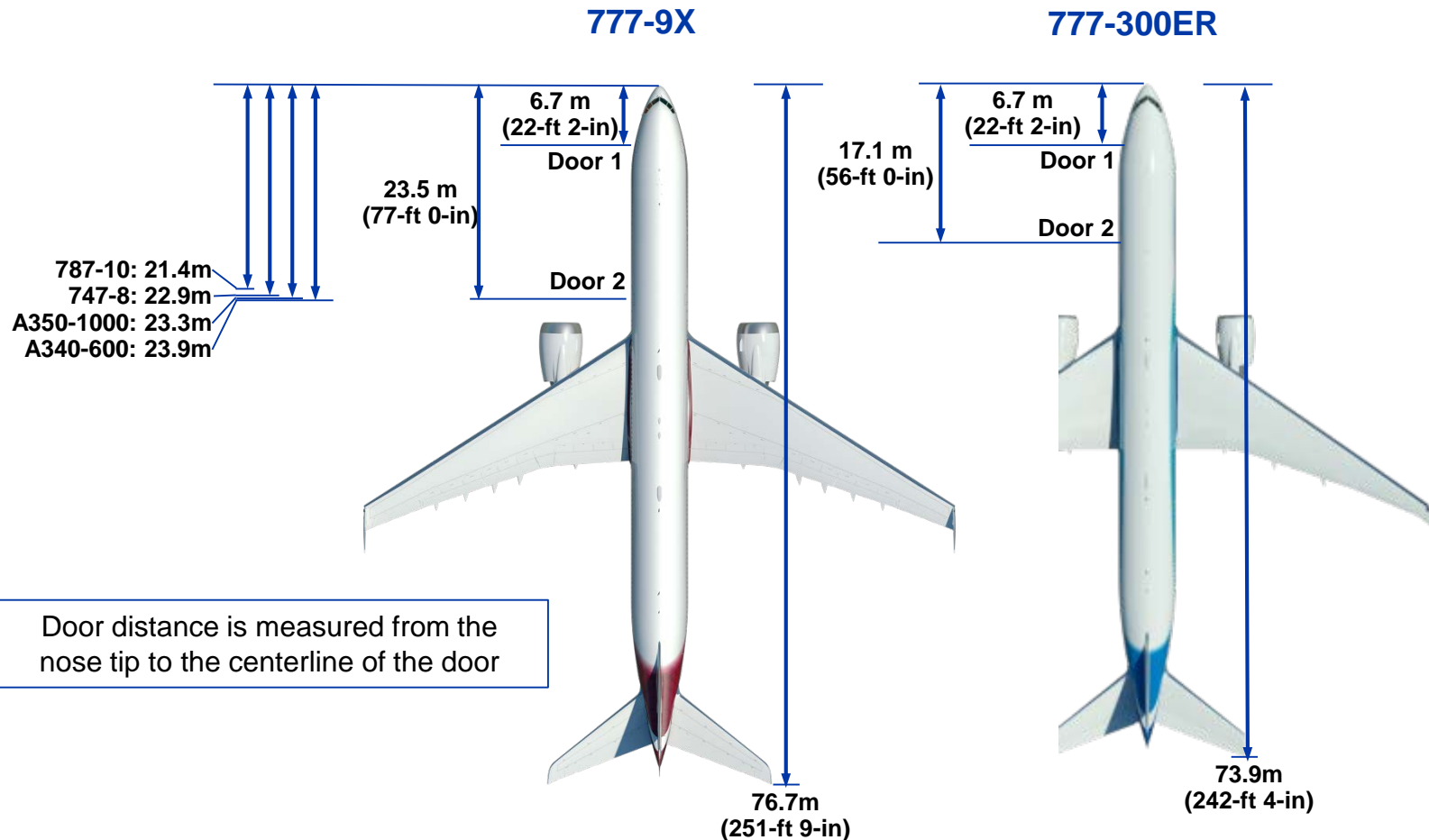


Note: Dimensions shown are for outboard fuel connector.
Only outboard fuel connector shown for illustration purpose.

Dimensions shown are preliminary and may change during configuration development

777-9X door location comparison with 777-300ER

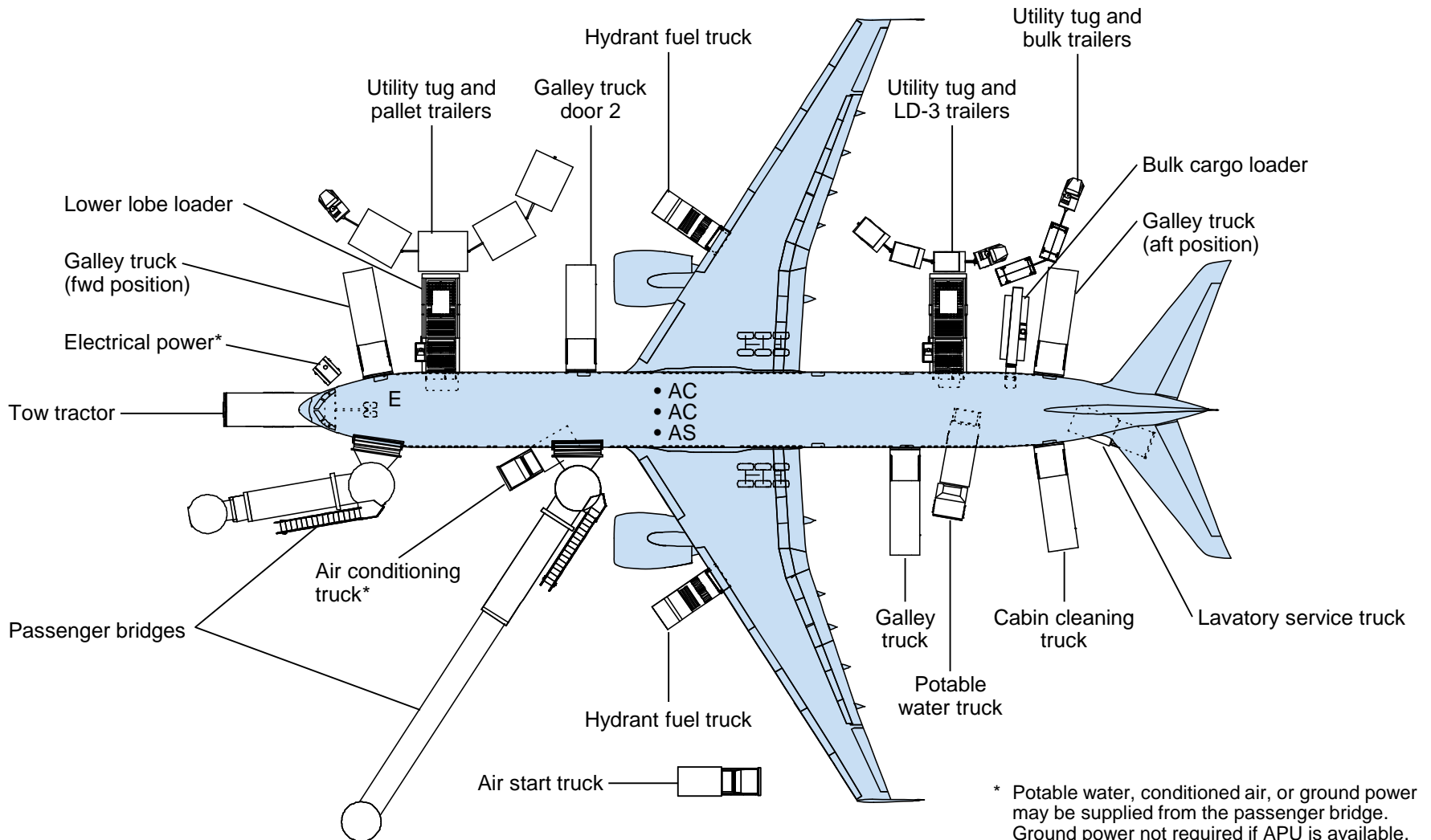
777-9X Parks at a 777-300ER Gate
Gate access – door 1 and 2 center



Dimensions shown are preliminary and may change during configuration development

777-9X servicing arrangement

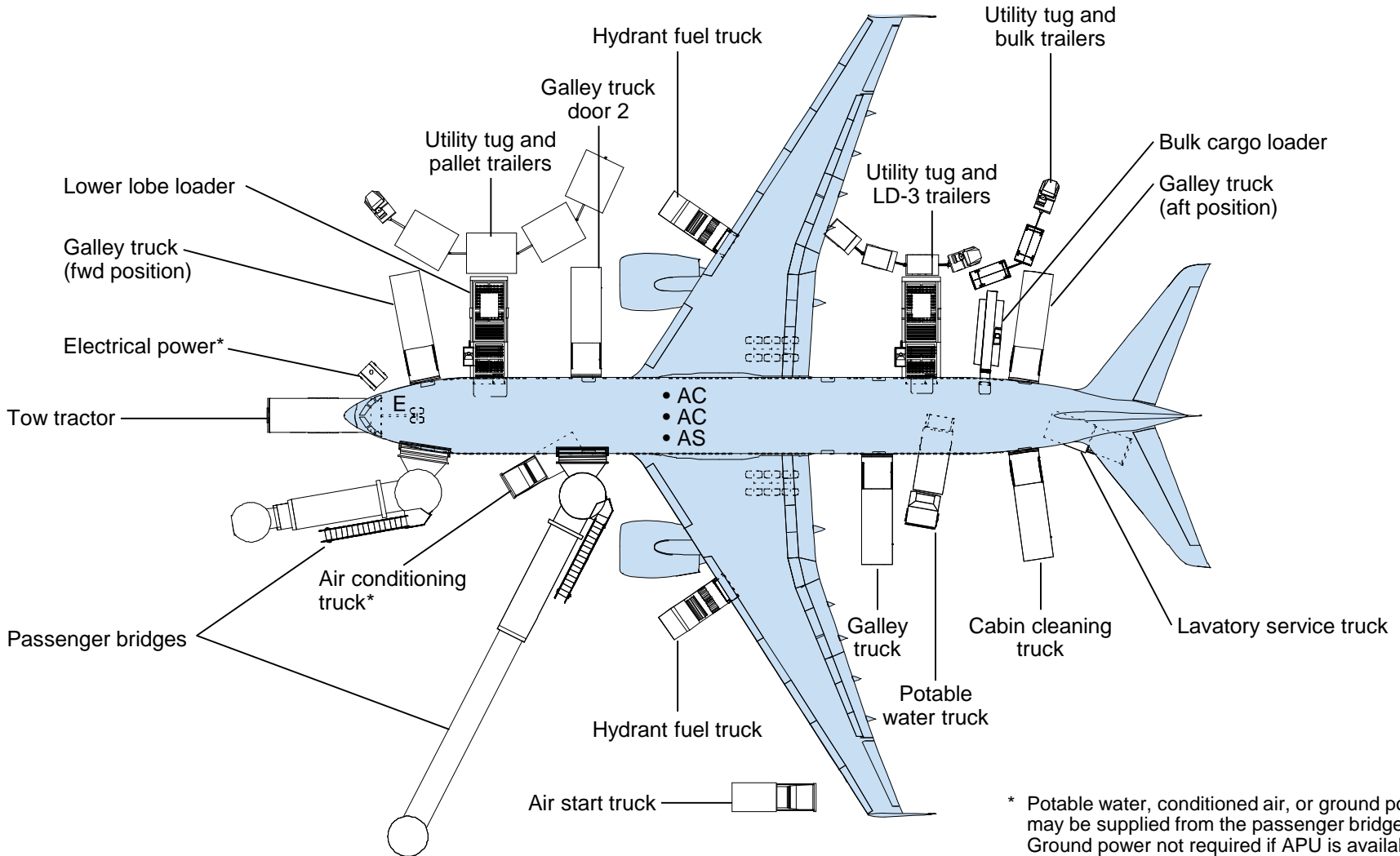
Compatible with today's 777 GSE (ground servicing equipment)



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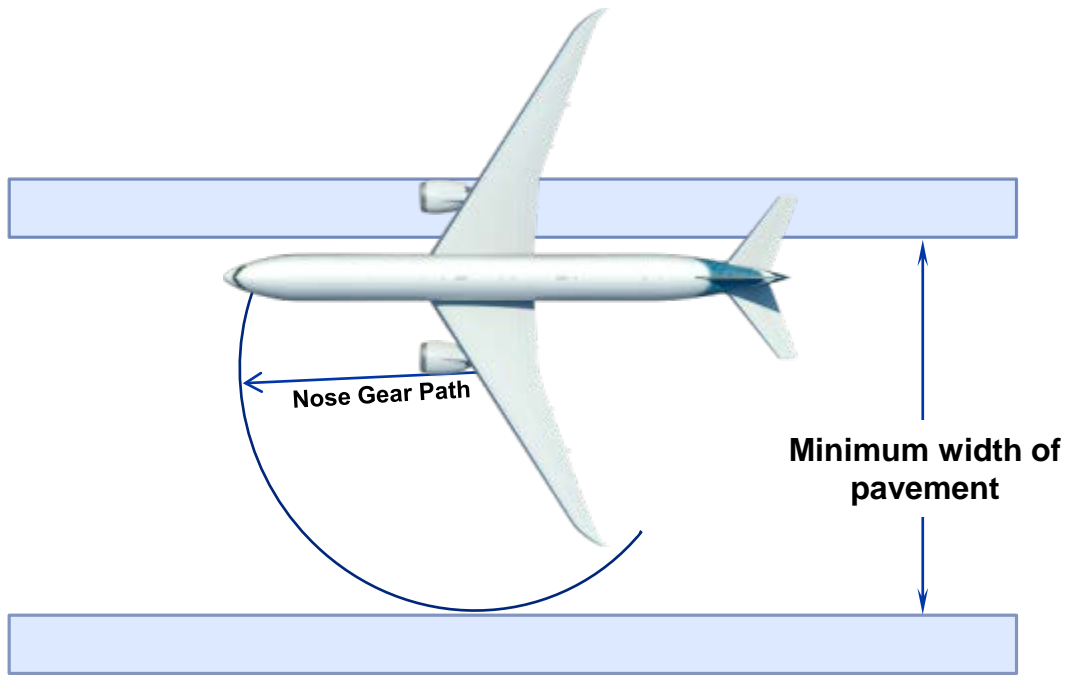
777-8X servicing arrangement

Compatible with today's 777 GSE (ground servicing equipment)



Dimensions shown are preliminary and may change during configuration development

777-9X 180° turn capability



- U-turn width can be reduced by using differential braking and/or asymmetrical thrust
- Minimum widths are calculated based on data from available airport planning manuals – values may vary during operations

	747-400	787-10 ¹	747-8	777-300ER	777-9X ¹	A340-600	A380-800 ²
ICAO Airplane Design Code	E	E	F	E	F	E	F
180 turn width (m) max steering angle ³	51m	51	52 m	57 m	59 m	57 m	57 m

1. Preliminary

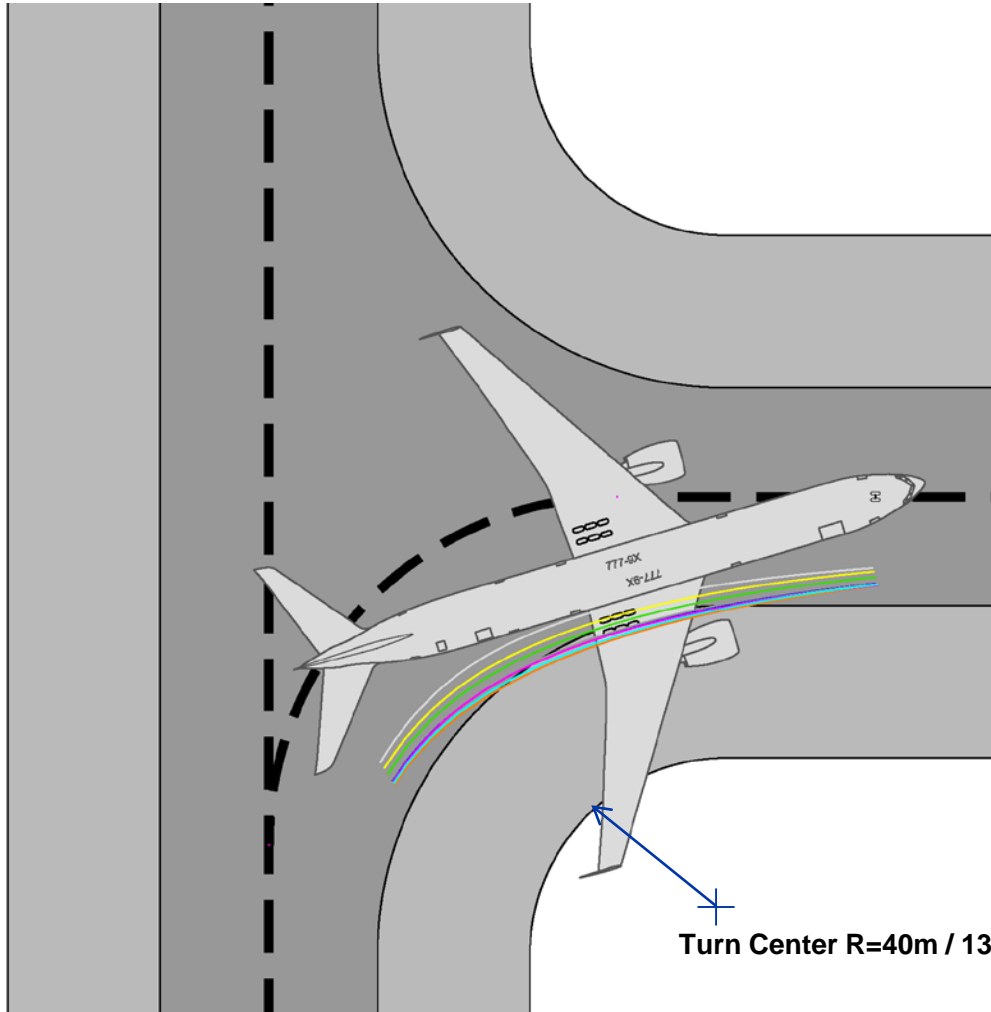
2. Boeing calculation using no differential braking, asymmetric thrust – current Airbus A380 planning manual value (50.91) includes differential braking and asymmetric thrust

3. Minimum widths do not take into account tire-edge clearance of 15 ft (4.5m) at both pavement edges, nor differential braking or asymmetrical thrust

4. 777-8X turn width will be less than the 777-300ER

Dimensions shown are preliminary and may change during configuration development

777-9X fillet requirement is similar to 777-300ER



Model	ICAO design code	Tire edge to turn center (ft)
A340-600	E	38.4
A350-1000*	E	38.7
A380	F	39.0
777-9X*	E**	39.0
777-300ER	E	39.3
747-8	F	39.9
787-10*	E	40.8
747-400	E	41.8

Less Critical

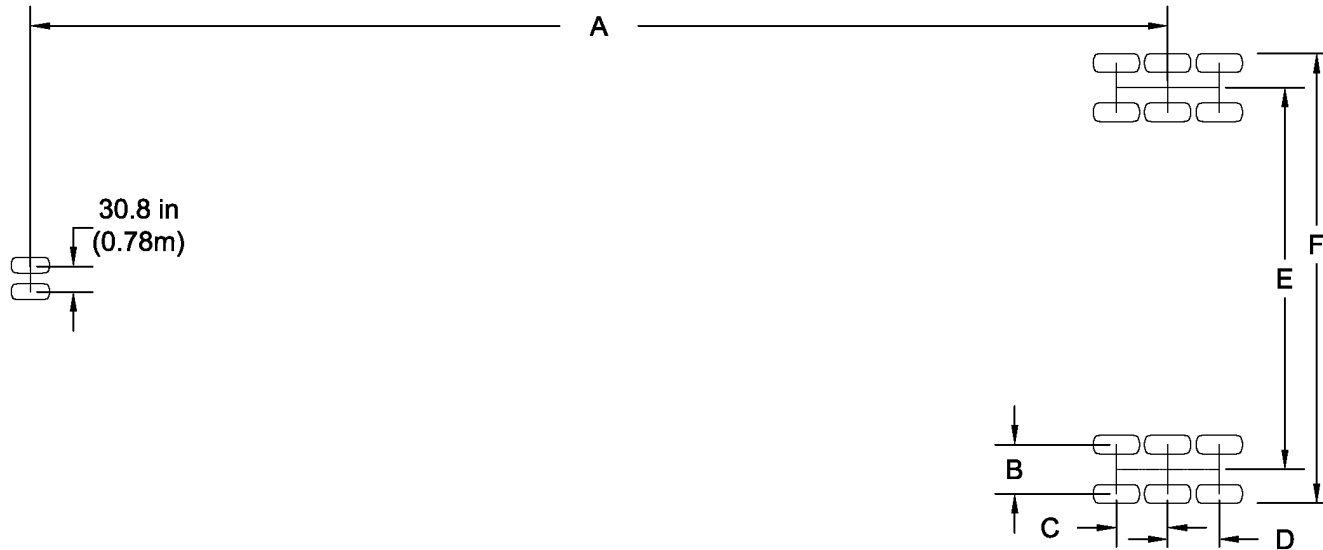
* Preliminary

** Code E after exiting the runway
777-8X fillet requirement will be greater than the 777-300ER

Judgmental Oversteering permits adequate tire edge clearance on most existing fillets

Dimensions shown are preliminary and may change during configuration development

777X landing gear footprint



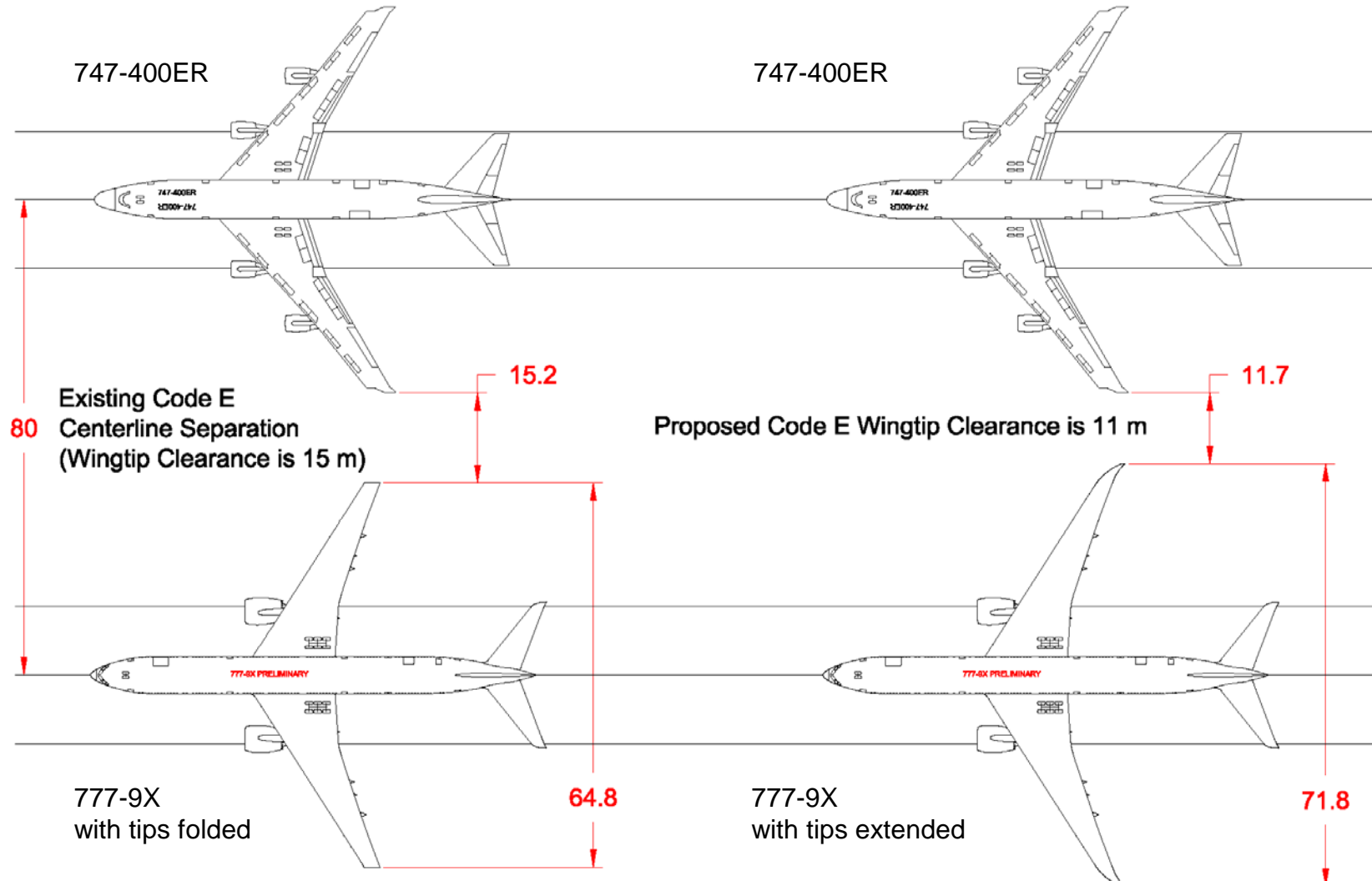
	UNITS	777-9X	777-8X
Maximum Design Taxi Weight	LB / KG	777,000 / 352,441	
Nose Gear Tire Size	IN	43 x 17.5 R17 (32PR)	
Nose Gear Tire Pressure	PSI / KG/CM ²	215 / 15.1	
Main Gear Tire Size	IN	52 x 21 R22 (38PR)	
Main Gear Tire Pressure	PSI / KG/CM ²	229 / 16.21	
Wheelbase (A)	FT-IN / M	106-1 / 32.3	93-10 / 28.6
MLG Truck Width (B)	IN / mm	55 / 140	
MLG Truck Length (C)	IN / mm	57.2 / 145	
MLG Track Length (D)	IN / mm	58.0 / 148	
MLG Maximum Width (E)	FT-IN / M	35-7 / 10.9	
MLG Maximum Tire Edge to Tire Edge width	FT-IN / M	41-10 / 12.8	

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Expected change to ICAO wingtip separation*

ICAO wingtip separation standard change from 15m to 11m (in 2016)

Supports 777X with FWT failure taxiing on Code E parallel taxiways

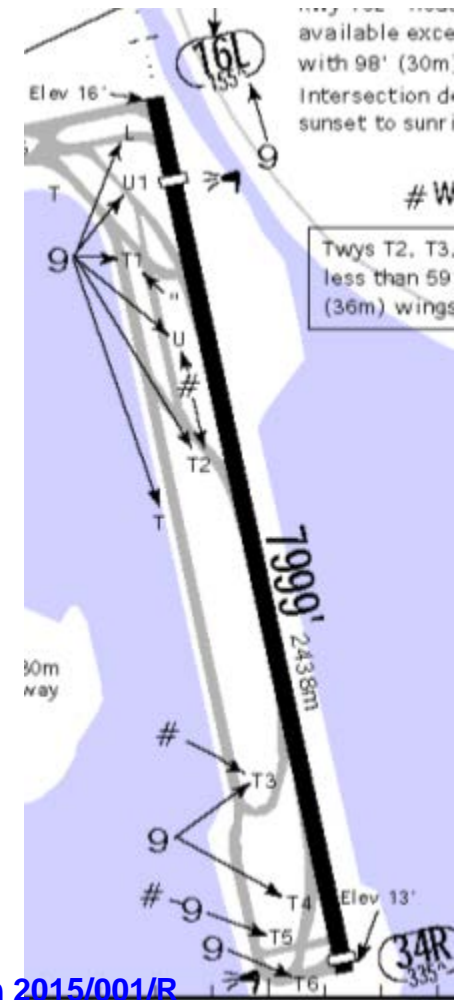


* ICAO change expected 2016. EASA adopted same separations 1/29/15 ED Decision 2015/001/R

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Expected change to ICAO wingtip separation*

ICAO wingtip separation standard change from 15m to 11m (in 2016) will allow 777X to extend wings with a Code E aircraft on adjacent dual taxiway runway entrance built to current separation criteria



* ICAO change expected 2016. EASA adopted same separations 1/29/15 ED Decision 2015/001/R
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777X Airport Compatibility Summary

- Airports and their regulators are delighted that Boeing is designing the 777X with airport compatibility in mind
- Airports appreciate that the folded wing will fit in today's 777-300ER gates
- Expected reductions in ICAO taxilane/taxiway to object separations (2016) will provide relief for the additional -9X length; expected reductions in taxiway-taxiway separations aid in accommodating a rare FWT failure *
- Boeing will address airport procedures for FWT failure to fold procedures
- Boeing will work with airports as needed on: ground servicing, de-icing, dual runway end taxiway entrances, higher RFF category, alternates and ETOPS airports, Jet Bridge and Fuel Pit Connectivity, etc.

* EASA adopted these separations 1/29/15 ED Decision 2015/001/R

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