

Appendix B

AIRPORT DESIGN STANDARDS

**2003 Existing FAA Design Standards
ARC D-II – Gulfstream IV**

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA (FAA Airport Design Program Output)

Aircraft Approach Category D or E	
Airplane Design Group II	
Airplane wingspan	78.99 feet
Primary runway end approach visibility minimums are not lower than 1 mile	
Other runway end approach visibility minimums are not lower than 1 mile	
Airplane undercarriage width (1.15 x main gear track)	18.60 feet
Airport elevation	725 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:	
VFR operations with no intervening taxiway	700 feet
VFR operations with one intervening taxiway	700 feet
VFR operations with two intervening taxiways	705 feet
IFR approach and departure with approach to near threshold 2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.	
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:	
VFR operations	2500 feet
IFR departures	2500 feet
IFR approach and departure with approach to near threshold	2500 feet
IFR approach and departure with approach to far threshold 2500 feet plus 100 feet for each 500 feet of threshold stagger.	
IFR approaches	3400 feet
Runway centerline to parallel taxiway/taxilane centerline	289.5 300 feet
Runway centerline to edge of aircraft parking	400.0 400 feet
Runway width	100 feet
Runway shoulder width	10 feet
Runway blast pad width	120 feet
Runway blast pad length	150 feet
Runway safety area width	500 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater	1000 feet
Runway object free area width	800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater	1000 feet

Clearway width	500 feet
Stopway width	100 feet
Obstacle free zone (OFZ):	
Runway OFZ width	400 feet
Runway OFZ length beyond each runway end	200 feet
Inner-approach OFZ width	400 feet
Inner-approach OFZ length beyond approach light system	200 feet
Inner-approach OFZ slope from 200 feet beyond threshold	50:1
Inner-transitional OFZ slope	0:1
Runway protection zone at the primary runway end:	
Width 200 feet from runway end	500 feet
Width 1900 feet from runway end	1010 feet
Length	1700 feet
Runway protection zone at other runway end:	
Width 200 feet from runway end	500 feet
Width 1900 feet from runway end	1010 feet
Length	1700 feet
Departure runway protection zone:	
Width 200 feet from the far end of TORA	500 feet
Width 1900 feet from the far end of TORA	1010 feet
Length	1700 feet
Taxiway centerline to parallel taxiway/taxilane centerline	104.8 105 feet
Taxiway centerline to fixed or movable object	65.3 65.5 feet
Taxilane centerline to parallel taxilane centerline	96.9 97 feet
Taxilane centerline to fixed or movable object	57.4 57.5 feet
Taxiway width	33.7 35 feet
Taxiway shoulder width	10 feet
Taxiway safety area width	79.0 79 feet
Taxiway object free area width	130.6 131 feet
Taxilane object free area width	114.8 115 feet
Taxiway edge safety margin	7.5 feet
Taxiway wingtip clearance	25.8 26 feet
Taxilane wingtip clearance	17.9 18 feet

**Future FAA Design Standards
ARC D-III – Gulfstream V (1 mile visibility Minimum)**

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category D or E	
Airplane Design Group III	
Airplane wingspan	94.00 feet
Primary runway end approach visibility minimums are not lower than 1 mile	
Other runway end approach visibility minimums are not lower than 1 mile	
Airplane maximum certificated takeoff weight is 150,000 lbs or less	
Airplane wheelbase is less than 60 feet	
Airplane undercarriage width (1.15 x main gear track) . . .	18.60 feet
Airport elevation	725 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:	
VFR operations with no intervening taxiway	700 feet
VFR operations with one intervening taxiway	800 feet
VFR operations with two intervening taxiways	952 feet
IFR approach and departure with approach to near threshold 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.	2500 feet less
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:	
VFR operations	2500 feet
IFR departures	2500 feet
IFR approach and departure with approach to near threshold . .	2500 feet
IFR approach and departure with approach to far threshold 100 feet for each 500 feet of threshold stagger.	2500 feet plus
IFR approaches	3400 feet
Runway centerline to parallel taxiway/taxilane centerline . 297.0	400 feet
Runway centerline to edge of aircraft parking 400.0	500 feet
Runway width	100 feet
Runway shoulder width	20 feet
Runway blast pad width	140 feet
Runway blast pad length	200 feet
Runway safety area width	500 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater	1000 feet
Runway object free area width	800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater	1000 feet
Clearway width	500 feet
Stopway width	100 feet

Obstacle free zone (OFZ):		
Runway OFZ width		400 feet
Runway OFZ length beyond each runway end		200 feet
Inner-approach OFZ width		400 feet
Inner-approach OFZ length beyond approach light system		200 feet
Inner-approach OFZ slope from 200 feet beyond threshold		50:1
Inner-transitional OFZ slope		0:1
Runway protection zone at the primary runway end:		
Width 200 feet from runway end		500 feet
Width 1900 feet from runway end		1010 feet
Length		1700 feet
Runway protection zone at other runway end:		
Width 200 feet from runway end		500 feet
Width 1900 feet from runway end		1010 feet
Length		1700 feet
Departure runway protection zone:		
Width 200 feet from the far end of TORA		500 feet
Width 1900 feet from the far end of TORA		1010 feet
Length		1700 feet
Taxiway centerline to parallel taxiway/taxilane centerline	122.8	152 feet
Taxiway centerline to fixed or movable object	75.8	93 feet
Taxilane centerline to parallel taxilane centerline	113.4	140 feet
Taxilane centerline to fixed or movable object	66.4	81 feet
Taxiway width	38.7	50 feet
Taxiway shoulder width		20 feet
Taxiway safety area width	94.0	118 feet
Taxiway object free area width	151.6	186 feet
Taxilane object free area width	132.8	162 feet
Taxiway edge safety margin		10 feet
Taxiway wingtip clearance	28.8	34 feet
Taxilane wingtip clearance	19.4	22 feet

**Future FAA Design Standards
ARC D-III – Gulfstream V (Category I ILS visibility Minimums)**

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category D or E

Airplane Design Group III	
Airplane wingspan	93.00 feet
Primary runway end approach visibility minimums are not lower than CAT I	
Other runway end approach visibility minimums are not lower than CAT I	
Airplane maximum certificated takeoff weight is 150,000 lbs or less	
Airplane wheelbase is less than 60 feet	
Airplane undercarriage width (1.15 x main gear track) . . .	18.60 feet
Airport elevation	725 feet
Airplane tail height	25.20 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

Airplane Group/ARC

Runway centerline to parallel runway centerline simultaneous operations
when wake turbulence is not treated as a factor:

VFR operations with no intervening taxiway	700 feet
VFR operations with one intervening taxiway	800 feet
VFR operations with two intervening taxiways	952 feet
IFR approach and departure with approach to near threshold	2500 feet less
100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.	

Runway centerline to parallel runway centerline simultaneous operations
when wake turbulence is treated as a factor:

VFR operations	2500 feet
IFR departures	2500 feet
IFR approach and departure with approach to near threshold . .	2500 feet
IFR approach and departure with approach to far threshold	2500 feet plus
100 feet for each 500 feet of threshold stagger.	
IFR approaches	3400 feet

Runway centerline to parallel taxiway/taxilane centerline . 296.5	400 feet
Runway centerline to edge of aircraft parking 400.0	500 feet
Runway width	100 feet
Runway shoulder width	20 feet
Runway blast pad width	140 feet
Runway blast pad length	200 feet
Runway safety area width	500 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater	1000 feet
Runway object free area width	800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater	1000 feet
Clearway width	500 feet
Stopway width	100 feet

Obstacle free zone (OFZ):

Runway OFZ width	400 feet
Runway OFZ length beyond each runway end	200 feet
Inner-approach OFZ width	400 feet
Inner-approach OFZ length beyond approach light system	200 feet
Inner-approach OFZ slope from 200 feet beyond threshold	50:1
Inner-transitional OFZ height H 50.1	47.7 feet
Inner-transitional OFZ slope	6:1

Runway protection zone at the primary runway end:

Width 200 feet from runway end	1000 feet
Width 2700 feet from runway end	1750 feet
Length	2500 feet

Runway protection zone at other runway end:

Width 200 feet from runway end	1000 feet
Width 2700 feet from runway end	1750 feet
Length	2500 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA	500 feet
Width 1900 feet from the far end of TORA	1010 feet
Length	1700 feet

Taxiway centerline to parallel taxiway/taxilane centerline	121.6	152 feet
Taxiway centerline to fixed or movable object	75.1	93 feet
Taxilane centerline to parallel taxilane centerline	112.3	140 feet
Taxilane centerline to fixed or movable object	65.8	81 feet
Taxiway width	38.7	50 feet
Taxiway shoulder width		20 feet
Taxiway safety area width	93.0	118 feet
Taxiway object free area width	150.2	186 feet
Taxilane object free area width	131.6	162 feet
Taxiway edge safety margin		10 feet
Taxiway wingtip clearance	28.6	34 feet
Taxilane wingtip clearance	19.3	22 feet

REFERENCE: AC 150/5300-13, Airport Design.