



Recent amendment to Annex 14, Volume I and an update on PANS-Aerodromes

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Overview

- Adoption of Amendment 14 to Annex 14, Volume I
- Update on PANS-Aerodromes
- Upcoming events



Adoption of Amendment 14

- Adopted on 9 March 2018 (6th meeting of the 213th Session of the ICAO Council)
- Effective on 16 July 2018
- Applicable on 8 November 2018
- Details in State letter AN 4/1.2.27-18/23 dated 29 March 2018



Main features of Amendment 14

- Revised ARC
- Reduced RWY width based on OMGWS
- Reduced TWY width based on OMGWS
- Reduced taxiway shoulders
- Reduced RWY strip width
- Reduced runway-taxiway separation distances

ARC and OMGWS

- New definition on Outer main gear span (OMGWS) added
 - *Outer main gear wheel span (OMGWS)*. The distance between the outside edges of the main gear wheels.
- Aerodrome Reference Code amended – only wingspan in code element 2 (no OMGWS)

Runway Width

Code number	Code letter					
	A	B	C	D	E	F
1 ^a	18 m	18 m	23 m	–	–	–
2 ^a	23 m	23 m	30 m	–	–	–
3	30 m	30 m	30 m	45 m	–	–
4	–	–	45 m	45 m	45 m	60 m



Outer Main Gear Wheel Span (OMGWS)

Code number	Up to but not including 4.5 m	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
1 ^a	18 m	18 m	23 m	–
2 ^a	23 m	23 m	30 m	–
3	30 m	30 m	30 m	45 m
4	–	–	45 m	45 m

Runway shoulder width

- 60m for Code D, E
- 75m for Code F

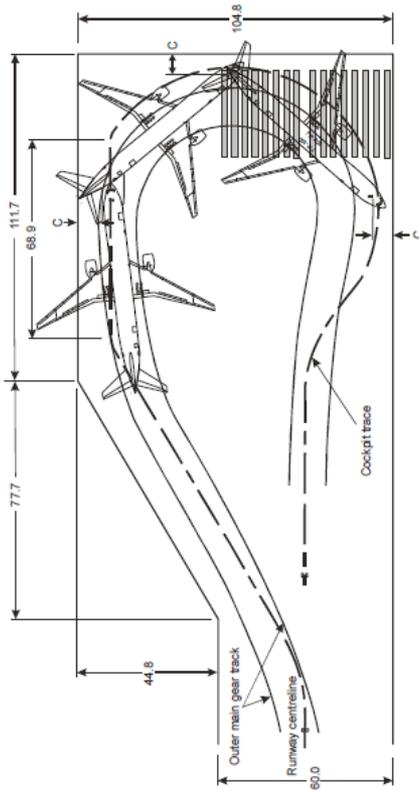


- 60m for Code D, E with OMGWS from 9m up to but not including 15m
- 60m for Code F for 2- or 3-engined aeroplane with OMGWS from 9m up to but not including 15m
- 75m for Code F for 4 (or more) -engined aeroplane with OMGWS from 9m up to but not including 15m

3.2.5 Recommendation.— *A runway shoulder should be prepared or constructed so as to resist erosion and the ingestion of the surface material by aeroplane engines.*

3.2.6 Recommendation.— *Runway shoulders for code letter F aeroplanes should be paved to a minimum overall width of runway and shoulder of not less than 60 m.*

Runway turn pad



Code letter Clearance

- A 1.5 m
- B 2.25 m
- C 3 m if the turn pad is intended to be used by aeroplanes with a wheel base less than 18 m;
4.5 m if the turn pad is intended to be used by aeroplanes with a wheel base equal to or greater than 18 m.
- D 4.5 m
- E 4.5 m
- F 4.5 m



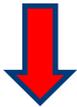
	OMGWS			
	Up to but not including 4.5 m	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m to but not including 15 m
Clearance	1.50 m	2.25 m	3 m ^a or 4 m ^b	4 m

^a if the turn pad is intended to be used by aeroplanes with a wheel base less than 18 m

^b if the turn pad is intended to be used by aeroplanes with a wheel base equal to or greater than 18 m

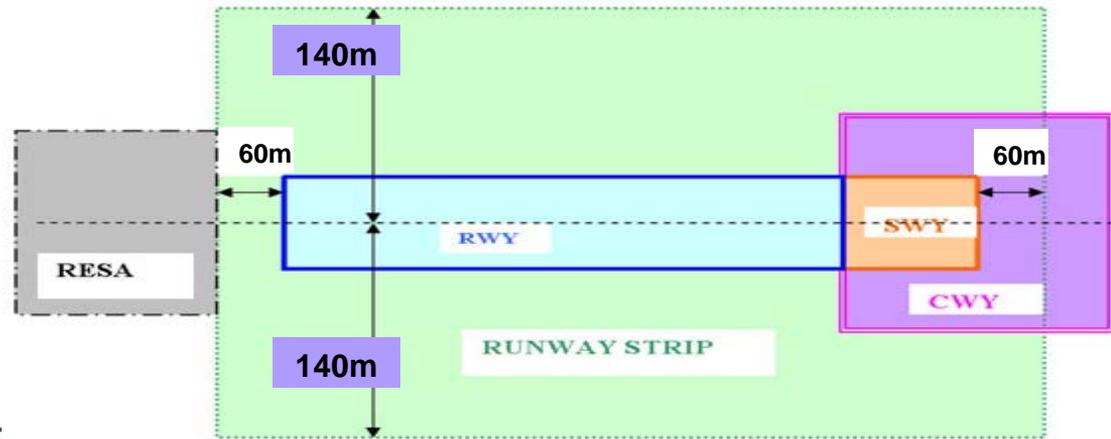
Runway strip

- 150 m where the code number is 3 or 4; and
- 75 m where the code number is 1 or 2;



— 140m where the code number is 3 or 4;

— 70m where the code number is 1 or 2;



Code 3 or 4 Aerodrome

Taxiway clearance

Code letter	Clearance
A	1.5 m
B	2.25 m
C	3 m on straight portions; 3 m on curved portions if the taxiway is intended to be used by aeroplanes with a wheel base less than 18 m; 4.5 m on curved portions if the taxiway is intended to be used by aeroplanes with a wheel base equal to or greater than 18 m.
D	4.5 m
E	4.5 m
F	4.5 m



	OMGWS			
	Up to but not including 4.5 m	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
Clearance	1.50 m	2.25 m	3 m ^a or 4 m ^b	4 m

^a On curved portions if the taxiway is intended to be used by aeroplanes with a wheel base of less than 18 m

^b On curved portions if the taxiway is intended to be used by aeroplanes with a wheel base equal to or greater than 18 m

Taxiway width

Code letter	Taxiway width
<i>A</i>	<i>7.5 m</i>
<i>B</i>	<i>10.5 m</i>
<i>C</i>	<i>15 m</i>
<i>D</i>	<i>18 m if the taxiway is intended to be used by aeroplanes with an outer main gear wheel span of less than 9 m;</i> <i>23 m if the taxiway is intended to be used by aeroplanes with an outer main gear wheel span equal to or greater than 9 m.</i>
<i>E</i>	<i>23 m</i>
<i>F</i>	<i>25 m</i>



	OMGWS			
	Up to but not including 4.5 m	4.5 m up to but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
Taxiway width	7.5 m	10.5 m	15 m	23 m

Runway-taxiway separation

Table 3-1. Taxiway minimum separation distances

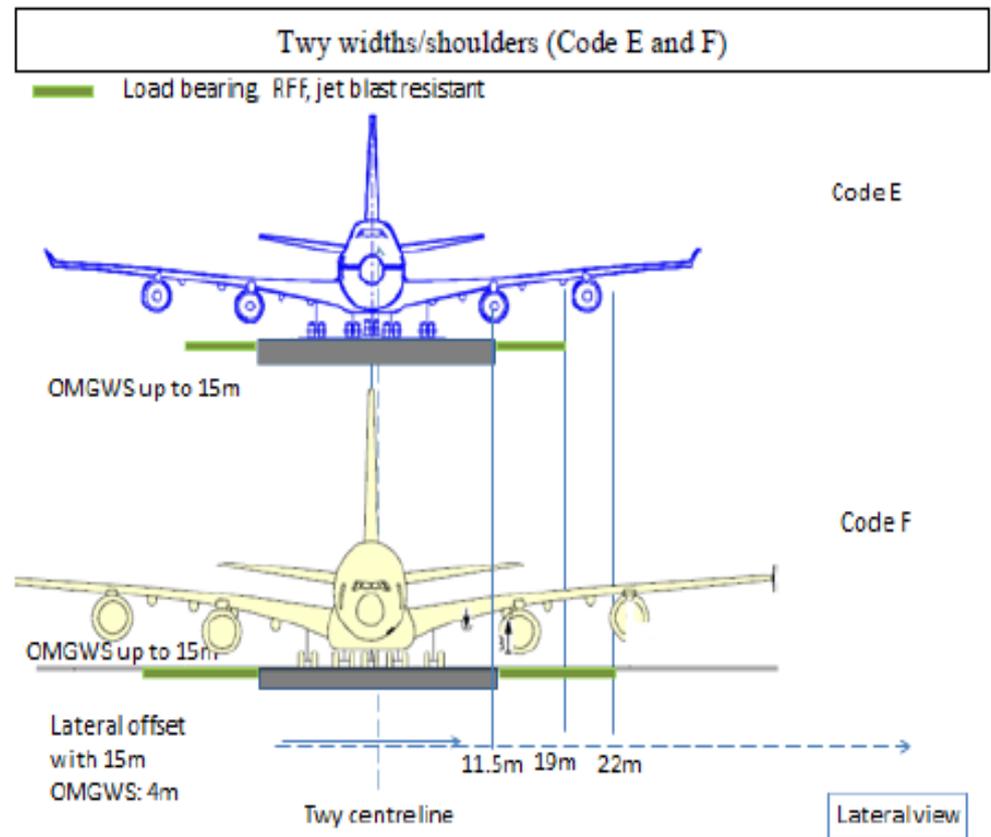
Code letter	Distance between taxiway centre line and runway centre line (metres)								Taxiway centre line to taxiway centre line (metres)	Taxiway, other than aircraft stand taxilane, centre line to object (metres)	Aircraft stand taxilane centre line to aircraft stand taxilane centre line (metres)	Aircraft stand taxilane centre line to object (metres)
	Instrument runways				Non-instrument runways							
	Code number 1	Code number 2	Code number 3	Code number 4	Code number 1	Code number 2	Code number 3	Code number 4				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
A	82.5 77.5	82.5 77.5	-	-	37.5	47.5	-	-	23	15.5	19.5	12
B	87 82	87 82	152	-	42	52	87	-	32	20	28.5	16.5
C	88	88	168 158	158	48	58	93	93	44	26	40.5	22.5
D	-	-	176 166	176 166	-	-	101	101	63	37	59.5	33.5
E	-	-	172.5	182.5 172.5	-	-	107.5	107.5	76	43.5	72.5	40
F	-	-	180	190 180	-	-	115	115	91	51	87.5	47.5

Taxiway shoulders

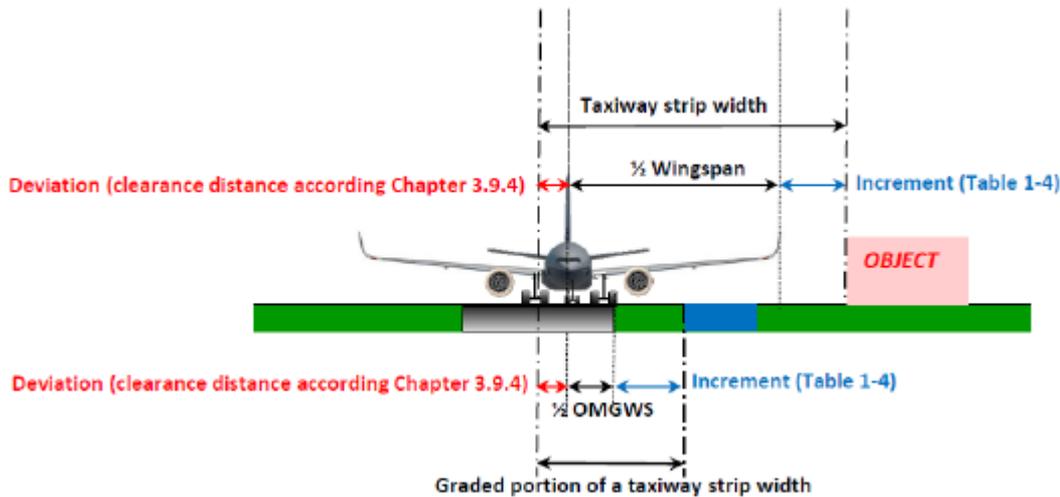
- 60 m where the code letter is F;
- 44 m where the code letter is E;
- 38 m where the code letter is D; and
- 25 m where the code letter is C.



- **44m** where the code letter is F;
- **38m** where the code letter is E;
- **34m** where the code letter is D; and
- 25 m where the code letter is C.



Taxiway strips



- 11 m where the code letter is A;
- 12.5 m where the code letter is B or C;
- 19 m where the code letter is D;
- 22 m where the code letter is E; and
- 30 m where the code letter is F.



- 10.25 m where the OMGWS is up to but not including 4.5 m
- 11 m where the OMGWS is 4.5m up to but not including 6 m
- 12.50 m where the OMGWS is 6 m up to but not including 9 m
- 18.50 m where the OMGWS is 9 m up to but not including 15 m



Characteristic	Proposed amendment	Formerly
Runway Width	Reduced to 45m for large aircraft with OMGWS* from 9 to 15m.	Was 60m for aircraft with wingspan over 65m (i.e. code F).
Width of Runway shoulders overall	Reduced to 60m for code F aeroplanes with OMGWS from 9 to 15 m and two or three engines 75m maintained for aircraft with four engines. New recommendation that shoulders should be <u>paved</u> to 60m, for Code F (but see runway width above)	was 75m for all code F aeroplanes. Annex 14 did not expressly require shoulders to be paved
Runway strip width	Reduced to 140m for ARC number 3 or 4 (for aeroplanes with reference field length over 1200m).	Was 150m.
Wheel to Edge clearance	Reduced to 4m, based on OMGWS from 9 to 15m.	Was 4.5m.
Taxiway Width	Reduced to 23m for OMGWS from 9 to 15m. Refer Fig.2	Was 25m (for Code F).
Runway-Taxiway separation	Reduced to 180m for Code 4 instrument runways.	Was 190m
Width of Taxiway shoulders overall	Reduced to 44m for Code F.	Was 60m
	Reduced to 38m for Code E.	Was 44m
	Reduced to 34m for Code D.	Was 38m



Update on PANS-Aerodromes

- New Part II of PANS-Aerodromes is being under review, covering day-to-day operational management



Update on PANS-Aerodromes

- Nine new Chapters
 - Training
 - Reporting format using standard runway condition report
 - Inspection of the movement area
 - Work in progress (WIP)
 - Foreign object debris (FOD) control
 - Wildlife hazard management
 - Apron safety
 - Runway safety
 - Airside driver permit scheme and vehicle/equipment



Upcoming events

- **ICAO Thirteenth Air Navigation Conference (AN-Conf/13)**
 - 9 to 19 October, 2018
 - ICAO headquarters, Montreal, Canada
- **Global symposium on GRF**
 - 26 to 28 March, 2019
 - ICAO headquarters, Montreal, Canada



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Thank You