



ICAO

International Civil Aviation Organization

**Sixteenth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/16)**

Video Teleconference, 07 – 11 June 2021

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**Agenda Item 6: Any Other Business**

**AMENDMENT 1 TO PANS-AIM**

(Presented by the Secretariat)

**SUMMARY**

This paper presents a reminder of the ICAO State Letter introducing Amendment 1 to PANS-AIM.

**1. INTRODUCTION**

1.1 ICAO State Letter AN2/33.1 20/26 (**Attachment A**) dated 08 June 2020, introduced Amendment 1 to ICAO Doc 10066 – PANS-AIM, for applicability on 04 November 2021 for elements concerning ATS route classification, GBAS Cat II and Cat II Criteria, visual segment surface (VSS) and folding wing tips (FWT), and 28 November 2024 for pavement classification rating (PCR)

**2. DISCUSSION**

2.1 Amendment 1 stems from proposals to revise the PANS-AIM, the *Procedures for Air Navigation Services – Aircraft Operations*, Volume I – *Flight Procedures* and Volume II – *Construction of Visual and Instrument Flight Procedures* (PANS-OPS, Doc 8168), *Procedures for Air Navigation Services – Aerodromes* (PANS-AERODROMES, Doc 9981), Annex 4 – *Aeronautical Charts* and Annex 14 – *Aerodromes*, Volume I – *Aerodrome Design and Operations* as a result of the work of the fourteenth meeting of the Instrument Flight Procedures Panel (IFPP/14) and the third meeting of the Aerodrome Design and Operations Panel (ADOP/3).

2.2 The State Letter includes an implementation task list and outline of guidance material, an impact assessment, and the amendments to the PANS-AIM document.

2.3 The State Letter reminds States of the requirement to publish in AIP any significant differences that will exist on 04 November 2021 and 28 November 2024, as relevant, between the amended provisions of PANS-AIM and national regulations and practices.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) ensure the AIS has included Amendment 1 to PANS-AIM in AIP Amendment Planning and
- c) discuss any relevant matters as appropriate.

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Ref.: AN 2/33.1-20/26

8 June 2020

**Subject:** Approval of Amendment 1 to the *Procedures for Air Navigation Services — Aeronautical Information Management* (PANS-AIM, Doc 10066)

**Action Required:** a) Implementation of the amendment on 4 November 2021<sup>1</sup> and on 28 November 2024<sup>2</sup>; b) Publication of any differences as of 4 November 2021 and as of 28 November 2024

Sir/Madam,

1. I have the honour to inform you that the Air Navigation Commission, acting under delegated authority, on 10 March 2020, approved Amendment 1 to the *Procedures for Air Navigation Services (PANS) — Aeronautical Information Management* (PANS-AIM, Doc 10066) for applicability on 4 November 2021 for the elements concerning ATS route classification, GBAS Cat II and Cat III Criteria, visual segment surface (VSS) and folding wing tips (FWT), and 28 November 2024 for pavement classification rating (PCR). The amendment was approved on 12 May 2020 by the President of the Council on behalf of the Council in accordance with established procedure. A copy of the amendment is available as attachments to the electronic version of this State letter on the ICAO-NET (<http://portal.icao.int>) where you can access all other relevant documentation.

2. Amendment 1 stems from proposals to revise the PANS-AIM, the *Procedures for Air Navigation Services — Aircraft Operations, Volume I — Flight Procedures* and *Volume II — Construction of Visual and Instrument Flight Procedures* (PANS-OPS, Doc 8168), *Procedures for Air Navigation Services — Aerodromes* (PANS-AERODROMES, Doc 9981), Annex 4 — *Aeronautical Charts* and Annex 14 — *Aerodromes, Volume I — Aerodrome Design and Operations* as a result of the work of the fourteenth meeting of the Instrument Flight Procedures Panel (IFPP/14) and the third meeting of the Aerodrome Design and Operations Panel (ADOP/3).

3. An implementation task list, including an outline of guidance material, and an impact assessment for the amendment are presented in Attachments B and C, respectively.

<sup>1</sup> 4 November 2021 for the elements concerning ATS route classification, GBAS Cat II and Cat III Criteria, visual segment surface (VSS) and folding wing tips (FWT).

<sup>2</sup> 28 November 2024 for pavement classification rating (PCR).

4. Your Government is invited by the Council to implement the provisions of the PANS-AIM, as amended. In this connection, I draw your attention to the decision taken by the Council, on 1 October 1973, to discontinue the publication of differences in Supplements to PANS documents and, instead, to request States to publish up-to-date lists of significant differences from PANS documents in their Aeronautical Information Publications (AIPs).

5. May I, therefore, invite your Government to publish in your AIP a list of any significant differences which will exist on 4 November 2021 for the elements concerning ATS route classification, GBAS Cat II and Cat III Criteria, visual segment surface (VSS) and folding wing tips (FWT) and as of 28 November 2024 for pavement classification rating (PCR) between the amended provisions of the PANS-AIM and your national regulations and practices.

Accept, Sir/Madam, the assurances of my highest consideration.

Fang Liu  
Secretary General

**Enclosures:**

- A — Amendment to the Foreword of the PANS-AIM
- B — Implementation task list and outline of guidance material in relation to Amendment 1 to the PANS-AIM
- C — Impact assessment in relation to Amendment 1 to the PANS-AIM

**ATTACHMENT A** to State letter AN 2/33.1-20/26

**AMENDMENT TO THE FOREWORD OF THE PANS-AIM (DOC 10066)**

Add the following elements at the end of Table A:

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject</i>	<i>Approved Applicable</i>
1	The fourteenth meeting of the Instrument Flight Procedures Panel (IFPP/14) and the third meeting of the Aerodrome Design and Operations Panel (ADOP/3)	a) ATS route classification, GBAS Cat II and Cat III Criteria and visual segment surface (VSS) and folding wing tips; and  b) pavement classification rating.	12 May 2020 4 November 2021 28 November 2024

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**ATTACHMENT B** to State letter AN 2/33.1-20/26

**IMPLEMENTATION TASK LIST AND OUTLINE OF GUIDANCE MATERIAL  
IN RELATION TO AMENDMENT 1 TO THE PANS-AIM (DOC 10066)**

**1. IMPLEMENTATION TASK LIST**

1.1 Essential steps to be followed by a State in order to implement Amendment 1 to the PANS-AIM include:

- a) conduct a gap analysis between the amendment and national regulatory framework;
- b) identification of the rule-making process necessary to transpose the modified ICAO provisions into the national regulations;
- c) establishment of a national implementation plan that takes into account the modified ICAO provisions;
- d) drafting of the modification to the national requirements and means of compliance;
- e) official adoption of the national requirements and means of compliance;
- f) identification and publication of significant differences, if any, in the State's aeronautical information publication (AIP);
- g) modification of surveillance programmes to include new requirements, if applicable;
- h) revision of guidance material and checklists for safety oversight inspectors;
- i) training of operational staff in the use of the new provisions; and
- j) ensure compliance by industry (air navigation services provider (ANSP) and operator) through safety oversight activities.

**2. STANDARDIZATION PROCESS**

2.1 Approval date: 12 May 2020

2.2 Applicability dates:

- a) 4 November 2021 for the elements concerning ATS route classification, GBAS Cat II and Cat III Criteria, visual segment surface (VSS) and folding wing tips (FWT); and
- b) 28 November 2024 for the element concerning pavement classification rating (PCR).

2.3 Embedded date(s): None.

3. **SUPPORTING DOCUMENTATION**

3.1 **ICAO documentation**

<b>Title</b>	<b>Type (PANS/TI/Manual/Circ)</b>	<b>Planned publication date</b>
Doc 8168, <i>Procedures for Air Navigation Services — Aircraft Operations</i>	Manual	2021
Doc 8126, <i>Aeronautical Information Services Manual</i>	Manual	2021
Doc 9157, <i>Aerodrome Design Manual, Part 3 — Pavements</i>	Manual	2020

3.2 **External documentation**

<b>Title</b>	<b>External Organization</b>	<b>Publication date</b>
None		

4. **IMPLEMENTATION ASSISTANCE TASKS**

<b>Type</b>	<b>Global</b>	<b>Regional</b>
Workshop as resources permit	Training for States on how to implement the new aircraft classification rating – pavement classification rating (ACR-PCR) system.	ICAO regional offices or States offering to host regional events

5. **UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME (USOAP)**

5.1 No major changes to the USOAP CMA protocol questions are envisaged.

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**ATTACHMENT C** to State letter AN 2/33.1-20/26

**IMPACT ASSESSMENT IN RELATION TO  
AMENDMENT 1 TO PANS-AIM**

**1. INTRODUCTION**

1.1 Amendment 1 to the PANS-AIM is intended to address the requirements and procedures for the following:

- the current ATS route categorization in PANS-AIM generates confusion; a clearer delineation between conventional routes, area navigation routes and their associated specifications will now be provided;
- the development of GBAS Cat II and Cat III design criteria will allow for a uniform and consistent implementation of these procedures; this will result in major benefits such as the reduction of time between approaches and availability of precision approaches where instrument landing systems (ILS) cannot be implemented due to terrain constraints;
- depiction of VSS penetrations on the instrument approach charts leads to confusion without adding additional value; therefore, deletion of the charting requirement will avoid confusion;
- the current ACN-PCN pavement reporting system is upgraded into the ACR-PCR system to incorporate the current pavement design models which are becoming the standard for pavement design and analysis; and
- aeroplanes with folding wing tips will benefit from a lower aerodrome reference code (ARC) as its configuration changes and thereby take advantage of aerodrome compatibility of the lower ARC on the taxiway and apron systems.

**2. IMPACT ASSESSMENT**

***Amendment concerning ATS route classification, GBAS Cat II and Cat III Criteria and visual segment surface (VSS)***

2.1 *Safety impact* – Positive. With regard to ATS route classification, the amendment will provide clarification to the existing requirements. With regard to GBAS Cat II and Cat III criteria, the amendment will provide the procedure designers with harmonized criteria for deploying GBAS Cat III procedures, thus resulting in an enhanced level of safety. Concerning visual segment surface (VSS), the deletion of the requirement to identify VSS penetrations on the instrument approach chart reduces the presentation of misleading or confusing information on the chart.

2.2 *Financial impact*. With regard to ATS route classification and GBAS Cat II and Cat III criteria; an increase in overall costs is to be expected. However, there is no financial impact related to the amendment concerning VSS.

2.3 *Security impact* – None.

2.4 *Environmental impact* – None.

2.5 *Efficiency impact.* With regard to GBAS Cat II and Cat III Criteria the amendment will result in a sustained accuracy for aircraft guidance on final approach and good performance in operational conditions, with no interference from previous landing aircraft, thus resulting in increased efficiency. With regard to VSS and ATS route classification, there is no impact on efficiency.

2.6 *Expected implementation time.* With regard to ATS route classification, the need to update the regulatory framework and the State AIP will take up to one year. With regard to GBAS Cat II and Cat III Criteria: between two to five years. This time is required to establish and implement the State's policies regarding the establishment of GBAS Cat II and III services within their State. Once the GBAS Cat II and III services are in place, the implementation of associated procedures is that of a common procedure design process. With regard to VSS, the expected implementation time is zero to one year. States that already depict VSS penetration information on the instrument approach chart may continue with this practice. States that do not provide VSS penetration information on the instrument approach chart will not have to implement any new charting requirements.

***Amendment concerning pavement classification rating and folding wing tips***

2.7 *Safety impact* – Positive. More accurate pavement structural evaluations will facilitate aerodrome operations in a safe manner. The optimized use of pavement capacity and improved predictability of pavement life should reduce the risk of pavement surface distresses, including foreign object debris (FODs).

2.8 *Financial impact* – Negligible. States will need to update their regulations and guidance to adapt to the new system, especially by providing guidance on PCR determination, similarly to the current guidance they provide on PCN determination, and provide some additional training for their inspectors. ICAO guidance on PCR determination will facilitate this transition towards the new system.

2.9 Aerodrome operators will need to update their methodology for pavement classification rating. However, since they already have to report pavement classification number, it is just adopting a new methodology. Aircraft manufacturer will need to update the aircraft manuals to include the new pavement classification rating. However, these manuals are regularly updated irrespective of this proposal.

2.10 For aircraft operators, the proposal will allow optimized aircraft operating weights and/or frequencies based on the pavement structural capacity.

2.11 In respect of provisions related to aeroplanes with folding wing tips, it is expected to be significant savings where not all parts of the aerodrome need to be improved to accommodate such aeroplanes to comply with the higher aerodrome reference code. Once the wing tips are folded, the aeroplane can manoeuvre on areas designated for lower aerodrome reference codes.

2.12 *Security impact* – None. The amendment does not deal with security.

2.13 *Environmental impact*—Positive. Provisions related to aeroplanes with folding wing tips are expected to reduce overdesign in construction and leads to less use of natural resources and a more environmentally-efficient use of land surface.

2.14 *Efficiency impact* — Positive. Accurate structural ratings of pavements will help avoid delays in operations while evaluating pavements structural capacity. The improved accuracy of the proposed system, especially with regard to modern landing gear arrangements and pavement materials, will

allow an optimized use of pavement structural capacity. Aircraft operating weights and frequencies can therefore be adapted to avoid underuse or overuse of pavement structural capacity.

2.15 With respect to aeroplanes with folding wing tips, the provisions are expected to ensure more efficient use of existing aerodrome land surface and avoid unnecessary runway, taxiway or apron re-construction.

2.16 *Expected implementation time.* For States, two to five years. For aerodrome operators, it is recommended to have the method implemented over a two to three-year period, whereas a period of one year is sufficient for aircraft manufactures to update their manuals.

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**AMENDMENT No. 1**

**TO THE**

**PROCEDURES  
FOR  
AIR NAVIGATION SERVICES**

**AERONAUTICAL INFORMATION  
MANAGEMENT**

**(Doc 10066)**

**INTERIM EDITION**

The text of Amendment No. 1 to the PANS-AIM (Doc 10066) was approved by the President of the Council on behalf of the Council on **12 May 2020** for applicability on **4 November 2021** for the elements concerning ATS route classification, GBAS Cat II and Cat III Criteria, visual segment surface (VSS) and folding wing tips (FWT), and **28 November 2024** for pavement classification rating (PCR). This interim edition is distributed to facilitate implementation of the amendment by States. Replacement pages incorporating Amendment No. 1 are expected to be distributed in October 2020. (State letter AN 2/33.1-20/26 refers.)

**MAY 2020**

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**



### NOTES ON THE PRESENTATION OF THE AMENDMENT

1. The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

~~Text to be deleted is shown with a line through it.~~

text to be deleted

New text to be inserted is highlighted with grey shading.

new text to be inserted

~~Text to be deleted is shown with a line through it~~ followed  
by the replacement text which is highlighted with grey  
shading.

new text to replace existing text

**TEXT OF AMENDMENT 1 TO**  
**PROCEDURES FOR AIR NAVIGATION SERVICES**  
**AERONAUTICAL INFORMATION MANAGEMENT**  
**(PANS-AIM, DOC 10066)**

**CHAPTER 1. DEFINITIONS**

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***Area navigation route.***\* An ATS route established for the use of aircraft capable of employing area navigation.

...

***Conventional navigation route.***\* An ATS route established by reference to ground navigation aids.

...

***Pavement classification rating (PCR)***†. A number expressing the bearing strength of a pavement.

...

**Chapter 5**

**AERONAUTICAL INFORMATION PRODUCTS AND SERVICES**

...

**5.2 AERONAUTICAL INFORMATION IN A STANDARDIZED PRESENTATION**

**5.2.1 Aeronautical Information Publication (AIP)**

5.2.1.1 Contents

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5.2.1.1.3 ~~Until 3 November 2021, when the AIP Data Set (as specified in 5.3.3.1) is provided, the following sections of the AIP may be omitted and reference to the data set availability shall be provided:~~

...

5.2.1.1.3 ~~As of 4 November 2021, when the AIP Data Set (as specified in 5.3.3.1) is provided, the following sections of the AIP may be omitted and a reference to the data set availability shall be provided:~~

- a) GEN 2.5 List of radio navigation aids;

\* Applicable 4 November 2021

† Applicable 28 November 2024

- b) ENR 2.1 FIR, UIR, TMA and CTA;
- c) ENR 3.1 ~~Lower~~ Conventional navigation ~~ATS~~ routes;
- ~~d) ENR 3.2 Upper ATS routes;~~
- e) ENR 3.2~~3~~ Area navigation routes;
- ~~f) ENR 3.4 Helicopter routes;~~
- g) ENR 3.3~~5~~ Other routes;

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*Editorial Note.— Renumber subsequent listing accordingly.*

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**APPENDIX 1. AERONAUTICAL DATA CATALOGUE**

*Editorial Note.*— The text pertaining to the amendments below can be found in the excel files associated with the PANS-AIM, which are under separate cover.

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Table A1-1 Aerodrome/Heliport data – Runway

Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
Runway	...	Strength	PCN*	Text	Pavement classification number					
			PCR†	Text	Pavement classification rating					
			Pavement type*	Text	Pavement type for aircraft classification number — pavement classification number (ACN-PCN) determination					
			Pavement type†	Text	Pavement type for aircraft classification rating — pavement classification rating (ACR-PCR) determination					
			...							
			...							
Runway Direction	...	Displaced area	...							
			PCN*	Text	Pavement classification number of the displaced area					
			PCR†	Text	Pavement classification rating of the displaced area					
			...							
			...							
...										

\* Applicable until 27 November 2024

† Applicable as of 28 November 2024

Table A1-1 Aerodrome/Heliport data – Apron-Taxiway

Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
Apron	...									
	Strength	PCN*	Text	Pavement classification number of apron						
		PCR†	Text	Pavement classification rating of apron						
		Pavement type*	Text	Pavement type for aircraft classification number — pavement classification number (ACN-PCN) determination						
		Pavement type†	Text	Pavement type for aircraft classification rating — pavement classification rating (ACR-PCR) determination						
		...								
	...									
Taxiway	...									
	Strength	PCN*	Text	Pavement classification number of taxiway						
		PCR†	Text	Pavement classification rating of taxiway						
		Pavement type*	Text	Pavement type for aircraft classification number — pavement classification number (ACN-PCN) determination						
		Pavement type†	Text	Pavement type for aircraft classification rating — pavement classification rating (ACR-PCR) determination						
		...								
	...									
Reference code letter	Code list	A letter based on the aeroplane wingspan and outer main gear wheel span								
Location for wing tips extension††	Position	Point	For aerodromes accommodating aeroplanes with folding wing tips, the location where to extend the wing tips							
...										
Aircraft stand										

Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
	...									
	PCN*		Text	Pavement classification number of aircraft stand						
	PCR†		Text	Pavement classification rating of aircraft stand						
	...									
...										

\* Applicable until 27 November 2024

† Applicable as of 28 November 2024

†† Applicable as of 4 November 2021

Table A1-3 ATS and other routes data – ATS Route

Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
. . .										
Route segment										
	Navigation specification*		Text	Designation of the navigation specification(s) applicable to a specified segment(s) - There are two kinds of navigation specifications: Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH. Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.						
. . .										
	MEA		Altitude	Minimum en-route altitude (MEA). The altitude for an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance.	Lower ATS Routes*	50 m	routine	calculated	50 m or 100 ft	50 m or 100 ft
	MOCA		Altitude	Minimum obstacle clearance altitude (MOCA). The minimum altitude for a defined segment of flight that provides the required obstacle clearance.	Lower ATS routes*	50 m	routine	calculated	50 m or 100 ft	50 m or 100 ft
	Minimum flight altitude		Altitude	Minimum flight altitude	Helicopter route*	50 m	routine	calculated	50 m or 100 ft	50 m or 100 ft
. . .										
PBN requirements										
	Navigation specification†		Text	Designation of the navigation specification(s) applicable to a specified segment(s) - There are two kinds of navigation specifications: Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for						

				performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH. Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.						
	...									
...										

\* Applicable until 3 November 2021

† Applicable as of 4 November 2021

Table A1-5 Radio navigation aids/systems data – Radio Navaid

Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
Radio navigation aid										
	...									
	Name		Text	The textual name assigned to the navaid						
	ILS facility classification*		Code list	A classification based on the functional and performance capabilities of an ILS	ILS					
	GBAS facility classification*		Code list	A classification based on the functional and performance capabilities of the GBAS ground subsystem	GBAS					
	GBAS approach facility designation*		Code list	A classification based on the GBAS service volume and performance requirements for each supported approach	GBAS					
	...									

\* Applicable as of 4 November 2021

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**APPENDIX 2**

**CONTENTS OF THE AERONAUTICAL  
INFORMATION PUBLICATION (AIP)**

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**PART 2 — EN-ROUTE (ENR)**

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**ENR 3. ATS ROUTES**

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**ENR 3.1 Lower ATS routes**  
*(Applicable until 3 November 2021)*

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**ENR 3.2 Upper ATS routes**  
*(Applicable until 3 November 2021)*

...

**ENR 3.3 Area navigation routes**  
*(Applicable until 3 November 2021)*

...

**ENR 3.4 Helicopter routes**  
*(Applicable until 3 November 2021)*

**ENR 3.1 Lower Conventional navigation ATS routes**  
*(Applicable as of 4 November 2021)*

#AIP-DS# Detailed description of lower conventional navigation ATS routes, including:

- 1) route designator, designation of the required communication performance (RCP) specification(s), ~~navigation specification(s) and/or~~ required surveillance performance (RSP) specification(s) applicable to a specified segment(s), names, coded designators or name-codes and the geographical coordinates in degrees, minutes and seconds of all significant points defining the route including “compulsory” or “on-request” reporting points;
- ...
- 5) direction of cruising levels; and
- 6) ~~the navigation accuracy requirement for each PBN (RNAV or RNP) route segment; and~~
- 7) remarks, including an indication of the controlling unit, its operating channel and, if applicable, its logon address, SATVOICE number, and any navigation, RCP and RSP specification(s) limitations.

*Note. In relation to Annex 11, Appendix 1, and for flight planning purposes, the defined navigation specification is not considered to be an integral part of the route designator.*

**ENR 3.32 Area navigation routes**  
*(Applicable as of 4 November 2021)*

#AIP-DS# Detailed description of PBN (RNAV and RNP) routes, including:

...

- 3) magnetic reference bearing to the nearest degree, geodesic distance to the nearest tenth of a kilometre or tenth of a nautical mile between defined end-points and distance between each successive designated significant point;

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*Editorial Note.*— Renumber subsequent headings of ENR 3.4, ENR 3.5 and ENR 3.6 accordingly.

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## **PART 3 — AERODROMES (AD)**

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### **AD 2. AERODROMES**

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#### **\*\*\*\* AD 2.8 Aprons, taxiways and check locations/positions data**

Details related to the physical characteristics of aprons, taxiways and locations/positions of designated checkpoints, including:

- 1) until 27 November 2024, designation, surface and strength of aprons;
- 1) as of 28 November 2024, designation, surface and strength (PCR) of aprons;
- 2) until 27 November 2024, designation, width, surface and strength of taxiways;
- 2) as of 28 November 2024, designation, width, surface and strength (PCR) of taxiways;

...

#### **\*\*\*\* AD 2.12 Runway physical characteristics**

Detailed description of runway physical characteristics, for each runway, including:

...

- 3) dimensions of runways to the nearest metre or foot;
- 4) until 27 November 2024, strength of pavement (PCN and associated data) and surface of each runway and associated stopways;

- 4) as of 28 November 2024, strength of pavement (PCR and associated data) and surface of each runway and associated stopways;
- 5) geographical coordinates in degrees, minutes, seconds and hundredths of seconds for each threshold and runway end and, where appropriate, geoid undulation of:

...

**\*\*\*\* AD 2.19 Radio navigation and landing aids**

#AIP-DS# Detailed description of radio navigation and landing aids associated with the instrument approach and the terminal area procedures at the aerodrome, including:

- 1) until 3 November 2021, type of aids, magnetic variation to the nearest degree, as appropriate, and type of supported operation for ILS/MLS, basic GNSS, SBAS, and GBAS, and for VOR/ILS/MLS also station declination to the nearest degree used for technical line-up of the aid;
  - 1) as of 4 November 2021,
    - a) type of aids;
    - b) magnetic variation to the nearest degree, as appropriate;
    - c) type of supported operation for ILS/MLS/GLS, basic GNSS and SBAS;
    - d) classification for ILS;
    - e) facility classification and approach facility designation(s) for GBAS; and
    - f) for VOR/ILS/MLS also station declination to the nearest degree used for technical line-up of the aid;
  - 2) identification, if required;
  - 3) frequency(ies), channel number(s), service provider and reference path identifier(s) (RPI), as appropriate;

...

**\*\*\*\* AD 2.25 Visual segment surface (VSS) penetration\***

Visual segment surface (VSS) penetration, including procedure and procedure minima affected.

*Note.* — Criteria related to the VSS are contained in PANS-OPS Volume II, paragraph 5.4.6, Part I — Section 4, Chapter 5.

\* Applicable 4 November 2021

— END —