Transport Canada Transports Canada

Advisory Circular

Subject:	**Publication enhancements to aerodrome information in the aeronautical publications**		
Issuing Office:	Civil Aviation, Standards	Document No.:	AC 602-005
File Classification No.:	Z 5000-34	Issue No.:	03
RDIMS No.:	18214720 -V7	Effective Date:	2022-09-27

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1.0 Introduction

(1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

1.1 Purpose

(1) The purpose of this document is to advise users of the Canada Flight Supplement (CFS) of upcoming enhancements with respect to aerodrome information contained in the document.

1.2 Applicability

(1) This document applies to all Transport Canada Civil Aviation (TCCA) employees, to individuals and organizations using the CFS. This information is also available to the aviation industry for information purposes.

1.3 Description of changes

(1) Title amended to replace “airport” with “aerodrome”

(2) New paragraph in 3.0 (4)

(3) Section 4.0 has been amended to include new information relating to the publication of the aircraft group number for registered aerodromes supporting an Instrument Approach Procedure and the addition of a new runway surface type.

(4) Section 4.3 *Thin Bituminous Surface Runway* has been added.

2.0 References and requirements

2.1 Reference documents

(1) It is intended that the following reference materials be used in conjunction with this document:

(a) *Aeronautics Act* (R.S.C., 1985, c. A-2);

(b) Part VI, Subpart 2 of the *Canadian Aviation Regulations (CARs)* — Operating and Flight Rules, Division V - Operations at or in the vicinity of an aerodrome;

(c) Part VII, Subparts 3, 4 and 5 of the CARs;

(d) AC 300-021 — Thin Bituminous Surface Runway;

(e) AC 301-001 — Procedure to be followed in order to support Instrument Approach Procedures (IAP) at a non-certified aerodrome;

(f) AC 302-019 — Methodology for the identification of the Aircraft Group Number (AGN);

(g) AC 302-020 — Mixed Operations at an airport;

(h) AC 302-031 — Publication enhancements to airport information;

(i) Transport Canada Publication, TP 312 Aerodrome Standards and Recommended Practices 5th edition; and

(j) Canada Flight Supplement (CFS).

2.2 Cancelled documents

(1) Not applicable.

(2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and abbreviations

(1) The following **definitions** are used in this document:

(a) Not applicable

(2) The following **abbreviations** are used in this document:

(a) **AGN:** Aircraft Group Number;

(b) **CAR:** *Canadian Aviation Regulation*;

(c) **CFS**: Canada Flight Supplement;

(d) **ICAO**: International Civil Aviation Organisation;

(e) **N/A**: Not applicable;

(f) **RCAP: Restricted** Canada Air Pilot; and

(g) **TCCA**: Transport Canada, Civil Aviation.

3.0 Background

(1) Paragraph 602.96(2) of the *Canadian Aviation Regulations* (CARs) states in part; “Before taking off from, landing at or otherwise operating an aircraft at an aerodrome, the pilot-in-command of the aircraft shall be satisfied that … (b) the aerodrome is suitable for the intended operation”.

(2) TP312 5th edition Aerodrome Standards and Recommended Practices uses an operational concept to align the aerodrome certification standards to the actual (or planned) air operation by linking the standards to specific aircraft characteristics, aerodrome operating visibility condition, and level of service (Precision, Non-Precision, Non-Instrument). It also complements the document Criteria for the Development of Instrument Procedures -TP308 and other regulatory requirements currently stated in Parts VI, VII and VIII of the CARs.

(3) The publication of the Aircraft Group Number (AGN) for airports (certified aerodromes) provides aircraft operators pertinent information to ascertain the suitability of the airport for their intended operation as mandated in the CARs.

Unless there are changes relating to the runway level of service, physical characteristics or change of critical aircraft, the largest scheduled passenger service aircraft currently operating at the airport is typically identified as the critical aircraft.

(4) With regards to registered aerodromes, the CFS currently contains very little information for aircraft operators to ascertain the suitability of the aerodrome for their intended operation as mandated in the CARs. It is to be noted that most registered aerodromes supporting an instrument approach procedure formally attest to the status of the runway and its obstacle free environment based on obstacle separation specifications similar to those of airports (certified aerodromes). See AC 301-001 for further information.

To address the above, the publication of the AGN relating to the obstacle free environment of the runway is extended to include those registered aerodromes supporting an Instrument Approach Procedure and attesting to the status of their obstacle free environment. This will provide aircrews with supplemental information to assess the suitability of the aerodrome for their intended operation in accordance with CAR 602.96 (2)(b).

(5) For airports, the operating hours in respect of its certification has been added in the publications. This information is needed by air operators, notably those conducting scheduled passenger operations, to assess the certification status of the airport, as some elements forming part of airport certification requirements can only be effectively performed by having on site attendance of the airport operator. These include, but are not limited to, emergency response plan activation, safety management, runway condition reporting, issuance of NOTAMs, and direct reporting of hazards to pilots.

(6) Aerodromes are certified as airports based on the requirements stated in Part III, Subpart 2 of the CARs. Section 302.01 of the CARs states the following three individual situations whereby an aerodrome would be required to adhere to the certification requirements for ongoing operations:

(a) being within the built-up area of a city or town;

(b) receiving scheduled passenger service; or

(c) the Minister is of the opinion it would be in the public interest and it would further the safe operation of the airport.

(7) The majority of airports in Canada are certified on the basis of receiving a scheduled passenger service.

(8) Scheduled passenger service air operators are required by regulation to operate to/from a certified airport. It is therefore important for these air operators to know when the airport is meeting the requirements under Part III Subpart 2 of the CARs. The inclusion of the airports' operating hours in the publication complements current requirements in CAR 602.96(2)(b) and the scheduled air service requirements stated in CAR 703.15, 704.14, and 705.19.

Scheduled Air Service Requirements

(a) **703.15 (1)** Subject to subsection (2), every air operator that operates a scheduled air service for the purpose of transporting persons shall operate the service between airports or heliports or between an airport or heliport and a military aerodrome.

(b) **704.14 (1)** Subject to subsection (2), every air operator that operates a scheduled air service for the purpose of transporting persons shall operate the service between airports or heliports or between an airport or heliport and a military aerodrome.

(c) **705.19 (1)** Subject to subsection (2), every air operator that operates a scheduled air service for the purpose of transporting persons shall operate the service between airports or heliports or between an airport or heliport and a military aerodrome.

(9) In order to meet the regulatory requirements of Parts III and VII, of the CARs, the characteristics of the air operator's aircraft needs to be consistent with the airport's certification level of service during the published operating hours.

(10) It is recognized that aircraft larger, than the published certification level, such as cargo or charter are frequently part of the daily operational mix at an airport. When this occurs, those air operators are advised to contact the airport operator prior to the flight. This is needed so that the airport operator may establish procedures to ensure that the airport certification environment for the scheduled passenger operations is not compromised since this air operation must operate within a certified airport as stated in Sections 703.15, 704.14, and 705.19 of the CARs.

4.0 Aeronautical information publication enhancements

(1) Commencing with the September 08, 2022, publication cycle, the aeronautical publications are being enhanced, through the inclusion of the following:

(a) operating hours and Aircraft Group Number (AGN) will be published for all airports (certified aerodromes);

(b) the AGN will normally be published for registered aerodromes with an instrument approach procedure. An exception will be made – and an AGN will not be published – for those aerodromes with IAPs that are published in the RCAP that do not have an aerodrome attestation associated with IAP;

(c) a new runway surface type has been added, Thin Bituminous Surface (TBS); and

(d) private meteorological services and operating hours.

4.1 Identification of the operating hours at the airport

(1) The information relating to the airports' operating hours will be presented in the OPR section of the CFS next to the CERT statement.

(2) The following are examples of the publication format:

SUMSPOT / ON **CXXZ**

REF	
OPR	Peter Rabbit Corporation Inc 555-555-1234 H24 Cert
OPR	Peter Rabbit Corporation Inc 555-555-1234 14-22Z‡ Cert
OPR	Peter Rabbit Corporation Inc 555-555-1234 1430-2230Z‡ Mon-Fri; 17-01Z‡ Sat-Sun; O/T 2 hrs PN Cert

4.2 Aircraft Group Number (AGN)

(1) The purpose of the AGN is to provide a simple method for interrelating the numerous technical specifications concerning the aerodrome and the characteristics of the critical aircraft for which the aerodrome, or part thereof is provided.

(2) The aerodrome information in the CFS states the highest Aircraft Group Number (AGN) the obstacle free environment is set aside for.

(3) For airports, the AGN is depicted as follows in the **RWY DATA** section **(RWY CERT line)** of the CFS;

Rwy 16 RVR 1200(1/4sm)/Rwy 34 RVR 600 AGN IIIB

For registered aerodromes supporting an instrument approach procedure with an attestation, the AGN will be depicted as follows in the **RWY DATA** section of the CFS;

Rwy 06(056°)/24(236°) 3009x75 asphalt Rwy 06 down 0.54% AGN II

Note: Some aerodromes supporting procedures in the RCAP will not have an AGN published due to not having an aerodrome attestation associated with the instrument approach design

(4) The following table shows the breakdown of wingspans into AGN groupings. The wingspan and reference speed (V_{REF}) is used in the determination of the AGN. The reference speed (V_{REF}) to be used is at maximum landing weight with maximum landing flap, prior to any operational adjustments which would result in a higher $V_{REF;}$

Aircraft Group Number Groupings – Runway Environment		
Aircraft Group Number (AGN)	**Critical Aircraft Wingspan**	**Critical Aircraft Reference Landing Speed (V_{REF})**
I	Less than 14.94 m (49')	Less than 121 kts
II	14.94 m up to but not including 24.10 m (79')	Less than 121 kts
IIIA	24.10 m up to but not including 36.00 m (118')	Less than 121 kts
IIIB	up to but not including 36.00 m (118')	121 kts or more
IV	36.00 m up to but not including 52.12 m (171')	N/A
V	52.12 m up to but not including 65.23 m (214')	N/A
VI	65.23 m up to but not including 79.86 m (262')	N/A

Examples on use of the table:

1) The critical aircraft has a wingspan of 16.5 m and a reference landing speed (V_{REF}) of 98 kt. The aircraft falls into AGN II when referencing across the columns

2) The critical aircraft has a wingspan of 20.7 m and a reference landing speed (V_{REF}) of 129 kt. The aircraft falls into AGN II when referencing the wingspan column; **however**, the speed column limits to a V_{REF} less than 121 kts. The aircraft therefore falls into AGN IIIB due to the V_{REF} being 121 kts or greater.

(5) At a certified aerodrome (airport), the AGN for a taxiway which leads to/from a runway is typically equal to the AGN for the runway itself. However, there are occasions where a lower AGN may be appliable to a taxiway. This is because the AGN for a runway includes consideration of the aircraft's V_{REF}. However, the AGN for a taxiway at an airport is based solely on the wingspan of the aircraft. (A taxiway AGN is not provided for registered aerodromes.)

(6) In view of the above, the AGN for a taxiway will be published when it is lower than the highest (runway) AGN at an airport. In such a case, the certification level for the taxiway will be published in the RWY DATA section (TWY CERT line) of the CFS, as follows:

Twy W AGN II

Aircraft Group Number Groupings _ Taxiway Environment	
Aircraft Group Number (AGN)	**Critical Aircraft Wingspan**
I	Less than 14.94 m (49’)
II	14.94 m up to but not including 24.10 m (79’)
IIIA / IIIB	24.10 m up to but not including 36.00 m (118’)
IV	36.00 m up to but not including 52.12 m (171’)
V	52.12 m up to but not including 65.23 m (214’)
VI	65.23 m up to but not including 79.86 m (262’)

4.3 Thin Bituminous Surface Runways

(1) Thin Bituminous Surface (TBS) runways are pavement structures comprised of one or more granular layers, and surfaced with a double sealed granular pavement treatment. The surface layer is relatively thin compared to traditional hot-mix asphalt pavements. While TBS do not add any structural performance to the pavement structure, they do impart several benefits compared to granular surfaces including: improved surface drainage, improved friction, reduced rolling resistance, and a bound surface free of loose aggregate.

(2) As a result of the thin surface treatment, the surface layer has a relatively low shear strength which leaves the pavement susceptible to damage from high-shear stress inducing manoeuvres such as locked-wheel turns while taxiing. Flight crews should use the full width of the surface to maximise turn radius, and reduce the chance of damage to the surface.

(3) This surface type is identified as “Paved – TBS” in the CFS.

4.4 Identification of Private Meteorological Services

(1) NAV CANADA is entering into formal arrangements with operators of private meteorological services in support of instrument procedures. Formal arrangements between originators of aeronautical data and NAV CANADA will support an end-to-end data chain and data of the highest possible quality.

(2) The following reporting elements of private meteorological services will be published in the CFS WEATHER (WX) section to indicate an approved source of aeronautical data:

(a) “ALTIMETER”: Altimeter setting report observed from two aircraft altimeters. The private altimeter setting report is a weather service provided in support of an Approach UNICOM (AU). Contact the Aerodrome Operator (OPR) for further information on the specifics of the service.

(b) “WIND”: Human assessment of wind speed and direction. The private wind speed and direction report is a weather service provided in support of an Approach UNICOM (AU). Contact the Aerodrome (OPR) for further information on the specifics of the service.

(3) The following are examples of the publication format:

WX	AUTO H24

WX	AUTO 123-456-7890 11-23Z‡

WX	AUTO H24 (see COMM)

WX	WIND 123-456-7890 ltd hrs (see COMM)

WX	ALTIMETER H24 (see COMM)

WX	ALTIMETER/WIND ltd hrs (see COMM)

WX	ALTIMETER 11-21Z‡ (see COMM)

4.5 International Harmonization

(1) The above enhancements also take into consideration the need to standardize the information contained in the aeronautical publications with the specifications stated in ICAO Annex 15.

5.0 Information management

(1) Not applicable

6.0 Document history

(1) Advisory Circular (AC) 602-005 Issue 02, RDIMS 16773984 (E), 16774035 (F), dated 2021-06-04 – Publication enhancements of airport information

(2) AC 602-005 Issue 01, RDIMS 11134319 (E), 14111446 (F), dated 2018-08-31 – Publication enhancements of airport information

7.0 Contact us

For more information, please contact:

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We invite suggestions for amendment to this document. Submit your comments to:

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