Transport Canada Transports Canada

Staff Instruction

Subject: **Obstacle Assessment Process**

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1.0 Introduction

1.1 Purpose

(1) The purpose of this Staff Instruction (SI) is to provide guidance for completing a received Aeronautical Assessment Form (AAF).

1.2 Applicability

(1) This SI applies to Transport Canada Civil Aviation (TCCA) inspectors who will be doing assessment of objects in accordance with Section 601.25 of the *Canadian Aviation Regulations* (CARs). This AC is also available for information purposes to Transport Canada Civil Aviation (TCCA) Headquarters and other regional personnel.

1.3 Description of changes

(1) Not applicable

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) Part VI, Subpart 01, Division III of the *Canadian Aviation Regulations* (CARs) —Marking and Lighting of Obstacles to Air Navigation, Obstacles to Air Navigation, Sections 601.23 to 601.25

(b) Standard 621 of the *Canadian Aviation Regulations* (CARs) — Standards, Obstruction Marking and Lighting

(c) Aeronautical Assessment Form [AAF] for obstacle notification and assessment; Forms Catalog #26-0427

(d) AC 602-003 Legal Land Survey for AZR Clearance Attestation

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) **Aeronautical Assessment Form (AAF):** the form #26-0427 used for notification to the Minister of an object that will be a hazard to air navigation.

(b) **Applicant:** the person who submits an AAF for a proposed installation of an object or an existing obstacle installation for which there is a modification. The applicant may be the owner of the object or their representative.

(c) **Reference Surface (RS):** for the purpose of this SI, it means a variety of specified surfaces which the inspector references for purpose of determining of obstacle. The RS might be such as an Obstacle Limitation Surface (OLS), an Obstacle Identification

Surface (OIS) an Obstacle Protection Surface (OPS) or the 90 m AGL surface that prevails remote from aviation facilities and windfarms.

(d) **Mode of Protection:** the requirement for application of protection [i.e., marking and/or lighting] with respect to a period of operation, that is; Night, Day, or both, as specified by the inspector in the TCCA assessment area of the AAF. For example, if the applicable aerodrome does not have Night operations, the inspector may specify a requirement for only Day Protection. The Mode of Protection may also include the application of temporary lighting during construction.

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

(a) **AAF:** Aeronautical Assessment Form

(b) **AZR:** Airport Zoning Regulation

(c) **CARs:** *Canadian Aviation Regulations*

(d) **DND:** Department of National Defence

(e) **HAPI:** Helicopter Approach Path Indicator

(f) **OLS:** Obstacle Limitation Surfaces

(g) **OPS:** Obstacle Protection Surface (applicable to PAPI)

(h) **PAPI:** Precision Approach Path Indicator

(i) **RS:** Reference Surface

(j) **SI:** Staff Instruction

(k) **TCCA:** Transport Canada Civil Aviation

3.0 Background

(1) Section 601.24 of the *Canadian Aviation Regulations* (CARs) stipulates that the owner of an object, that will be an obstacle to air navigation, shall notify the Minister of Transport. The means of notification is the Aeronautical Assessment Form (AAF) which is Appendix C of Standard 621 and form #26-0427 in the Transport Canada forms catalog.

(2) Once notified, the Minister [i.e., the assigned inspector] assesses the object and determines whether it will indeed be an obstacle. As part of the assessment, the inspector may also become aware of issues regarding the object's height and location, such as penetration of an AZR surface. If the issue is resolved, the AAF is completed by specifying the Mode of Protection.

(3) Although the process is generally known within the regions, it would be appropriate to develop a formal description as guidance for new inspectors and to serve as a means of implementing new practices which are adopted from time to time.

(4) This Staff Instruction (SI) describes the assessment process with use of a workflow chart.

4.0 Discussion

Note: The described process is only about assessment of objects [e.g., building, structure, catenary] as obstacles to air navigation and ultimately the provision of obstacle marking and lighting. In the context of this SI, the inspector is not involved with other aspects of the object such as possible interference with electronic navigational aids or communications. There aspects are addressed as the result of the applicant making a similar submittal to the

NAV CANADA's Land Use Program and also in respect to licencing by Innovation, Science and Economic Development Canada (ISED).

4.1 Assessment process

(1) The AAF submission is typically received in a regional Operational Support email box and an inspector is assigned to conduct the assessment. Regional email addresses are found in Appendix A of Standard 621.

(2) The submitted AAF is a package consisting of the form itself along with attached materials such as:

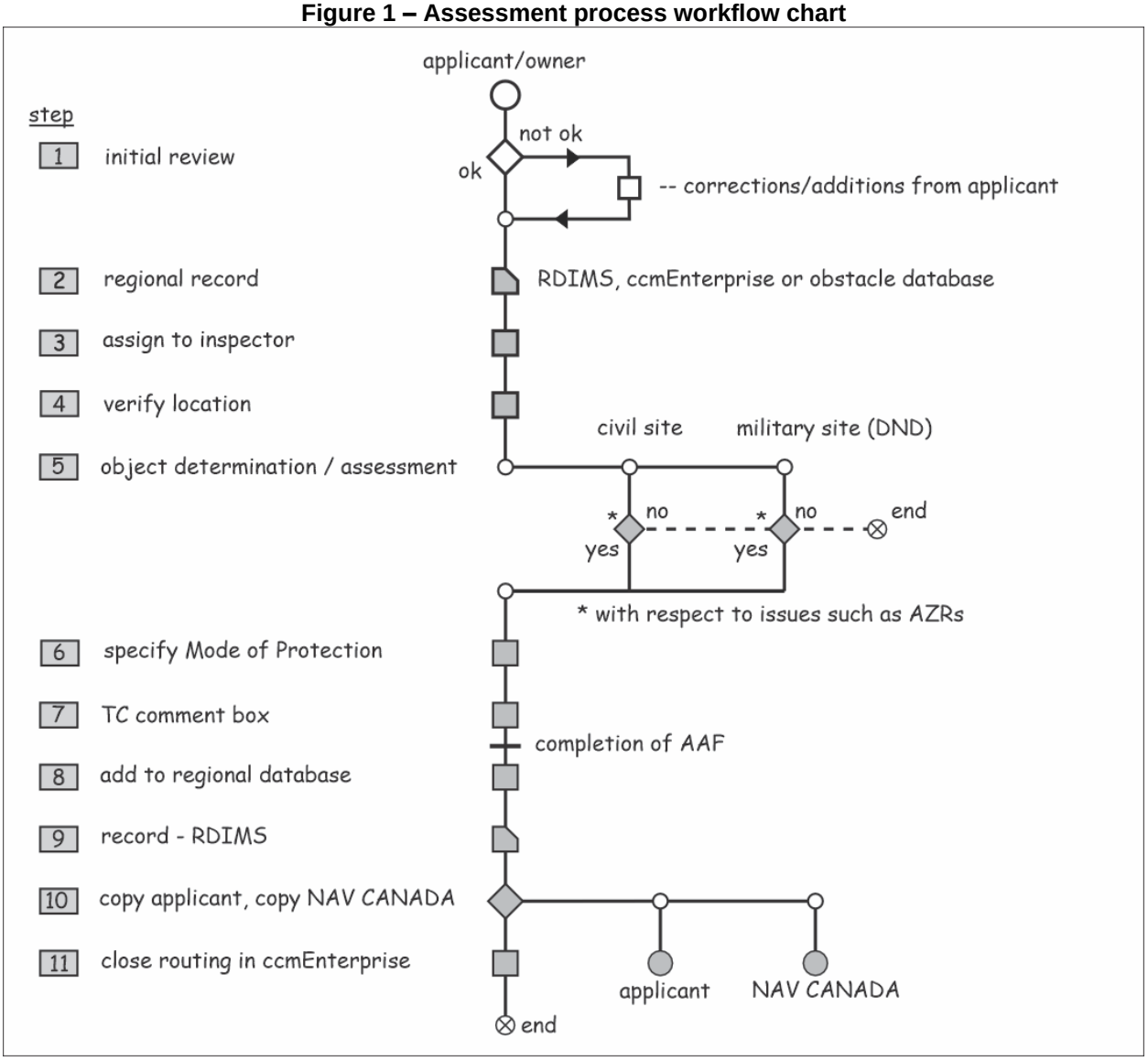
- (a) a more detailed project description with proposed marking, lighting, and monitoring;
- (b) a legal land survey;
- (c) a spreadsheet of Geodetic coordinates.

(3) The assessment involves elements such as:

- (a) a determination that the object is indeed an obstacle to air navigation;
- (b) resolution of height/location issues;
- (c) specification of the Mode of Protection;
- (d) review of the proposed marking, lighting, monitoring.

(4) **Figure 1** illustrates a workflow chart identifying the steps to be followed towards completing the AAF.

Figure 1 – Assessment process workflow chart



4.2 Explanation of steps

(1) **Step 1** - Initial review. The initial review is for purpose of ascertaining the completeness and fidelity of the provided information. This is a cursory review and might be done by Operations Support. Any omissions or discrepancies are brought to the attention of the applicant for correction.

(2) **Step 2** - Regional record. The typical regional practice is to save the submitted AAF and support documents to RDIMS and noted in ccmEnterprise or a spreadsheet according to regional practice.

(3) **Step 3** - Assignment to inspector. The AAF is assigned to an inspector.

(4) **Step 4** - Verify location. Typically, this is done by means of a Google Earth placemark. If in placing the mark, an error is indicated, the applicant is asked to resubmit with correction.

(5) **Step 5 -** Object Determination / Assessment

(a) The object is determined to be an obstacle when there is penetration of a Reference Surface (RS).

(b) Where the object is located within the vicinity of an aerodrome, and there is likely to be an issue regarding location and height, the applicant is advised to co-ordinate with the aerodrome operator and report back to the inspector as to what solution was achieved. It is not intended that the inspector would mediate between the aerodrome and applicant.

(c) Where the aerodrome is a military site, co-ordination is with DND.

1 Canadian Air Division
PO Box 17000 STN Forces
Winnipeg, MB. R3J 3Y5
email: airfieldsiting@forces.gc.ca

(d) Some height issues for an aerodrome would be penetration of an:

(i) AZR surface;

(ii) Obstacle Limitation Surface (OLS); or

(iii) Obstacle Protection Surface (OPS) for PAPI / HAPI.

(e) The inspector cannot proceed to the next step in the process until a height issue is resolved in some fashion, such as a physical modification by lowering the height of the object or movement of the specified surface.

(f) Where there is resolution, such that the object doesn't penetrate, the inspector concludes the object is no longer an obstacle and so advises the applicant.

(g) For a crane having a height which exceeds a specified surface such as that of an AZR, a temporary zoning exemption may be required to allow it to be installed. The inspector may also state, in the TCCA assessment area, a protocol for lowering the crane for a specified time period and immediately, if necessary.

(6) **Step 6** - Specification for Mode of Protection

(a) In the Transport Canada assessment area of the AAF, the inspector indicates [Night Protection], [Day Protection], [Temporary Lighting], or [No Protection required].

(b) The applicant is responsible to provide the appropriate marking/lighting in accordance with Standard 621 to suit the specified Mode of Protection.

(c) If the aerodrome does not have night operations, the specified Mode of Protection might be for Day Protection only. However, both Day Protection and Night Protection would be required if the object will be exposed to transiting aircraft not using the aerodrome.

(7) **Step 7** - Transport Canada assessment area of the AAF is for the inspector to comment such as:

(a) Explanation for a stipulation of only Day Protection, or a conclusion of No Protection. This need not be a long-detailed explanation, but sufficient for the purpose.

(b) Identification of the aerodrome upon which a determination is based. In some cases, the applicant may not be aware of the nearby aerodrome, even though they are asked in the AAF whether they have made contact.

(c) Comment on the marking, lighting, or monitoring being installed. Has the applicant correctly interpreted Standard 621? Will the inspector need to do an evaluation of equivalent marking/lighting? Will an exemption be needed?

Note: This completes the AAF. The inspector enters their name and date of completion. Note that the AAF doesn't need to be signed.

(8) **Step 8** - Edit Google placemark [if used].

(9) **Step 9** - Update the regional obstacle list.

(10) **Step 10** - Record - RDIMS. The completed AAF is placed into RDIMS and noted in ccmEnterprise.

(11) **Step 11** - Copy to applicant, copy to NAV CANADA.

(a) Copies of the completed AAF are sent by email to the applicant and to NAV CANADA Land Use (landuse@navcanada.ca)

(12) **Step 12 -** Close the routing in ccmEnterprise.

5.0 Information management

5.1 Digitization, treatment of originals

(1) When the received AAF and attachments [e.g., maps, photos, surveys] have been digitized, the originals of can be discarded.

6.0 Document history

(1) Not applicable.

7.0 Contact us

For more information, please contact:

For more information, please contact:
Civil Aviation Regional offices
https://tc.canada.ca/en/aviation/civil-aviation-contacts-offices

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

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