



Part 173

Aeronautical Information Service/Management

(AIS/AIM)

TABLE OF CONTENTS

ITEM	TITLE
SUBPART (A)	Introduction
<u>173.1</u>	<u>ECAR references</u>
173.3	Objective and the role of AIS
<u>173.5</u>	<u>Applicability</u>
<u>173.7</u>	<u>Certification and approval</u>
<u>173.9</u>	<u>ECAA audits and Inspection Authority</u>
<u>173.11</u>	<u>Differences from ICAO standard practices and procedures</u>
<u>173.13</u>	<u>Exposition</u>
<u>173.15</u>	<u>Operations manuals</u>
173.17	Documentation and Records
173.19	Resources (Personnel, Training, Facilities and Equipment)
173.19-1	Personnel requirements
<u>173.19-2</u>	<u>Training</u>
173.19-3	Training record
173.19-4	Reserved
173.19-5	Facilities and equipments requirements
173.21	Location of an AIS unit
173.23	Coordination between AIS and the concerned entities
173.25	Responsibility of supplying raw data to the AIS for AIRAC system
173.27	Emergency and Contingency plan
173.29	Safety management system (SMS)
SUBPART (B)	General
173.53	Definitions
173.55	Abbreviations
173.57	Common reference systems for air navigation
173.57-1	Horizontal reference system
173.57-2	Vertical reference system
173.57-3	Temporal reference system
173.57-4	Miscellaneous specifications
SUBPART (C)	Responsibilities and Functions
<u>173.69</u>	<u>State responsibilities</u>
173.71	AIS responsibilities and functions
173.73	Exchange of aeronautical data and aeronautical information
173.75	Copyright
173.77	Cost recovery
SUBPART (D)	Aeronautical Information Management (AIM)
173.89	Information management requirements
173.91	Data quality specifications
173.91-1	Data accuracy
173.91-2	Data resolution
173.91-3	Data integrity
173.91-4	Data traceability
173.91-5	Data timelines
173.91-6	Data completeness
173.91-7	Data format
173.93	Aeronautical data and aeronautical information validation and verification
173.95	Data error detection
173.97	Use of automation
173.99	Quality management system
173.101	Human factors considerations
173.103	Prevention of fatigue
SUBPART(E)	Scope of Aeronautical Data and Aeronautical Information
173.115	Scope of aeronautical data and aeronautical information

173.117	Metadata
SUBPART(F)	Aeronautical Information Products and Services
173.129	General
173.131	Aeronautical information in a standardized presentation
173.133	Aeronautical Information Publication (AIP)
173.135	AIP Supplement
173.137	Aeronautical Information Circulars (AIC)
173.139	Aeronautical Charts
173.141	NOTAM
173.143	Digital data sets
173.145	AIP data set
173.147	Terrain and obstacle data sets
173.149	Terrain data sets
173.151	Obstacle data sets
173.153	Aerodrome mapping data sets
173.155	Instrument flight procedure data sets
173.157	Distribution services
173.159	NOTAM distribution
173.161	Pre-Flight Information Service
173.163	Post-flight information Service
SUBPART(G)	Aeronautical Information Updates
173.175	General specifications
173.177	Aeronautical Information Regulation and Control (AIRAC)
173.179	Aeronautical Information Product updates
173.179-1	AIP updates
173.179-2	NOTAM
173.181	Data set updates
SUBPART(H)	Flight Plan
173.193	Flight plan form
173.195	Submission of a flight plan
173.197	Contents of a flight plan
173.199	Completion of a flight plan
173.201	Changes to a flight plan
173.203	Closing a flight plan
173.205	Acceptance of a flight plan
173.207	Adherence to flight plan
173.219	Use of repetitive flight plans
173.221	Procedures for submission of RPLs by operators
173.223	Submission of total listings
173.225	Changes to RPL listings
APPENDIXES	
Appendix 1	Aeronautical data catalogue
Appendix 2	Contents of the aeronautical information publication (AIP)
Appendix 3	NOTAM format
Appendix 4	SNOWTAM format
Appendix 5	ASHTAM format
Appendix 6	Terrain and obstacle attributes provision requirements
Appendix 7	Predetermined distribution system for NOTAM
Appendix 8	Terrain and obstacle data requirements
Appendix 9	ICAO model flight plan form (from item 1 to 5); and ICAO model repetitive flight plan listing form (from item 6 to 8)

SUBPART (A)

INTRODUCTION

173.1 ECAR References

The regulations contained in this part based on the ICAO annexes/documents (Annex 2, 11, 15, 19 and Doc 4444, 8126, 8400, 10066) and Egyptian aviation laws.

173.3 Objective and The role of AIS

- (a) The object of the aeronautical information service (AIS) is to ensure the flow of aeronautical data and aeronautical information necessary for global air traffic management (ATM) system safety, regularity, economy and efficiency in an environmentally sustainable manner.
- (b) The role and importance of aeronautical data and aeronautical information changed significantly with the implementation of area navigation (RNAV), performance-based navigation (PBN), airborne computer-based navigation systems, performance-based communication (PBC), performance-based surveillance (PBS), data link systems and satellite voice communications (SATVOICE). Corrupt, erroneous, late, or missing aeronautical data and aeronautical information can potentially affect the safety of air navigation.

173.5 Applicability

- (a) This part contains the rules governing the provision and management of the aeronautical information/data and services as mentioned in the following subparts and its titles:-
 - Introduction;
 - General;
 - Responsibilities and functions;
 - Aeronautical information management;
 - Scope of aeronautical data and aeronautical information;
 - Aeronautical information products and services;
 - Aeronautical information updates; and
 - Flight plans (FPL) and repetitive flight plans (RPL).
- (b) The ANSP certified by ECAA for providing aeronautical information services shall strictly adhere to the regulations in accordance with this part (ECAR 173), and reflect the implementations in their exposition listed in 173.13.

173.7 Certification and approval

- (a) No providing of aeronautical information services or its activities within Egypt flight information region (FIR) except under certification with full authority and supervision by ECAA in accordance with this part (ECAR 173).
- (b) The details related to the certification/approval requirements as mentioned in (EAC 172-6).

173.9 ECAA audits and inspection authority

- (a) The certified ANSP to provide the aeronautical information services shall give unrestricted and unlimited access for the ECAA inspectors to audit and inspect their personnel (manpower, qualifications and training), facilities, equipments, procedures, publications, documents, records, operation environment and any other activities required to ensure the completely compliance with the certificate conditions and the eligibility to continue holding that certificate.
- (b) Non-conformity with paragraph (a) above shall be a basis to suspend, withdraw or revoke the certificate issued to the ANSP under the conditions of this part (ECAR 173).
- (c) ECAA shall undertake the necessary procedures for audit and inspection at least once a year to approve the aeronautical information services units individually, following to the certification granted to the ANSP for providing aeronautical information services.

173.11 Differences from ICAO standard practices and procedures

- (a) All regulations contained in this part (ECAR 173) are strictly adhere to ICAO SARPS and the application of the Procedures for air navigation services - aeronautical information management (PANS-AIM, Doc 10066) and the regional supplementary procedures - aeronautical information services, contained in Doc 7030.
- (b) If any, the significant differences between national regulations and practices and the related ICAO provisions shall be clearly mentioned in GEN 1.7 of the AIP A.R.E, and Each difference shall be notified in the following form:
 - 1- Reference: Cite the paragraph or subparagraph of the Annex, PANS or SUPPS in respect of which the difference exists.
 - 2- Description of the difference: Describe the difference precisely and include any additional information necessary to make its effect clear.
 - 3- Remarks: Indicate the reason for the difference or, if the difference is likely to be eliminated in the future, indicate the date by which conformity with the ICAO provision may be expected.
- (c) ECAA will take the necessary actions to notify the international civil aviation organization for any differences between the application by ANSP and this part.

173.13 Exposition

Each applicant for the grant of an AIS certificate shall provide an exposition signed by head of the ANSP and the concerned responsible persons confirming that:-

- (a) The manuals and the relevant documents contained in the exposition are prepared in accordance with the requirements of this part;
- (b) Ensure that the exposition and any included manuals and its amendments are controlled and up-to-date;
- (c) Ensure that the exposition contains at least the following manuals:-
 - (1) Operation manual for each AIS division;
 - (2) Training manual for all AIS divisions;
 - (3) Emergency and Contingency Plan for AIS divisions to be implemented in all expected emergency cases;
 - (4) Quality management manual; and
 - (5) Safety management manual.
- (d) The exposition shall be accepted and approved by ECAA.

Note — The meaning of the "exposition" is a file consists of the manuals and documents that may be published and issued either packet or separately, which the ANSP explain and define its operations and activities in accordance with the requirements of ECAR part 173.

173.15 Operation manuals

The certified ANSP to provide the aeronautical information services shall establish an operation manual for all services provided according to the operation requirements of each AIS division, and contains at least the following chapters and items:-

- CHAPTER (1) General:

- 1) Introduction;
- 2) Definitions and abbreviations;
- 3) References;
- 4) The object and role of AIS;
- 5) The location and address of the unit, office or department and other details;
- 6) An organization chart showing lines of responsibility of the AIS with the other units, offices and departments within the organization of ANSP and the aerodrome concerned;

- 7) Common reference systems for air navigation, time and Units of measurement;
- 8) Copyright; and
- 9) Cost recovery.
- CHAPTER (2) Operation and Requirements:
 - 1) Scope and functions;
 - 2) Policy and procedures of the division concerned;
 - 3) Specifications of the services provided, requirements and proposed hours of the operations of each service;
 - 4) The required checklists to ensure the monitoring of the issuance, distribution or publishing of information/data and services;
 - 5) Facilities and equipments.
- CHAPTER (3) Duties and Responsibilities:
 - 1) Duties and responsibilities for the senior person(s) and person(s).
- CHAPTER (4) Training:
 - 1) Unit training plan for each AIS division; and
 - 2) Competency of technical staff.
- CHAPTER (5) Co-Ordination:
 - 1) The objective and means of co-ordination; and
 - 2) Type of co-ordination and define the relevant units, offices, departments, organization and any concerned entities.
 - 3) Bilateral agreements and letters of coordination.
- CHAPTER (6) Quality Management System and Safety Management System:
 - 1) The quality management manual;
 - 2) The quality procedures;
 - 3) The internal quality assurance; and
 - 4) Quality forms; and
 - 5) The Safety management manual;
 - 6) The safety procedures;
 - 7) The safety report forms;
- CHAPTER (7) Emergency and Contingency plan:
 - 1) Purpose: the purpose of the contingency plan is to develop alternative operating plans to ensure continuity of work and provision of the services in emergency cases that may affect the service delivery in the usual manner.
 - 2) Scope: all concerned AIS divisions.
 - 3) Requirements: procedures and scenarios.
 - 4) Abbreviations and definitions: define the abbreviations and definitions used.
 - 5) Description of the sites and the type of facilities and equipments contained, and the alternative site and its facilities and equipments that intended to use for provide the services in case of emergency.
 - 6) Alternative operating plans in case of malfunction, shortage, lack or damage of the following factors:-
 - a- Facilities and equipments: the malfunction or lack that affect the operation of systems, AFTN or electricity, etc;
 - b- Staff: staff shortage due to non-attendance of shift staff and medical cases of staff, etc; and
 - c- Place: disaster cases that affect the services place such as fire, earthquake, flooding/torrent, storm, bomb threat or public health, etc.
- CHAPTER (8) Administration:
 - 1) Technical and administrative standing orders relating to the services provided, and the special local instructions of aerodromes if applicable; and

- 2) Shift administration, shift roster and procedures to ensure the safe delivery of shifts to assure the continuous of services provided through the periods of work shifts.
- 3) Prescribe any administrative matters as required.
- CHAPTER (9) Document Control:
 - 1) Prescribe the procedures and requirements of the document control and distribution.
- APPENDIXES: Any attachments required.

173.17 Documentation and Records

The certified ANSP to provide the aeronautical information services shall:

- (1) Hold copies of relevant references, charts and any other documentation that is necessary for the provision of aeronautical information service listed in their exposition in each unit, office or department;;
- (2) Establish a system/procedures to control and review all the documentation required to keep and maintain it up-to-date;
- (3) The current version of each item of documentation can be identified to preclude the use of out of date editions, and all obsolete documentation is promptly removed;
- (4) Ensure that documentation are available to all staff for operation process;
- (5) Ensure that all facilities required for archiving and storing are available;
- (6) Establish a filing system (Suitable file classification scheme-Indexes-File tracking) and back up (soft copy) of that documentation.

173.19 Resources (Personnel, Training, Facilities and Equipment)

The certified ANSP to provide the aeronautical information services shall establish procedures to ensure adequate resources that are essential to the provisions of AIS, highly skilled, competent staff in sufficient numbers, suitable accommodation and the necessary facilities, in order to meet the prerequisites which ensure the provision of adequate and accurate aeronautical information services, as mentioned bellow:-

173.19-1 Personnel requirements

The certified ANSP to provide the aeronautical information services shall take all necessary procedures to ensure all human resources required for the quality and continuity of the provision of aeronautical information services are adequately maintained and Future manpower requirements shall be planned for at least 5 years in advance based on comprehensive assessment of the duties to be performed.

173.19-2 Training

The certified ANSP to provide the aeronautical information services shall establish and implement the following:-

- (1) Training program manual (AIS/MAP) containing all programs, courses, ratings, and the qualification requirements for all technical staff and including the instructors, evaluators, examiners and OJTI through career development.
- (2) Define the requirements, specifications, syllabus, time frames and the circumstances needed to the following training programs:-
 - Continuation training (a- Refresher training, b- Conversion training);
 - Unit training (a- On-the-job training, b- Pre-on-the-job training);
 - Initial training (a- Rating training, b- Basic training).

Note — Ref Doc 10056 .
- (3) Development and improvement of the training programs and courses to retain and maintain the competency up-to-date for all technical staff.
- (4) Training plan with timeframe for the training related to AIS technical staff.

- (5) Define the authorized persons responsible for the instruction, evaluation, examination and OJTI within AIS divisions, in accordance with their training program manual requirements.
- (6) Determine the requirements, specifications, syllabus and time frames for the following:-
 - Theoretical and practical materials of various courses and ratings;
 - On-job training instructor course (OJTI);
 - Classroom and simulator instructional techniques course (CIT);
 - Local competency examiner course (LCE);
 - If applicable, trainer of trainers course (TOT).

173.19-3 Training record

The certified ANSP to provide the aeronautical information services shall establish :-

- (1) System for keeping the training records for all technical staff, instructors, evaluators, examiners and OJTI containing all courses certifications, ratings, check of competency (COC) and any related documents.
- (2) System to ensure the training records kept and maintained up-to-date.

173.19-4 Facilities and equipment's requirements

- (a) The certified ANSP to provide the aeronautical information services shall establish offices, facilities and equipments that are appropriate for the aeronautical information services listed in their exposition;
- (b) The minimum facilities and equipment provided for the AIS headquarters, NOF and aerodrome AIS units shall be at least as following:-

- AIS Headquarters:

- 1) Personal computers (PC(s)), printers and Internet connection for each position;
- 2) Photocopying equipment;
- 3) Teletypewriter terminals (AFS/AFTN connection);
- 4) Telephones;
- 5) Faxes; and
- 6) Clocks (UTC and local time).

- NOF and Aerodrome AIS units:

- 1) Adequate table/counter space for processing information;
- 2) Adequate filing system (Suitable file classification scheme – Indexes - File tracking) and all facilities required for archiving and storing;
- 3) AIS/AIM operation system (receive and transmit) linked to the AFS;
- 4) PC/computer terminal, printer, connection to the Internet;
- 5) Photocopier for pre-flight bulletin production;
- 6) Telephone;
- 7) Fax equipment;
- 8) A reliable clocks, both showing UTC and local time; and
- 9) Reference charts and documents required for the consultation of pre-flight briefing and flight planning.

173.21 Location of an AIS unit

Aerodrome AIS units shall be situated close to other aerodrome flight services and to airline flight operations offices and located on the ground floor of the terminal building near the apron to facilitate pre-flight functions by flight crews with maximum efficiency and without their being compelled to cover undue distances.

173.23 Coordination between AIS and the concerned entities

The certified ANSP to provide the aeronautical information services shall establish systems and procedures to ensure the coordination between AIS units/departments with the other relevant units, offices, organizations and any relevant entities in the context of CHAIN project.

173.25 Responsibility of supplying raw data to the AIS for AIRAC system

In order for the AIRAC system to operate satisfactorily, it is essential that the technical branches of the State aviation authority that are assigned the responsibility of supplying raw data to the AIS be thoroughly familiar with the AIRAC system. In particular, they must be aware not only of the effective dates but also the latest dates on which the raw data must reach the AIS in order for an AIP Amendment or AIP Supplement to be published and reach recipients at least 28 days in advance of the effective date. It is the responsibility of the AIS to determine these latest dates in order to publish amendments/supplements that will meet the corresponding AIRAC effective dates. AIS shall publish an AIC of predetermined AIRAC effective dates based on annual basis carry out (Cycle NR, Latest date for raw data to reach AIS, PUB dates and effective dates. Technical branches shall endeavour to forward raw data to the AIS as early as possible and not wait until the latest date. This applies particularly where lengthy or complicated drafts are concerned. Early receipt will allow the AIS to process the data at a normal speed, whereas late receipt will normally mean that processing will be rushed, increasing the possibility of error.

173.27 Emergency and Contingency plan

The certified ANSP to provide the aeronautical information services shall establish contingency plan covering all expected emergency cases that may affect the factors of service outputs such as facilities and equipments, staff and place to assuredness the orderly flow of information/data and services, as mentioned in item 173.15-CHAPTER (7). And develop procedures to ensure the recurrent training with the required emergency response parameters to train all technical personnel performing the related functions in the emergency cases to maintain and enhance their competence at the desired level.

173.29 Safety management system (SMS)

- The certified ANSP to provide the AIS shall establish a safety management system containing safety management manual, the implemented procedures and safety report forms to ensure the highest level of safe operation, performance and service within AIS divisions (REF ECAR part 19).
- The certified ANSP to provide the AIS shall define the authorized person(s) responsible for the follow-up of safety regulations and implementations within the AIS divisions.

173.31 to 173.51 (Reserved Items)

SUBPART (B)

General

173.53 Definitions

When the following terms are used in the aeronautical information services, they have the following meanings:-

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome mapping data (AMD). Data collected for the purpose of compiling aerodrome mapping information.

Aerodrome mapping database (AMDB). A collection of aerodrome mapping data organized and arranged as a structured data set.

Aeronautical chart. A representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation.

Aeronautical data. A representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing.

Aeronautical fixed service (AFS). A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

Aeronautical information. Information resulting from the assembly, analysis and formatting of aeronautical data.

Aeronautical Information Circular (AIC). A notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

Aeronautical information management (AIM). The dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

Aeronautical information product. Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media. Aeronautical information products include:

- Aeronautical Information Publication (AIP), including Amendments and Supplements;
- Aeronautical Information Circulars (AIC);
- Aeronautical charts;
- NOTAM; and
- Digital data sets.

Aeronautical Information Publication (AIP). A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

Aeronautical information service (AIS). A service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation.

AIP Amendment. Permanent changes to the information contained in the AIP.

AIP Supplement. Temporary changes to the information contained in the AIP which are provided by means of special pages.

AIRAC. An acronym (aeronautical information regulation and control) signifying a system aimed at advance notification, based on common effective dates, of circumstances that necessitate significant changes in operating practices.

Air defense identification zone (ADIZ).Special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services (ATS).

Air traffic management (ATM).The dynamic, integrated management of air traffic and airspace (including air traffic services, airspace management and air traffic flow management) — safely, economically and efficiently — through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

Airway. A control area or portion thereof established in the form of a corridor.

Application. Manipulation and processing of data in support of user requirements (ISO 19104*).

Area navigation (RNAV).A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

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

ASHTAM.A special series NOTAM notifying by means of a specific format change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations.

Assemble. A process of merging data from multiple sources into a database and establishing a baseline for subsequent processing.

ATS surveillance service. Term used to indicate a service provided directly by means of an ATS surveillance system.

ATS surveillance system. A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

Automatic dependent surveillance — broadcast (ADS-B).A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

Automatic dependent surveillance — contract (ADS-C).A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

Automatic terminal information service (ATIS).The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof: Data link-automatic terminal information service (D-ATIS). The provision of ATIS via data link, Voice-automatic terminal information service (Voice-ATIS). The provision of ATIS by means of continuous and repetitive voice broadcasts.

Bare Earth. Surface of the Earth including bodies of water and permanent ice and snow, and excluding vegetation and manmade objects.

Calendar. Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108*).

Canopy. Bare Earth supplemented by vegetation height.

Confidence level. The probability that the true value of a parameter is within a certain interval around the estimate of its value.

Controller-pilot data link communications (CPDLC).A means of communication between controller and pilot, using data link for ATC communications.

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

Culture. All man-made features constructed on the surface of the Earth, such as cities, railways and canals.

Cyclic redundancy check (CRC).A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

Danger area. An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

Data Accuracy. A degree of conformance between the estimated or measured value and the true value.

Data completeness. The degree of confidence that all of the data needed to support the intended use is provided.

Data format. A structure of data elements, records and files arranged to meet standards, specifications or data quality requirements.

Data Integrity (assurance level). A degree of assurance that an aeronautical data and its value has not been lost or altered since the origination or authorized amendment.

Data product. Data set or data set series that conforms to a data product specification (ISO 19131*).

Data product specification. Detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party (ISO 19131*).

Data quality. A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity (or equivalent assurance level), traceability, timeliness, completeness and format.

Data Resolution. A number of units or digits to which a measured or calculated value is expressed and used.

Data set. Identifiable collection of data (ISO 19101*).

Data set series. Collection of data sets sharing the same product specification (ISO 19115*).

Data timeliness. The degree of confidence that the data is applicable to the period of its intended use.

Data traceability. The degree that a system or a data product can provide a record of the changes made to that product and thereby enable an audit trail to be followed from the end-user to the originator.

Datum. Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO 19104*).

Digital Elevation Model (DEM). The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum.

Direct transit arrangements. Special arrangements approved by the public authorities concerned by which traffic which are pausing briefly in its passage through the Contracting State may remain under their direct control.

Ellipsoid height (Geodetic height). The height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question.

Feature. Abstraction of real world phenomena (ISO 19101*).

Feature attribute. Characteristic of a feature (ISO 19101*).

Feature operation. Operation that every instance of a feature type may perform (ISO 19110*).

Feature relationship. Relationship that links instances of one feature type with instances of the same or a different feature type (ISO 19101*).

Feature type. Class of real world phenomena with common properties (ISO 19110*).

Filed flight plan. The flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes.

Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight information region. Airspace of defined dimensions within which flight information service and alerting service are provided.

Flight level. A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Geodesic distance. The shortest distance between any two points on a mathematically defined ellipsoidal surface.

Geodetic datum. A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

Geoid. The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.

Geoid undulation. The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid.

Gregorian calendar. Calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar (ISO 19108*).

Height. The vertical distance of a level, point or an object considered as a point, measured from a specific datum.

Heliport. An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Human Factors principles. Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

Integrity classification (aeronautical data). Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data are classified as:

- a) Routine data: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;
- b) Essential data: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and
- c) Critical data: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

International airport. Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

International NOTAM office (NOF). An office designated by a State for the exchange of NOTAM internationally.

Logon address. A specified code used for data link logon to an ATS unit.

Manoeuvring area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Metadata. Data about data (ISO 19115*).

Meteorological authority. The authority providing or arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State.

Meteorological bulletin. A text comprising meteorological information preceded by an appropriate heading.

Meteorological information. Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

Meteorological office. An office designated to provide meteorological service for international air navigation.

Meteorological report. A statement of observed meteorological conditions related to a specified time and location.

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.

Minimum obstacle clearance altitude (MOCA). The minimum altitude for a defined segment of flight that provides the required obstacle clearance.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron.

Navigation specification. A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. 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.

Next intended user. The entity that receives the aeronautical data or information from the Aeronautical Information Service.

NOTAM. A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

Obstacle. All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

- a) Are located on an area intended for the surface movement of aircraft; or
- b) Extend above a defined surface intended to protect aircraft in flight; or
- c) Stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

Obstacle/terrain data collection surface. A defined surface intended for the purpose of collecting obstacle/terrain data.

Origination (aeronautical data or aeronautical information). The creation of the value associated with new data or information or the modification of the value of an existing data or information.

Originator (aeronautical data or aeronautical information). An entity that is accountable for data or information origination and/or from which the AIS organization receives aeronautical data and information.

Orthometric height. Height of a point related to the geoid, generally presented as an MSL elevation.

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

Performance-based communication (PBC). Communication based on performance specifications applied to the provision of air traffic services.

Performance-based navigation (PBN). Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Performance-based surveillance (PBS). Surveillance based on performance specifications applied to the provision of air traffic services.

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Portrayal. Presentation of information to humans (ISO 19117*).

Position (geographical). Set of coordinates (latitude and longitude) referenced to the mathematical reference ellipsoid which define the position of a point on the surface of the Earth.

Post spacing. Angular or linear distance between two adjacent elevation points.

Precision. The smallest difference that can be reliably distinguished by a measurement process.

Pre-flight information bulletin (PIB). A presentation of current NOTAM information of operational significance, prepared prior to flight.

Prohibited area. Airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

Quality. Degree to which a set of inherent characteristics fulfils requirements (ISO 9000*).

Quality assurance. Part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000*).

Quality control. Part of quality management focused on fulfilling quality requirements (ISO 9000*).

Quality management. Coordinated activities to direct and control an organization with regard to quality (ISO 9000*).

Radio navigation service. A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

Repetitive flight plan (RPL). A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

Required communication performance (RCP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability and operations needed to support performance-based communication.

Required surveillance performance (RSP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

Requirement. Need or expectation that is stated, generally implied or obligatory (ISO 9000*).

Restricted area. Airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

Route stage. A route or portion of a route flown without an intermediate landing.

SNOWTAM†. A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format. († Applicable until 3 November 2021)

SNOWTAM††. A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice, or frost on the movement area. (†† Applicable as of 4 November 2021)

Station declination. An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

Terrain. The surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles.

Traceability. Ability to trace the history, application or location of that which is under consideration (ISO 9000*).

Validation. Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000*).

Verification. Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000*).

VOLMET. Meteorological information for aircraft in flight.

Data link-VOLMET (D-VOLMET). Provision of current aerodrome routine meteorological reports (METAR) and aerodrome special meteorological reports (SPECI), aerodrome forecasts (TAF), SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET via data link.

VOLMET broadcast. Provision, as appropriate, of current METAR, SPECI, TAF and SIGMET by means of continuous and repetitive voice broadcasts.

World area forecast centre (WAFc). A meteorological centre designated to prepare and issue significant weather forecasts and upper-air forecasts in digital form on a global basis direct to States by appropriate means as part of the aeronautical fixed service.

World area forecast system (WAFS). A worldwide system by which world area forecast centres provide aeronautical meteorological en-route forecasts in uniform standardized formats.

173.55 Abbreviations

When the following abbreviation and codes are used in the aeronautical information services, they have the following meanings:

ACFT Aircraft
AD Aerodrome
ADIZ Air defence identification zone
AFS Aeronautical fixed service
AFTN Aeronautical fixed telecommunication network
AGA Aerodromes, air routes and ground aids
AIC Aeronautical information circular
AIP Aeronautical information publication
AIRAC Aeronautical information regulation and control
AIS Aeronautical information services
AIM Aeronautical information management
ALT Altitude
ALTN Alternate
AMD Amend *or* amended
AMDT Amendment (AIP Amendment)
ANSP Air navigation services provider
AP Airport
A.R.E Arab republic of Egypt
ARO Air traffic services reporting office
ARP Aerodrome reference point
ATC Air traffic control
ATM Air traffic management
ATS Air traffic services
BOF Briefing office
CIV Civil
CNS Communications, navigation and surveillance
COM Communications
DOF Date of flight
Doc Document (s)
EAC Egyptian advisory circular
ECAA Egyptian civil aviation authority
ECAR Egyptian civil aviation regulation
EGNOS European geostationary navigation overlay service
EMERG Emergency
FIC Flight information centre
FIR Flight information region
FIS Flight information service
FPL Filed flight plan
FPR Flight plan route
FREQ Frequency

FRNG Firing
GND Ground
GNSS Global navigation satellite system
H24 Continuous day and night service
ICAO International civil aviation organization
IFR Instrument flight rules
MAP Aeronautical maps and charts
MET Meteorological *or* meteorology
MIL Military
MSL Mean sea level
NIL None or I have nothing to send to you
NOF International NOTAM office
NOTAM A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations
NR Number
OCA Obstacle clearance altitude
OCH Obstacle clearance height
PANS-OPS Procedures for air navigation services-Operations
PBN Performance-based navigation
PBS Performance-based surveillance
PIB Pre-flight information bulletin
PPM Policy and procedure manual
RMK Remark
RNAV Area navigation
RNP Required navigation performance
RPL Repetitive flight plan
RPLC Replace or replaced
RVSM Reduced vertical separation minimum [300 m (1 000 ft) between FL 290 and FL 410]
SAR Search and rescue
SATCOM Satellite communication
SATVOICE Satellite voice communication
SID Standard instrument departure
STAR Standard instrument arrival
SUP Supplement (AIP Supplement)
TFC Traffic
TMA Terminal control area
U/S Unserviceable
UTA Upper control area
UTC Coordinated Universal Time
VFR Visual flight rules
WGS-84 World Geodetic System – 1984
WIE With immediate effect or effective immediately

Note — The ICAO abbreviation and codes which used in the aeronautical information services are mentioned in ICAO Doc 8400 (ICAO Abbreviations and Codes).

173.57 Common reference systems for air navigation

The certified ANSP to provide the aeronautical information services shall establish and implement the required procedures to ensure the provision of the following:-

173.57-1 Horizontal reference system

- (a) World Geodetic System — 1984 (WGS-84) shall be used as the horizontal (geodetic) reference system for international air navigation. Consequently, published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum.
- (b) In precise geodetic applications and some air navigation applications, temporal changes in the tectonic plate motion and tidal effects on the Earth's crust shall be modelled and estimated. To reflect the temporal effect, an epoch shall be included with any set of absolute station coordinates.

173.57-2 Vertical reference system

- (a) Mean sea level (MSL) datum, shall be used as the vertical reference system for international air navigation.
- (b) The Earth Gravitational Model — 1996 (EGM-96), shall be used by international air navigation as the global gravity model.
- (c) At those geographical positions where the accuracy of EGM-96 does not meet the accuracy requirements for elevation and geoid undulation on the basis of EGM-96 data, regional, national or local geoid models containing high resolution (short wavelength) gravity field data shall be developed and used. When a geoid model other than the EGM-96 model is used, a description of the model used, including the parameters required for height transformation between the model and EGM-96, shall be provided in the Aeronautical Information Publication (AIP).

173.57-3 Temporal reference system

- (a) For international civil aviation, the Gregorian calendar and Coordinated Universal Time (UTC) shall be used as the temporal reference system.
- (b) When a different temporal reference system is used for some applications, the feature catalogue, or the metadata associated with an application schema or a data set, as appropriate, shall include either a description of that system or a citation for a document that describes that temporal reference system.

173.57-4 Miscellaneous specifications

- (a) Aeronautical information products intended for international distribution shall include English text for those parts expressed in plain language.
- (b) Place names shall be spelt in conformity with local usage, transliterated, when necessary, into the ISO-Basic Latin alphabet.
- (c) Units of measurement used in the origination, processing and distribution of aeronautical data and aeronautical information shall be consistent with ECAR part 305.
- (d) ICAO abbreviations shall be used in the aeronautical information products whenever they are appropriate and their use will facilitate distribution of aeronautical data and aeronautical information.

173.59 to 173.67 (Reserved Items)

SUBPART (C)

RESPONSIBILITIES AND FUNCTIONS

173.69 State responsibilities

- (a) ECAA certify ANSP for the provision of aeronautical data and aeronautical information services cover all Egyptian territory and those areas over the high seas on behalf and under full authority and supervision of ECAA.
- (b) The State of Egypt shall ensure that the provision of aeronautical data and aeronautical information covers its own territory and those areas over the high seas for which it is responsible for the provision of air traffic services.
- (c) The State of Egypt shall remain responsible for the aeronautical data and aeronautical information provided in accordance with 173.69-1 Aeronautical data and aeronautical information provided for and on behalf of the State of Egypt shall clearly indicate that it is provided under the authority of the State of Egypt irrespective of the format in which they are provided.
- (d) The State of Egypt shall ensure that the aeronautical data and aeronautical information provided are complete, timely and of required quality in accordance with SUBPART (D).
- (e) The State of Egypt shall ensure that formal arrangements are established between originators of aeronautical data and aeronautical information and the aeronautical information service in relation to the timely and complete provision of aeronautical data and aeronautical information.

173.71 AIS Responsibilities and Functions

The certified ANSP to provide the aeronautical data and aeronautical information services shall establish and implement the required procedures to ensure the provision of the following:-

- (a) An AIS shall ensure that aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation are made available in a form suitable for the operational requirements of the ATM community, including:
 - 1) Those involved in flight operations, including flight crews, flight planning and flight simulators; and
 - 2) The air traffic services unit responsible for flight information service and the services responsible for pre-flight information.
- (b) An AIS shall receive, collate or assemble, edit, format, publish/store and distribute aeronautical data and aeronautical information concerning the entire territory of Egypt as well as those areas over the high seas in which Egypt is responsible for the provision of air traffic services. Aeronautical data and aeronautical information shall be provided as aeronautical information products.
- (c) Where 24-hour service is not provided, service shall be available during the whole period an aircraft is in flight in the area of responsibility of an Aeronautical Information Service, plus a period of at least two hours before and after such a period. The service shall also be available at such other time as may be requested by an appropriate ground organization.
- (d) An AIS shall, in addition, obtain aeronautical data and aeronautical information to enable it to provide pre-flight information service and to meet the need for in-flight information:
 - 1) From the aeronautical information services of other States;
 - 2) From other sources that may be available.
- (e) Aeronautical data and aeronautical information obtained under 173.71(d)-1) shall, when distributed, be clearly identified as having the authority of the State of origin.

- (f) Aeronautical data/information obtained under 173.71(d)-2) shall, if possible, be verified before distribution and if not verified shall, when distributed, be clearly identified as such.
- (g) An AIS shall promptly make available to the Aeronautical Information Services of other States any aeronautical data and aeronautical information necessary for the safety, regularity or efficiency of air navigation required by them, to enable them to comply with 173.71(a).
- (h) Provide the flight plans services (FPL), the repetitive flight plans services (RPL), and the air traffic services reporting office services (ARO) at the aerodromes within Egyptian FIR as well as AIS services.

173.73 Exchange of aeronautical data and aeronautical information

The certified ANSP to provide the aeronautical data and aeronautical information services shall establish and implement the required procedures to ensure the provision of the following:-

- (a) Designate the office to which all elements of the aeronautical information products provided by other States shall be addressed. Such an office shall be qualified to deal with requests for aeronautical data and aeronautical information provided by other States.
- (b) Formal arrangements shall be established between those parties providing aeronautical data and aeronautical information on behalf of the States and their users in relation to the provision of the service.
- (c) Where more than one international NOTAM office is designated within Egypt, the extent of responsibility and the territory covered by each office shall be defined.
- (d) An AIS shall arrange, as necessary, to satisfy operational requirements for the issuance and receipt of NOTAM distributed by telecommunication.
- (e) Wherever practicable, direct contact between AIS shall be established in order to facilitate the international exchange of aeronautical data and aeronautical information.
- (f) Except as provided in 173.73(h), one copy of each of the following aeronautical information products (where available) that have been requested by the AIS of a Contracting State shall be made available by the originating State and provided in the mutually-agreed form(s), without charge, even where authority for publication/storage and distribution has been delegated to a non-governmental agency:-
 - 1) Aeronautical Information Publication (AIP), including Amendments and Supplements;
 - 2) Aeronautical Information Circulars (AIC);
 - 3) NOTAM; and
 - 4) Aeronautical Charts.
- (g) The exchange of more than one copy of the elements of aeronautical information products and other air navigation documents, including those containing air navigation legislation and regulations, shall be subject to bilateral agreement between the participating contracting states and entities.
- (h) When aeronautical data and aeronautical information are provided in the form of digital data sets to be used by the AIS, they shall be provided on the basis of agreement between the Contracting States concerned.
- (i) The procurement of aeronautical data and aeronautical information, including the elements of aeronautical information products, and other air navigation documents, including those containing air navigation legislation and regulations, by States other than Contracting States and by other entities shall be subject to separate agreement between the participating States and entities.
- (j) Globally interoperable aeronautical data and information exchange models shall be used for the provision of data sets.

173.75 Copyright

- (a) All Egyptian aeronautical information products is granted copyright protection in accordance with the national laws.
- (b) Any aeronautical information product which has been granted copyright protection by the originating state and provided to another state in accordance with 173.73 shall only be made available to a third party on the condition that the third party is made aware that the product is copyright protected and provided that it is appropriately annotated that the product is subject to copyright by the originating State.
- (c) When aeronautical information and aeronautical data are provided to a State in accordance with 173.73(h), the receiving State shall not provide digital data sets of the providing State to any third party without the consent of the providing State.

173.77 Cost recovery

The overhead cost of collecting and compiling aeronautical data and aeronautical information shall be included in the cost basis for airport and air navigation services charges, as appropriate, in accordance with the principles contained in ICAO's policies on charges for airports and air navigation services (Doc 9082).

173.79 to 173.87 (Reserved Items)

SUBPART (D)

AERONAUTICAL INFORMATION MANAGEMENT (AIM)

173.89 Information management requirements

The certified ANSP to provide the aeronautical data and aeronautical information services shall take all necessary procedures required to ensure that the information management resources and processes established by an aeronautical information service are adequate to ensure the timely collection, processing, storing, integration, exchange and delivery of quality-assured aeronautical data and aeronautical information within the ATM system.

173.91 Data quality specifications

The certified ANSP to provide the aeronautical data and aeronautical information services shall establish and implement the required procedures to ensure the provision of data quality specifications mentioned below:-

173.91-1 Data Accuracy

- (a) The order of accuracy for aeronautical data shall be in accordance with its intended use.
- (b) Specifications concerning the order of accuracy (including confidence level) for aeronautical data are contained in the Appendix 1 of this part.

173.91-2 Data Resolution

- (a) The order of resolution of aeronautical data shall commensurate with the actual data accuracy.

Note 1.— Specifications concerning the resolution of the aeronautical data are contained in the Appendix 1 of this part.

Note 2.— The resolution of the data features contained in the database may be the same or finer than the publication resolution.

173.91-3 Data Integrity

- (a) The integrity of aeronautical data shall be maintained throughout the data process from origination to distribution to the next intended user.

Note .— Specifications concerning the integrity classification related to aeronautical data are contained in the Appendix 1 of this part.

- (b) Procedures shall be put in place in order to:

- 1) For routine data: avoid corruption throughout the processing of the data;
- 2) For essential data: assure corruption does not occur at any stage of the entire process and may include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level; and
- 3) For critical data: assure corruption does not occur at any stage of the entire process and include additional integrity assurance processes to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks.

173.91-4 Data Traceability

Traceability of aeronautical data shall be ensured and retained as long as the data is in use.

173.91-5 Data Timeliness

Timeliness shall be ensured by including limits on the effective period of the data elements.

173.91-6 Data Completeness

Completeness of the aeronautical data shall be ensured in order to support the intended use.

173.91-7 Data Format

The format of delivered data shall be adequate to ensure that the data is interpreted in a manner that is consistent with its intended use.

173.93 Aeronautical data and aeronautical information validation and verification

- (a) Material to be issued as part of an aeronautical information product shall be thoroughly checked before it is submitted to the AIS, in order to ensure that all necessary information has been included and that it is correct in detail.
- (b) An AIS shall establish verification and validation procedures which ensure that upon receipt of aeronautical data and aeronautical information, quality requirements are met.

173.95 Data error detection

- (a) Digital data error detection techniques shall be used during the transmission and/or storage of aeronautical data and digital data sets.
- (b) Digital data error detection techniques shall be used in order to maintain the integrity levels as specified in 173.91-3.

Note — Detailed specifications concerning digital data error detection techniques are contained in the PANS-AIM (Doc 10066).

173.97 Use of automation

- (a) Automation shall be applied in order to ensure the quality, efficiency and cost-effectiveness of aeronautical information services.
- (b) Due consideration to the integrity of data and information shall be given when automated processes are implemented and mitigating steps taken where risks are identified.
- (c) In order to meet the data quality requirements, automation shall:
 - 1) enable digital aeronautical data exchange between the parties involved in the data processing chain; and
 - 2) use aeronautical information exchange models and data exchange models designed to be globally interoperable.

173.99 Quality management system

- (a) Quality management systems shall be implemented and maintained encompassing all functions of an aeronautical information service, as outlined in 173.71. The execution of such quality management systems shall be made demonstrable for each function stage.
- (b) Quality management shall be applicable to the whole aeronautical information data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data.
- (c) The quality management system established in accordance with 173.99(a) shall follow the ISO 9000 series of quality assurance standards, and be certified by an accredited certification body.
- (d) Within the context of the established quality management system, the competencies and the associated knowledge, skills and abilities required for each function shall be identified, and personnel assigned to perform those functions shall be appropriately trained. Processes shall be in place to ensure that personnel possess the competencies required to perform specific assigned functions. Appropriate records shall be maintained so that the qualifications of personnel can be confirmed. Initial and periodic assessments shall be established that require personnel to demonstrate the required competencies. Periodic assessments of personnel shall be used as a means to detect and correct shortfalls in knowledge, skills and abilities.
- (e) Each quality management system shall include the necessary policies, processes and procedures, including those for the use of metadata, to ensure and verify that aeronautical data is traceable throughout the aeronautical information data chain so as to allow any data anomalies or errors detected in use to be identified by root cause, corrected and communicated to affected users.

- (f) The established quality management system shall provide users with the necessary assurance and confidence that distributed aeronautical data and aeronautical information satisfy the aeronautical data quality requirements.
 - (g) All necessary measures shall be taken to monitor compliance with the quality management system in place.
 - (h) Demonstration of compliance of the quality management system applied shall be by audit. If nonconformity is identified, initiating action to correct its cause shall be determined and taken without undue delay. All audit observations and remedial actions shall be evidenced and properly documented.
- Note 1 — Error-producing faults in the entire process may be mitigated by additional data quality assurance techniques as may be required. These may include application tests for critical data (for example, by flight check); the use of security, logic, semantic, comparison and redundancy checks; digital error detection; and the qualification of human resources and process tools, such as hardware and software.
- (i) The certified ANSP to provide the AIS shall define the authorized person(s) responsible for the follow-up of quality regulations and implementations within the AIS divisions.

173.101 Human factor considerations

- (a) The organization of an AIS as well as the design, contents, processing and distribution of aeronautical data and aeronautical information shall take into consideration human factor principles, which facilitate their optimum utilization.
- (b) Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

Note — This may be accomplished through the design of systems, operating procedures or improvements in the operating environment.

173.103 Prevention of fatigue

Each applicant for the grant of an AIS certificate shall establish procedures acceptable to the ECAA to ensure that AIS officers are not subject to fatigue by ensuring that operational working hours and working environment are subject to the following limitations:

1- AIS officer duty hours:

- (a) The duty hours for AIS officer shall be limited, to ensure that AIS officer fatigue does not impair operational safety.
- (b) AIS officer duty hours log shall be maintained at each AIS operational position, AIS supervisor/officer are responsible for ensuring that the entries made in the duty hour log are complete and accurate.
- (c) Duty hours requirements and working hours limitations shall include the following:
 - 1) No period of duty shall exceed (8) hours per (24) hours, and it may increase to (12) hours per (24) hours due to the requirements of operation including break times for both;
 - 2) In case of working hours (12 hours), there shall be interval of not less than 12 hours between end of the period of duty and the commencement of the next Period of Duty;
 - 3) The AIS Service provider shall maintain sufficient qualified AIS officers and adequate staff to provide the type(s) of AIS service approved by EACC and during the period(s) promulgated in the AIP with safe operation in accordance with the number of operational positions at a unit.
- (d) The operation hours of staff other than mentioned above, when required due to emergency or special cases, must be approved by ECAA.

2- Working environment:

- (a) The design of the AIS workplace shall be properly planned from the beginning to meet the requirements of ICAO and 173.21.

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- (b) The workplace shall offer safety and comfort, and the design of the AIS physical work environment shall be as optimum as possible in terms of space, furniture, decoration, lighting, temperature, rest areas with a suitable equipments and lockers in order to reduce the presence of stress-provoking agents, and also the other related requirements.
 - (c) The layout of the AIS rooms shall be designed with sufficient spaces to accommodate all the working staff, facilities, equipments and the possible visitors to avoid the distraction and nuisance to AIS officers.

173.105 to 173.113 (Reserved Items)

SUBPART (E)

SCOPE OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION

The scope of aeronautical data and aeronautical information provides the minimum requirement to support aeronautical information products and services, aeronautical navigation data bases, air navigation applications and ATM systems.

173.115 Scope of aeronautical data and aeronautical information

(a) The aeronautical data and aeronautical information to be received and managed by the AIS shall include at least the following sub-domains:

- 1) National regulations, rules and procedures;
- 2) Aerodromes and heliports;
- 3) Airspace;
- 4) ATS routes;
- 5) Instrument flight procedures;
- 6) Radio navigation aids/systems;
- 7) Obstacles;
- 8) Terrain; and
- 9) Geographic information.

Note 1.— Detailed specifications concerning the content of each sub-domain are contained in the Appendix 1 of this part.

Note 2.— Aeronautical data and aeronautical information in each sub-domain may be originated by more than one organization or authority.

(b) Determination and reporting of aeronautical data shall be in accordance with the accuracy and integrity classification required to meet the needs of the end-user of aeronautical data.

Note.— Specifications concerning the accuracy and integrity classification related to aeronautical data are contained in the Appendix 1 of this part.

173.117 Metadata

(a) Metadata shall be collected for aeronautical data processes and exchange points.

(b) Metadata collection shall be applied throughout the aeronautical information data chain, from origination to distribution to the next intended user.

Note.— Detailed specifications concerning metadata are contained in the PANS-AIM (Doc 10066).

173.119 to 173.127 (Reserved Items)

SUBPART (F)

AERONAUTICAL INFORMATION PRODUCTS AND SERVICES

173.129 General

- (a) Aeronautical information shall be provided in the form of aeronautical information products and associated services.

Note — Specifications concerning the order of resolution of aeronautical data provided for each aeronautical information product are contained in the Appendix 1 of this part.

- (b) When aeronautical data and aeronautical information are provided in multiple formats, processes shall be implemented to ensure data and information consistency between formats.

173.131 Aeronautical information in a standardized presentation

- (a) Aeronautical information provided in a standardized presentation shall include the AIP, AIP Amendments, AIP Supplements, AICs, NOTAMs and Aeronautical Charts.

Note 1.— Detailed specifications about AIP, AIP Amendments, AIP Supplements, AICs and NOTAMs are contained in the PANS-AIM (Doc 10066).

Note 2.— Cases where digital data sets may replace the corresponding elements of the standardized presentation are detailed in the PANS-AIM (Doc 10066).

- (b) The AIP, AIP Amendment, AIP Supplement and AIC shall be provided on paper and/or as an electronic document.
- (c) The AIP, AIP Amendment, AIP Supplement and AIC provided as an electronic document (eAIP) should allow for both displaying on electronic devices and printing on paper.

173.133 Aeronautical Information Publication (AIP)

- (a) AIP are intended primarily to satisfy international requirements for the exchange of aeronautical information of a lasting character essential to air navigation.
- (b) AIP constitute the basic information source for permanent information and long duration temporary changes.
- (c) AIP shall include :
 - 1) A statement of the competent authority responsible for the air navigation facilities, services or procedures covered by the AIP;
 - 2) The general conditions under which the services or facilities are available for international use;
 - 3) A list of significant differences between the national regulations and practices of the State and the related ICAO Standards, Recommended Practices and Procedures, given in a form that would enable a user to differentiate readily between the requirements of the State and the related ICAO provisions;
 - 4) The choice made by a State in each significant case where an alternative course of action is provided for in ICAO Standards, Recommended Practices and Procedures.

173.135 AIP Supplement

A checklist of valid AIP Supplements shall be regularly provided.

Note.— Detailed specifications concerning the frequency for providing checklists of valid AIP Supplements are contained in the PANS-AIM (Doc 10066).

173.137 Aeronautical Information Circulars (AIC)

- (a) An AIC shall be used to provide:
 - 1) A long-term forecast of any major change in legislation, regulations, procedures or facilities; or
 - 2) Information of a purely explanatory or advisory nature liable to affect flight safety; or
 - 3) Information or notification of an explanatory or advisory nature concerning technical, legislative or purely administrative matters.
- (b) An AIC shall not be used for information that qualifies for inclusion in AIP or NOTAM.
- (c) The validity of AIC currently in force shall be reviewed at least once a year.
- (d) A checklist of currently valid AIC shall be regularly provided.

Note.— Detailed specifications concerning the frequency for providing checklists of valid AIC are contained in the PANS-AIM (Doc 10066).

173.139 Aeronautical Charts

- (a) The aeronautical charts listed alphabetically below shall, when available for designated international aerodromes/heliports, form part of the AIP, or be provided separately to recipients of the AIP:
 - 1) Aerodrome/Heliport Chart — ICAO;
 - 2) Aerodrome Ground Movement Chart — ICAO;
 - 3) Aerodrome Obstacle Chart — ICAO Type A;
 - 4) Aerodrome Obstacle Chart — ICAO Type B (when available)
 - 5) Aerodrome Terrain and Obstacle Chart — ICAO (Electronic);
 - 6) Aircraft Parking/Docking Chart — ICAO;
 - 7) Area Chart — ICAO;
 - 8) ATC Surveillance Minimum Altitude Chart — ICAO;
 - 9) Instrument Approach Chart — ICAO;
 - 10) Precision Approach Terrain Chart — ICAO;
 - 11) Standard Arrival Chart — Instrument (STAR) — ICAO;
 - 12) Standard Departure Chart — Instrument (SID) — ICAO;
 - 13) Visual Approach Chart — ICAO.
- (b) The “Enroute Chart — ICAO” shall, when available, form part of the AIP, or be provided separately to recipients of the AIP.
- (c) The aeronautical charts listed alphabetically below shall, when available, be provided as aeronautical information products:
 - 1) World Aeronautical Chart — ICAO 1:1 000 000;
 - 2) Aeronautical Chart — ICAO 1:500 000;
 - 3) Aeronautical Navigation Chart — ICAO Small Scale;
 - 4) Plotting Chart — ICAO chart; and
 - 5) ATC Surveillance Minimum Altitude Chart — ICAO.
- (d) Electronic aeronautical charts should be provided based on digital databases and the use of geographic information systems.
- (e) The chart resolution of aeronautical data shall be that as specified for a particular chart.

Note — Specifications concerning the chart resolution for aeronautical data are contained in the Appendix 1 of this part.

173.141 NOTAM

A checklist of valid NOTAM shall be regularly provided.

Note.— Detailed specifications concerning the frequency for providing checklists of valid NOTAM are contained in the PANS-AIM (Doc 10066).

173.143 Digital data sets

(a) Digital data shall be in the form of the following data sets:

- 1) AIP data set;
- 2) Terrain data sets;
- 3) Obstacle data sets;
- 4) Aerodrome mapping data sets; and
- 5) Instrument flight procedure data sets.

Note.— Detailed specifications concerning the content of the digital data sets are contained in the PANS-AIM (Doc 10066).

(b) Each data set shall be provided to the next intended user together with at least the minimum set of metadata that ensures traceability.

Note.— Detailed specifications concerning metadata are contained in the PANS-AIM (Doc 10066).

(c) A checklist of valid data sets shall be regularly provided.

173.145 AIP data set

- (a) An AIP data set should be provided covering the extent of information as provided in the AIP.
- (b) When it is not possible to provide a complete AIP data set, the data subset(s) that are available should be provided.
- (c) The AIP data set shall contain the digital representation of aeronautical information of lasting character (permanent information and long duration temporary changes) essential to air navigation.

173.147 Terrain and obstacle data sets

Note 1.— Numerical requirements for terrain and obstacle data sets are contained in the Appendices 1 and 8 of this part.

Note 2.— Requirements for terrain and obstacle data collection surfaces are contained in the Appendix 8 of this part.

(a) The coverage areas for sets of electronic terrain and obstacle data shall be specified as:

- Area 1: the entire territory of a State;
- Area 2: within the vicinity of an aerodrome, subdivided as follows;
- Area 2a: a rectangular area around a runway that comprises the runway strip plus any clearway that exists.

Note.— See Annex 14, Volume I, Chapter 3, for dimensions for runway strip.

- Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;
- Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a; and
- Area 2d: an area outside the Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing terminal control area (TMA) boundary, whichever is nearest;
- Area 3: the area bordering an aerodrome movement area that extends horizontally from the edge of a runway to 90 m from the runway centre line and 50 m from the edge of all other parts of the aerodrome movement area.
- Area 4: The area extending 900 m prior to the runway threshold and 60 m each side of the extended runway centre line in the direction of the approach on a precision approach runway, Category II or III.

(b) Where the terrain at a distance greater than 900 m (3 000 ft) from the runway threshold is mountainous or otherwise significant, the length of Area 4 should be extended to a distance not exceeding 2 000 m (6 500 ft) from the runway threshold.

173.149 Terrain data sets

- (a) Terrain data sets shall contain the digital representation of the terrain surface in the form of continuous elevation values at all intersections (points) of a defined grid, referenced to common datum.
- (b) Terrain data shall be provided for Area 1.
- (c) For aerodromes regularly used by international civil aviation, electronic terrain data shall be provided for:
 - 1) Area 2a;
 - 2) The take-off flight path area; and
 - 3) An area bounded by the lateral extent of the aerodrome obstacle limitation surfaces.
- (d) For aerodromes regularly used by international civil aviation, additional terrain data should be provided within Area 2 as follows:
 - 1) In the area extending to 10 km from the ARP; and
 - 2) Within the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller) where terrain penetrates a horizontal terrain data collection surface specified as 120 m above the lowest runway elevation.
- (e) Arrangements should be made for the coordination of providing terrain data for adjacent aerodromes where their respective coverage areas overlap to assure that the data for the same terrain are correct.
- (f) For those aerodromes located near territorial boundaries, arrangements should be made among States concerned to share terrain data.
- (g) For aerodromes regularly used by international civil aviation, terrain data should be provided for Area 3.
- (h) For aerodromes regularly used by international civil aviation, terrain data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established and where detailed terrain information is required by operators to enable them to assess the effect of terrain on decision height determination by use of radio altimeters.
- (i) Where additional terrain data is collected to meet other aeronautical requirements, the terrain data sets should be expanded to include this additional data.

173.151 Obstacle data sets

- (a) Obstacle data sets shall contain the digital representation of the vertical and horizontal extent of obstacles.
- (b) Obstacles data shall not be included in terrain data sets.
- (c) The obstacle data shall be provided for obstacles in Area 1 whose height is 100 m or higher above ground.
- (d) For aerodromes regularly used by international civil aviation, obstacle data shall be provided for all obstacles within Area 2 that are assessed as being a hazard to air navigation.
- (e) For aerodromes regularly used by international civil aviation, obstacle data shall be provided for:
 - 1) Area 2a for those obstacles that penetrate an obstacle data collection surface outlined by a rectangular area around a runway that comprises the runway strip plus any clearway that exists. The Area 2a obstacle collection surface shall have height of 3 m above the nearest runway elevation measured along the runway centre line, and for those portions related to a clearway, if one exists, at the elevation of the nearest runway end;
 - 2) Objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area; and

3) Penetrations of the aerodrome obstacle limitation surfaces.

Note.— Take-off flight path areas are specified in Annex 4, 3.8.2. Aerodrome obstacle limitation surfaces are specified in Annex 14, Volume 1, Chapter 4.

- (f) For aerodromes regularly used by international civil aviation, obstacle data should be provided for Areas 2b, 2c and 2d for obstacles that penetrate the relevant obstacle data collection surface specified as follows:
- 1) Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15% to each side. The Area 2b obstacle collection surface has a 1.2% slope extending from the ends of Area 2a at the elevation of the runway end in the direction of departure, with a length of 10 km and a splay of 15% to each side;
 - 2) Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a. The Area 2c obstacle collection surface has a 1.2% slope extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a. The initial elevation of Area 2c shall be the elevation of the point of Area 2a at which it commences; and
 - 3) Area 2d: an area outside the Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing TMA boundary, whichever is nearest. The Area 2d obstacle collection surface has a height of 100 m above ground; except that data need not be collected for obstacles less than a height of 3 m above ground in Area 2b and less than a height of 15 m above ground in Area 2c.
- (g) Arrangements should be made for the coordination of providing obstacle data for adjacent aerodromes where their respective coverage areas overlap to assure that the data for the same obstacle are correct.
- (h) For those aerodromes located near territorial boundaries, arrangements should be made among States concerned to share obstacle data.
- (i) For aerodromes regularly used by international civil aviation, obstacle data should be provided for Area 3 for obstacles that penetrate the relevant obstacle data collection surface extending a half-metre (0.5 m) above the horizontal plane passing through the nearest point on the aerodrome movement area.
- (j) For aerodromes regularly used by international civil aviation, electronic terrain and obstacle data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established
- (k) Where additional obstacle data are collected to meet other aeronautical requirements, the obstacle data sets should be expanded to include these additional data.

173.153 Aerodrome mapping data sets

- (a) Aerodrome mapping data sets shall contain the digital representation of aerodrome features.
- (b) Aerodrome mapping data sets should be made available for aerodromes regularly used by international civil aviation.

173.155 Instrument flight procedure data sets

- (a) Instrument flight procedure data sets shall contain the digital representation of instrument flight procedures.
- (b) Instrument flight procedures data sets should be made available for aerodromes regularly used by international civil aviation.

173.157 Distribution services

- (a) Aeronautical information products shall be distributed to authorized users who request them.
- (b) AIP, AIP Amendments, AIP Supplements and AIC shall be made available by the most expeditious means.
- (c) Global communication networks such as the Internet should, whenever practicable, be employed for the provision of aeronautical information products.

173.159 NOTAM distribution

- (a) NOTAM shall be distributed on the basis of a request.
- (b) NOTAM shall be prepared in conformity with the relevant provisions of the ICAO communication procedures.
- (c) The Aeronautical Fixed Service (AFS) shall, whenever practicable, be employed for NOTAM distribution.
- (d) When a NOTAM is sent by means other than the AFS, a six-digit date-time group indicating the date and time of NOTAM origination, and the identification of the originator shall be used, preceding the text. The originating State shall select the NOTAM that are to be given international distribution.
- (e) International exchange of NOTAM shall take place only as mutually agreed between the international NOTAM offices concerned and between the NOTAM offices and multinational NOTAM Processing Units.
- (f) The originating State shall upon request grant distribution of NOTAM series other than those distributed internationally.
- (g) Selective distribution lists shall be used when practicable.

Note.— Guidance material relating to selective distribution lists is contained in the Aeronautical Information Services Manual (Doc 8126).

173.161 Pre-Flight Information Service

- (a) For any aerodrome/heliport used for international air operations, aeronautical information relative to the route stages originating at the aerodrome/heliport shall be made available to flight operations personnel, including flight crews and services responsible for pre-flight information.
- (b) Aeronautical information provided for pre-flight planning purposes shall include information of operational significance from the elements of the aeronautical information products.

173.163 Post-flight information Service

- (a) For any aerodrome/heliport used for international air operations, arrangements shall be made to receive information concerning the state and operation of air navigation facilities or services noted by aircrews.
- (b) The arrangements specified in 173.163(a) shall ensure that such information is made available to the aeronautical information service for distribution as the circumstances necessitate.
- (c) For any aerodrome/heliport used for international air operations, arrangements shall be made to receive information concerning the presence of wildlife hazard observed by aircrews.
- (d) The information about presence of wildlife hazard shall be made available to the aeronautical information service for distribution as the circumstances necessitate.

173.165 to 173.173 (Reserved Items)

SUBPART (G)

AERONAUTICAL INFORMATION UPDATES

173.175 General specifications

Aeronautical data and aeronautical information shall be kept up to date.

173.177 Aeronautical Information Regulation and Control (AIRAC)

- (a) Information concerning the following circumstances shall be distributed under the regulated system (AIRAC), i.e. basing establishment, withdrawal or significant changes upon a series of common effective dates at intervals of 28 days, including 8 November 2018 :-
- (1) Limits (horizontal and vertical), regulations and procedures applicable to:
 - a) Flight information regions;
 - b) Control areas;
 - c) Control zones;
 - d) Advisory areas;
 - e) ATS routes;
 - f) Permanent danger, prohibited and restricted areas (including type and periods of activity when known) and ADIZ;
 - g) Permanent areas or routes or portions thereof where the possibility of interception exists.
 - (2) Positions, frequencies, call signs, identifiers, known irregularities and maintenance periods of radio navigation aids, and communication and surveillance facilities.
 - (3) Holding and approach procedures, arrival and departure procedures, noise abatement procedures and any other pertinent ATS procedures.
 - (4) Transition levels, transition altitudes and minimum sector altitudes.
 - (5) Meteorological facilities (including broadcasts) and procedures.
 - (6) Runways and stopways.
 - (7) Taxiways and aprons.
 - (8) Aerodrome ground operating procedures (including low visibility procedures).
 - (9) Approach and runway lighting.
 - (10) Aerodrome operating minima if published by a State.
- (b) The information notified under the AIRAC system shall not be changed further for at least another 28 days after the effective date, unless the circumstance notified is of a temporary nature and would not persist for the full period.
- (c) Information provided under the AIRAC system shall be made available by the AIS so as to reach recipients at least 28 days in advance of the effective date.
- Note- AIRAC information is distributed by the AIS unit at least 42 days in advance of the AIRAC effective dates with the objective of reaching recipients at least 28 days in advance of the effective date.
- (d) When information has not been submitted by the AIRAC date, a NIL notification shall be distributed not later than one cycle before the AIRAC effective date concerned.
- (e) Implementation dates other than AIRAC effective dates shall not be used for pre-planned operationally significant changes requiring cartographic work and/or for updating of navigation databases.
- (f) The regulated system (AIRAC) shall also be used for the provision of information relating to the establishment and withdrawal of, and premeditated significant changes in, the circumstances listed below:
- 1) Position, height and lighting of navigational obstacles.

- 2) Hours of service of aerodromes, facilities and services.
 - 3) Customs, immigration and health services.
 - 4) Temporary danger, prohibited and restricted areas and navigational hazards, military exercises and mass movements of aircraft.
 - 5) Temporary areas or routes or portions thereof where the possibility of interception exists.
- (g) Whenever major changes are planned and where advance notice is desirable and practicable, information shall be made available by the AIS so as to reach recipients at least 56 days in advance of the effective date. This shall be applied to the establishment of, and premeditated major changes in, the circumstances listed below, and other major changes if deemed necessary.
- 1) New aerodromes for international IFR operations.
 - 2) New runways for IFR operations at international aerodromes.
 - 3) Design and structure of the air traffic services route network.
 - 4) Design and structure of a set of terminal procedures (including change of procedure bearings due to magnetic variation change).
 - 5) Circumstances listed in 173.177(a) if the entire State or any significant portion thereof is affected or if cross-border coordination is required.

173.179 Aeronautical Information Product updates

173.179-1 AIP updates

- (a) AIP shall be amended or reissued at such regular intervals as may be necessary to keep them up to date.
- (b) Permanent changes to the AIP shall be published as AIP Amendments.
- (c) Temporary changes of long duration (three months or longer) and information of short duration which contains extensive text and/or graphics shall be published as AIP Supplements.

173.179-2 NOTAM

- (a) When an AIP Amendment or an AIP Supplement is published in accordance with AIRAC procedures, a “Trigger” NOTAM shall be originated.
Note — Detailed specifications concerning the Trigger NOTAM are contained in the PANS-AIM (Doc 10066).
- (b) A NOTAM shall be originated and issued promptly whenever the information to be distributed is of a temporary nature and of short duration or when operationally significant permanent changes, or temporary changes of long duration are made at short notice, except for extensive text and/or graphics.
- (c) A NOTAM shall be originated and issued concerning the following information:
 - 1) Establishment, closure or significant changes in operation of aerodrome(s) or heliport(s) or runways;
 - 2) Establishment, withdrawal and significant changes in operation of aeronautical services (AGA, AIS, ATS, CNS, MET, SAR, etc.);
 - 3) Establishment, withdrawal and significant changes in operational capability of radio navigation and air-ground communication services. This includes: interruption or return to operation, change of frequencies, change in notified hours of service, change of identification, change of orientation (directional aids), change of location, power increase or decrease amounting to 50 per cent or more, change in broadcast schedules or contents, or irregularity or unreliability of operation of any radio navigation and air-ground communication services or limitations of relay stations including operational impact, affected service, frequency and area;

- 4) Unavailability of back-up and secondary systems, having a direct operational impact;
- 5) Establishment, withdrawal or significant changes made to visual aids;
- 6) interruption of or return to operation of major components of aerodrome lighting systems;
- 7) Establishment, withdrawal or significant changes made to procedures for air navigation services;
- 8) Occurrence or correction of major defects or impediments in the manoeuvring area;
- 9) Changes to and limitations on availability of fuel, oil and oxygen;
- 10) Major changes to search and rescue facilities and services available;
- 11) Establishment, withdrawal or return to operation of hazard beacons marking obstacles to air navigation;
- 12) Changes in regulations requiring immediate action, e.g. prohibited areas for SAR action;
- 13) Presence of hazards not otherwise promulgated, which affect air navigation (including obstacles, military exercises and operations, intentional and unintentional radio frequency interferences, rocket launches, displays, fireworks, sky lanterns, rocket debris, races and major parachuting events);
- 14) Conflict zones which affect air navigation (to include information that is as specific as possible regarding the nature and extent of threats of that conflict and its consequences for civil aviation);

Note.: Guidance related to conflict zones is contained in the Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones (Doc 10084).

- 15) Erecting or removal of, or changes to, obstacles to air navigation in the take-off/climb, missed approach, approach areas and runway strip;
- 16) Establishment or discontinuance (including activation or deactivation) as applicable, or changes in the status of prohibited, restricted or danger areas;
- 17) Establishment or discontinuance of areas or routes or portions thereof where the possibility of interception exists and where the maintenance of guard on the VHF emergency frequency 121.5 MHz is required;
- 18) Allocation, cancellation or change of location indicators;
- 19) Changes in aerodrome/heliport rescue and fire fighting category provided (see Annex 14, Volume I, Chapter 9, and Attachment A, Section 17);
- 20) Presence or removal of, or significant changes in, hazardous conditions due to snow, slush, ice, radioactive material, toxic chemicals, volcanic ash deposition or water on the movement area;
- 21) Outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;
- 22) Observations or forecasts of space weather phenomena, the date and time of their occurrence, the flight levels where provided, and portions of the airspace which may be affected by the phenomena;
- 23) An operationally significant change in volcanic activity, the location, date and time of volcanic eruptions and/or horizontal and vertical extent of volcanic ash cloud, including direction of movement, flight levels and routes or portions of routes which could be affected;
- 24) Release into the atmosphere of radioactive materials or toxic chemicals following a nuclear or chemical incident, the location, date and time of the incident, the flight levels and routes or portions thereof which could be affected and the direction of movement;
- 25) Establishment of operations of humanitarian relief missions, such as those undertaken under the auspices of the United Nations, together with procedures and/or limitations which affect air navigation; and

26) Implementation of short-term contingency measures in cases of disruption, or partial disruption, of ATS and related supporting services.

Note.: See Annex 11, 2.31 and Attachment C to that Annex.

Note.— Specifications concerning the timely promulgation of information by NOTAM are contained in Chapter 6 of the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066).

(d) The following information shall not be notified by NOTAM:

- 1) Routine maintenance work on aprons and taxiways which does not affect the safe movement of aircraft;
- 2) Runway marking work, when aircraft operations can safely be conducted on other available runways, or the equipment used can be removed when necessary;
- 3) Temporary obstructions in the vicinity of aerodromes/heliports that do not affect the safe operation of aircraft;
- 4) Partial failure of aerodrome/heliport lighting facilities where such failure does not directly affect aircraft operations;
- 5) Partial temporary failure of air-ground communications when suitable alternative frequencies are known to be available and are operative;
- 6) The lack of apron marshalling services and road traffic control;
- 7) The unserviceability of location, destination or other instruction signs on the aerodrome movement area;
- 8) Parachuting when in uncontrolled airspace under VFR (see 173.173-2(13)), when controlled, at promulgated sites or within danger or prohibited areas;
- 9) Training activities by ground units;
- 10) Unavailability of back-up and secondary systems if these do not have an operational impact;
- 11) Limitations to airport facilities or general services with no operational impact;
- 12) National regulations not affecting general aviation;
- 13) Announcement or warnings about possible/potential limitations, without any operational impact;
- 14) General reminders on already published information;
- 15) Availability of equipment for ground units without containing information on the operational impact for airspace and facility users;
- 16) Information about laser emissions without any operational impact and fireworks below minimum flying heights;
- 17) Closure of movement area parts in connection with planned work locally coordinated of duration of less than one hour;
- 18) Closure, changes, unavailability in operation of aerodrome(s)/heliport(s) outside the aerodrome(s)/heliport(s) operational hours;
- 19) Other non-operational information of a similar temporary nature.

Note - Information which relates to an aerodrome and its vicinity and does not affect its operational status may be distributed locally during pre-flight or in-flight briefing or other local contact with flight crew members.

173.181 Data set updates

- (a) Data sets shall be amended or reissued at such regular intervals as may be necessary to keep them up to date.
- (b) Permanent changes and temporary changes of long duration (three months or longer) made available as digital data shall be issued in the form of a complete data set or a sub-set that includes only the differences from the previously issued complete data set.
- (c) When made available as a completely re-issued data set, the differences from the previously issued complete data set should be indicated.

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- (d) When temporary changes of short duration are made available as digital data (Digital NOTAM), they should use the same aeronautical information model as the complete data set.
 - (e) Updates to AIP and the digital data sets shall be synchronized.

173.183 to 173.191 (Reserved Items)

SUBPART (H)

FLIGHT PLAN (FPL) and REPETITIVE FLIGHT PLANS (RPL)

173.193 Flight plan form (FPL)

- (a) A flight plan form based on the model in Appendix 9 from item 1 to 5 of this part shall be provided and shall be used by operators and air traffic services units for the purpose of completing flight plans.
- (b) The flight plan form shall be printed and shall include an English text, in addition to the local language if required.
- (c) Operators and air traffic services units shall comply with the instructions for completion of the flight plan form and the repetitive flight plan listing form given in Appendix 9 of this part.
- (d) An operator shall, prior to departure:
 - 1) Ensure that, where the flight is intended to operate on a route or in an area where an RNP type is prescribed, the aircraft has an appropriate RNP approval, and that all conditions applying to that approval will be satisfied;
 - 2) Ensure that, where operation in reduced vertical separation minimum (RVSM) airspace is planned, the aircraft has the required RVSM approval; and
 - 3) Ensure that, where the flight is intended to operate where an RCP type is prescribed, the aircraft has an appropriate RCP approval, and that all conditions applying to that approval will be satisfied.

173.195 Submission of a flight plan

1- PRIOR TO DEPARTURE

- a) Flight plans shall not be submitted more than 120 hours before the estimated off-block time of a flight.
- b) Except when other arrangements have been made for submission of repetitive flight plans, a flight plan submitted prior to departure shall be submitted to the air traffic services reporting office at the departure aerodrome. If no such unit exists at the departure aerodrome, the flight plan shall be submitted to the unit serving or designated to serve the departure aerodrome.
- c) In the event of a delay of 30 minutes in excess of the estimated off-block time for a controlled flight or a delay of one hour for an uncontrolled flight for which a flight plan has been submitted, the flight plan shall be amended or a new flight plan submitted and the old flight plan cancelled, whichever is applicable.

2- DURING FLIGHT

- a) A flight plan to be submitted during flight shall normally be transmitted to the ATS unit in charge of the FIR, control area, advisory area or advisory route in or on which the aircraft is flying, or in or through which the aircraft wishes to fly or to the aeronautical telecommunication station serving the air traffic services unit concerned. When this is not practicable, it shall be transmitted to another ATS unit or aeronautical telecommunication station for retransmission as required to the appropriate air traffic services unit.
- b) Where relevant, such as in respect of ATC units serving high- or medium-density airspace, the appropriate ATS authority shall prescribe conditions and/or limitations with respect to the submission of flight plans during flight to ATC units.

173.197 Contents of a flight plan

The flight plan shall comprise information regarding such of the following items as are considered relevant by the appropriate ATS authority:

- Aircraft identification
- Flight rules and type of flight
- Number and type(s) of aircraft and wake turbulence category
- Equipment
- Departure aerodrome (see Note 1)
- Estimated off-block time (see Note 2)
- Cruising speed(s)
- Cruising level(s)
- Route to be followed
- Destination aerodrome and total estimated elapsed time
- Alternate aerodrome(s)
- Fuel endurance
- Total number of persons on board
- Emergency and survival equipment
- Other information.

Note- For flight plans submitted during flight, the information provided in respect of this item will be an indication of the location from which supplementary information concerning the flight may be obtained, if required.

Note- For flight plans submitted during flight, the information to be provided in respect of this item will be the time over the first point of the route to which the flight plan relates.

Note- The term “aerodrome” where used in the flight plan is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

173.199 Completion of a flight plan

- (a) Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including “Alternate aerodrome(s)” regarding the whole route or the portion thereof for which the flight plan is submitted.
- (b) It shall, in addition, contain information, as applicable, on all other items when so prescribed by the appropriate ATS authority or when otherwise deemed necessary by the person submitting the flight plan.

173.201 Changes to a flight plan

All changes to a flight plan submitted for an IFR flight, or a VFR flight operated as a controlled flight, shall be reported as soon as practicable to the appropriate air traffic services unit. For other VFR flights, significant changes to a flight plan shall be reported as soon as practicable to the appropriate air traffic services unit.

173.203 Closing a flight plan

- (a) Unless otherwise prescribed by the appropriate ATS authority, a report of arrival shall be made in person, by radiotelephony or via data link at the earliest possible moment after landing, to the appropriate air traffic services unit at the arrival aerodrome, by any flight for which a flight plan has been submitted covering the entire flight or the remaining portion of a flight to the destination aerodrome.
- (b) When a flight plan has been submitted only in respect of a portion of a flight, other than the remaining portion of a flight to destination, it shall, when required, be closed by an appropriate report to the relevant air traffic services unit.
- (c) When no air traffic services unit exists at the arrival aerodrome, the arrival report, when required, shall be made as soon as practicable after landing and by the quickest means available to the nearest air traffic services unit.

- (d) When communication facilities at the arrival aerodrome are known to be inadequate and alternate arrangements for the handling of arrival reports on the ground are not available, the following action shall be taken. Immediately prior to landing the aircraft shall, if practicable, transmit to the appropriate air traffic services unit, a message comparable to an arrival report, where such a report is required. Normally, this transmission shall be made to the aeronautical station serving the air traffic services unit in charge of the flight information region in which the aircraft is operated.
- (e) Arrival reports made by aircraft shall contain the following elements of information:
 - 1) Aircraft identification;
 - 2) Departure aerodrome;
 - 3) Destination aerodrome (only in the case of a diversionary landing);
 - 4) Arrival aerodrome;
 - 5) Time of arrival.

173.205 Acceptance of a flight plan

The first ATS unit receiving a flight plan, or change thereto, shall:

- 1) Check it for compliance with the format and data conventions;
- 2) Check it for completeness and, to the extent possible, for accuracy;
- 3) Take action, if necessary, to make it acceptable to the air traffic services; and
- 4) Indicate acceptance of the flight plan or change thereto, to the originator.

173.207 Adherence to flight plan

An aircraft shall adhere to the current flight plan or the applicable portion of a current flight plan submitted for a controlled flight unless a request for a change has been made and clearance obtained from the appropriate air traffic control unit, or unless an emergency situation arises which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate air traffic services unit shall be notified of the action taken and that this action has been taken under emergency authority.

173.209 to 173.217 (Reserved Items)

173.219 Use of repetitive flight plans (RPL)

- (a) RPLs shall not be used for flights other than IFR flights operated regularly on the same day(s) of consecutive weeks and on at least ten occasions or every day over a period of at least ten consecutive days. The elements of each flight plan shall have a high degree of stability.
- (b) RPLs shall cover the entire flight from the departure aerodrome to the destination aerodrome. RPL procedures shall be applied only when all ATS authorities concerned with the flights have agreed to accept RPLs.
- (c) The use of RPLs for international flight shall be subject to the provision that the affected adjacent States either already use RPLs or will use them at the same time. The procedures for use between States shall be the subject of bilateral, multilateral or regional air navigation agreement as appropriate.

173.221 Procedures for submission of RPLs by operators

- (a) Conditions governing submission, notification of changes, or cancellation of RPLs shall be the subject of appropriate arrangements between operators and the ATS authority concerned or of regional air navigation agreements.
- (b) An RPL shall comprise information regarding such of the following items as are considered relevant by the appropriate ATS authority:
 - 1) Validity period of the flight plan
 - 2) Days of operation
 - 3) Aircraft identification
 - 4) Aircraft type and wake turbulence category
 - 5) MLS capability
 - 6) Departure aerodrome
 - 7) Off-block time
 - 8) Cruising speed(s)
 - 9) Cruising level(s)
 - 10) Route to be followed
 - 11) Destination aerodrome
 - 12) Total estimated elapsed time
 - 13) Indication of the location where the following information may be obtained immediately upon request:
 - Alternate aerodromes
 - Fuel endurance
 - Total number of persons on board
 - Emergency equipment
 - 14) Other information.

173.223 Submission of total listings

- (a) RPLs shall be submitted in the form of listings containing the required flight plan data using an RPL listing form specially designed for the purpose or by means of other media suitable for electronic data processing. The method of submission shall be determined by local or regional agreement.
Note: -A model RPL listing form is contained in Appendix 9 from item 6 to 8 of this part.
- (b) Initial submission of complete RPL listings and any subsequent seasonal resubmission of complete listings shall be made in sufficient time to permit the data to be properly assimilated by the ATS organization. The minimum lead time required for the submission of such listings shall be established by the administrations concerned and published in their AIPs. This minimum lead time shall be at least two weeks.
- (c) Operators shall submit listings to the designated agency for distribution to the appropriate air traffic services units.
- (d) The information normally to be provided shall be that listed in 173.221(b) except that administrations may also require the provision of estimate information of FIR boundaries and the primary alternate aerodrome. If so required, such information shall be provided as indicated on an RPL listing form specially designed for the purpose.
- (e) Information regarding alternate aerodrome(s) and supplementary flight plan data (information normally provided under Item 19 of the ICAO flight plan form) shall be kept readily available by the operator at the departure aerodrome or another agreed location, so that, on request by ATS units, it can be supplied without delay. The name of the office from which the information can be obtained shall be recorded on the RPL listing form.
- (f) Acknowledgement of receipt of listings of flight plan data and/or amendment thereto shall not be required except by agreement between operators and the appropriate agency.

173.225 Changes to RPL listings

(a) **CHANGES OF A PERMANENT NATURE:**

- 1) Changes of a permanent nature involving the inclusion of new flights and the deletion or modification of currently listed flights shall be submitted in the form of amendment listings. These listings shall reach the air traffic services agency concerned at least seven days prior to the change becoming effective.
- 2) Where RPL listings have been initially submitted by the use of media suitable for electronic data processing, it shall be permissible by mutual agreement between the operator and the appropriate authority for some changes to be submitted by means of RPL listing forms.
- 3) All RPL changes shall be submitted in accordance with the instructions for preparation of RPL listings.

(b) **CHANGES OF A TEMPORARY NATURE:**

- 1) Changes of a temporary, non-recurring nature relating to RPLs concerning aircraft type and wake turbulence category, speed and/or cruising level shall be notified for each individual flight as early as possible and not later than 30 minutes before departure to the ATS reporting office responsible for the departure aerodrome. A change of cruising level only may be notified by radiotelephony on initial contact with the ATS unit.
- 2) In case of an incidental change in the aircraft identification, the departure aerodrome, the route and/or the destination aerodrome, the RPL shall be cancelled for the day concerned and an individual flight plan shall be submitted.
- 3) Whenever it is expected by the operator that a specific flight, for which an RPL has been submitted, is likely to encounter a delay of 30 minutes or more in excess of the off-block time stated in that flight plan, the ATS unit responsible for the departure aerodrome shall be notified immediately.

Note: -Because of the stringent requirements of flow control, failure by operators to comply with this procedure may result in the automatic cancellation of the RPL for that specific flight at one or more of the ATS units concerned.

- 4) Whenever it is known to the operator that any flight for which an RPL has been submitted is cancelled, the ATS unit responsible for the departure aerodrome shall be notified.

(c) **OPERATOR/PILOT LIAISON:**

The operator shall ensure that the latest flight plan information, including permanent and incidental changes, pertaining to a particular flight and duly notified to the appropriate agency, is made available to the pilot-in-command.

(d) **RPL PROCEDURES FOR ATS UNITS:**

The procedures for handling RPLs described herein are applicable regardless of whether automatic data-processing equipment is utilized or flight plan data is handled manually.

(e) **IMPLEMENTATION OF RPL PROCEDURES:**

- 1) Procedures for use of RPLs may be established for flights operating within a single FIR or a single State.
- 2) Procedures may also be established for flights across international boundaries subject to the provision that affected States currently utilize or will concurrently use RPLs.
- 3) Application of RPL procedures for international flights requires the establishment of bilateral or multilateral agreements between the States concerned. Multilateral agreements involving a number of States may take the form of regional air navigation agreements.
- 4) Application of RPLs requires agreements with participating operators to establish submission and amendment procedures.
- 5) Agreements shall include provisions for the following procedures:
 - a. Initial submission;
 - b. permanent changes;
 - c. Temporary and incidental changes;

- d. Cancellations;
 - e. Additions; and
 - f. Completely revised listings when indicated by extensive changes.
- (f) COLLECTION, STORAGE AND PROCESSING OF RPL DATA:
- 1) Any State using RPLs shall designate one or more agencies responsible for administering such data. The area of responsibility for any such designated agency shall be at least one FIR. However, part or the entire area of responsibility of one or more States may be administered jointly by a designated agency. Each designated agency shall distribute relevant RPL data to the ATS units concerned within its area of responsibility so that such data reach these units in sufficient time to become effective.
 - 2) RPLs shall be stored by each ATS unit concerned in a manner that will ensure that they are systematically activated on the appropriate day of operation in the order of estimated times indicative of entry into the unit's area of responsibility. Activation shall be accomplished in sufficient time to present the data to the controller in appropriate form for analysis and control action.
- (g) SUSPENSION OF RPL PROCEDURES:
- An appropriate ATS authority obliged, due to exceptional circumstances, to temporarily suspend the use of RPLs in its area of responsibility, or a specified part thereof, shall publish notice of such suspension with as much advance notice as possible and in the most suitable form considering the circumstances.
- (h) ATS MSG RELATED TO INDIVIDUAL FLIGHTS OPERATING ON AN RPL:
- ATS messages relating to individual flights operating on an RPL shall be originated and addressed to ATS units concerned in a manner identical to that used for flights operating on individual flight plans.

173.227 to 173.235 (Reserved Items)

APPENDIXES

Appendix 1

AERONAUTICAL DATA CATALOGUE

(See appendix 1 of Doc 10066)

Note 1.— The Aeronautical Data Catalogue is available electronically and provided as part of the PANS-AIM.

Note 2.— The Aeronautical Data Catalogue is a general description of the aeronautical Information management (AIM) data scope and consolidates all data that can be collected and maintained by the aeronautical information service (AIS). It provides a reference for aeronautical data origination and publication requirements.

Note 3.— The Aeronautical Data Catalogue provides a means for States to facilitate the identification of the organizations and authorities responsible for the origination of the aeronautical data and aeronautical information. It also provides a common list of terms and facilitates the formal arrangements between data originators and the AIS. It includes data quality requirements applicable from origination through to publication.

Note 4.— The Aeronautical Data Catalogue contains the aeronautical data subjects, properties and sub-properties organized in:

Table A1-1 Aerodrome data;

Table A1-2 Airspace data;

Table A1-3 ATS and other routes data;

Table A1-4 Instrument flight procedure data;

Table A1-5 Radio navigation aids/systems data;

Table A1-6 Obstacle data;

Table A1-7 Geographic data;

Table A1-8 Terrain data;

Table A1-9 Data types; and

Table A1-10 Information about national and local regulation, services and procedures.

Note 5.— The Aeronautical Data Catalogue provides detailed descriptions of all subjects, properties and sub-properties, the data quality requirements and the data types.

Note 6.— The data types describe the nature of the property and sub-property and specify the data elements to be collected.

Note 7.— The tables of the Aeronautical Data Catalogue are composed of the following columns:

(1) Subject for which data can be collected.

(2)(3) Property is an identifiable characteristic of a subject which can be further defined into sub-properties. The classification of a catalogue element as subject, property or sub-property does not impose a certain data model.

(4) The data is classified in different types. See Table A1-9 for more information on data types.

(5) A description of the data element.

(6) Notes are additional information or conditions of the provision.

(7) Accuracy requirements for aeronautical data are based on a 95 per cent confidence level. For those fixes and points that are serving a dual purpose, e.g. holding point and missed approach point, the higher accuracy applies. Accuracy requirements for obstacle and terrain data are based on a 90 per cent confidence level.

(8) Integrity classification.

(9) Origination type. Positional data is identified as surveyed, calculated or declared.

(10) Publication resolution. The publication resolutions for geographical position data (latitude and longitude) are applicable to coordinates formatted in degrees, minutes and seconds. When a different format is used (such as degrees with decimals for digital data sets) or when the location is significantly further to the north/south, the publication resolution needs to be commensurate with the accuracy requirements.

(11) Chart resolution.

Note 8.— The Aeronautical Data Catalogue contains quality requirements for aeronautical data as originally provided in: Annex 4 — Aeronautical Charts, Appendix 6; Annex 11 — Air Traffic Services, Appendix 5; Annex 14 — Aerodromes, Volume I — Aerodromes Designs and Operations, Appendix 4 and Volume II — Heliports, Appendix 1; Annex 15 — Aeronautical Information Services, Appendices 7 and 8, and the Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168), Volume II — Construction of Visual and Instrument Flight Procedures. The framework of the Aeronautical Data Catalogue is designed to adapt to future quality requirements for the remaining aeronautical data properties and sub-properties.

Appendix 2

CONTENTS OF THE AERONAUTICAL INFORMATION PUBLICATION (AIP)

Note 1.— The information elements prefixed with “#AIP-DS#” may be omitted when available through the AIP data set (as specified in the PANS-AIM (Doc 10066) Chapter 5, 5.2.1.1.3).

Note 2.— The information elements prefixed with “#OBS-DS#” may be omitted when available through the obstacle data set (as specified in the PANS-AIM (Doc 10066) Chapter 5, 5.2.1.1.3).

PART 1 — GENERAL (GEN)

When the AIP is produced as one volume, the preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments appear only in Part 1 — GEN, and the annotation “not applicable” shall be entered against each of these subsections in Parts 2 and 3.

If an AIP is produced and made available in more than one volume with each having a separate amendment and supplement service, a separate preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments shall be included in each volume.

GEN 0.1 Preface

Brief description of the AIP, including:

- 1) name of the publishing authority;
- 2) applicable ICAO documents;
- 3) publication media (i.e. printed, online or other electronic media);
- 4) AIP structure and established regular amendment interval;
- 5) copyright policy, if applicable; and
- 6) service to contact in case of detected AIP errors or omissions.

GEN 0.2 Record of AIP Amendments

A record of AIP Amendments and AIRAC AIP Amendments (published in accordance with the AIRAC system) containing:

- 1) amendment number;
- 2) publication date;
- 3) date inserted (for the AIRAC AIP Amendments, effective date); and
- 4) initials of officer who inserted the amendment.

GEN 0.3 Record of AIP Supplements

A record of issued AIP Supplements containing:

- 1) Supplement number;
- 2) Supplement subject;
- 3) AIP section(s) affected;
- 4) period of validity; and
- 5) cancellation record.

GEN 0.4 Checklist of AIP pages

A checklist of AIP pages containing:

- 1) page number/chart title; and
- 2) publication or effective date (day, month by name and year) of the aeronautical information.

GEN 0.5 List of hand amendments to the AIP

A list of current hand amendments to the AIP containing:

- 1) AIP page(s) affected;
- 2) amendment text; and

3) AIP Amendment number by which a hand amendment was introduced.

GEN 0.6 Table of contents to Part 1

A list of sections and subsections contained in Part 1 — General (GEN).

Note.— Subsections may be listed alphabetically.

GEN 1. NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 Designated authorities

The addresses of designated authorities concerned with the facilitation of international air navigation (civil aviation, meteorology, customs, immigration, health, en-route and aerodrome/heliport charges, agricultural quarantine and aircraft accident investigation) containing, for each authority:

- 1) designated authority;
- 2) name of the authority;
- 3) postal address;
- 4) telephone number;
- 5) telefax number;
- 6) e-mail address;
- 7) aeronautical fixed service (AFS) address; and
- 8) website address, if available.

GEN 1.2 Entry, transit and departure of aircraft

Regulations and requirements for advance notification and applications for permission concerning entry, transit and departure of aircraft on international flights.

GEN 1.3 Entry, transit and departure of passengers and crew

Regulations (including customs, immigration and quarantine, and requirements for advance notification and applications for permission) concerning entry, transit and departure of non-immigrant passengers and crew.

GEN 1.4 Entry, transit and departure of cargo

Regulations (including customs, and requirements for advance notification and applications for permission) concerning entry, transit and departure of cargo.

Note.— Provisions for facilitating entry and departure for search, rescue, salvage, investigation, repair or salvage in connection with lost or damaged aircraft are detailed in section GEN 3.6, Search and rescue.

GEN 1.5 Aircraft instruments, equipment and flight documents

Brief description of aircraft instruments, equipment and flight documents, including:

- 1) instruments, equipment (including aircraft communication, navigation and surveillance equipment) and flight documents to be carried on aircraft, including any special requirement in addition to the provisions specified in Annex 6, Part I, Chapters 6 and 7; and
- 2) emergency locator transmitter (ELT), signalling devices and life-saving equipment as presented in Annex 6, Part I, 6.6 and Part II, 2.4.5, where so determined by regional air navigation agreement, for flights over designated land areas.

GEN 1.6 Summary of national regulations and international agreements/conventions

A list of titles and references and, where applicable, summaries of national regulations affecting air navigation, together with a list of international agreements/conventions ratified by the State.

GEN 1.7 Differences from ICAO Standards, Recommended Practices and Procedures

A list of significant differences between national regulations and practices of the State and related ICAO provisions, including:

- 1) provision affected (Annex and edition number, paragraph); and
- 2) difference in full text.

All significant differences shall be listed under this subsection. All Annexes shall be listed in numerical order even if there is no difference to an Annex, in which case a NIL notification shall be provided. National differences or the degree of non-application of the regional supplementary procedures (SUPPs) shall be notified immediately following the Annex to which the supplementary procedure relates.

GEN 2. TABLES AND CODES

GEN 2.1 Measuring system, aircraft markings, holidays

GEN 2.1.1 Units of measurement

Description of units of measurement used including table of units of measurement.

GEN 2.1.2 Temporal reference system

Description of the temporal reference system (calendar and time system) employed, together with an indication of whether or not daylight saving hours are employed and how the temporal reference system is presented throughout the AIP.

GEN 2.1.3 Horizontal reference system

Brief description of the horizontal (geodetic) reference system used, including:

- 1) name/designation of the reference system;
- 2) identification and parameters of the projection;
- 3) identification of the ellipsoid used;
- 4) identification of the datum used;
- 5) area(s) of application; and
- 6) an explanation, if applicable, of the asterisk used to identify those coordinates that do not meet the accuracy requirements.

GEN 2.1.4 Vertical reference system

Brief description of the vertical reference system used, including:

- 1) name/designation of the reference system;
- 2) description of the geoid model used including the parameters required for height transformation between the model used and EGM-96; and
- 3) an explanation, if applicable, of the asterisk used to identify those elevations/geoid undulations that do not meet the accuracy requirements.

GEN 2.1.5 Aircraft nationality and registration marks

Indication of aircraft nationality and registration marks adopted by the State.

GEN 2.1.6 Public holidays

A list of public holidays with indication of services being affected.

GEN 2.2 Abbreviations used in aeronautical information products

A list of alphabetically arranged abbreviations and their respective significations used by the State in its AIP and in the distribution of aeronautical data and aeronautical information with appropriate annotation for those national abbreviations that are different from those contained in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC, Doc 8400).

Note.— A list of alphabetically arranged definitions/glossary of terms may also be added.

GEN 2.3 Chart symbols

A list of chart symbols arranged according to the chart series where symbols are applied.

GEN 2.4 Location indicators

A list of alphabetically arranged location indicators assigned to the locations of aeronautical fixed stations to be used for encoding and decoding purposes. An annotation to locations not connected to the aeronautical fixed service (AFS) shall be provided.

GEN 2.5 List of radio navigation aids

#AIP-DS# A list of radio navigation aids arranged alphabetically, containing:

- 1) identifier;
- 2) name of the station;
- 3) type of facility/aid; and
- 4) indication whether aid serves en-route (E), aerodrome (A) or dual (AE) purposes.

GEN 2.6 Conversion of units of measurement

Tables for conversion or, alternatively, conversion formulae between:

- 1) nautical miles and kilometres and vice versa;
- 2) feet and metres and vice versa;
- 3) decimal minutes of arc and seconds of arc and vice versa; and
- 4) other conversions as appropriate.

GEN 2.7 Sunrise/sunset

Information on the time of sunrise and sunset including a brief description of criteria used for determination of the times given and either a simple formulae or table from which times may be calculated for any location within its territory/area of responsibility, or an alphabetical list of locations for which the times are given in a table with a reference to the related page in the table and the sunrise/sunset tables for the selected stations/locations, including:

- 1) station name;
- 2) ICAO location indicator;
- 3) geographical coordinates in degrees and minutes;
- 4) date(s) for which times are given;
- 5) time for the beginning of morning civil twilight;
- 6) time for sunrise;
- 7) time for sunset; and
- 8) time for the end of evening civil twilight.

GEN 3. SERVICES

GEN 3.1 Aeronautical information services

GEN 3.1.1 Responsible service

Description of the aeronautical information service (AIS) provided and its major components, including:

- 1) service/unit name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address;
- 7) website address, if available;
- 8) a statement concerning the ICAO documents on which the service is based and a reference to the AIP location where differences, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.1.2 Area of responsibility

The area of responsibility for the AIS.

GEN 3.1.3 Aeronautical publications

Description of the elements of the aeronautical information products, including:

- 1) AIP and related amendment service;
- 2) AIP Supplements;
- 3) AIC;
- 4) NOTAM and pre-flight information bulletins (PIB);
- 5) checklists and lists of valid NOTAM; and
- 6) how they may be obtained.

When an AIC is used to promulgate publication prices, that shall be indicated in this section of the AIP.

GEN 3.1.4 AIRAC system

Brief description of the AIRAC system provided including a table of present and near future AIRAC dates.

GEN 3.1.5 Pre-flight information service at aerodromes/heliports

A list of aerodromes/heliports at which pre-flight information is routinely available, including an indication of relevant:

- 1) elements of the aeronautical information products held;
- 2) maps and charts held; and
- 3) general area of coverage of such information.

GEN 3.1.6 Digital data sets

Description of the available data sets, including:

- 1) data set title;
- 2) short description;
- 3) data subjects included;
- 4) geographical scope; and
- 5) if applicable, limitations related to its usage.
- 6) Contact details of how data sets may be obtained, containing:
 - a) name of the individual, service or organization responsible;
 - b) street address and e-mail address of the individual, service or organization responsible;
 - c) telefax number of the individual, service or organization responsible;
 - d) contact telephone number of the individual, service or organization responsible;
 - e) hours of service (time period including time zone when contact can be made);
 - f) online information that can be used to contact the individual, service or organization; and
 - g) supplemental information, if necessary, on how and when to contact the individual, service or organization.

GEN 3.2 Aeronautical charts

GEN 3.2.1 Responsible service(s)

Description of service(s) responsible for the production of aeronautical charts, including:

- 1) service name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address;
- 7) website address, if available;
- 8) a statement concerning the ICAO documents on which the service is based and a reference to the AIP location where differences, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.2.2 Maintenance of charts

Brief description of how aeronautical charts are revised and amended.

GEN 3.2.3 Purchase arrangements

Details of how charts may be obtained, containing:

- 1) service/sales agency(ies);**
- 2) postal address;**
- 3) telephone number;**
- 4) telefax number;**
- 5) e-mail address;**
- 6) AFS address; and**
- 7) website address, if available.**

GEN 3.2.4 Aeronautical chart series available

A list of aeronautical chart series available followed by a general description of each series and an indication of the intended use.

GEN 3.2.5 List of aeronautical charts available

A list of aeronautical charts available, including:

- 1) title of series;**
- 2) scale of series;**
- 3) name and/or number of each chart or each sheet in a series;**
- 4) price per sheet; and**
- 5) date of latest revision.**

GEN 3.2.6 Index to the World Aeronautical Chart (WAC) — ICAO 1:1 000 000

An index chart showing coverage and sheet layout for the WAC 1:1 000 000 produced by a State. If Aeronautical Chart — ICAO 1:500 000 is produced instead of WAC 1:1 000 000, index charts shall be used to indicate coverage and sheet layout for the Aeronautical Chart — ICAO 1:500 000.

GEN 3.2.7 Topographical charts

Details of how topographical charts may be obtained, containing:

- 1) name of service/agency(ies);**
- 2) postal address;**
- 3) telephone number;**
- 4) telefax number;**
- 5) e-mail address;**
- 6) AFS address; and**
- 7) website address, if available.**

GEN 3.2.8 Corrections to charts not contained in the AIP

A list of corrections to aeronautical charts not contained in the AIP, or an indication where such information can be obtained.

GEN 3.3 Air traffic services

GEN 3.3.1 Responsible service

Description of the air traffic service (ATS) and its major components, including:

- 1) service name;**
- 2) postal address;**
- 3) telephone number;**

- 4) telefax number;
- 5) e-mail address;
- 6) AFS address;
- 7) website address, if available;
- 8) a statement concerning the ICAO documents on which the service is based and a reference to the AIP location where differences, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.3.2 Area of responsibility

Brief description of area of responsibility for which ATS is provided.

GEN 3.3.3 Types of services

Brief description of main types of ATS provided.

GEN 3.3.4 Coordination between the operator and ATS

General conditions under which coordination between the operator and air traffic services is effected.

GEN 3.3.5 Minimum flight altitude

The criteria used to determine minimum flight altitudes.

GEN 3.3.6 ATS units address list

A list of ATS units and their addresses arranged alphabetically, containing:

- 1) unit name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address; and
- 7) website address, if available.

GEN 3.4 Communication and navigation services

GEN 3.4.1 Responsible service

Description of the service responsible for the provision of telecommunication and navigation facilities, including:

- 1) service name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address;
- 7) website address, if available;
- 8) a statement concerning the ICAO documents on which the service is based and a reference to the AIP location where differences, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.4.2 Area of responsibility

Brief description of area of responsibility for which telecommunication service is provided.

GEN 3.4.3 Types of service

Brief description of the main types of service and facilities provided, including:

- 1) radio navigation services;
- 2) voice and/or data link services;

- 3) broadcasting service;
- 4) language(s) used; and
- 5) an indication of where detailed information can be obtained.

GEN 3.4.4 Requirements and conditions

Brief description concerning the requirements and conditions under which the communication service is available.

GEN 3.4.5 Miscellaneous

Any additional information (e.g. selected radio broadcasting stations, telecommunications diagram).

GEN 3.5 Meteorological services

GEN 3.5.1 Responsible service

Brief description of the meteorological service responsible for the provision of meteorological information, including:

- 1) service name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address;
- 7) website address, if available;
- 8) a statement concerning the ICAO documents on which the service is based and a reference to the AIP location where differences, if any, are listed; and
- 9) an indication if service is not H24.

GEN 3.5.2 Area of responsibility

Brief description of area and/or air routes for which meteorological service is provided.

GEN 3.5.3 Meteorological observations and reports

Detailed description of the meteorological observations and reports provided for international air navigation, including:

- 1) name of the station and the ICAO location indicator;
- 2) type and frequency of observation including an indication of automatic observing equipment;
- 3) types of meteorological reports (e.g. METAR) and availability of a trend forecast;
- 4) specific type of observation system and number of observation sites used to observe and report surface wind, visibility, runway visual range, cloud base, temperature and, where applicable, wind shear (e.g. anemometer at intersection of runways, transmissometer next to touchdown zone, etc.);
- 5) hours of operation; and
- 6) indication of aeronautical climatological information available.

GEN 3.5.4 Types of services

Brief description of the main types of service provided, including details of briefing, consultation, display of meteorological information, flight documentation available for operators and flight crew members, and of the methods and means used for supplying the meteorological information.

GEN 3.5.5 Notification required from operators

Minimum amount of advance notice required by the meteorological authority from operators in respect of briefing, consultation and flight documentation and other meteorological information they require or change.

GEN 3.5.6 Aircraft reports

As necessary, requirements of the meteorological authority for the making and transmission of aircraft reports.

GEN 3.5.7 VOLMET service

Description of VOLMET and/or D-VOLMET service, including:

- 1) name of transmitting station;
- 2) call sign or identification and abbreviation for the radio communication emission;
- 3) frequency or frequencies used for broadcast;
- 4) broadcasting period;
- 5) hours of service;
- 6) list of aerodromes/heliports for which reports and/or forecasts are included; and
- 7) reports, forecasts and SIGMET information included and remarks.

GEN 3.5.8 SIGMET and AIRMET service

Description of the meteorological watch provided within flight information regions or control areas for which air traffic services are provided, including a list of the meteorological watch offices with:

- 1) name of the meteorological watch office and the ICAO location indicator;
- 2) hours of service;
- 3) flight information region(s) or control area(s) served;
- 4) SIGMET validity periods;
- 5) specific procedures applied to SIGMET information (e.g. for volcanic ash and tropical cyclones);
- 6) procedures applied to AIRMET information (in accordance with relevant regional air navigation agreements);
- 7) ATS unit(s) provided with SIGMET and AIRMET information; and
- 8) additional information (e.g. concerning any limitation of service, etc.).

GEN 3.5.9 Other automated meteorological services

Description of available automated services for the provision of meteorological information (e.g. automated pre-flight information service accessible by telephone and/or computer modem), including:

- 1) service name;
- 2) information available;
- 3) areas, routes and aerodromes covered; and
- 4) telephone and telefax number(s), e-mail address, and, if available, website address.

GEN 3.6 Search and rescue

GEN 3.6.1 Responsible service(s)

Brief description of service(s) responsible for the provision of search and rescue (SAR), including:

- 1) service/unit name;
- 2) postal address;
- 3) telephone number;
- 4) telefax number;
- 5) e-mail address;
- 6) AFS address;
- 7) website address, if available; and
- 8) a statement concerning the ICAO documents on which the service is based and a reference to the AIP location where differences, if any, are listed.

GEN 3.6.2 Area of responsibility

Brief description of area of responsibility within which SAR services are provided.

Note.— A chart may be included to supplement the description of the area.

GEN 3.6.3 Types of service

Brief description and geographical portrayal, where appropriate, of the type of service and facilities provided including indications where SAR aerial coverage is dependent upon significant deployment of aircraft.

GEN 3.6.4 SAR agreements

Brief description of SAR agreements in force, including provisions for facilitating entry and departure of other States' aircraft for search, rescue, salvage, repair or salvage in connection with lost or damaged aircraft, either with airborne notification only or after flight plan notification.

GEN 3.6.5 Conditions of availability

Brief description of provisions for SAR, including the general conditions under which the service and facilities are available for international use, including an indication of whether a facility available for SAR is specialized in SAR techniques and functions, or is specially used for other purposes but adapted for SAR purposes by training and equipment, or is only occasionally available and has no particular training or preparation for SAR work.

GEN 3.6.6 Procedures and signals used

Brief description of the procedures and signals employed by rescue aircraft and a table showing the signals to be used by survivors.

GEN 4. CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES

Note.— Reference may be made to where details of actual charges may be found, if not itemized in this chapter.

GEN 4.1 Aerodrome/heliport charges

Brief description of type of charges which may be applicable at aerodromes/heliports available for international use, including:

- 1) landing of aircraft;
- 2) parking, hangarage and long-term storage of aircraft;
- 3) passenger service;
- 4) security;
- 5) noise-related items;
- 6) other (customs, health, immigration, etc.);
- 7) exemptions/reductions; and
- 8) methods of payment.

GEN 4.2 Air navigation services charges

Brief description of charges which may be applicable to air navigation services provided for international use, including:

- 1) approach control;
- 2) route air navigation services;
- 3) cost basis for air navigation services and exemptions/reductions; and
- 4) methods of payment.

PART 2 — EN-ROUTE (ENR)

If an AIP is produced and made available in more than one volume with each having a separate amendment and supplement service, a separate preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments shall be included in each volume. In the case of an AIP being published as one volume, the annotation “not applicable” shall be entered against each of the above subsections.

ENR 0.1 Table of contents to Part 2

A list of sections and subsections contained in Part 2 — En-route.

Note.— Subsections may be listed alphabetically.

ENR 1. GENERAL RULES AND PROCEDURES

ENR 1.1 General rules

The requirement is for publication of the general rules as applied within the State.

ENR 1.2 Visual flight rules

The requirement is for publication of the visual flight rules as applied within the State.

ENR 1.3 Instrument flight rules

The requirement is for publication of the instrument flight rules as applied within the State.

ENR 1.4 ATS airspace classification and description

ENR 1.4.1 ATS airspace classification

Description of ATS airspace classes in the form of the ATS airspace classification table in Annex 11, Appendix 4, appropriately annotated to indicate those airspace classes not used by the State.

ENR 1.4.2 ATS airspace description

Other ATS airspace descriptions as applicable, including general textual descriptions.

ENR 1.5 Holding, approach and departure procedures

ENR 1.5.1 General

The requirement is for a statement concerning the criteria on which holding, approach and departure procedures are established. If different from ICAO provisions, the requirement is for presentation of criteria used in a tabular form.

ENR 1.5.2 Arriving flights

The requirement is to present procedures (conventional or area navigation or both) for arriving flights which are common to flights into or within the same type of airspace. If different procedures apply within a terminal airspace, a note to this effect shall be given together with a reference to where the specific procedures can be found.

ENR 1.5.3 Departing flights

The requirement is to present procedures (conventional or area navigation or both) for departing flights which are common to flights departing from any aerodrome/heliport.

ENR 1.5.4 Other relevant information and procedures

Brief description of additional information, e.g. entry procedures, final approach alignment, holding procedures and patterns.

ENR 1.6 ATS surveillance services and procedures

ENR 1.6.1 Primary radar

Description of primary radar services and procedures, including:

- 1) supplementary services;
- 2) the application of radar control service;
- 3) radar and air-ground communication failure procedures;
- 4) voice and CPDLC position reporting requirements; and
- 5) graphic portrayal of area of radar coverage.

ENR 1.6.2 Secondary surveillance radar (SSR)

Description of secondary surveillance radar (SSR) operating procedures, including:

- 1) emergency procedures;**
- 2) air-ground communication failure and unlawful interference procedures;**
- 3) the system of SSR code assignment;**
- 4) voice and CPDLC position reporting requirements; and**
- 5) graphic portrayal of area of SSR coverage.**

Note.— The SSR description is of particular importance in areas or routes where the possibility of interception exists.

ENR 1.6.3 Automatic dependent surveillance — broadcast (ADS-B)

Description of automatic dependent surveillance — broadcast (ADS-B) operating procedures, including:

- 1) emergency procedures;**
- 2) air-ground communication failure and unlawful interference procedures;**
- 3) aircraft identification requirements;**
- 4) voice and CPDLC position reporting requirements; and**
- 5) graphic portrayal of area of ADS-B coverage.**

Note.— The ADS-B description is of particular importance in areas or routes where the possibility of interception exists.

ENR 1.6.4 Other relevant information and procedures

Brief description of additional information and procedures, e.g. radar failure procedures and transponder failure procedures.

ENR 1.7 Altimeter setting procedures

The requirement is for a statement of altimeter setting procedures in use, containing:

- 1) brief introduction with a statement concerning the ICAO documents on which the procedures are based together with differences to ICAO provisions, if any;**
- 2) basic altimeter setting procedures;**
- 3) description of altimeter setting region(s);**
- 4) procedures applicable to operators (including pilots); and**
- 5) table of cruising levels.**

ENR 1.8 Regional supplementary procedures

The requirement is for presentation of regional supplementary procedures (SUPPs) affecting the entire area of responsibility.

ENR 1.9 Air traffic flow management and airspace management

Brief description of air traffic flow management (ATFM) system and airspace management, including:

- 1) ATFM structure, service area, service provided, location of unit(s) and hours of operation;**
- 2) types of flow messages and descriptions of the formats; and**
- 3) procedures applicable for departing flights, containing:**
 - a) service responsible for provision of information on applied ATFM measures;**
 - b) flight plan requirements; and**
 - c) slot allocations.**
- 4) information on overall responsibility regarding airspace management within FIR(s), details of civil/military airspace allocation and management coordination, structure of manageable airspace (allocation and changes to allocation) and general operating procedures.**

ENR 1.10 Flight planning

The requirement is to indicate any restriction, limitation or advisory information related to the flight planning stage

which may assist the user in the presentation of the intended flight operation, including:

- 1) procedures for the submission of a flight plan;
- 2) repetitive flight plan system; and
- 3) changes to the submitted flight plan.

ENR 1.11 Addressing of flight plan messages

The requirement is for an indication, in tabular form, of the addresses allocated to flight plans, showing:

- 1) category of flight (IFR, VFR or both);
- 2) route (into or via FIR and/or TMA); and
- 3) message address.

ENR 1.12 Interception of civil aircraft

The requirement is for a complete statement of interception procedures and visual signals to be used with a clear indication of whether ICAO provisions are applied and, if not, that differences exist.

Note.— A list of significant differences between national regulations and practices of the State and related ICAO provisions is found in Gen 1.7.

ENR 1.13 Unlawful interference

The requirement is for presentation of appropriate procedures to be applied in case of unlawful interference.

ENR 1.14 Air traffic incidents

Description of air traffic incidents reporting system, including:

- 1) definition of air traffic incidents;
- 2) use of the “Air Traffic Incident Reporting Form”;
- 3) reporting procedures (including in-flight procedures); and
- 4) purpose of reporting and handling of the form.

Note.— A copy of the Air Traffic Incident Report Form (PANS ATM, Doc 4444, Appendix 4) may be included for reference.

ENR 2. ATS AIRSPACE

ENR 2.1 FIR, UIR, TMA and CTA

#AIP-DS# Detailed description of flight information regions (FIR), upper flight information regions (UIR), and control areas (CTA) (including specific CTA such as TMA), including:

- 1) name, geographical coordinates in degrees and minutes of the FIR/UIR lateral limits and in degrees, minutes and seconds of the CTA lateral limits, vertical limits and class of airspace;
- 2) identification of unit providing the service;
- 3) call sign of aeronautical station serving the unit and language(s) used, specifying the area and conditions, when and where to be used, if applicable;
- 4) frequencies, and if applicable SATVOICE number, supplemented by indications for specific purposes; and
- 5) remarks.

#AIP-DS# Control zones around military air bases not otherwise described in the AIP shall be included in this subsection. Where the requirements of Annex 2 concerning flight plans, two-way communications and position reporting apply to all flights in order to eliminate or reduce the need for interceptions and/or where the possibility of interception exists and the maintenance of guard on the VHF emergency channel 121.5 MHz is required, a statement to this effect shall be included for the relevant area(s) or portion(s) thereof.

A description of designated areas over which the carriage of an emergency locator transmitter (ELT) is required and where aircraft shall continuously guard the VHF emergency frequency 121.5 MHz, except for those periods when aircraft are carrying out communications on other VHF channels or when airborne equipment limitations or cockpit duties do not permit simultaneous guarding of two channels.

Note.— Other types of airspace around civil aerodromes/heliports such as control zones and aerodrome traffic

zones are described in the relevant aerodrome or heliport section.

ENR 2.2 Other regulated airspace

Where established, a detailed description of other types of regulated airspace and airspace classification.

ENR 3. ATS ROUTES

Note 1.— Bearings, tracks and radials are normally magnetic. In areas of high latitude, where it is determined by the appropriate authority that reference to Magnetic North is impractical, another suitable reference, i.e. True North or Grid North, may be used.

Note 2.— Changeover points established at the midpoint between two radio navigation aids, or at the intersection of the two radials in the case of a route which changes direction between the navigation aids, need not be shown for each route segment if a general statement regarding their existence is made.

Note 3.— Guidance material on the organization of ATS route publication is contained in the Aeronautical Information Services Manual (Doc 8126).

ENR 3.1 Conventional routes Applicable as of 4 November 2021)

#AIP-DS# Detailed description of Conventional routes, including:

- 1) route designator, designation of the required communication performance (RCP) specification(s), 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;
- 2) tracks or VOR radials to the nearest degree, geodesic distance to the nearest tenth of a kilometre or tenth of a nautical mile between each successive designated significant point and, in the case of VOR radials, changeover points;
- 3) upper and lower limits or minimum en-route altitudes, to the nearest higher 50 m or 100 ft, and airspace classification;
- 4) lateral limits and minimum obstacle clearance altitudes;
- 5) direction of cruising levels; and
- 6) 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.

ENR 3.2 Area navigation routes (Applicable as of 4 November 2021)

#AIP-DS# Detailed description of PBN (RNAV and RNP) 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;
- 2) in respect of waypoints defining an area navigation route, additionally as applicable:
 - a) station identification of the reference VOR/DME;
 - b) bearing to the nearest degree and the distance to the nearest tenth of a kilometre or tenth of a nautical mile from the reference VOR/DME, if the waypoint is not collocated with it; and
 - c) elevation of the transmitting antenna of DME to the nearest 30 m (100 ft);
- 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;
- 4) upper and lower limits and airspace classification;
- 5) direction of cruising levels;
- 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, defined navigation specification is not considered to be an integral part of the route designator.

ENR 3.3 Other routes

#AIP-DS# The requirement is to describe other specifically designated routes which are compulsory within specified area(s).

Note.— Arrival, transit and departure routes which are specified in connection with procedures for traffic to and from aerodromes/heliports need not be described since they are described in the relevant section of Part 3 — Aerodromes.

ENR 3.4 En-route holding

#AIP-DS# The requirement is for a detailed description of en-route holding procedures, containing:

- 1) holding identification (if any) and holding fix (navigation aid) or waypoint with geographical coordinates in degrees, minutes and seconds;
- 2) inbound track;
- 3) direction of the procedure turn;
- 4) maximum indicated airspeed;
- 5) minimum and maximum holding level;
- 6) time/distance outbound; and
- 7) indication of the controlling unit and its operating frequency.

Note.— Obstacle clearance criteria related to holding procedures are contained in Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168), Volumes I and II.

ENR 4. RADIO NAVIGATION AIDS/SYSTEMS

ENR 4.1 Radio navigation aids — en-route

#AIP-DS# A list of stations providing radio navigation services established for en-route purposes and arranged alphabetically by name of the station, including:

- 1) name of the station and magnetic variation to the nearest degree and for VOR, station declination to the nearest degree used for technical line-up of the aid;
- 2) identification;
- 3) frequency/channel for each element;
- 4) hours of operation;
- 5) geographical coordinates in degrees, minutes and seconds of the position of the transmitting antenna;
- 6) elevation of the transmitting antenna of DME to the nearest 30 m (100 ft); and
- 7) remarks.

If the operating authority of the facility is other than the designated governmental agency, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

ENR 4.2 Special navigation systems

#AIP-DS# Description of stations associated with special navigation systems (DECCA, LORAN, etc.), including:

- 1) name of station or chain;
- 2) type of service available (master signal, slave signal, colour);
- 3) frequency (channel number, basic pulse rate, recurrence rate, as applicable);
- 4) hours of operation;
- 5) geographical coordinates in degrees, minutes and seconds of the position of the transmitting station; and
- 6) remarks.

If the operating authority of the facility is other than the designated governmental agency, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

ENR 4.3 Global navigation satellite system (GNSS)

A list and description of elements of the global navigation satellite system (GNSS) providing the navigation service

established for en-route purposes and arranged alphabetically by name of the element, including:

- 1) the name of the GNSS element, (GPS, GLONASS, EGNOS, MSAS, WAAS, etc.);
- 2) frequency(ies), as appropriate;
- 3) geographical coordinates in degrees, minutes and seconds of the nominal service area and coverage area; and
- 4) remarks.

If the operating authority of the facility is other than the designated governmental agency, the name of the operating authority shall be indicated in the remarks column.

ENR 4.4 Name-code designators for significant points

#AIP-DS# A list of alphabetically arranged name-code designators (five-letter pronounceable “name-code”) established for significant points at positions not marked by the site of radio navigation aids, including:

- 1) name-code designator;
- 2) geographical coordinates in degrees, minutes and seconds of the position;
- 3) reference to ATS or other routes where the point is located; and
- 4) remarks, including supplementary definition of positions where required.

ENR 4.5 Aeronautical ground lights — en-route

#AIP-DS# A list of aeronautical ground lights and other light beacons designating geographical positions which are selected by the State as being significant, including:

- 1) name of the city or town or other identification of the beacon;
- 2) type of beacon and intensity of the light in thousands of candelas;
- 3) characteristics of the signal;
- 4) operational hours; and
- 5) remarks.

ENR 5. NAVIGATION WARNINGS

ENR 5.1 Prohibited, restricted and danger areas

#AIP-DS# Description, supplemented by graphic portrayal where appropriate, of prohibited, restricted and danger areas together with information regarding their establishment and activation, including:

- 1) identification, name and geographical coordinates of the lateral limits in degrees, minutes and seconds if inside and in degrees and minutes if outside control area/control zone boundaries;
- 2) upper and lower limits; and
- 3) remarks, including time of activity.

Type of restriction or nature of hazard and risk of interception in the event of penetration shall be indicated in the remarks column.

ENR 5.2 Military exercise and training areas and air defence identification zone (ADIZ)

#AIP-DS# Description, supplemented by graphic portrayal where appropriate, of established military training areas and military exercises taking place at regular intervals, and established air defence identification zone (ADIZ), including:

- 1) geographical coordinates of the lateral limits in degrees, minutes and seconds if inside and in degrees and minutes if outside control area/control zone boundaries;
- 2) upper and lower limits and system and means of activation announcements together with information pertinent to civil flights and applicable ADIZ procedures; and
- 3) remarks, including time of activity and risk of interception in the event of penetration of ADIZ.

ENR 5.3 Other activities of a dangerous nature and other potential hazards

ENR 5.3.1 Other activities of a dangerous nature

#AIP-DS# Description, supplemented by charts where appropriate, of activities that constitute a specific or obvious danger to aircraft operation and could affect flights, including:

- 1) geographical coordinates in degrees and minutes of centre of area and range of influence;
- 2) vertical limits;
- 3) advisory measures;
- 4) authority responsible for the provision of information; and
- 5) remarks, including time of activity.

ENR 5.3.2 Other potential hazards

#AIP-DS# Description, supplemented by charts where appropriate, of other potential hazards that could affect flights (active volcanoes, nuclear power stations, etc.), including:

- 1) geographical coordinates in degrees and minutes of location of potential hazard;
- 2) vertical limits;
- 3) advisory measures;
- 4) authority responsible for the provision of information; and
- 5) remarks.

ENR 5.4 Air navigation obstacles

#OBS-DS# A list of obstacles affecting air navigation in Area 1 (the entire State territory), including:

- 1) obstacle identification or designation;
- 2) type of obstacle;
- 3) obstacle position, represented by geographical coordinates in degrees, minutes and seconds;
- 4) obstacle elevation and height to the nearest metre or foot; and
- 5) type and colour of obstacle lighting (if any).

Note 1.— An obstacle whose height above the ground is 100 m and higher is considered an obstacle for Area 1.

Note 2.— Specifications concerning the determination and reporting (accuracy of field work and data integrity) of positions (latitude and longitude) and elevations/heights for obstacles in Area 1 are given in Appendix 1.

ENR 5.5 Aerial sporting and recreational activities

#AIP-DS# Brief description, supplemented by graphic portrayal where appropriate, of intensive aerial sporting and recreational activities together with conditions under which they are carried out, including:

- 1) designation and geographical coordinates of the lateral limits in degrees, minutes and seconds if inside and in degrees and minutes if outside control area/control zone boundaries;
- 2) vertical limits;
- 3) operator/user telephone number; and
- 4) remarks, including time of activity.

Note.— This subsection may be subdivided into different sections for each different category of activity, giving the indicated details in each case.

ENR 5.6 Bird migration and areas with sensitive fauna

Description, supplemented by charts where practicable, of movements of birds associated with migration, including migration routes and permanent resting areas and areas with sensitive fauna.

ENR 6. EN-ROUTE CHARTS

The requirement is for the En-route Chart — ICAO and index charts to be included in this section.

PART 3 — AERODROMES (AD)

If an AIP is produced and made available in more than one volume with each having a separate amendment and supplement service, a separate preface, record of AIP Amendments, record of AIP Supplements, checklist of AIP pages and list of current hand amendments shall be included in each volume. In the case of an AIP being published as one volume, the annotation “not applicable” shall be entered against each of the above subsections.

AD 0.1 Table of contents to Part 3

A list of sections and subsections contained in Part 3 — Aerodromes (AD).

Note.— Subsections may be listed alphabetically.

AD 1. AERODROMES/HELIPORTS — INTRODUCTION

AD 1.1 Aerodrome/heliport availability and conditions of use

AD 1.1.1 General conditions

Brief description of the State's designated authority responsible for aerodromes and heliports, including:

- 1) the general conditions under which aerodromes/heliports and associated facilities are available for use; and
- 2) a statement concerning the ICAO documents on which the services are based and a reference to the AIP location where differences, if any, are listed.

AD 1.1.2 Use of military air bases

Regulations and procedures, if any, concerning civil use of military air bases.

AD 1.1.3 Low visibility procedures

The general conditions under which the low visibility procedures applicable to Cat II/III operations at aerodromes, if any, are applied.

AD 1.1.4 Aerodrome operating minima

Details of aerodrome operating minima applied by the State.

AD 1.1.5 Other information

If applicable, other information of a similar nature.

AD 1.2 Rescue and firefighting services and snow plan

AD 1.2.1 Rescue and firefighting services

Brief description of rules governing the establishment of rescue and firefighting services at aerodromes and heliports available for public use together with an indication of rescue and firefighting categories established by a State.

AD 1.2.2 Snow plan

Brief description of general snow plan considerations for aerodromes/heliports available for public use at which snow conditions are normally liable to occur, including:

- 1) organization of the winter service;
- 2) surveillance of movement areas;
- 3) measuring methods and measurements taken;
- 4) actions taken to maintain the usability of movement areas;
- 5) system and means of reporting;
- 6) the cases of runway closure; and
- 7) distribution of information about snow conditions.

Note.— Where different snow plan considerations apply at aerodromes/heliports, this subsection may be subdivided accordingly.

AD 1.3 Index to aerodromes and heliports

A list, supplemented by graphic portrayal, of aerodromes and heliports within a State, including:

- 1) aerodrome/heliport name and ICAO location indicator;
- 2) type of traffic permitted to use the aerodrome/heliport (international/national, IFR/VFR, scheduled/non-scheduled, general aviation, military and other); and
- 3) reference to AIP, Part 3 subsection in which aerodrome/heliport details are presented.

AD 1.4 Grouping of aerodromes/heliports

Brief description of the criteria applied by the State in grouping aerodromes/heliports for production/distribution/provision of information purposes (international/national; primary/secondary; major/other; civil/military; etc.).

AD 1.5 Status of certification of aerodromes

A list of aerodromes in the State, indicating the status of certification, including:

- 1) aerodrome name and ICAO location indicator;
- 2) date and, if applicable, validity of certification; and
- 3) remarks, if any.

AD 2. AERODROMES

Note.— **** is to be replaced by the relevant ICAO location indicator.
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****** AD 2.1 Aerodrome location indicator and name**

The requirement is for the ICAO location indicator allocated to the aerodrome and the name of aerodrome. An ICAO location indicator shall be an integral part of the referencing system applicable to all subsections in section AD 2.

****** AD 2.2 Aerodrome geographical and administrative data**

The requirement is for aerodrome geographical and administrative data, including:

- 1) aerodrome reference point (geographical coordinates in degrees, minutes and seconds) and its site;
- 2) direction and distance of aerodrome reference point from centre of the city or town which the aerodrome serves;
- 3) aerodrome elevation to the nearest metre or foot, reference temperature and mean low temperature;
- 4) where appropriate, geoid undulation at the aerodrome elevation position to the nearest metre or foot;
- 5) magnetic variation to the nearest degree, date of information and annual change;
- 6) name of aerodrome operator, address, telephone and telefax numbers, e-mail address, AFS address and, if available, website address;
- 7) types of traffic permitted to use the aerodrome (IFR/VFR); and
- 8) remarks.

****** AD 2.3 Operational hours**

Detailed description of the hours of operation of services at the aerodrome, including:

- 1) aerodrome operator;
- 2) customs and immigration;
- 3) health and sanitation;
- 4) AIS briefing office;
- 5) ATS reporting office (ARO);
- 6) MET briefing office;
- 7) air traffic service;
- 8) fuelling;
- 9) handling;
- 10) security;
- 11) de-icing; and
- 12) remarks.

****** AD 2.4 Handling services and facilities**

Detailed description of the handling services and facilities available at the aerodrome, including:

- 1) cargo-handling facilities;
- 2) fuel and oil types;
- 3) fuelling facilities and capacity;

- 4) de-icing facilities;
- 5) hangar space for visiting aircraft;
- 6) repair facilities for visiting aircraft; and
- 7) remarks.

**** AD 2.5 Passenger facilities

Passenger facilities available at the aerodrome, provided as a brief description or a reference to other information sources such as a website, including:

- 1) hotel(s) at or in the vicinity of aerodrome;
- 2) restaurant(s) at or in the vicinity of aerodrome;
- 3) transportation possibilities;
- 4) medical facilities;
- 5) bank and post office at or in the vicinity of aerodrome;
- 6) tourist office; and
- 7) remarks.

**** AD 2.6 Rescue and firefighting services

Detailed description of the rescue and firefighting services and equipment available at the aerodrome, including:

- 1) aerodrome category for firefighting;
- 2) rescue equipment;
- 3) capability for removal of disabled aircraft; and
- 4) remarks.

**** AD 2.7 Seasonal availability — clearing

Detailed description of the equipment and operational priorities established for the clearance of aerodrome movement areas, including:

- 1) type(s) of clearing equipment;
- 2) clearance priorities; and
- 3) remarks.

**** 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;
- as of 28 November 2024, designation, surface and strength (PCR) of aprons;
- 2) until 27 November 2024, designation, width, surface and strength of taxiways;
- as of 28 November 2024, designation, width, surface and strength (PCR) of taxiways;
- 3) location and elevation to the nearest metre or foot of altimeter checkpoints;
- 4) location of VOR checkpoints;
- 5) position of INS checkpoints in degrees, minutes, seconds and hundredths of seconds; and
- 6) remarks.

If check locations/positions are presented on an aerodrome chart, a note to that effect shall be provided under this subsection.

**** AD 2.9 Surface movement guidance and control system and markings

Brief description of the surface movement guidance and control system and runway and taxiway markings, including:

- 1) use of aircraft stand identification signs, taxiway guide lines and visual docking/parking guidance system at aircraft stands;
- 2) runway and taxiway markings and lights;
- 3) stop bars and runway guard lights (if any);
- 4) other runway protection measures; and
- 5) remarks.

**** AD 2.10 Aerodrome obstacles

#OBS-DS# Detailed description of obstacles, including:

1) obstacles in Area 2:

- a) obstacle identification or designation;
- b) type of obstacle;
- c) obstacle position, represented by geographical coordinates in degrees, minutes, seconds and tenths of seconds;
- d) obstacle elevation and height to the nearest metre or foot;
- e) obstacle marking, and type and colour of obstacle lighting (if any); and
- f) NIL indication, if appropriate.

Note 1.— Annex 15, Chapter 5 provides a description of Area 2 while Appendix 8, Figure A8-2 of this document contains graphical illustrations of obstacle data collection surfaces and criteria used to identify obstacles in Area 2.

Note 2.— Specifications concerning the determination and reporting (accuracy of field work and data integrity) of positions (latitude and longitude) and elevations for obstacles in Area 2 are given in Appendix 1.

2) the absence of an Area 2 data set for the aerodrome is to be clearly stated and obstacle data are to be provided for:

- a) obstacles that penetrate the obstacle limitation surfaces;
 - b) obstacles that penetrate the take-off flight path area obstacle identification surface; and
 - c) other obstacles assessed as being hazardous to air navigation.
- 3) indication that information on obstacles in Area 3 is not provided, or if provided:**
- a) obstacle identification or designation;
 - b) type of obstacle;
 - c) obstacle position, represented by geographical coordinates in degrees, minutes, seconds and tenths of seconds;
 - d) obstacle elevation and height to the nearest tenth of a metre or tenth of a foot;
 - e) obstacle marking, and type and colour of obstacle lighting (if any);
 - f) if appropriate, an indication that the list of obstacles is available as a digital data set, and a reference to GEN 3.1.6; and
 - g) NIL indication, if appropriate.

Note 1.— Annex 15, Chapter 5, provides a description of Area 3 while Appendix 8, Figure A8-3 of this document contains graphical illustrations of obstacle data collection surfaces and criteria used to identify obstacles in Area 3.

Note 2.— Specifications concerning the determination and reporting (accuracy of field work and data integrity) of positions (latitude and longitude) and elevations for obstacles in Area 3 are given in Appendix 1.

**** AD 2.11 Meteorological information provided

Detailed description of meteorological information provided at the aerodrome and an indication of which meteorological office is responsible for the service enumerated, including:

- 1) name of the associated meteorological office;
- 2) hours of service and, where applicable, the designation of the responsible meteorological office outside these hours;
- 3) office responsible for preparation of TAFs and periods of validity and interval of issuance of the forecasts;
- 4) availability of the trend forecasts for the aerodrome, and interval of issuance;
- 5) information on how briefing and/or consultation is provided;
- 6) types of flight documentation supplied and language(s) used in flight documentation;
- 7) charts and other information displayed or available for briefing or consultation;
- 8) supplementary equipment available for providing information on meteorological conditions, e.g. weather radar and receiver for satellite images;
- 9) the air traffic services unit(s) provided with meteorological information; and
- 10) additional information (e.g. concerning any limitation of service).

**** AD 2.12 Runway physical characteristics

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

- 1) designations;
- 2) true bearings to one-hundredth of a degree;
- 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;

- 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:

— thresholds of a non-precision approach runway to the nearest metre or foot; and

— thresholds of a precision approach runway to the nearest tenth of a metre or tenth of a foot;

6) elevations of:

— thresholds of a non-precision approach runway to the nearest metre or foot; and

— thresholds and the highest elevation of the touchdown zone of a precision approach runway to the nearest tenth of a metre or tenth of a foot;

7) slope of each runway and associated stopways;

8) dimensions of stopway (if any) to the nearest metre or foot;

9) dimensions of clearway (if any) to the nearest metre or foot;

10) dimensions of strips;

11) dimensions of runway end safety areas;

12) location (which runway end) and description of arresting system (if any);

13) the existence of an obstacle-free zone; and

14) remarks.

**** AD 2.13 Declared distances

Detailed description of declared distances to the nearest metre or foot for each direction of each runway, including:

1) runway designator;

2) take-off run available;

3) take-off distance available, and if applicable, alternative reduced declared distances;

4) accelerate-stop distance available;

5) landing distance available; and

6) remarks, including runway entry or start point where alternative reduced declared distances have been declared.

If a runway direction cannot be used for take-off or landing, or both, because it is operationally forbidden, then this shall be declared and the words “not usable” or the abbreviation “NU” entered (Annex 14, Volume I, Attachment A, Section 3).

**** AD 2.14 Approach and runway lighting

Detailed description of approach and runway lighting, including:

1) runway designator;

2) type, length and intensity of approach lighting system;

3) runway threshold lights, colour and wing bars;

4) type of visual approach slope indicator system;

5) length of runway touchdown zone lights;

6) length, spacing, colour and intensity of runway centre line lights;

7) length, spacing, colour and intensity of runway edge lights;

8) colour of runway end lights and wing bars;

9) length and colour of stopway lights; and

10) remarks.

**** AD 2.15 Other lighting and secondary power supply

Description of other lighting and secondary power supply, including:

1) location, characteristics and hours of operation of aerodrome beacon/identification beacon (if any);

2) location and lighting (if any) of anemometer/landing direction indicator;

3) taxiway edge and taxiway centre line lights;

4) secondary power supply including switch-over time; and

5) remarks.

**** AD 2.16 Helicopter landing area

Detailed description of helicopter landing area provided at the aerodrome, including:

1) geographical coordinates in degrees, minutes, seconds and hundredths of seconds and, where appropriate, geoid

undulation of the geometric centre of touchdown and lift-off (TLOF) or of each threshold of final approach and take-off (FATO) area:

- for non-precision approaches, to the nearest metre or foot; and
- for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 2) TLOF and/or FATO area elevation:**
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 3) TLOF and FATO area dimensions to the nearest metre or foot, surface type, bearing strength and marking;**
- 4) true bearings to one-hundredth of a degree of FATO;**
- 5) declared distances available, to the nearest metre or foot;**
- 6) approach and FATO lighting; and**
- 7) remarks.**

****** AD 2.17 Air traffic services airspace**

#AIP-DS# Detailed description of air traffic services (ATS) airspace organized at the aerodrome, including:

- 1) airspace designation and geographical coordinates in degrees, minutes and seconds of the lateral limits;**
- 2) vertical limits;**
- 3) airspace classification;**
- 4) call sign and language(s) of the ATS unit providing service;**
- 5) transition altitude;**
- 6) hours of applicability; and**
- 7) remarks.**

****** AD 2.18 Air traffic services communication facilities**

Detailed description of ATS communication facilities established at the aerodrome, including:

- 1) service designation;**
- 2) call sign;**
- 3) channel(s);**
- 4) SATVOICE number(s), if available;**
- 5) logon address, as appropriate;**
- 6) hours of operation; and**
- 7) remarks.**

****** 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;**
 - 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;**
- 4) hours of operation, as appropriate;**
- 5) geographical coordinates in degrees, minutes, seconds and tenths of seconds of the position of the transmitting antenna, as appropriate;**
- 6) elevation of the transmitting antenna of DME to the nearest 30 m (100 ft) and of DME/P to the nearest 3 m (10 ft); elevation of GBAS reference point to the nearest metre or foot, and the ellipsoid height of the point to the nearest metre or foot. For SBAS, the ellipsoid height of the landing threshold point (LTP) or the fictitious threshold point (FTP) to the nearest metre or foot;**
- 7) service volume radius from the GBAS reference point to the nearest kilometre or nautical mile; and**
- 8) remarks.**

When the same aid is used for both en-route and aerodrome purposes, a description shall also be given in section ENR 4. If the GBAS serves more than one aerodrome, description of the aid shall be provided under each aerodrome. If the operating authority of the facility is other than the designated governmental agency, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

****** AD 2.20 Local aerodrome regulations**

Detailed description of regulations applicable to the use of the aerodrome, including the acceptability of training flights, non-radio and microlight aircraft and similar, and to ground manoeuvring and parking but excluding flight procedures.

****** AD 2.21 Noise abatement procedures**

Detailed description of noise abatement procedures established at the aerodrome.

****** AD 2.22 Flight procedures**

Detailed description of the conditions and flight procedures, including radar and/or ADS-B procedures, established on the basis of airspace organization at the aerodrome. When established, detailed description of the low visibility procedures at the aerodrome, including:

- 1) runway(s) and associated equipment authorized for use under low visibility procedures;
- 2) defined meteorological conditions under which initiation, use and termination of low visibility procedures would be made;
- 3) description of ground marking/lighting for use under low visibility procedures; and
- 4) remarks.

****** AD 2.23 Additional information**

Additional information at the aerodrome, such as an indication of bird concentrations at the aerodrome, together with an indication of significant daily movement between resting and feeding areas, to the extent practicable.

****** AD 2.24 Charts related to an aerodrome**

The requirement is for charts related to an aerodrome to be included in the following order:

- 1) Aerodrome/Heliport Chart — ICAO;
- 2) Aircraft Parking/Docking Chart — ICAO;
- 3) Aerodrome Ground Movement Chart — ICAO;
- 4) Aerodrome Obstacle Chart — ICAO Type A (for each runway);
- 5) Aerodrome Obstacle Chart — ICAO Type B (when available);
- 6) Aerodrome Terrain and Obstacle Chart — ICAO (Electronic);
- 7) Precision Approach Terrain Chart — ICAO (precision approach Cat II and III runways);
- 8) Area Chart — ICAO (departure and transit routes);
- 9) Standard Departure Chart — Instrument — ICAO;
- 10) Area Chart — ICAO (arrival and transit routes);
- 11) Standard Arrival Chart — Instrument — ICAO;
- 12) ATC Surveillance Minimum Altitude Chart — ICAO;
- 13) Instrument Approach Chart — ICAO (for each runway and procedure type);
- 14) Visual Approach Chart — ICAO; and
- 15) bird concentrations in the vicinity of the aerodrome.

If some of the charts are not produced, a statement to this effect shall be given in section GEN 3.2.

Note.— A page pocket may be used in the AIP to include the Aerodrome Terrain and Obstacle Chart — ICAO (Electronic) on appropriate electronic media.

****** 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

AD 3. HELIPORTS

When a helicopter landing area is provided at the aerodrome, associated data shall be listed only under **** AD 2.16.

Note.— **** is to be replaced by the relevant ICAO location indicator.

**** AD 3.1 Heliport location indicator and name

The requirement is for the ICAO location indicator assigned to the heliport and the name of heliport. An ICAO location indicator shall be an integral part of the referencing system applicable to all subsections in section AD 3.

**** AD 3.2 Heliport geographical and administrative data

The requirement is for heliport geographical and administrative data, including:

- 1) heliport reference point (geographical coordinates in degrees, minutes and seconds) and its site;
- 2) direction and distance of heliport reference point from centre of the city or town which the heliport serves;
- 3) heliport elevation to the nearest metre or foot, reference temperature and mean low temperature;
- 4) where appropriate, geoid undulation at the heliport elevation position to the nearest metre or foot;
- 5) magnetic variation to the nearest degree, date of information and annual change;
- 6) name of heliport operator, address, telephone and telefax numbers, e-mail address, AFS address and, if available, website address;
- 7) types of traffic permitted to use the heliport (IFR/VFR); and
- 8) remarks.

**** AD 3.3 Operational hours

Detailed description of the hours of operation of services at the heliport, including:

- 1) heliport operator;
- 2) customs and immigration;
- 3) health and sanitation;
- 4) AIS briefing office;
- 5) ATS reporting office (ARO);
- 6) MET briefing office;
- 7) air traffic service;
- 8) fuelling;
- 9) handling;
- 10) security;
- 11) de-icing; and
- 12) remarks.

**** AD 3.4 Handling services and facilities

Detailed description of the handling services and facilities available at the heliport, including:

- 1) cargo-handling facilities;
- 2) fuel and oil types;
- 3) fuelling facilities and capacity;
- 4) de-icing facilities;
- 5) hangar space for visiting helicopters;
- 6) repair facilities for visiting helicopters; and
- 7) remarks.

**** AD 3.5 Passenger facilities

Passenger facilities available at the heliport, provided as a brief description or as a reference to other information sources such as a website, including:

- 1) hotel(s) at or in the vicinity of the heliport;
- 2) restaurant(s) at or in the vicinity of the heliport;

- 3) transportation possibilities;
- 4) medical facilities;
- 5) bank and post office at or in the vicinity of the heliport;
- 6) tourist office; and
- 7) remarks.

****** AD 3.6 Rescue and firefighting services**

Detailed description of the rescue and firefighting services and equipment available at the heliport, including:

- 1) heliport category for firefighting;
- 2) rescue equipment;
- 3) capability for removal of disabled helicopters; and
- 4) remarks.

****** AD 3.7 Seasonal availability — clearing**

Detailed description of the equipment and operational priorities established for the clearance of heliport movement areas, including:

- 1) type(s) of clearing equipment;
- 2) clearance priorities; and
- 3) remarks.

****** AD 3.8 Aprons, taxiways and check locations/positions data**

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

- 1) designation, surface and strength of aprons, helicopter stands;
- 2) designation, width and surface type of helicopter ground taxiways;
- 3) width and designation of helicopter air taxiway and air transit route;
- 4) location and elevation to the nearest metre or foot of altimeter checkpoints;
- 5) location of VOR checkpoints;
- 6) position of INS checkpoints in degrees, minutes, seconds and hundredths of seconds; and
- 7) remarks.

If check locations/positions are presented on a heliport chart, a note to that effect shall be provided under this subsection.

****** AD 3.9 Markings and markers**

Brief description of final approach and take-off area and taxiway markings and markers, including:

- 1) final approach and take-off markings;
- 2) taxiway markings, air taxiway markers and air transit route markers; and
- 3) remarks.

****** AD 3.10 Heliport obstacles**

#OBS-DS# Detailed description of obstacles, including:

- 1) obstacle identification or designation;
- 2) type of obstacle;
- 3) obstacle position, represented by geographical coordinates in degrees, minutes, seconds and tenths of seconds;
- 4) obstacle elevation and height to the nearest metre or foot;
- 5) obstacle marking, and type and colour of obstacle lighting (if any); and
- 6) NIL indication, if appropriate.

****** AD 3.11 Meteorological information provided**

Detailed description of meteorological information provided at the heliport and an indication of which meteorological office is responsible for the service enumerated, including:

- 1) name of the associated meteorological office;
- 2) hours of service and, where applicable, the designation of the responsible meteorological office outside these hours;
- 3) office responsible for preparation of TAFs, and periods of validity of the forecasts;
- 4) availability of the trend forecasts for the heliport, and interval of issuance;
- 5) information on how briefing and/or consultation is provided;
- 6) type of flight documentation supplied and language(s) used in flight documentation;
- 7) charts and other information displayed or available for briefing or consultation;
- 8) supplementary equipment available for providing information on meteorological conditions, e.g. weather radar and receiver for satellite images;
- 9) the ATS unit(s) provided with meteorological information; and
- 10) additional information (e.g. concerning any limitation of service).

****** AD 3.12 Heliport data**

Detailed description of heliport dimensions and related information, including:

- 1) heliport type (surface-level, elevated or helideck);
- 2) touchdown and lift-off (TLOF) area dimensions to the nearest metre or foot;
- 3) true bearings to one-hundredth of a degree of final approach and take-off (FATO) area;
- 4) dimensions to the nearest metre or foot of FATO, and surface type;
- 5) surface and bearing strength in tonnes (1 000 kg) of TLOF;
- 6) geographical coordinates in degrees, minutes, seconds and hundredths of seconds and, where appropriate, geoid undulation of the geometric centre of TLOF or of each threshold of FATO:
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 7) TLOF and/or FATO slope and elevation:
 - for non-precision approaches, to the nearest metre or foot; and
 - for precision approaches, to the nearest tenth of a metre or tenth of a foot;
- 8) dimensions of safety area;
- 9) dimensions, to the nearest metre or foot, of helicopter clearway;
- 10) the existence of an obstacle-free sector; and
- 11) remarks.

****** AD 3.13 Declared distances**

Detailed description of declared distances to the nearest metre or foot, where relevant for a heliport, including:

- 1) take-off distance available, and if applicable, alternative reduced declared distances;
- 2) rejected take-off distance available;
- 3) landing distance available; and
- 4) remarks, including entry or start point where alternative reduced declared distances have been declared.

****** AD 3.14 Approach and FATO lighting**

Detailed description of approach and FATO lighting, including:

- 1) type, length and intensity of approach lighting system;
- 2) type of visual approach slope indicator system;
- 3) characteristics and location of FATO area lights;
- 4) characteristics and location of aiming point lights;
- 5) characteristics and location of TLOF lighting system; and
- 6) remarks.

****** AD 3.15 Other lighting and secondary power supply**

Description of other lighting and secondary power supply, including:

- 1) location, characteristics and hours of operation of heliport beacon;
- 2) location and lighting of wind direction indicator (WDI);
- 3) taxiway edge and taxiway centre line lights;
- 4) secondary power supply including switch-over time; and
- 5) remarks.

****** AD 3.16 Air traffic services airspace**

#AIP-DS# Detailed description of air traffic services (ATS) airspace organized at the heliport, including:
1) airspace designation and geographical coordinates in degrees, minutes and seconds of the lateral limits;
2) vertical limits;
3) airspace classification;
4) call sign and language(s) of ATS unit providing service;
5) transition altitude;
6) hours of applicability; and
7) remarks.

****** AD 3.17 Air traffic services communication facilities**

Detailed description of ATS communication facilities established at the heliport, including:
1) service designation;
2) call sign;
3) channel(s);
4) SATVOICE number(s), if available;
5) logon address, as appropriate;
6) hours of operation; and
7) remarks.

****** AD 3.18 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 heliport, including:
1) 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;
2) identification, if required;
3) frequency(ies), channel number(s), service provider and reference path identifier(s) (RPI), as appropriate;
4) hours of operation, as appropriate;
5) geographical coordinates in degrees, minutes, seconds and tenths of seconds of the position of the transmitting antenna, as appropriate;
6) elevation of the transmitting antenna of DME to the nearest 30 m (100 ft) and of DME/P to the nearest 3 m (10 ft), elevation of GBAS reference point to the nearest metre or foot, and the ellipsoid height of the point to the nearest metre or foot. For SBAS, the ellipsoid height of the landing threshold point (LTP) or the fictitious threshold point (FTP) to the nearest metre or foot;
7) service volume radius from the GBAS reference point to the nearest kilometre or nautical mile; and
8) remarks.

When the same aid is used for both en-route and heliport purposes, a description shall also be given in section ENR 4. If the GBAS serves more than one heliport, description of the aid shall be provided under each heliport. If the operating authority of the facility is other than the designated governmental agency, the name of the operating authority shall be indicated in the remarks column. Facility coverage shall be indicated in the remarks column.

****** AD 3.19 Local heliport regulations**

Detailed description of regulations applicable to the use of the heliport, including the acceptability of training flights, non-radio and microlight aircraft and similar, and to ground manoeuvring and parking but excluding flight procedures.

****** AD 3.20 Noise abatement procedures**

Detailed description of noise abatement procedures established at the heliport.

****** AD 3.21 Flight procedures**

Detailed description of the conditions and flight procedures, including radar and/or ADS-B procedures, established on the basis of airspace organization established at the heliport. When established, detailed description of the low visibility procedures at the heliport, including:

- 1) touchdown and lift-off (TLOF) area(s) and associated equipment authorized for use under low visibility procedures;
- 2) defined meteorological conditions under which initiation, use and termination of low visibility procedures would be made;
- 3) description of ground marking/lighting for use under low visibility procedures; and
- 4) remarks.

****** AD 3.22 Additional information**

Additional information about the heliport, such as an indication of bird concentrations at the heliport, together with an indication of significant daily movement between resting and feeding areas, to the extent practicable.

****** AD 3.23 Charts related to a heliport**

The requirement is for charts related to a heliport to be included in the following order:

- 1) Aerodrome/Heliport Chart — ICAO;
 - 2) Area Chart — ICAO (departure and transit routes);
 - 3) Standard Departure Chart — Instrument — ICAO;
 - 4) Area Chart — ICAO (arrival and transit routes);
 - 5) Standard Arrival Chart — Instrument — ICAO;
 - 6) ATC Surveillance Minimum Altitude Chart — ICAO;
 - 7) Instrument Approach Chart — ICAO (for each procedure type);
 - 8) Visual Approach Chart — ICAO; and
 - 9) bird concentrations in the vicinity of heliport.
- If some of the charts are not produced, a statement to this effect shall be given in section GEN 3.2.

Appendix 3

NOTAM FORMAT (see PANS-AIM (Doc 10066) Chapter 5, 5.2.5)

Priority indicator																→	
Address																	
Date and time of filing																→	
Originator's indicator																«≡	
Message series, number and identifier																	
NOTAM containing new information NOTAMN (series and number/year)																
NOTAM replacing a previous NOTAM NOTAMR (series and number/year) (series and number/year of NOTAM to be replaced)																
NOTAM cancelling a previous NOTAM NOTAMC (series and number/year) (series and number/year of NOTAM to be cancelled)																
Qualifiers																	
	FIR	NOTAM Code	Traffic	Purpose	Scope	Lower limit	Upper limit	Coordinates, Radius									
Q)		Q															«≡
Identification of ICAO location indicator in which the facility, airspace or condition reported on is located								A)								→	
Period of validity																	
From (date-time group)				B)													→
To (PERM or date-time group)				C)													EST* PERM* «≡
Time schedule (if applicable)				D)												→	
																«≡	
Text of NOTAM; plain-language entry (using ICAO abbreviations)																	
E)																	
Lower limit				F)													→
Upper limit				G)) «≡
Signature																	

*Delete as appropriate

INSTRUCTIONS FOR THE COMPLETION OF THE NOTAM FORMAT

Note.— For NOTAM examples see the Aeronautical Information Services Manual (Doc 8126) and the Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC, Doc 8400).

1. General

The qualifier line (Item Q)) and all identifiers (Items A) to G) inclusive) each followed by a closing parenthesis, as shown in the format, shall be transmitted unless there is no entry to be made against a particular identifier.

2. NOTAM numbering

Each NOTAM shall be allocated a series identified by a letter and a four-digit number followed by a stroke and a twodigit number for the year (e.g. A0023/03). Each series shall start on 1 January with number 0001.

3. Qualifiers (Item Q)

Item Q) is divided into eight fields, each separated by a stroke. An entry shall be made in each field. Examples of how fields are to be filled are shown in the Aeronautical Information Services Manual (Doc 8126). The definition of the fields is as follows:

1) FIR

a) If the subject of the information is located geographically within one FIR, the ICAO location indicator shall be that of the FIR concerned. When an aerodrome is situated within the overlying FIR of another State, the first field of Item Q) shall contain the code for that overlying FIR (e.g. Q) LFRR/...A) EGJJ);

or,

if the subject of the information is located geographically within more than one FIR, the FIR field shall be composed of the ICAO nationality letters of the State originating the NOTAM followed by “XX”. (The location indicator of the overlying UIR shall not be used). The ICAO location indicators of the FIRs concerned shall then be listed in Item A) or indicator of State or non-governmental agency which is responsible for provision of a navigation service in more than one State.

b) If one State issues a NOTAM affecting FIRs in a group of States, the first two letters of the ICAO location indicator of the issuing State plus “XX” shall be included. The location indicators of the FIRs concerned shall then be listed in Item A) or indicator of State or non-governmental agency which is responsible for provision of a navigation service in more than one State.

2) NOTAM CODE

All NOTAM Code groups contain a total of five letters and the first letter is always the letter Q. The second and third letters identify the subject, and the fourth and fifth letters denote the status or condition of the subject reported upon. The two-letter codes for subjects and conditions are those contained in the PANS-ABC (Doc 8400).

For combinations of second and third, and fourth and fifth letters, refer to the NOTAM Selection Criteria contained in Doc 8126 or insert one of the following combinations, as appropriate:

a) If the subject is not listed in the NOTAM Code (PANS-ABC, Doc 8400) or in the NOTAM Selection Criteria (Doc 8126), insert “XX” as the second and third letters ; If subject is “XX”, use “XX” also for condition (e.g. QXXXX).

b) If the condition of the subject is not listed in the NOTAM Code (Doc 8400) or in the NOTAM Selection Criteria (Doc 8126), insert “XX” as the fourth and fifth letters (e.g. QFAXX);

c) When a NOTAM containing operationally significant information is issued in accordance with Annex 15, 6.2.1, and when it is used to announce the existence of AIRAC AIP Amendments or Supplements, insert “TT” as the fourth and fifth letters of the NOTAM Code;

d) When a NOTAM is issued containing a checklist of valid NOTAM, insert “KKKK” as the second, third, fourth and fifth letters; and

e) The following fourth and fifth letters of the NOTAM Code shall be used in NOTAM cancellations:

AK = RESUMED NORMAL OPERATION

AL = OPERATIVE (OR RE-OPERATIVE) SUBJECT TO PREVIOUSLY PUBLISHED LIMITATIONS/CONDITIONS

AO = OPERATIONAL

CC = COMPLETED

CN = CANCELLED

HV = WORK COMPLETED
XX = PLAIN LANGUAGE

Note 1.— As Q - - AO = Operational is used for NOTAM cancellation, NOTAM promulgating new equipment or services use the following fourth and fifth letters Q - - CS = Installed.

Note 2.— Q - - CN = CANCELLED shall be used to cancel planned activities, e.g. navigation warnings; Q - - HV = WORK COMPLETED is used to cancel work in progress.

3) TRAFFIC

I = IFR
V = VFR
K = NOTAM is a checklist

Note.— Depending on the NOTAM subject and content, the qualifier field TRAFFIC may contain combined qualifiers. Guidance concerning the combination of TRAFFIC qualifiers with subject and conditions in accordance with the NOTAM Selection Criteria is contained in Doc 8126.

4) PURPOSE

N = NOTAM selected for the immediate attention of flight crew members
B = NOTAM of operational significance selected for PIB entry
O = NOTAM concerning flight operations
M = Miscellaneous NOTAM; not subject for a briefing, but available on request
K = NOTAM is a checklist

Note.— Depending on the NOTAM subject and content, the qualifier field PURPOSE may contain the combined qualifiers BO or NBO. Guidance concerning the combination of PURPOSE qualifiers with subject and conditions in accordance with the NOTAM Selection Criteria is contained in Doc 8126.

5) SCOPE

A = Aerodrome
E = En-route
W = Nav Warning
K = NOTAM is a checklist

If the subject is qualified AE, the aerodrome location indicator shall be reported in Item A).

Note.— Depending on the NOTAM subject and content, the qualifier field SCOPE may contain combined qualifiers. Guidance concerning the combination of SCOPE qualifiers with subject and conditions in accordance with the NOTAM Selection Criteria is contained in Doc 8126.

6) and 7) LOWER/UPPER LIMITS

Lower and upper limits shall only be expressed in flight levels (FL) and shall express the actual vertical limits of the area of influence without the addition of buffers. In the case of navigation warnings and airspace restrictions, values entered shall be consistent with those provided under Items F) and G).

If the subject does not contain specific height information, insert “000” for LOWER and “999” for UPPER as default values.

8) COORDINATES, RADIUS

The latitude and longitude accurate to one minute, as well as a three-digit distance figure giving the radius of influence in NM (e.g. 4700N01140E043). Coordinates present approximate centre of circle whose radius encompasses the whole area of influence, and if the NOTAM affects the entire FIR/UIR or more than one FIR/UIR, enter the default value “999” for radius.

4. Item A)

Insert the ICAO location indicator as contained in Doc 7910 of the aerodrome or FIR in which the facility, airspace, or condition being reported on is located. More than one FIR/UIR may be indicated when appropriate. If there is no available ICAO location indicator, use the ICAO nationality letter as given in ICAO Doc 7910, Part 2, plus “XX” and followed up in Item E) by the name, in plain language.

If information concerns GNSS, insert the appropriate ICAO location indicator allocated for a GNSS element or the common location indicator allocated for all elements of GNSS (except GBAS).

Note.— In the case of GNSS, the location indicator may be used when identifying a GNSS element outage (e.g. KNMH for a GPS satellite outage).

5. Item B)

For date-time group use a ten-figure group, giving year, month, day, hours and minutes in UTC. This entry is the datetime at which the NOTAMN comes into force. In the cases of NOTAMR and NOTAMC, the date-time group is the actual date and time of the NOTAM origination. The start of a day shall be indicated by “0000”.

6. Item C)

With the exception of NOTAMC, a date-time group (a ten-figure group giving year, month, day, hours and minutes in UTC) indicating duration of information shall be used unless the information is of a permanent nature in which case the abbreviation “PERM” is inserted instead. The end of a day shall be indicated by “2359” (i.e. do not use “2400”). If the information on timing is uncertain, the approximate duration shall be indicated using a date-time group followed by the abbreviation “EST”. Any NOTAM which includes an “EST” shall be cancelled or replaced before the date-time specified in Item C).

7. Item D)

If the hazard, status of operation or condition of facilities being reported on will be active in accordance with a specific time and date schedule between the dates-times indicated in Items B) and C), insert such information under Item D). If Item D) exceeds 200 characters, consideration shall be given to providing such information in a separate, consecutive NOTAM.

Note.— Guidance concerning a harmonized definition of Item D) content is provided in Doc 8126.

8. Item E)

Use decoded NOTAM Code, complemented where necessary by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language. When NOTAM is selected for international distribution, English text shall be included for those parts expressed in plain language. This entry shall be clear and concise in order to provide a suitable PIB entry. In the case of NOTAMC, a subject reference and status message shall be included to enable accurate plausibility checks.

9. Items F) and G)

These items are normally applicable to navigation warnings or airspace restrictions and are usually part of the PIB entry. Insert both lower and upper height limits of activities or restrictions, clearly indicating only one reference datum and unit of measurement. The abbreviations GND or SFC shall be used in Item F) to designate ground and surface respectively. The abbreviation UNL shall be used in Item G) to designate unlimited.

Appendix 4

SNOWTAM FORMAT (see PANS-AIM (Doc 10066) Chapter 5, 5.2.5.1.4)

(applicable until 3 November 2021)

(COM heading)	(PRIORITY INDICATOR)		(ADDRESSES)										<E			
	(DATE AND TIME OF FILING)						(ORIGINATOR'S INDICATOR)						<E			
(Abbreviated heading)	(SWAA* SERIAL NUMBER)						(LOCATION INDICATOR)			DATE-TIME OF OBSERVATION				(OPTIONAL GROUP)		
	S	W	*	*												<E(

SNOWTAM	(Serial number)	<E
(AERODROME LOCATION INDICATOR)		A) <E
(DATE-TIME OF OBSERVATION (<i>Time of completion of measurement in UTC</i>))		B) —————>
(RUNWAY DESIGNATOR)		C) —————>
(CLEARED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (<i>m</i>))		D) —————>
(CLEARED RUNWAY WIDTH, IF LESS THAN PUBLISHED WIDTH (<i>m</i> ; if offset left or right of centre line add "L" or "R"))		E) —————>
(DEPOSITS OVER TOTAL RUNWAY LENGTH <i>(Observed on each third of the runway, starting from threshold having the lower runway designation number)</i> NIL — CLEAR AND DRY 1 — DAMP 2 — WET 3 — RIME OR FROST COVERED (<i>depth normally less than 1 mm</i>) 4 — DRY SNOW 5 — WET SNOW 6 — SLUSH 7 — ICE 8 — COMPACTED OR ROLLED SNOW 9 — FROZEN RUTS OR RIDGES		F)J.....>
(MEAN DEPTH (<i>mm</i>) FOR EACH THIRD OF TOTAL RUNWAY LENGTH)		G)J.....>
(ESTIMATED SURFACE FRICTION ON EACH THIRD OF RUNWAY) ESTIMATED SURFACE FRICTION GOOD — 5 MEDIUM/GOOD — 4 MEDIUM — 3 MEDIUM/POOR — 2 POOR — 1 <i>(The intermediate values of "MEDIUM/GOOD" and "MEDIUM/POOR" provide for more precise information in the estimate when conditions are found to be between medium and either good or poor.)</i>		H)J.....>
(CRITICAL SNOWBANKS (<i>If present, insert height (cm)/distance from the edge of runway (m) followed by "L", "R" or "LR" if applicable</i>))		J) —————>
(RUNWAY LIGHTS (<i>If obscured, insert "YES" followed by "L", "R" or both "LR" if applicable</i>))		K) —————>
(FURTHER CLEARANCE (<i>If planned, insert length (m)/width (m) to be cleared or if to full dimensions, insert "TOTAL"</i>))		L) —————>
(FURTHER CLEARANCE EXPECTED TO BE COMPLETED BY ... (<i>UTC</i>))		M) —————>
(TAXIWAY (<i>If no appropriate taxiway is available, insert "NO"</i>))		N) —————>
(TAXIWAY SNOWBANKS (<i>If higher than 60 cm, insert "YES" followed by the lateral distance apart, m</i>))		P) <E
(APRON (<i>If unusable insert "NO"</i>))		R) —————>
(NEXT PLANNED OBSERVATION/MEASUREMENT IS FOR) (<i>month/day/hour in UTC</i>)		S) —————>
(PLAIN-LANGUAGE REMARKS (<i>Including contaminant coverage and other operationally significant information, e.g. sanding, de-icing, chemicals</i>))		T)) <E

NOTES: 1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2.
 2. Information on other runways, repeat from B to P.
 3. Words in brackets () not to be transmitted.

SIGNATURE OF ORIGINATOR (*not for transmission*)

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

1. General

- a) When reporting on more than one runway, repeat Items B to P inclusive.
- b) Items together with their indicator shall be dropped completely, where no information is to be included.
- c) Metric units shall be used and the unit of measurement not reported.
- d) The maximum validity of SNOWTAM is 8 hours. New SNOWTAM shall be issued whenever a new runway condition report is received. The following changes relating to runway conditions are considered as significant:
 - 1) a change in the coefficient of friction of about 0.05;
 - 2) changes in depth of deposit greater than the following: 20 mm for dry snow, 10 mm for wet snow, 3 mm for slush;
 - 3) a change in the available length or width of a runway of 10 per cent or more;
 - 4) any change in the type of deposit or extent of coverage which requires reclassification in Items F or T of the SNOWTAM;
 - 5) when critical snow banks exist on one or both sides of the runway, any change in the height or distance from centre line;
 - 6) any change in the conspicuity of runway lighting caused by obscuring of the lights;
 - 7) any other conditions known to be significant according to experience or local circumstances.
- e) The abbreviated heading “TTAAiiii CCCC MMYGGgg (BBB)” is included to facilitate the automatic processing of SNOWTAM messages in computer data banks. The explanation of these symbols is:
 - TT = data designator for SNOWTAM = SW;
 - AA = geographical designator for States, e.g. LF = FRANCE, EG = United Kingdom (see Location Indicators (Doc 7910), Part 2, Index to Nationality Letters for Location Indicators);
 - iiii = SNOWTAM serial number in a four-digit group;
 - CCCC = four-letter location indicator of the aerodrome to which the SNOWTAM refers (see Location Indicators (Doc 7910));
 - MMYYGGgg = date/time of observation/measurement, whereby:
 - MM = month, e.g. January = 01, December = 12
 - YY = day of the month
 - GGgg = time in hours (GG) and minutes (gg) UTC;
 - (BBB) = optional group for:
 - Correction to SNOWTAM message previously disseminated with the same serial number = COR.

Note 1.— Brackets in (BBB) are used to indicate that this group is optional.

Note 2.— When reporting on more than one runway and individual dates/times of observation/measurement are indicated by repeated Item B, the latest date/time of observation/measuring is inserted in the abbreviated heading (MMYYGGgg).

Example: Abbreviated heading of SNOWTAM No. 149 from Zurich, measurement/observation of 7 November at 0620 UTC:

SWLS0149 LSZH 11070620

Note.— The information groups are separated by a space, as illustrated above.

- f) The text “SNOWTAM” in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, for example: SNOWTAM 0124.
- g) For readability purposes for the SNOWTAM message, include a line feed after the SNOWTAM serial number, after Item A, after the last item referring to the runway (e.g. Item P) and after Item S.

2. Item A — Aerodrome location indicator (four-letter location indicator).

3. Item B — Eight-figure date/time group — giving time of observation as month, day, hour and minute in UTC; this item shall always be completed.

4. Item C — Lower runway designator number.

5. Item D — Cleared runway length in metres, if less than published length (see Item T on reporting on part of runway not cleared).

6. Item E — Cleared runway width in metres, if less than published width; if offset left or right of centre line, add (without space) “L” or “R”, as viewed from the threshold having the lower runway designation number.

7. Item F — Deposit over total runway length as explained in SNOWTAM Format. Suitable combinations of these numbers may be used to indicate varying conditions over runway segments. If more than one deposit is present on the same portion of the runway, they should be reported in sequence from the top (closest to the sky) to the bottom (closest to the runway). Drifts, depths of deposit appreciably greater than the average values or other significant characteristics of the deposits may be reported under Item T in plain language. The values for each third of the runway shall be separated by an oblique stroke (/), without space between the deposit values and the oblique stroke, for example: 47/47/47.

Note.— Definitions for the various types of snow are given at the end of this appendix.

8. Item G — Mean depth in millimetres deposit for each third of total runway length, or “XX” if not measurable or operationally not significant; the assessment to be made to an accuracy of 20 mm for dry snow, 10 mm for wet snow and 3 mm for slush. The values for each third of the runway shall be separated by an oblique stroke (/), without space between the values and the oblique stroke, for example: 20/20/20.

9. Item H — Estimated surface friction on each third of the runway (single digit) in the order from the threshold having the lower runway designation number.

Friction measurement devices can be used as part of the overall runway surface assessment. Some States may have developed procedures for runway surface assessment which may include the use of information obtained from friction measuring devices and the reporting of quantitative values. In such cases, these procedures should be published in the Aeronautical Information Publication (AIP) and the reporting made in Item (T) of the SNOWTAM format.

The values for each third of the runway are separated by an oblique stroke (/), without space between the values and the oblique stroke-, for example: 5/5/5.

10. Item J — Critical snow banks. If present insert height in centimetres and distance from edge of runway in metres, followed (without space) by left (“L”) or right (“R”) side or both sides (“LR”), as viewed from the threshold having the lower runway designation number.

11. Item K — If runway lights are obscured, insert “YES” followed (without space) by “L”, “R” or both “LR”, as viewed from the threshold having the lower runway designation number.

12. Item L — When further clearance will be undertaken, enter length and width of runway or “TOTAL” if runway will be cleared to full dimensions.

13. Item M — Enter the anticipated time of completion in UTC.

14. Item N — The code (and combination of codes) for Item F may be used to describe taxiway conditions; enter “NO” if no taxiways serving the associated runway are available.

15. Item P — If snow banks are higher than 60 cm, enter “YES” followed by the lateral distance parting the snow banks (the distance between) in metres.

16. Item R — The code (and combination of codes) for Item F may be used to describe apron conditions; enter “NO” if the apron is unusable.

17. Item S — Enter the anticipated time of next observation/measurement in UTC.

18. Item T — Describe in plain language any operationally significant information but always report on length of uncleared runway (Item D) and extent of runway contamination (Item F) for each third of the runway (if appropriate) in accordance with the following scale:

RWY CONTAMINATION 10 PER CENT — if 10% or less of runway contaminated

RWY CONTAMINATION 25 PER CENT — if 11–25% of runway contaminated

RWY CONTAMINATION 50 PER CENT — if 26–50% of runway contaminated

RWY CONTAMINATION 100 PER CENT — if 51–100% of runway contaminated.

EXAMPLE OF COMPLETED SNOWTAM FORMAT

GG EHAMZQZX EDDFZQZX EKCHZQZX
070645 LSZHYNXX
SWLS0149 LSZH 11070700
(SNOWTAM 0149
A) LSZH
B) 11070620 C) 02 D)...P)
B) 11070600 C) 09 D)...P)
B) 11070700 C) 12 D)...P)
R) NO S) 11070920
T) DEICING

Note.— See the Aeronautical Information Services Manual (Doc 8126) for additional SNOWTAM examples incorporating different runway conditions.

Definitions of the various types of snow

Slush. Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Note.— Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

Snow (on the ground).

- a) Dry snow. Snow which can be blown if loose or, if compacted by hand, will fall apart again upon release; specific gravity: up to but not including 0.35.
- b) Wet snow. Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) Compacted snow. Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

Appendix 4

SNOWTAM FORMAT (see PANS-AIM (Doc 10066) Chapter 5, 5.2.5.1.4)

(applicable as of 4 November 2021)

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)										<E
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)										<E
(Abbreviated heading)	(SWAA* SERIAL NUMBER)					(LOCATION INDICATOR)		DATE/TIME OF ASSESSMENT				(OPTIONAL GROUP)
	S	W	.	.								<E(

SNOWTAM →	(Serial number)	<E
Aeroplane performance calculation section		
(AERODROME LOCATION INDICATOR)	M	A) →
(DATE/TIME OF ASSESSMENT (Time of completion of assessment in UTC))	M	B) →
(LOWER RUNWAY DESIGNATION NUMBER)	M	C) →
(RUNWAY CONDITION CODE (RWYCC) ON EACH -RUNWAY THIRD) (From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)	M	D) / / →
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)	C	E) / / →
(DEPTH (mm) OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)	C	F) / / →
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH) (Observed on each runway third, starting from threshold having the lower runway designation number)	M	G) / / →
COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE		→
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)	O	H) <E
Situational awareness section		
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (m))	O	I) →
(DRIFTING SNOW ON THE RUNWAY)	O	J) →
(LOOSE SAND ON THE RUNWAY)	O	K) →
(CHEMICAL TREATMENT ON THE RUNWAY)	O	L) →
(SNOWBANKS ON THE RUNWAY) (If present, distance from runway centre line (m) followed by "L", "R" or "LR" as applicable)	O	M) →
(SNOWBANKS ON A TAXIWAY)	O	N) →
(SNOWBANKS ADJACENT TO THE RUNWAY)	O	O) →
(TAXIWAY CONDITIONS)	O	P) →
(APRON CONDITIONS)	O	R) →
(MEASURED FRICTION COEFFICIENT)	O	S) →
(PLAIN-LANGUAGE REMARKS)	O	T))
NOTES: 1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier. 2. Information on other runways, repeat from B to H. 3. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported. 4. Words in brackets () not to be transmitted. 5. For letters A) to T) refer to the Instructions for the completion of the SNOWTAM Format, paragraph 1, item b).		

SIGNATURE OF ORIGINATOR (not for transmission)

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

Note.— Origin of data, assessment process and the procedures linked to the surface conditions reporting system are prescribed in the Procedures for Air Navigation Services — Aerodromes (PANS-Aerodromes, Doc 9981).

1. General

- a) When reporting on more than one runway, repeat Items B to H (aeroplane performance calculation section).
- b) The letters used to indicate items are only used for reference purpose and should not be included in the messages. The letters, M (mandatory), C (conditional) and O (optional) mark the usage and information and shall be included as explained below.
- c) Metric units shall be used and the unit of measurement not reported.
- d) The maximum validity of SNOWTAM is 8 hours. New SNOWTAM shall be issued whenever a new runway condition report is received.
- e) A SNOWTAM cancels the previous SNOWTAM.
- f) The abbreviated heading “TTAAiiii CCCC MMYGGg (BBB)” is included to facilitate the automatic processing of SNOWTAM messages in computer data banks. The explanation of these symbols is:
TT = data designator for SNOWTAM = SW;
AA = geographical designator for States, e.g. LF = FRANCE, EG = United Kingdom (see Location Indicators (Doc 7910), Part 2, Index to Nationality Letters for Location Indicators);
iiii = SNOWTAM serial number in a four-digit group;
CCCC = four-letter location indicator of the aerodrome to which the SNOWTAM refers (see Location Indicators (Doc 7910));
MMYYGGg = date/time of observation/measurement, whereby:
MM = month, e.g. January = 01, December = 12
YY = day of the month
GGg = time in hours (GG) and minutes (g) UTC;
(BBB) = optional group for correction, in the case of an error, to a SNOWTAM message previously disseminated with the same serial number = COR.

Note 1.— Brackets in (BBB) are used to indicate that this group is optional.

Note 2.— When reporting on more than one runway and individual dates/times of observation/assessment are indicated by repeated Item B, the latest date/time of observation/assessment is inserted in the abbreviated heading (MMYYGGg).

Example: Abbreviated heading of SNOWTAM No. 149 from Zurich, measurement/observation of 7 November at 0620 UTC:

SWLS0149 LSZH 11070620

Note.— The information groups are separated by a space, as illustrated above.

- g) The text “SNOWTAM” in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, for example: SNOWTAM 0124.
- h) For readability purposes for the SNOWTAM message, include a line feed after the SNOWTAM serial number, after Item A, and after the aeroplane performance calculation section.
- i) When reporting on more than one runway, repeat the information in the aeroplane performance calculation section from the date and time of assessment for each runway before the information in the situational awareness section.
- j) Mandatory information is:
 - 1) AERODROME LOCATION INDICATOR;
 - 2) DATE AND TIME OF ASSESSMENT;
 - 3) LOWER RUNWAY DESIGNATOR NUMBER;
 - 4) RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD; and
 - 5) CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (when runway condition code (RWYCC) is reported 1–5)

2. Aeroplane performance calculation section

Item A — Aerodrome location indicator (four-letter location indicator).

Item B — Date and time of assessment (eight-figure date/time group giving time of observation as month, day, hour and minute in UTC).

Item C — Lower runway designator number (nn[L] or nn[C] or nn[R]).

Note.— Only one runway designator is inserted for each runway and always the lower number.

Item D — Runway condition code for each runway third. Only one digit (0, 1, 2, 3, 4, 5 or 6) is inserted for each runway third, separated by an oblique stroke (n/n/n).

Item E — Per cent coverage for each runway third. When provided, insert 25, 50, 75 or 100 for each runway third, separated by an oblique stroke ([n]nn/[n]nn/[n]nn).

Note 1.— This information is provided only when the runway condition for each runway third (Item D) has been reported as other than 6 and there is a condition description for each runway third (Item G) that has been reported other than DRY.

Note 2.— When the conditions are not reported, this will be signified by the insertion of “NR” for the appropriate runway third(s).

Item F — Depth of loose contaminant for each runway third. When provided, insert in millimetres for each runway third, separated by an oblique stroke (nn/nn/nn or nnn/nnn/nnn).

Note 1.— This information is only provided for the following contamination types:

— standing water, values to be reported 04, then assessed value. Significant changes 3 mm up to and including 15 mm;

— slush, values to be reported 03, then assessed value. Significant changes 3 mm up to and including 15 mm;

— wet snow, values to be reported 03, then assessed value. Significant changes 5 mm; and

— dry snow, values to be reported 03, then assessed value. Significant changes 20 mm.

Note 2.— When the conditions are not reported, this will be signified by the insertion of “NR” for the appropriate runway third(s).

Item G — Condition description for each runway third. Insert any of the following condition descriptions for each runway third, separated by an oblique stroke.

COMPACTED SNOW

DRY SNOW

DRY SNOW ON TOP OF COMPACTED SNOW

DRY SNOW ON TOP OF ICE

FROST

ICE

SLUSH

STANDING WATER

WATER ON TOP OF COMPACTED SNOW

WET

WET ICE

WET SNOW

WET SNOW ON TOP OF COMPACTED SNOW

WET SNOW ON TOP OF ICE

DRY (only reported when there is no contaminant)

Note.— When the conditions are not reported, this will be signified by the insertion of “NR” for the appropriate runway third(s).

Item H — Width of runway to which the runway condition codes apply. Insert the width in metres if less than the published runway width.

3. Situational awareness section

Note 1.— Elements in the situational awareness section end with a full stop.

Note 2.— Elements in the situational awareness section for which no information exists, or where the conditional circumstances for publication are not fulfilled, are left out completely.

Item I — Reduced runway length. Insert the applicable runway designator and available length in meters (example: RWY nn [L] or nn [C] or nn [R] REDUCED TO [n]nnn).

Note.— This information is conditional when a NOTAM has been published with a new set of declared distances.

Item J — Drifting snow on the runway. When reported, insert “DRIFTING SNOW”.

Item K — Loose sand on the runway. When loose sand is reported on the runway, insert the lower runway designator and with a space “LOOSE SAND” (RWY nn or RWY nn[L] or nn[C] or nn[R] LOOSE SAND).

Item L — Chemical treatment on the runway. When chemical treatment has been reported applied, insert the lower runway designator and with a space “CHEMICALLY TREATED” (RWY nn or RWY nn[L] or nn[C] or nn[R] CHEMICALLY TREATED).

Item M — Snow banks on the runway. When snow banks are reported present on the runway, insert the lower runway designator and with a space “SNOW BANK” and with a space left “L” or right “R” or both sides “LR”, followed by the distance in metres from centre line separated by a space FM CL (RWY nn or RWY nn[L] or nn[C] or nn[R] SNOW BANK Lnn or Rnn or LRnn FM CL).

Item N — Snow banks on a taxiway. When snow banks are present on a taxiway, insert the taxiway designator and with a space “SNOW BANK” (TWY [nn]n SNOW BANK).

Item O — Snow banks adjacent to the runway. When snow banks are reported present penetrating the height profile in the aerodrome snow plan, insert the lower runway designator and “ADJ SNOW BANKS” (RWY nn or RWY nn[L] or nn[C] or nn[R] ADJ SNOW BANKS).

Item P — Taxiway conditions. When taxiway conditions are reported as poor, insert the taxiway designator followed by a space “POOR” (TWY [n or nn] POOR or ALL TWYS POOR).

Item R — Apron conditions. When apron conditions are reported as poor, insert the apron designator followed by a space “POOR” (APRON [nnnn] POOR or ALL APRONS POOR).

Item S — Measured friction coefficient. Where reported, insert the measured friction coefficient and friction measuring device.

Note.— This will only be reported for States that have an established programme of runway friction measurement using a State-approved friction measuring device.

Item T — Plain language remarks.

EXAMPLE OF COMPLETED SNOWTAM FORMAT

Example SNOWTAM 1

GG EADBZQZX EADNZQZX EADSZQZX
170100 EADDYNYX
SWEA0149 EADD 02170055
(SNOWTAM 0149
EADD
02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW)

Example SNOWTAM 2

GG EADBZQZX EADNZQZX EADSZQZX
170140 EADDYNYX
SWEA0150 EADD 02170135
(SNOWTAM 0150
EADD
02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW
02170135 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH)

Example SNOWTAM 3

GG EADBZQZX EADNZQZX EADSZQZX
170229 EADDYNYX
SWEA0151 EADD 02170225
(SNOWTAM 0151
EADD
02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW
02170135 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH
02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW
RWY 09L SNOW BANK R20 FM CL. RWY 09R ADJ SNOW BANKS. TWY B POOR. APRON NORTH POOR)

Example SNOWTAM 4

GG EADBZQZX EADNZQZX EADSZQZX
170350 EADDYNYX
SWEA0152 EADD 02170345
(SNOWTAM 0152
EADD
02170345 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/SLUSH
02170134 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH
02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW 35
DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)

Appendix 5

ASHTAM FORMAT (See PANS-AIM (Doc 10066) Chapter 5, 5.2.5.1.5)

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSEE INDICATOR(S)) ¹												
	(DATE AND TIME (OF FILING))						(ORIGINATOR'S (INDICATOR))							
(Abbreviated heading)	(VA* ² SERIAL NUMBER)						(LOCATION INDICATOR)		DATE/TIME OF ISSUANCE				(OPTIONAL GROUP)	
	V	A	*2	*2										

ASHTAM	(SERIAL NUMBER)	
(FLIGHT INFORMATION REGION AFFECTED)		A)
(DATE/TIME (UTC) OF ERUPTION)		B)
(VOLCANO NAME AND NUMBER)		C)
(VOLCANO LATITUDE/LONGITUDE OR VOLCANO RADIAL AND DISTANCE FROM NAVAID)		D)
(VOLCANO LEVEL OF ALERT COLOUR CODE, INCLUDING ANY PRIOR LEVEL OF ALERT COLOUR CODE) ³		E)
(EXISTENCE AND HORIZONTAL/VERTICAL EXTENT OF VOLCANIC ASH CLOUD) ⁴		F)
(DIRECTION OF MOVEMENT OF ASH CLOUD) ⁴		G)
(AIR ROUTES OR PORTIONS OF AIR ROUTES AND FLIGHT LEVELS AFFECTED)		H)
(CLOSURE OF AIRSPACE AND/OR AIR ROUTES OR PORTIONS OF AIR ROUTES, AND ALTERNATIVE AIR ROUTES AVAILABLE)		I)
(SOURCE OF INFORMATION)		J)
(PLAIN-LANGUAGE REMARKS)		K)
<p>NOTES:</p> <ol style="list-style-type: none"> 1. See also Appendix 5 regarding addressee indicators used in predetermined distribution systems. 2. *Enter ICAO nationality letter as given in ICAO Doc 7910, Part 2. 3. See paragraph 3.5 below. 4. Advice on the existence, extent and movement of volcanic ash cloud G) and H) may be obtained from the volcanic ash advisory centre(s) responsible for the FIR concerned. 5. Item titles in brackets () not to be transmitted. 		

SIGNATURE OF ORIGINATOR *(not for transmission)*

INSTRUCTIONS FOR THE COMPLETION OF THE ASHTAM FORMAT

1. General

1.1 The ASHTAM provides information on the status of activity of a volcano when a change in its activity is, or is expected to be, of operational significance. This information is provided using the volcano level of alert colour code given in 3.5 below.

1.2 In the event of a volcanic eruption producing ash cloud of operational significance, the ASHTAM also provides information on the location, extent and movement of the ash cloud and the air routes and flight levels affected.

1.3 Issuance of an ASHTAM giving information on a volcanic eruption, in accordance with paragraph 3 below, should not be delayed until complete information A) to K) is available but should be issued immediately following receipt of notification that an eruption has occurred or is expected to occur, or a change in the status of activity of a volcano of operational significance has occurred or is expected to occur, or an ash cloud is reported. In the case of an expected eruption, and hence no ash cloud evident at that time, items A) to E) should be completed and items F) to I) indicated as “not applicable”.

Similarly, if a volcanic ash cloud is reported, e.g. by special air-report, but the source volcano is not known at that time, the ASHTAM should be issued initially with items A) to E) indicated as “unknown”, and items F) to K) completed, as necessary, based on the special air-report, pending receipt of further information. In other circumstances, if information for a specific field A) to K) is not available, indicate “NIL”.

1.4 The maximum period of validity of ASHTAM is 24 hours. New ASHTAM shall be issued whenever there is a change in the level of alert.

2. Abbreviated heading

2.1 Following the usual aeronautical fixed telecommunication network (AFTN) communications header, the abbreviated heading “TT AAiiii CCCC MMYGGg (BBB)” is included to facilitate the automatic processing of ASHTAM messages in computer data banks. The explanation of these symbols is:

TT = data designator for ASHTAM = VA;

AA = geographical designator for States, e.g. NZ = New Zealand (see Location Indicators (Doc 7910), Part 2, Index to Nationality Letters for Location Indicators);

iiii = ASHTAM serial number in a four-figure group;

CCCC = four-letter location indicator of the flight information region concerned (see Location Indicators (Doc 7910), Part 5, addresses of centres in charge of FIR/UIR);

MMYYGGg = date/time of report, whereby:

MM = month, e.g. January = 01, December = 12

YY = day of the month

GGg = time in hours (GG) and minutes (g) UTC;

(BBB) = Optional group for correction to an ASHTAM message previously disseminated with the same serial number = COR.

Note.— Brackets in (BBB) are used to indicate that this group is optional.

Example: Abbreviated heading of ASHTAM for Auckland Oceanic FIR, report on 7 November at 0620 UTC:
VANZ0001 NZZO 11070620

3. Content of ASHTAM

3.1 Item A — Flight information region affected, plain-language equivalent of the location indicator given in the abbreviated heading, in this example “Auckland Oceanic FIR”.

3.2 Item B — Date and time (UTC) of first eruption.

3.3 Item C — Name of volcano, and number of volcano as listed in the Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds (Doc 9691), Appendix E, and on the World Map of Volcanoes and Principal Aeronautical Features.

3.4 Item D — Latitude/Longitude of the volcano in whole degrees or radial and distance of volcano from NAVAID as listed in Doc 9691, Appendix E, and on the World Map of Volcanoes and Principal Aeronautical Features).

3.5 Item E — Colour code for level of alert indicating volcanic activity, including any previous level of alert colour code as follows:

Level of alert colour code	Status of activity of volcano
GREEN ALERT	Volcano is in normal, non-eruptive state. or, after a change from a higher alert level: Volcanic activity considered to have ceased, and volcano reverted to its normal, non-eruptive state.
YELLOW ALERT	Volcano is experiencing signs of elevated unrest above known background levels. or, after a change from a higher alert level: Volcanic activity has decreased significantly but continues to be closely monitored for possible renewed increase.
ORANGE ALERT plume	Volcano is exhibiting heightened unrest with increased likelihood of eruption. or, Volcanic eruption is underway with no or minor ash emission [specify ash-height if possible].
RED ALERT	Eruption is forecast to be imminent with significant emission of ash into the Atmosphere likely. or, Eruption is underway with significant emission of ash into the atmosphere [specify ash-plume height if possible].

Note.— The colour code for the level of alert indicating the status of activity of the volcano and any change from a previous status of activity should be provided to the area control centre by the responsible vulcanological agency in the State concerned, e.g. “RED ALERT FOLLOWING YELLOW” OR “GREEN ALERT FOLLOWING ORANGE”.

3.6 Item F — If volcanic ash cloud of operational significance is reported, indicate the horizontal extent and base/top of the ash cloud using latitude/longitude (in whole degrees) and altitudes in thousands of metres (feet) and/or radial and distance from source volcano. Information initially may be based only on special air-report, but subsequent information may be more detailed based on advice from the responsible meteorological watch office and/or volcanic ash advisory centre.

3.7 Item G — Indicate forecast direction of movement of the ash cloud at selected levels based on advice from the responsible meteorological watch office and/or volcanic ash advisory centre.

3.8 Item H — Indicate air routes and portions of air routes and flight levels affected, or expected to become affected.

3.9 Item I — Indicate closure of airspace, air routes or portions of air routes, and availability of alternative routes.

3.10 Item J — The source of the information (e.g. “special air-report” or “vulcanological agency.”) should always be indicated, whether an eruption has actually occurred or ash cloud reported, or not.

3.11 Item K — Include in plain language any operationally significant information additional to the foregoing.

Appendix 6

TERRAIN AND OBSTACLE ATTRIBUTES PROVISION REQUIREMENTS

Table A6-1. Terrain attributes

Terrain attribute	Mandatory/Optional
Area of coverage	Mandatory
Data originator identifier	Mandatory
Data source identifier	Mandatory
Acquisition method	Mandatory
Post spacing	Mandatory
Horizontal reference system	Mandatory
Horizontal resolution	Mandatory
Horizontal accuracy	Mandatory
Horizontal confidence level	Mandatory
Horizontal position	Mandatory
Elevation	Mandatory
Elevation reference	Mandatory
Vertical reference system	Mandatory
Vertical resolution	Mandatory
Vertical accuracy	Mandatory
Vertical confidence level	Mandatory
Surface type	Optional
Recorded surface	Mandatory
Penetration level	Optional
Known variations	Optional
Integrity	Mandatory
Date and time stamp	Mandatory
Unit of measurement used	Mandatory

Table A6-2. Obstacle attributes

Obstacle attribute	Mandatory/Optional
Area of coverage	Mandatory
Data originator identifier	Mandatory
Data source identifier	Mandatory
Obstacle identifier	Mandatory
Horizontal accuracy	Mandatory
Horizontal confidence level	Mandatory
Horizontal position	Mandatory
Horizontal resolution	Mandatory
Horizontal extent	Mandatory
Horizontal reference system	Mandatory
Elevation	Mandatory
Height	Optional
Vertical accuracy	Mandatory
Vertical confidence level	Mandatory
Vertical resolution	Mandatory
Vertical reference system	Mandatory
Obstacle type	Mandatory
Geometry type	Mandatory
Integrity	Mandatory
Date and time stamp	Mandatory
Unit of measurement used	Mandatory
Operations	Optional
Effectivity	Optional
Lighting	Mandatory

Appendix 7

PREDETERMINED DISTRIBUTION SYSTEM FOR NOTAM

(See PANS-AIM (Doc 10066) Chapter 5, 5.4.2.4, and Annex 10, Volume II, Chapter 4, 4.4.14)

1. The predetermined distribution system provides for incoming NOTAM (including SNOWTAM and ASHTAM) to be channelled through the aeronautical fixed service (AFS) direct to designated addressees predetermined by the receiving State concerned while concurrently being routed to the international NOTAM office for checking and control purposes.

2. The addressee indicators for those designated addressees are constituted as follows:

1) First and second letters:

The first two letters of the location indicator for the AFS communication centre associated with the relevant international NOTAM office of the receiving State.

2) Third and fourth letters:

The letters “ZZ” indicating a requirement for special distribution.

3) Fifth letter:

The fifth letter differentiating between NOTAM (letter “N”), SNOWTAM (letter “S”), and ASHTAM (letter “V”).

4) Sixth and seventh letters:

The sixth and seventh letters, each taken from the series A to Z and denoting the national and/or international distribution list(s) to be used by the receiving AFS centre.

Note.— The fifth, sixth and seventh letters replace the three-letter designator YNY which, in the normal distribution system, denotes an international NOTAM office.

5) Eighth letter:

The eighth position letter shall be the filler letter “X” to complete the eight-letter addressee indicator.

3. States are to inform the States from which they receive NOTAM of the sixth and seventh letters to be used under different circumstances to ensure proper routing.

Appendix 8

TERRAIN AND OBSTACLE DATA REQUIREMENTS (See SUBPART (F))

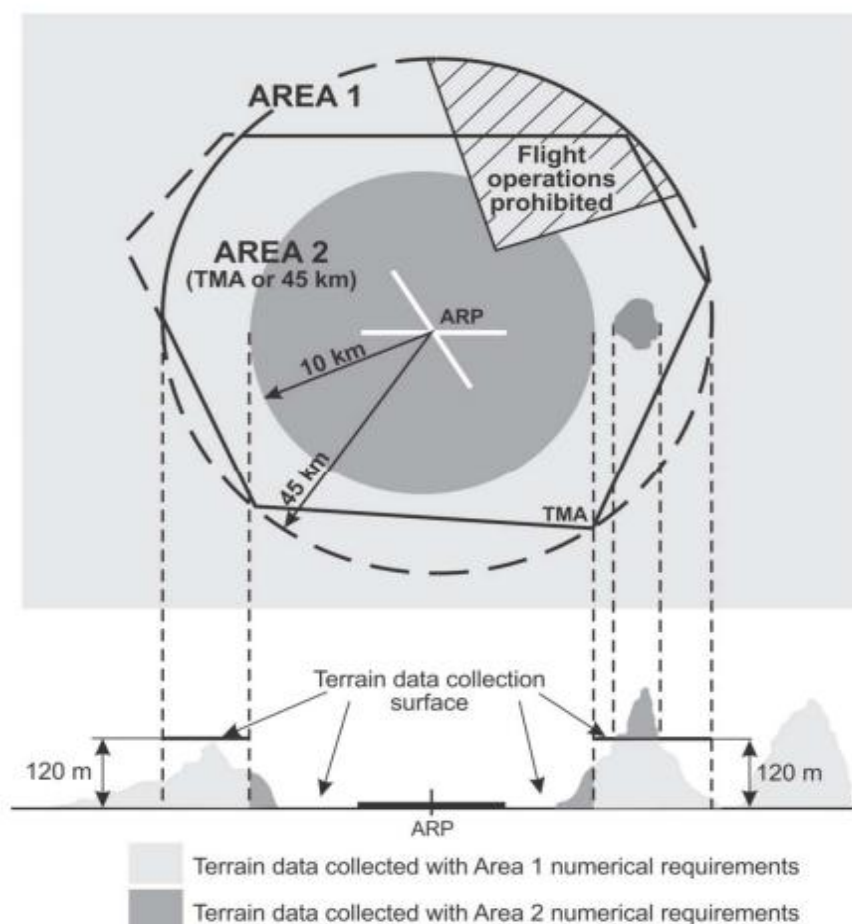


Figure A8-1. Terrain data collection surfaces — Area 1 and Area 2

1. Within the area covered by a 10-km radius from the aerodrome reference point (ARP), terrain data shall comply with the Area 2 numerical requirements.
2. In the area between 10 km and the terminal control area (TMA) boundary or 45-km radius (whichever is smaller), data on terrain that penetrates the horizontal plane 120 m above the lowest runway elevation shall comply with the Area 2 numerical requirements.
3. In the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller), data on terrain that does not penetrate the horizontal plane 120 m above the lowest runway elevation shall comply with the Area 1 numerical requirements.
4. In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, terrain data shall comply with the Area 1 numerical requirements.

Note.— Terrain data numerical requirements for Areas 1 and 2 are specified in Appendix 1.

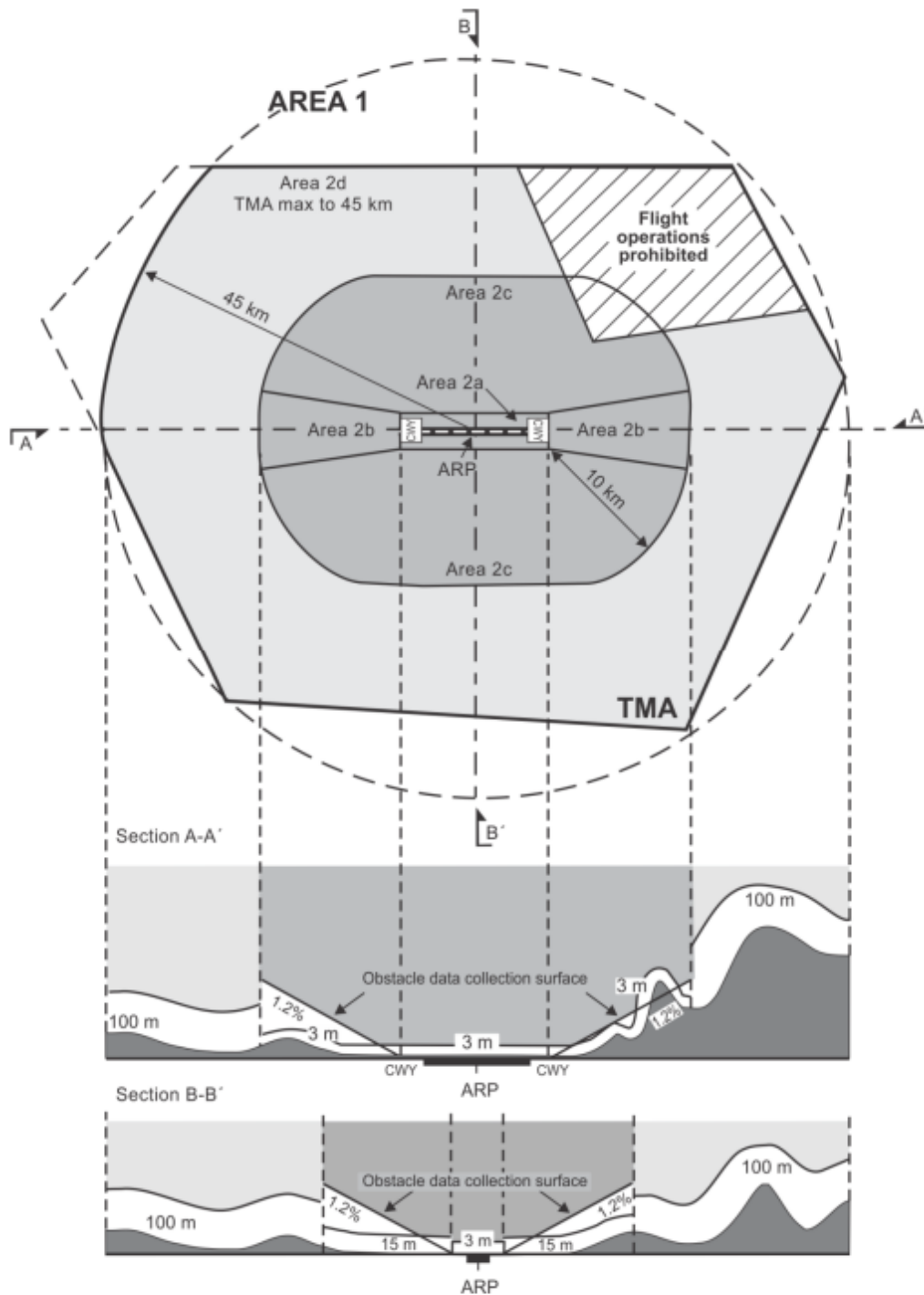


Figure A8-2. Obstacle data collection surfaces — Area 1 and Area 2

1. Obstacle data shall be collected and recorded in accordance with the Area 2 numerical requirements specified in Appendix 1.
2. In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, obstacle data shall be collected and recorded in accordance with the Area 1 requirements.
3. Data on every obstacle within Area 1 whose height above the ground is 100 m or higher shall be collected and recorded in the database in accordance with the Area 1 numerical requirements specified in Appendix 1.

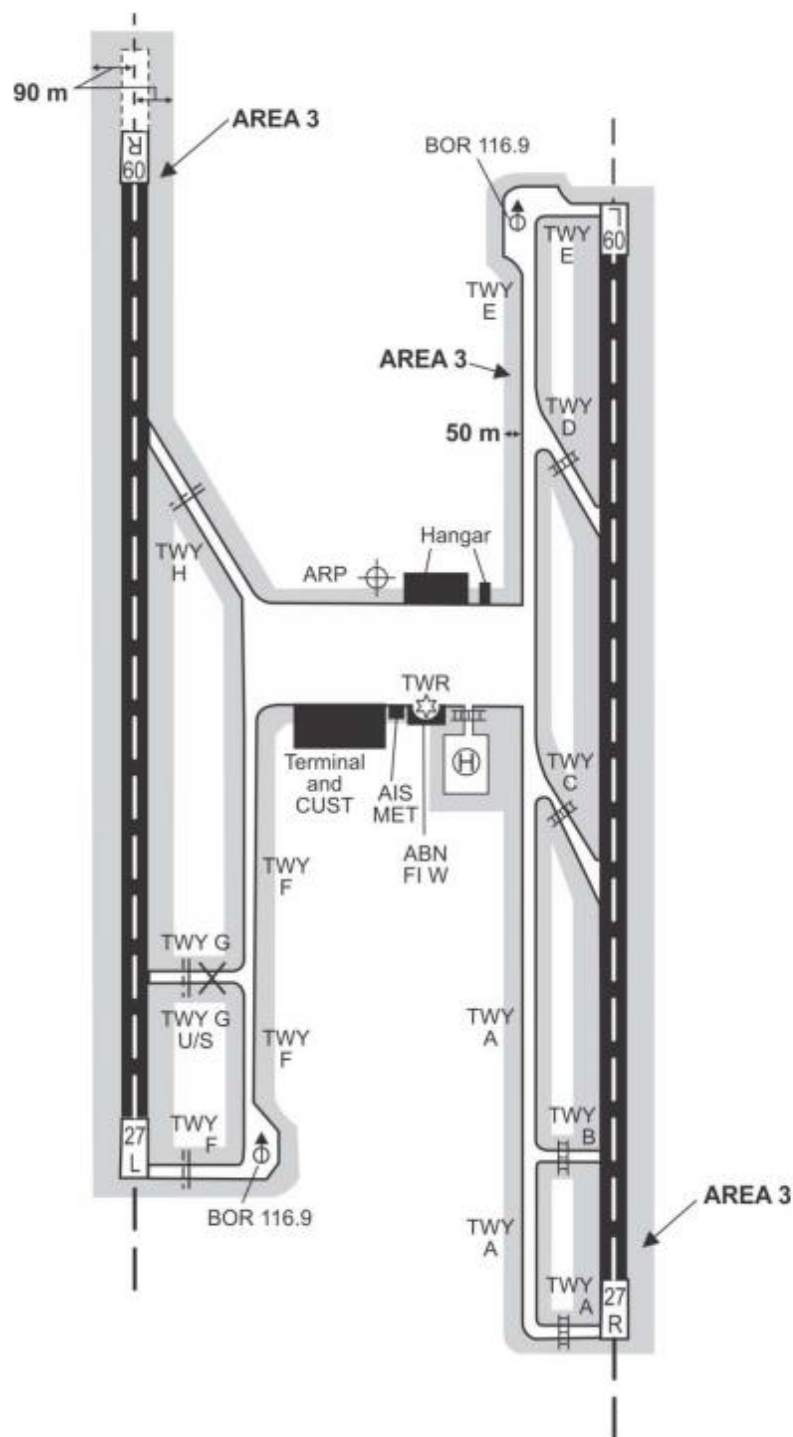


Figure A8-3. Terrain and obstacle data collection surface — Area 3

Terrain and obstacle data in Area 3 shall comply with the numerical requirements specified in Appendix 1.

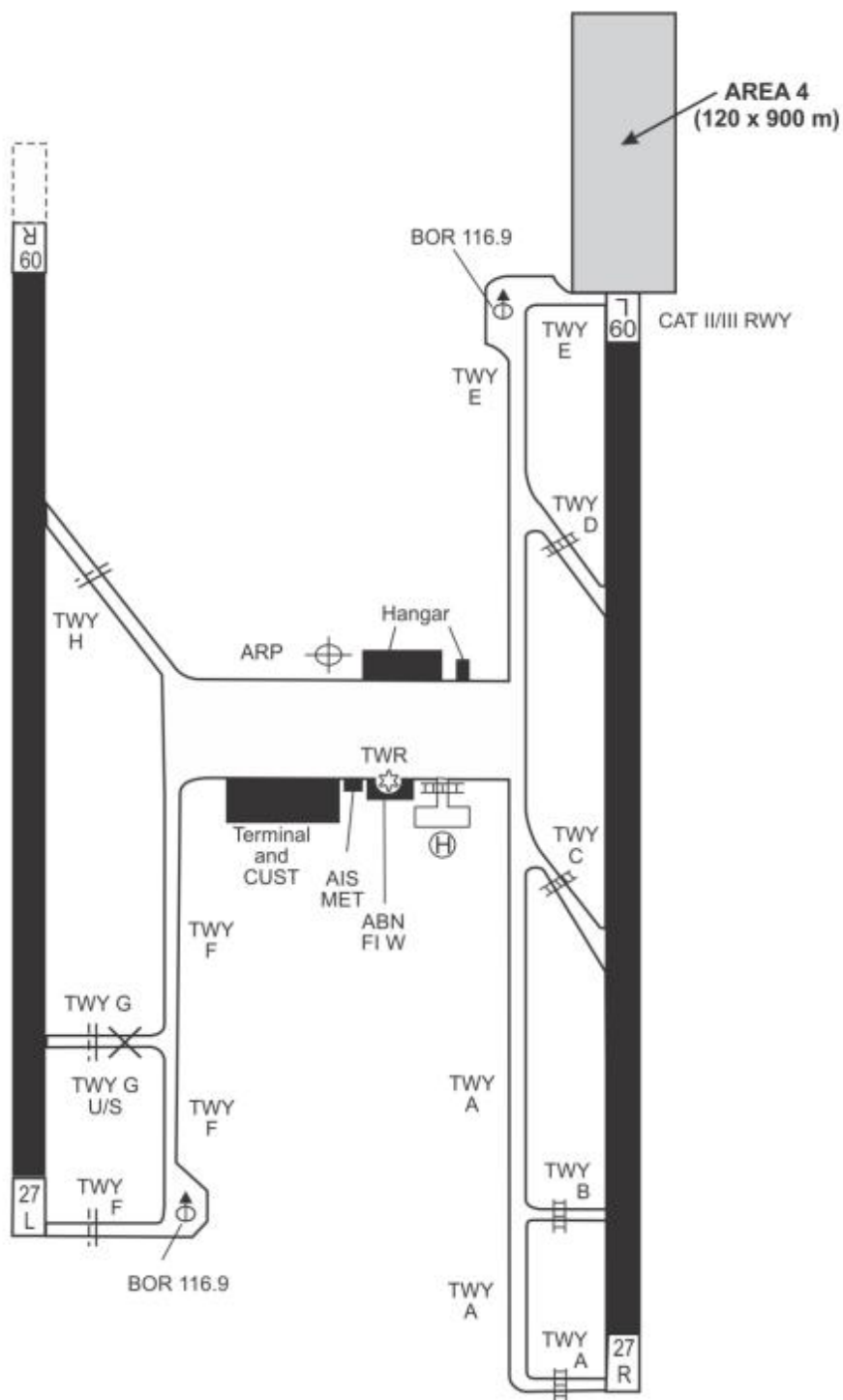


Figure A8-4. Terrain and obstacle data collection surface — Area 4

Terrain and obstacle data in Area 4 shall comply with the numerical requirements specified in Appendix 1.

FLIGHT PLAN

FLIGHT PLAN PLAN DE VOL			
PRIORITY Priorité <div style="border: 1px solid black; padding: 2px;"> <<= FF >> </div>	ADDRESSEE(S) Destinataire(s) <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		
FILING TIME Heure de dépôt <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>	ORIGINATOR Expéditeur <div style="border: 1px solid black; width: 150px; height: 20px; margin-top: 5px;"></div>		
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR Identification précise du(des) destinataire(s) et/ou de l'expéditeur			
3 MESSAGE TYPE Type de message <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <<= (FPL </div>	7 AIRCRAFT IDENTIFICATION Identification de l'aéronef <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>	8 FLIGHT RULES Règles de vol <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	TYPE OF FLIGHT Type de vol <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>
9 NUMBER Nombre <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	TYPE OF AIRCRAFT Type d'aéronef <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>	WAKE TURBULENCE CAT. Cat. de turbulence de sillage <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	
13 DEPARTURE AERODROME Aérodrome de départ <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>		TIME Heure <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	
15 CRUISING SPEED Vitesse croisière <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>	LEVEL Niveau <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>	ROUTE Route <div style="border: 1px solid black; width: 150px; height: 20px; margin-top: 5px;"></div>	
16 DESTINATION AERODROME Aérodrome de destination <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>			
18 OTHER INFORMATION Renseignements divers <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>			
19 ENDURANCE Autonomie <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>			
20 SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES) Renseignements complémentaires (À NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)			
PERSONS ON BOARD Personnes à bord <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	EMERGENCY RADIO Radio de secours <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>UHF R/U</div> <div>VHF R/V</div> <div>ELT R/E</div> </div>		
SURVIVAL EQUIPMENT Équipement de survie <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>POLAR S/P</div> <div>DESERT D</div> <div>MARITIME M</div> <div>JUNGLE J</div> </div>	JACKETS/Gilets de sauvetage <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>LIGHT J/L</div> <div>FLUORES F</div> <div>UHF U</div> <div>VHF V</div> </div>		
NUMBER Nombre <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	CAPACITY Capacité <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	COVER Couverture <div style="border: 1px solid black; width: 50px; height: 20px; margin-top: 5px;"></div>	COLOUR Couleur <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div>
AIRCRAFT COLOUR AND MARKINGS Couleur et marques de l'aéronef <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>			
REMARKS Remarques <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>			
PILOT-IN-COMMAND Pilote commandant de bord <div style="border: 1px solid black; width: 150px; height: 20px; margin-top: 5px;"></div>			
FILED BY / Déposé par <div style="border: 1px solid black; width: 150px; height: 20px; margin-top: 5px;"></div>			
SPACE RESERVED FOR ADDITIONAL REQUIREMENTS Espace réservé à des fins supplémentaires <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>			

2. Instructions for the completion of the flight plan form

2.1 General

Adhere closely to the prescribed formats and manner of specifying data.

Commence inserting data in the first space provided. Where excess space is available, leave unused spaces blank.

Insert all clock times in 4 figures UTC.

Insert all estimated elapsed times in 4 figures (hours and minutes).

Shaded area preceding Item 3 — to be completed by ATS and COM services, unless the responsibility for originating flight plan messages has been delegated.

Note.— The term “aerodrome” where used in the flight plan is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

2.2 Instructions for insertion of ATS data

Complete Items 7 to 18 as indicated hereunder.

Complete also Item 19 as indicated hereunder, when so required by the appropriate ATS authority or when otherwise deemed necessary.

Note 1.— Item numbers on the form are not consecutive, as they correspond to Field Type numbers in ATS messages.

Note 2.— Air traffic services data systems may impose communications or processing constraints on information in filed flight plans. Possible constraints may, for example, be limits with regard to item length, number of elements in the route item or total flight plan length. Significant constraints are documented in the relevant Aeronautical Information Publication.

ITEM 7: AIRCRAFT IDENTIFICATION (MAXIMUM 7 CHARACTERS)

INSERT one of the following aircraft identifications, not exceeding 7 alphanumeric characters and without hyphens or symbols:

- a) the ICAO designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, NGA213, JTR25) when in radiotelephony the call sign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (e.g. KLM511, NIGERIA 213, JESTER 25);
- OR b) the nationality or common mark and registration mark of the aircraft (e.g. EIAKO, 4XBCD, N2567GA), when:
 - 1) in radiotelephony the call sign to be used by the aircraft will consist of this identification alone (e.g. CGAJS), or preceded by the ICAO telephony designator for the aircraft operating agency (e.g. BLIZZARD CGAJS);

- 2) the aircraft is not equipped with radio.

Note 1.— Standards for nationality, common and registration marks to be used are contained in Annex 7, section 3.

Note 2.— Provisions for the use of radiotelephony call signs are contained in Annex 10, Volume II, Chapter 5. ICAO designators and telephony designators for aircraft operating agencies are contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

**ITEM 8: FLIGHT RULES AND TYPE OF
FLIGHT (ONE OR TWO CHARACTERS)**

Flight rules

INSERT one of the following letters to denote the category of flight rules with which the pilot intends to comply:

- I if it is intended that the entire flight will be operated under the IFR
- V if it is intended that the entire flight will be operated under the VFR
- Y if the flight initially will be operated under the IFR, followed by one or more subsequent changes of flight rules or
- Z if the flight initially will be operated under the VFR, followed by one or more subsequent changes of flight rules

Specify in Item 15 the point or points at which a change of flight rules is planned.

Type of flight

INSERT one of the following letters to denote the type of flight when so required by the appropriate ATS authority:

- S if scheduled air service
- N if non-scheduled air transport operation
- G if general aviation
- M if military
- X if other than any of the defined categories above.

Specify status of a flight following the indicator STS in Item 18, or when necessary to denote other reasons for specific handling by ATS, indicate the reason following the indicator RMK in Item 18.

**ITEM 9: NUMBER AND TYPE OF AIRCRAFT
AND WAKE TURBULENCE CATEGORY**

Number of aircraft (1 or 2 characters)

INSERT the number of aircraft, if more than one.

Type of aircraft (2 to 4 characters)

INSERT the appropriate designator as specified in Doc 8643, *Aircraft Type Designators*,

OR, if no such designator has been assigned, or in case of formation flights comprising more than one type,

INSERT ZZZZ, and *SPECIFY* in Item 18, the (numbers and) type(s) of aircraft preceded by TYP/ .

Wake turbulence category (1 character)

INSERT an oblique stroke followed by one of the following letters to indicate the wake turbulence category of the aircraft:

- J — SUPER, to indicate an aircraft type specified as such in Doc 8643, *Aircraft Type Designators*;
- H — HEAVY, to indicate an aircraft type with a maximum certificated take-off mass of 136 000 kg or more, with the exception of aircraft types listed in Doc 8643 in the SUPER (J) category;
- M — MEDIUM, to indicate an aircraft type with a maximum certificated take-off mass of less than 136 000 kg but more than 7 000 kg;
- L — LIGHT, to indicate an aircraft type with a maximum certificated take-off mass of 7 000 kg or less.

ITEM 10: EQUIPMENT AND CAPABILITIES

Capabilities comprise the following elements:

- a) presence of relevant serviceable equipment on board the aircraft;
- b) equipment and capabilities commensurate with flight crew qualifications; and
- c) where applicable, authorization from the appropriate authority.

Radiocommunication, navigation and
approach aid equipment and capabilities

INSERT one letter as follows:

N if no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable,

OR S if standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable
(see Note 1),

AND/OR

INSERT one or more of the following letters to indicate the serviceable COM/NAV/approach aid equipment and capabilities available:

A	GBAS landing system	J6	CPDLC FANS I/A
B	LPV (APV with SBAS)		SATCOM (MTSAT)
C	LORAN C	J7	CPDLC FANS I/A SATCOM
D	DME		(Iridium)
E1	FMC WPR ACARS	K	MLS
E2	D-FIS ACARS	L	ILS
E3	PDC ACARS	M1	ATC SATVOICE (INMARSAT)
F	ADF	M2	ATC SATVOICE (MTSAT)
G	GNSS. If any portion of the flight is planned to be conducted under IFR, it refers to GNSS receivers that comply with the requirements of Annex 10, Volume I (See Note 2)	M3	ATC SATVOICE (Iridium)
		O	VOR
		P1	CPDLC RCP 400 (See Note 7)
		P2	CPDLC RCP 240 (See Note 7)
		P3	SATVOICE RCP 400 (See Note 7)
		P4-P9	Reserved for RCP
H	HF RTF	R	PBN approved (See Note 4)
I	Inertial Navigation	T	TACAN
J1	CPDLC ATN VDL Mode 2 (See Note 3)	U	UHF RTF
J2	CPDLC FANS I/A HFDL	V	VHF RTF
J3	CPDLC FANS I/A VDL Mode A	W	RVSM approved
J4	CPDLC FANS I/A VDL Mode 2	X	MNPS approved
J5	CPDLC FANS I/A SATCOM (INMARSAT)	Y	VHF with 8.33 kHz channel spacing capability
		Z	Other equipment carried or other capabilities (See Note 5)

Any alphanumeric characters not indicated above are reserved.

Note 1.— If the letter S is used, standard equipment is considered to be VHF RTF, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.

Note 2.— If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.

Note 3.— See RTCA/EUROCAE Interoperability Requirements Standard for ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.

Note 4.— If the letter R is used, the performance-based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance-based navigation to a specific route segment, route or area is contained in the Performance-based Navigation (PBN) Manual (Doc 9613).

Note 5.— If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/ , NAV/ and/or DAT, as appropriate.

Note 6.— Information on navigation capability is provided to ATC for clearance and routing purposes.

Note 7.— Guidance material on the application of performance-based communication, which prescribes RCP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

Surveillance equipment and capabilities
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INSERT N if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable,
OR

INSERT one or more of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board:

SSR Modes A and C

- A Transponder — Mode A (4 digits — 4 096 codes)
- C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Mode S

- E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability
- H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability
- I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability
- L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability
- P Transponder — Mode S, including pressure-altitude, but no aircraft identification capability
- S Transponder — Mode S, including both pressure altitude and aircraft identification capability
- X Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

Note.— Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B

- B1 ADS-B with dedicated 1 090 MHz ADS-B “out” capability
- B2 ADS-B with dedicated 1 090 MHz ADS-B “out” and “in” capability
- U1 ADS-B “out” capability using UAT
- U2 ADS-B “out” and “in” capability using UAT
- V1 ADS-B “out” capability using VDL Mode 4
- V2 ADS-B “out” and “in” capability using VDL Mode 4

ADS-C

- D1 ADS-C with FANS 1/A capabilities
- G1 ADS-C with ATN capabilities

Alphanumeric characters not indicated above are reserved.

Example: ADE3RV/HB2U2V2G1

Note 1.— The RSP specification(s), if applicable, will be listed in Item 18 following the indicator SUR/. Guidance material on the application of performance-based surveillance, which prescribes RSP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

Note 2.— Additional surveillance equipment or capabilities will be listed in Item 18 following the indicator SUR/, as required by the appropriate ATS authority.

**ITEM 13: DEPARTURE AERODROME
AND TIME (8 CHARACTERS)**

INSERT the ICAO four-letter location indicator of the departure aerodrome as specified in Doc 7910, *Location Indicators*,

OR, if no location indicator has been assigned,

INSERT ZZZZ and *SPECIFY*, in Item 18, the name and location of the aerodrome preceded by DEP/ ,

OR, the first point of the route or the marker radio beacon preceded by DEP/..., if the aircraft has not taken off from the aerodrome,

OR, if the flight plan is received from an aircraft in flight,

INSERT AFIL, and *SPECIFY*, in Item 18, the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, preceded by DEP/ .

THEN, WITHOUT A SPACE,

INSERT for a flight plan submitted before departure, the estimated off-block time (EOBT),

OR, for a flight plan received from an aircraft in flight, the actual or estimated time over the first point of the route to which the flight plan applies.

ITEM 15: ROUTE

INSERT the *first cruising speed* as in (a) and the *first cruising level* as in (b), without a space between them.

THEN, following the arrow, *INSERT* the route description as in (c).

(a) Cruising speed (maximum 5 characters)

INSERT the *True airspeed* for the first or the whole cruising portion of the flight, in terms of:

Kilometres per hour, expressed as K followed by 4 figures (e.g. K0830), *or*

Knots, expressed as N followed by 4 figures (e.g. N0485), *or*

True Mach number, when so prescribed by the appropriate ATS authority, to the nearest hundredth of unit Mach, expressed as M followed by 3 figures (e.g. M082).

(b) Cruising level (maximum 5 characters)

INSERT the planned cruising level for the first or the whole portion of the route to be flown, in terms of:

Flight level, expressed as F followed by 3 figures (e.g. F085; F330), or

**Standard metric level in tens of metres, expressed as S followed by 4 figures (e.g. S1130), or*

Altitude in hundreds of feet, expressed as A followed by 3 figures (e.g. A045; A100), or

Altitude in tens of metres, expressed as M followed by 4 figures (e.g. M0840), or

for uncontrolled VFR flights, the letters VFR.

(c) Route (including changes of speed,
level and/or flight rules)

Flights along designated ATS routes

INSERT, if the departure aerodrome is located on or connected to the ATS route, the designator of the first ATS route,

OR, if the departure aerodrome is not on or connected to the ATS route, the letters DCT followed by the point of joining the first ATS route, followed by the designator of the ATS route.

THEN

INSERT each point at which either a change of speed and/or level is planned to commence, or a change of ATS route, and/or a change of flight rules is planned,

Note.— When a transition is planned between a lower and upper ATS route and the routes are oriented in the same direction, the point of transition need not be inserted.

FOLLOWED IN EACH CASE

by the designator of the next ATS route segment, even if the same as the previous one,

OR by DCT, if the flight to the next point will be outside a designated route, unless both points are defined by geographical coordinates.

Flights outside designated ATS routes

INSERT points normally not more than 30 minutes flying time or 370 km (200 NM) apart, including each point at which a change of speed or level, a change of track, or a change of flight rules is planned.

OR, when required by appropriate ATS authority(ies),

DEFINE the track of flights operating predominantly in an east-west direction between 70°N and 70°S by reference to significant points formed by the intersections of half or whole degrees of latitude with meridians spaced at

* When so prescribed by the appropriate ATS authorities.

intervals of 10 degrees of longitude. For flights operating in areas outside those latitudes the tracks shall be defined by significant points formed by the intersection of parallels of latitude with meridians normally spaced at 20 degrees of longitude. The distance between significant points shall, as far as possible, not exceed one hour's flight time. Additional significant points shall be established as deemed necessary.

For flights operating predominantly in a north-south direction, define tracks by reference to significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude which are spaced at 5 degrees.

INSERT DCT between successive points unless both points are defined by geographical coordinates or by bearing and distance.

USE ONLY the conventions in (1) to (5) below and *SEPARATE* each sub-item by a space.

- (1) ATS route (2 to 7 characters)

The *coded designator* assigned to the route or route segment including, where appropriate, the coded designator assigned to the standard departure or arrival route (e.g. BCN1, BI, R14, UB10, KODAP2A).

Note.— Provisions for the application of route designators are contained in Annex 11, Appendix 1.

- (2) Significant point (2 to 11 characters)

The *coded designator* (2 to 5 characters) assigned to the point (e.g. LN, MAY, HADDY),

or, if no coded designator has been assigned, one of the following ways:

- *Degrees only* (7 characters):

2 figures describing latitude in degrees, followed by "N" (North) or "S" (South), followed by 3 figures describing longitude in degrees, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 46N078W.

- *Degrees and minutes* (11 characters):

4 figures describing latitude in degrees and tens and units of minutes followed by "N" (North) or "S" (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W.

- *Bearing and distance from a reference point:*

The identification of the reference point, followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros — e.g. a point 180° magnetic at a distance of 40 nautical miles from VOR "DUB" should be expressed as DUB180040.

(3)

Change of speed or level
(maximum 21 characters)

The point at which a change of speed (5% TAS or 0.01 Mach or more) or a change of level is planned to commence, expressed exactly as in (2) above, followed by an oblique stroke and both the cruising speed and the cruising level, expressed exactly as in (a) and (b) above, without a space between them, even when only one of these quantities will be changed.

Examples: LN/N0284A045
MAY/N0305F180
HADDY/N0420F330
4602N07805W/N0500F350
46N078W/M082F330
DUB180040/N0350M0840

(4)

Change of flight rules
(maximum 3 characters)

The point at which the change of flight rules is planned, expressed exactly as in (2) or (3) above as appropriate, followed by a space and one of the following:

VFR if from IFR to VFR
IFR if from VFR to IFR

Examples: LN VFR
LN/N0284A050 IFR

(5)

Cruise climb (maximum 28 characters)

The letter C followed by an oblique stroke; THEN the point at which cruise climb is planned to start, expressed exactly as in (2) above, followed by an oblique stroke; THEN the speed to be maintained during cruise climb, expressed exactly as in (a) above, followed by the two levels defining the layer to be occupied during cruise climb, each level expressed exactly as in (b) above, or the level above which cruise climb is planned followed by the letters PLUS, without a space between them.

Examples: C/48N050W/M082F290F350
C/48N050W/M082F290PLUS
C/52N050W/M220F580F620.

**ITEM 16: DESTINATION AERODROME AND
TOTAL ESTIMATED ELAPSED TIME,
DESTINATION ALTERNATE AERODROME(S)**

Destination aerodrome and total
estimated elapsed time (8 characters)

INSERT the ICAO four-letter location indicator of the destination aerodrome as specified in Doc 7910, *Location Indicators*,

OR, if no location indicator has been assigned,

INSERT ZZZZ and *SPECIFY* in Item 18 the name and location of the aerodrome, preceded by DEST/ .

THEN WITHOUT A SPACE

INSERT the total estimated elapsed time.

Note.— For a flight plan received from an aircraft in flight, the total estimated elapsed time is the estimated time from the first point of the route to which the flight plan applies to the termination point of the flight plan.

Destination alternate aerodrome(s)

INSERT the ICAO four-letter location indicator(s) of not more than two destination alternate aerodromes, as specified in Doc 7910, *Location Indicators*, separated by a space,

OR, if no location indicator has been assigned to the destination alternate aerodrome(s),

INSERT ZZZZ and *SPECIFY* in Item 18 the name and location of the destination alternate aerodrome(s), preceded by ALTN/ .

ITEM 18: OTHER INFORMATION

Note.— Use of indicators not included under this item may result in data being rejected, processed incorrectly or lost.

Hyphens or oblique strokes should only be used as prescribed below.

INSERT 0 (zero) if no other information,

OR, any other necessary information in the sequence shown hereunder, in the form of the appropriate indicator selected from those defined hereunder followed by an oblique stroke and the information to be recorded:

STS/ Reason for special handling by ATS, e.g. a search and rescue mission, as follows:

ALTRV:	for a flight operated in accordance with an altitude reservation;
ATFMX:	for a flight approved for exemption from ATFM measures by the appropriate ATS authority;
FFR:	fire-fighting;
FLTCK:	flight check for calibration of navaids;
HAZMAT:	for a flight carrying hazardous material;
HEAD:	a flight with Head of State status;
HOSP:	for a medical flight declared by medical authorities;
HUM:	for a flight operating on a humanitarian mission;
MARSA:	for a flight for which a military entity assumes responsibility for separation of military aircraft;
MEDEVAC:	for a life critical medical emergency evacuation;
NONRVSM:	for a non-RVSM capable flight intending to operate in RVSM airspace;
SAR:	for a flight engaged in a search and rescue mission; and
STATE:	for a flight engaged in military, customs or police services.

Other reasons for special handling by ATS shall be denoted under the designator RMK/.

PBN/ Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

	RNAV SPECIFICATIONS
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
	RNP SPECIFICATIONS
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g. NAV/GBAS SBAS.

COM/ Indicate communication equipment and capabilities not specified in Item 10 a).

DAT/ Indicate data communication equipment and capabilities not specified in 10 a).

SUR/ Indicate surveillance equipment and capabilities not specified in Item 10 b). Indicate as many RSP specification(s) as apply to the flight, using designator(s) with no space. Multiple RSP specifications are separated by a space. Example: RSP180 RSP400.

DEP/ Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows:
With 4 figures describing latitude in degrees and tens and units of minutes followed by "N" (North) or "S" (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).

OR, Bearing and distance from the nearest significant point, as follows:

The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR "DUB" should be expressed as DUB180040.

OR, The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome.

DEST/ Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.

DOF/ The date of flight departure in a six-figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).

REG/ The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.

EET/ Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: EET/CAP0745 XYZ0830
EET/EINN0204

SEL/ SELCAL Code, for aircraft so equipped.

TYP/ Type(s) of aircraft, preceded if necessary without a space by number(s) of aircraft and separated by one space, if ZZZZ is inserted in Item 9.

Example: TYP/2F15 5F5 3B2

CODE/ Aircraft address (expressed in the form of an alphanumerical code of six hexadecimal characters) when required by the appropriate ATS authority. Example: "F00001" is the lowest aircraft address contained in the specific block administered by ICAO.

DLE/ Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four-figure time in hours and minutes (hhmm).

Example: DLE/MDG0030

OPR/ ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.

ORGN/ The originator's 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

Note.— In some areas, flight plan reception centres may insert the ORGN/ identifier and originator's AFTN address automatically.

PER/ Aircraft performance data, indicated by a single letter as specified in the *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS, Doc 8168), *Volume I — Flight Procedures*, if so prescribed by the appropriate ATS authority.

ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RALT/ ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, *Location Indicators*, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

TALT/ ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, *Location Indicators*, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RIF/ The route details to the revised destination aerodrome, followed by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples: RIF/DTA HEC KLAX
RIF/ESP G94 CLA YPPH

RMK/ Any other plain-language remarks when required by the appropriate ATS authority or deemed necessary.

ITEM 19: SUPPLEMENTARY INFORMATION

Endurance

After E/ *INSERT* a 4-figure group giving the fuel endurance in hours and minutes.

Persons on board

After P/ *INSERT* the total number of persons (passengers and crew) on board, when required by the appropriate ATS authority. *INSERT* TBN (to be notified) if the total number of persons is not known at the time of filing.

Emergency and survival equipment

R/ (RADIO) *CROSS OUT* U if UHF on frequency 243.0 MHz is not available. *CROSS OUT* V if VHF on frequency 121.5 MHz is not available. *CROSS OUT* E if emergency locator transmitter (ELT) is not available.

S/ (SURVIVAL EQUIPMENT) *CROSS OUT* all indicators if survival equipment is not carried. *CROSS OUT* P if polar survival equipment is not carried. *CROSS OUT* D if desert survival equipment is not carried. *CROSS OUT* M if maritime survival equipment is not carried. *CROSS OUT* J if jungle survival equipment is not carried.

J/ (JACKETS) *CROSS OUT* all indicators if life jackets are not carried. *CROSS OUT* L if life jackets are not equipped with lights. *CROSS OUT* F if life jackets are not equipped with fluorescein. *CROSS OUT* U or V or both as in R/ above to indicate radio capability of jackets, if any.

D/ (DINGHIES) *CROSS OUT* indicators D and C if no dinghies are carried, or *INSERT* number of dinghies carried; and

(CAPACITY) *INSERT* total capacity, in persons, of all dinghies carried; and

(COVER) *CROSS OUT* indicator C if dinghies are not covered; and

(COLOUR) *INSERT* colour of dinghies if carried.

A/ (AIRCRAFT COLOUR AND MARKINGS) *INSERT* colour of aircraft and significant markings.

N/ (REMARKS) *CROSS OUT* indicator N if no remarks, or *INDICATE* any other survival equipment carried and any other remarks regarding survival equipment.

C/ (PILOT) *INSERT* name of pilot-in-command.

2.3 Filed by

INSERT the name of the unit, agency or person filing the flight plan.

2.4 Acceptance of the flight plan

Indicate acceptance of the flight plan in the manner prescribed by the appropriate ATS authority.

2.5 Instructions for insertion of COM data

Items to be completed

COMPLETE the top two shaded lines of the form, and *COMPLETE* the third shaded line only when necessary, in accordance with the provisions in PANS-ATM, Chapter 11, 11.2.1.2, unless ATS prescribes otherwise.

3. Instructions for the transmission of a filed flight plan (FPL) message

Correction of obvious errors

Unless otherwise prescribed, *CORRECT* obvious format errors and/or omissions (i.e. oblique strokes) to ensure adherence as specified in Section 2.

Items to be transmitted

TRANSMIT items as indicated hereunder, unless otherwise prescribed:

- a) the items in the shaded lines, above Item 3;
- b) commencing with <<≡ (FPL of Item 3:

all symbols and data in the unshaded boxes down to the)<<≡ at the end of Item 18,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 15 or 18. The alignment function is to be inserted only in lieu of a space so as not to break up a group of data,

letter shifts and figure shifts (not preprinted on the form) as necessary;

- c) the AFTN Ending, as described below:

End-of-Text Signal

- a) one LETTER SHIFT
- b) two CARRIAGE RETURNS, one LINE FEED

Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

4. Instructions for the transmission of a supplementary flight plan (SPL) message

Items to be transmitted

Transmit items as indicated hereunder, unless otherwise prescribed:

- a) AFTN Priority Indicator, Addressee Indicators <<≡, Filing Time, Originator Indicator <<≡ and, if necessary, specific identification of addressees and/or originator;

- b) commencing with <<≡ (SPL:

all symbols and data in the unshaded areas of boxes 7, 13, 16 and 18, except that the ‘)’ at the end of box 18 is *not* to be transmitted, and then the symbols in the unshaded area of box 19 down to and including the)<<≡ of box 19,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 18 and 19. The alignment function is to be inserted only in lieu of a space so as not to break up a group of data,

letter shifts and figure shifts (not preprinted on the form) as necessary;

- c) the AFTN Ending, as described below:

End-of-Text Signal

- a) one LETTER SHIFT
- b) two CARRIAGE RETURNS, one LINE FEED

Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

5. Example of a completed flight plan form

FLIGHT PLAN PLAN DE VOL			
PRIORITY Priorité FF		ADDRESSEE(S) Destinataire(s) EHAA ZQZX EBURZQZX EDDYZQZX LFFFZQZX LFRR ZQZX LFBBZQZX LECMZQZX LPFCZQZX	
FILING TIME Heure de dépôt 190836		ORIGINATOR Expéditeur EHAMZPX	
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR Identification précise du(des) destinataire(s) et/ou de l'expéditeur			
3 MESSAGE TYPE Type de message FPL	7 AIRCRAFT IDENTIFICATION Identification de l'aéronef ACF402	8 FLIGHT RULES Règles de vol I	TYPE OF FLIGHT Type de vol N
9 NUMBER Nombre 1	TYPE OF AIRCRAFT Type d'aéronef EA30	WAKE TURBULENCE CAT. Cat. de turbulence de sillage H	10 EQUIPMENT Équipement S/C
13 DEPARTURE AERODROME Aérodrome de départ EHAM	TIME Heure 0940		
15 CRUISING SPEED Vitesse croisière K0830	LEVEL Niveau F290	ROUTE Route LEK2B LEK UA6 XMM/M078 F330	
UA6 PON URION CHW UA5 NTS DCT 4611N00412W			
DCT STG UA5 FTM FATIM1A			
16 DESTINATION AERODROME Aérodrome de destination LPPT	TOTAL EET Durée totale estimée HR MIN 0230	ALTN AERODROME Aérodrome de dégagement LPPI	2ND ALTN AERODROME 2 ^e aérodrome de dégagement
18 OTHER INFORMATION Renseignements divers REG/FBVGA SEL/EJFL EET/LPPC0158			
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES) Renseignements complémentaires (À NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)			
19 ENDURANCE Autonomie HR MIN E/0345	PERSONS ON BOARD Personnes à bord P/300	EMERGENCY RADIO Radio de secours UHF VHF ELT R/U V E	
SURVIVAL EQUIPMENT/Équipement de survie POLAR Désert MARITIME JUNGLE S / P D M J DINGHIES/Canots			
JACKETS/Gilets de sauvetage LIGHT Lampes FLUORES Fluores J / L F U V X			
NUMBER Nombre CAPACITY Capacité COVER Couverture COLOUR Couleur D/11 330 C YELLOW			
AIRCRAFT COLOUR AND MARKINGS Couleur et marques de l'aéronef A/WHITE			
REMARKS Remarques N/			
PILOT-IN-COMMAND Pilote commandant de bord C/DENKE			
FILED BY / Déposé par			
AIR CHARTER INT.		SPACE RESERVED FOR ADDITIONAL REQUIREMENTS Espace réservé à des fins supplémentaires	

REPETITIVE FLIGHT PLAN LISTING

[illegible]

6. ICAO model repetitive flight plan (RPL) listing form

7. Instructions for the completion of the repetitive flight plan (RPL) listing form

7.1 General

List only flight plans that will operate in accordance with IFR. (Flight rules I in FPL format).

It is assumed that all aircraft are operating as scheduled flights (Type of flight S in FPL format), otherwise *notify* in Q (Remarks).

It is assumed that all aircraft operating on RPLs are equipped with 4 096-code transponders with Modes A and C. Otherwise, *notify* in Q (Remarks).

List flight plans in *alphabetical order of the location indicator of the departure aerodrome*.

List flight plans for each departure aerodrome in chronological order of estimated off-block times.

Adhere closely to the data conventions as indicated for the Flight Plan Form (Appendix 3, 1.6) unless otherwise specifically indicated in 7.4.

Insert all clock times in 4 figures UTC.

Insert all estimated elapsed times in 4 figures (hours and minutes).

Insert data on a separate line for each segment of operations with one or more stops, i.e. from any departure aerodrome to the next destination aerodrome even though call sign or flight number is the same for multiple segments.

Clearly identify additions and deletions in accordance with Item H at 7.4. Subsequent listings shall list the corrected and added data, and deleted flight plans shall be omitted.

Number pages by indicating number of page and total number of pages in submission.

Utilize more than one line for any RPL where the space provided for items O and Q on one line is not sufficient.

7.2 A flight shall be cancelled as follows:

- a) indicate a minus sign in Item H followed by all other items of the cancelled flight;
- b) insert a subsequent entry denoted by a plus sign in Item H and the date of the last flight in Item J, with all other items of the cancelled flight unchanged.

7.3 Modification to a flight shall be made as follows:

- a) carry out the cancellation as indicated in 7.2; and
- b) insert a third entry giving the new flight plan(s) with the appropriate items modified as necessary, including the new validity dates in Items I and J.

Note.— All entries related to the same flight will be inserted in succession in the order specified above.

7.4 Instructions for insertion of RPL data

Complete Items A to Q as indicated hereunder.

ITEM A: OPERATOR

INSERT name of operator.

ITEM B: ADDRESSEE(S)

INSERT name of agency(ies) designated by States to administer RPLs for FIRs or areas of responsibility concerned with the route of flight.

ITEM C: DEPARTURE AERODROME(S)

INSERT location indicator(s) of departure aerodrome(s).

ITEM D: DATE

INSERT on each page of submission the date (year, month, day) in a 6-figure group that the listing was submitted.

ITEM E: SERIAL NO.

INSERT serial number of submission (2 numerics) indicating last two digits of year, a dash, and the sequential no. of the submission for the year indicated (start with numeral 1 each new year).

ITEM F: PAGE OF

INSERT page number and total number of pages submitted.

ITEM G: SUPPLEMENTARY DATA AT

INSERT name and appropriate contact details of entity where information normally provided under Item 19 of the FPL is kept readily available and can be supplied without delay.

ITEM H: ENTRY TYPE

INSERT a minus sign (–) for each flight plan that is to be deleted from the listing.

INSERT a plus sign (+) for each initial listing and, in the case of subsequent submissions, for each flight plan not listed in the previous submission.

Note.— No information is required under this item for any flight plan which is unchanged from the previous submission.

ITEM I: VALID FROM

INSERT first date (year, month, day) upon which the flight is scheduled to operate.

ITEM J: VALID UNTIL

INSERT last date (year, month, day) upon which the flight is scheduled to operate as listed, or
UFN if the duration is unknown.

ITEM K: DAYS OF OPERATION

INSERT number corresponding to the day of the week in the appropriate column;
Monday = 1 through Sunday = 7.

INSERT 0 for each day of non-operation in the appropriate column.

ITEM L: AIRCRAFT IDENTIFICATION

(Item 7 of the ICAO flight plan)

INSERT aircraft identification to be used for the flight.

**ITEM M: TYPE OF AIRCRAFT AND
WAKE TURBULENCE CATEGORY**

(Item 9 of the ICAO flight plan)

INSERT appropriate ICAO designator as specified in Doc 8643 — *Aircraft Type Designators*.

INSERT J, H, M or L indicator as appropriate:

- J — SUPER, to indicate an aircraft type specified as such in Doc 8643, *Aircraft Type Designators*;
- H — HEAVY to indicate an aircraft type with a maximum certificated take-off mass of 136 000 kg or more, with the exception of aircraft types listed in Doc 8643 in the SUPER (J) category;
- M — MEDIUM to indicate an aircraft type with a maximum certificated take-off mass of less than 136 000 kg but more than 7 000 kg;
- L — LIGHT to indicate an aircraft type with a maximum certificated take-off mass of 7 000 kg or less.

ITEM N: DEPARTURE AERODROME AND TIME

(Item 13 of the ICAO flight plan)

INSERT location indicator of the departure aerodrome.

INSERT the off-block time, i.e. the estimated time that the aircraft will commence movement associated with departure.

ITEM O: ROUTE

(Item 15 of the ICAO flight plan)

(a) Cruising speed

INSERT the true airspeed for the first or whole cruising portion of the flight in accordance with Item 15 (a) of the ICAO flight plan.

(b) Cruising level

INSERT the planned cruising level for the first or whole portion of the route in accordance with Item 15 (b) of the ICAO flight plan.

(c) Route

INSERT the entire route in accordance with Item 15 (c) of the ICAO flight plan.

**ITEM P: DESTINATION AERODROME AND
TOTAL ESTIMATED ELAPSED TIME**

(Item 16 of the ICAO flight plan)

INSERT location indicator of the destination aerodrome.

INSERT the total estimated elapsed time.

ITEM Q: REMARKS

INSERT items of information as required by the appropriate ATS authority, items normally notified in Item 18 of the ICAO flight plan and any other information pertinent to the flight of concern to ATS.

8. Example of a completed repetitive flight plan (RPL) listing form

[illegible]

- END -