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S T A T U T O R Y I N S T R U M E N T S

2020 No. 18.

THE CIVIL AVIATION (CONSTRUCTION OF INSTRUMENT FLIGHT PROCEDURES) REGULATIONS, 2020

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S T A T U T O R Y I N S T R U M E N T S

2020 No. 18.

The Civil Aviation (Construction of Instrument Flight Procedures) Regulations, 2020

(Under section 61 of the Civil Aviation Authority Act, Cap 354)

IN EXERCISE of the powers conferred on the Minister responsible for civil aviation by section 61 of the Civil Aviation Authority Act, Cap 354, these Regulations are made this 17th day of October 2019.

PART I — PRELIMINARY

1. Title

These Regulations may be cited as the Civil Aviation (Construction of Instrument Flight Procedures) Regulations, 2020.

2. Interpretation

In these Regulations unless the context otherwise requires—

"Act" means the Civil Aviation Authority Act, Cap 354;

"aerodrome operating minima" means the limits of usability of an aerodrome for—

(a) take-off, expressed in terms of runway visual range or visibility and if necessary, cloud conditions;

(b) landing in precision approach and landing operations, expressed in terms of visibility or runway visual range and decision altitude or height as appropriate to the category of the operation;

(c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility or runway visual range and decision altitude or height; and

(d) landing in non-precision approach and landing operations, expressed in terms of visibility or runway visual range, minimum descent altitude or height and, if necessary, cloud conditions;

"aerodrome reference point" means the designated geographical location of an aerodrome;

" Aeronautical chart" means a representation of a portion of the earth, its culture and relief, specifically designated to meet the requirements of air navigation;

"aeronautical data" means a representation of aeronautical facts, concepts or instructions in a formalised manner suitable for communication, interpretation or proceedings;

"aeronautical information" means information which results from the assembly, analysis and formatting of aeronautical data;

"aeronautical information circular" means a notice that contains information that does not qualify for the organisation of a Notice to Airmen or for inclusion in the Aeronautical Information Publication but which relates to flight safety, air navigation, technical, administrative or legislative matters;

"aeronautical information services" means a service established within a defined area of coverage responsible for the provision of aeronautical information necessary for the safety, regularity and efficiency of air navigation;

"air navigation services " means—

(a) air traffic services or air traffic management;

(b) instrument flight procedure design services;

(c) aeronautical information services or aeronautical information management;

(d) aeronautical cartographic services;

(e) aeronautical telecommunication services;

(f) aeronautical meteorological services; and

(g) aeronautical search and rescue services.

"air navigation services provider" means an entity established for the purposes of providing air navigation services;

"Authority" means the Uganda Civil Aviation Authority;

"flight procedure" means the instrument approach procedure or visual approach procedure;

"flight procedure design" means the complete package that includes all the considerations that went into the development of an instrument flight procedure;

"flight procedure design process" means the process of designing instrument flight procedures, leading to the creation or modification of an instrument flight procedure;

"ground validation" means a review of the entire instrument flight procedure design package by a person trained in procedure design and with appropriate knowledge of validation process;

"instrument approach procedure" means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply;

"instrument flight procedure designer" means a person responsible for instrument flight procedure design and meets the competency requirements as specified by the Authority;

"instrument flight procedure design service" means a service established for the design, documentation, validation, maintenance and periodic review of the instrument flight procedures necessary for the safety, regularity and efficiency of air navigation;

"instrument flight procedure design service provider" means a person or organisation that provides an instrument flight procedure design service;

"integrity of aeronautical data" means a degree of assurance that an aeronautical data and its value has not been lost or altered since the data origination or authorised amendment;

"obstacle" means fixed objects and mobile objects, whether temporary or permanent, or parts of the object, that—

(a) are located on an area intended for the surface movement of aircraft;

(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 clearance altitude (OCA) or obstacle clearance height (OCH)" means the lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation, as applicable, used in establishing compliance with the appropriate obstacle clearance criteria.

3. Application

These Regulations apply to a person who provides an instrument flight procedure design service within designated airspaces and at aerodromes for civil aviation purposes.

Part II—Requirements for the Provision of Instrument Flight Procedure Design Service

4. Related documents

These Regulations shall be read together with ICAO Doc 8168 Volumes I and II - Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS).

5. Provision of instrument flight procedure design service

A person shall not provide an instrument flight procedure design service within Uganda unless—

(a) the person holds a certificate issued under the Civil Aviation (Certification of Air Navigation Services) Regulations, 2020; and

(b) the services are provided in accordance with—

(i) the requirements prescribed in these Regulations; and

(ii) the procedures specified in the service providers' manual of air navigation service operations (MANSOPs).

6. Requirements for provision of instrument flight procedure design service

(1) A person shall not design, maintain, review, amend, adapt or publish flight procedures for use in Uganda unless the flight procedures are approved by the Authority and are in accordance with these Regulations.

(2) An instrument flight procedure design service provider designated by the Authority shall—

(a) follow an instrument flight procedure design process that encompasses acquisition of data, design and promulgation of procedures;

(b) assure the quality and safety of the procedure design product through review, verification, coordination and validation of the procedure at appropriate points in the process; and

(c) use the units of measurement specified in the Civil Aviation (Units of Measurement for Air and Ground Operations) Regulations, 2020 in the design of the instrument flight procedures.

7. Instrument flight procedure design operational requirements

The instrument flight procedures design service provider shall—

(a) maintain an appropriate instrument flight procedure design office to enable the flight procedure designer carry out design work in flight procedure design in accordance with these Regulations;

(b) ensure that the designs of instrument flight procedures are in accordance with—

(i) requirements set out in these Regulations;

(ii) the applicable criteria and procedures prescribed by the Authority; and

(c) make provision for persons trained in instrument flight procedure design to check and verify, independently, the plans of each instrument flight procedure designed.

8. Instrument Flight Procedure Design Operations Manual

(1) The instrument flight procedures design service provider shall—

(a) develop and maintain an operations manual which shall serve to demonstrate compliance with the requirements set out in these Regulations; and

(b) submit a copy of the most current operations manual to the Authority for approval.

(2) The contents of the operations manual shall include—

(a) the information required of the instrument flight procedures design service provider as prescribed in these Regulation; and

(b) a description of the instrument flight procedure design service provider's office that shows the roles, responsibilities and job description of the instrument flight procedure design personnel who are responsible for ensuring compliance by the organization with the requirements in paragraph (a).

(3) The instrument fight procedure design service provider shall—

(a) keep the operations manual in a readily accessible form;

(b) ensure that the instrument flight procedure designer has ready access to the operations manual; and

(c) where necessary, amend the operations manual.

9. Procedure design facility requirements

The Instrument flight procedure design service provider shall provide and maintain adequate facilities for carrying out design work on instrument flight procedures under the procedure design certificate, including—

(a) premises and equipment appropriate for the design, design verification, flight validation and maintenance of instrument flight procedures;

(b) access to all necessary data by employees for designing the procedures including—

(i) accurate and current databases or charts detailing terrain and obstacle information;

(ii) accurate and current navigation aid coordinate data; and

(iii) accurate and current aerodrome reference point and threshold data,

(c) ready access to copies of relevant documentation comprising technical standards, practices, and instructions, and any other documentation that may be necessary for the design, design verification, flight validation, and maintenance of the types of instrument flight procedure;

(d) a procedure for controlling all documentation required in paragraph (c) to ensure that—

(i) the documentation is reviewed and authorized by an appropriate person before issue and use;

(ii) current versions of relevant documentation are available to personnel;

(iii) any obsolete document is promptly removed from every point of use; and

(iv) the current version of every item of documentation can be identified to prevent the use of superseded material.

10. Documents and records.

The instrument flight procedure design service provider shall—

(a) establish a mechanism for controlling documents and records relating to the instrument flight procedures on which the designer carries on design work including the policies and procedures for making, amending, preserving and disposing of the documents and records;

(b) at the request of the Authority, make available for inspection the documents and records or copies of the documents or records or extracts.

11. Employment of personnel

The instrument flight procedure design service provider shall—

(a) employ, contract, or engage sufficient personnel to plan, design, verify, and maintain the instrument flight procedures; and

(b) develop job descriptions for its procedure design technical staff.

12. Instrument flight procedure designer training, experience and approval

(1) The instrument flight procedure design service provider shall ensure that the person who designs or amends a flight instrument procedure demonstrates the required competency level for flight procedure design.

(2) The personnel to be recruited as instrument flight procedure designers shall have a high level of experience in aviation gained from different domains.

(3) An instrument flight procedure designer shall acquire and maintain the competency level through training and supervised on-the-job training.

(4) The training for instrument flight procedure designers shall include an initial training and recurrent training at periodic intervals.

(5) The instrument flight procedure designer shall demonstrate a basic level of competency through initial training, which shall include—

(a) knowledge of information contained in International Civil Aviation Organisation (ICAO) Document 8168; Volume II and other related ICAO provisions relevant to Uganda;

(b) skills in the design of procedures; and

(c) competency as outlined in the competency framework for flight procedures designers as prescribed by the Authority.

(6) The instrument flight procedure designer shall demonstrate a basic level of competence through recurrent training which shall include—

(a) knowledge of the updates in the relevant civil aviation regulations and documents pertaining to procedure design; and

(b) maintenance and enhancement of knowledge and skills in the design of procedures.

(7) The designated instrument flight procedure design service provider shall maintain training records for the instrument flight procedure designers.

(8) Only instrument flight procedure designers approved by the Authority shall undertake the design, review and validation of instrument flight procedures for operational use in Uganda.

(9) A person who seeks approval by the Authority, for purposes of sub regulation (8) shall—

(a) provide proof of successful completion of the ICAO PANS-OPS training course applicable to the approval being requested based on the ICAO PANS-OPS criteria;

(b) demonstrate practical application of theoretical knowledge through the design of two instrument flight procedures under the supervision of a qualified designer; and

(c) demonstrate ability to maintain a documented quality assurance process for procedure design.

(10) An instrument flight procedure designer approved by the Authority shall only design instrument flight procedures within the scope of the approval.

13. Instrument flight procedure design

The Instrument flight procedure design service provider shall—

(a) design the instrument flight procedures in accordance with these Regulations and the Procedures for Air Navigation Services - Aircraft Operations (ICAO Doc 8168, Volume II) and other documents as may be prescribed by the Authority;

(b) coordinate with all concerned parties throughout the procedure design and validation process to ensure that the instrument flight procedure meets the needs of the user community;

(c) ensure that each new or revised procedure is verified by a qualified procedure designer other than the one who designed the procedure;

(d) review the published instrument flight procedures at intervals not exceeding five years to ensure that the instrument flight procedures continue to comply with changing criteria and meet user requirements;

(e) ensure the designers develop and maintain instrument flight procedure design documentation that includes—

(i) information required for publication in the Aeronautical Information Publication; and

(ii) details and assumptions made by the instrument flight procedure designer including—

(aa) controlling obstacle for each segment of the procedure;

(bb) effect of environmental considerations on the design of the procedure;

(cc) infrastructure assessment;

(dd) airspace constraints;

(ee) for modifications or amendments to existing procedures, the reasons for any changes;

(ff) for any deviation from existing standards, the reasons for such a deviation and details of the mitigations applied to assure continued safe operations; and

(gg) the results of the final verification for accuracy and completeness prior to validation and publication,

(f) retain the design records for a period not less than the operational lifetime of the procedure;

(g) present all calculations and results of calculations in a manner that enables the reader to follow and trace the logic and resultant output;

(h) keep the records of all calculations in paragraph (g) in order to prove compliance to or variation from the standard criteria;

(i) make final verification of all documentation for accuracy and completeness prior to validation and publication;

(j) retain all documentation for a period of not be less than the operational lifetime of the procedure to assist in recreating the procedure in future in case of incidents and for periodic review and maintenance;

(k) ensure that ground validation is undertaken by a qualified flight procedure designer with appropriate knowledge of flight validation issues;

(l) conduct flight validation whenever the following conditions exist—

(i) the flyability of a procedure cannot be determined by other means;

(ii) the procedure requires mitigation for deviations from design criteria;

(iii) the accuracy or integrity of obstacle and terrain data cannot be determined by other means;(iv) new procedures differ significantly from existing procedures; or

(v) for helicopter Point-in-Space procedures.

14. Integrity of aeronautical data

(1) The instrument flight procedure design service provider shall ensure the integrity of the aeronautical database and aeronautical data used for designing an instrument flight procedure.

(2) The data used in designing an instrument flight procedure shall be up to date, traceable and meet the required level of verifiable accuracy for the design.

15. Procedure design data and information acquisition

(1) The instrument flight procedure design service provider shall ensure that the quality characteristics of data acquired for flight procedure design are known and adequate or that, in the case where the data quality characteristics are unknown or inadequate, data verification is undertaken prior to use.

(2) In conducting obstacle survey for procedure design, the flight procedure designer—

(a) shall account for all the obstacles and items such as trees and heights of tall buildings shall be accounted for either by physical examination of the site or by addition of a suitable margin above terrain contours; and

(b) may adjust the accuracy of the vertical and horizontal data obtained, by adding an amount equal to the specified survey error to the height of the measured obstructions and by making a corresponding adjustment for specified horizontal error.

(3) The procedure design shall be coordinated with the relevant stakeholders and integrated into the design process of the airspace of Uganda, taking into account the air traffic flow, separation minima, airspace user requirements and infrastructure and legal environmental considerations.

16. Ground validation

The instrument flight procedure design service provider shall undertake ground validation in order to arrest any errors in the criteria and documentation, and shall evaluate on the ground, to the extent possible, those elements that shall be evaluated in a flight validation.

17. Quality assurance

The instrument flight procedure design service provider shall implement a quality assurance process for all instrument flight procedure design functions.

18. Competency of flight validation pilots

(1) The instrument flight procedure design service provider shall ensure that the person who conducts flight validation including simulator evaluation is a qualified and experienced flight validation pilot.

(2) A flight validation pilot shall have—

(a) at a minimum, a commercial pilot licence with instrument rating;

(b) the licence for the category of aircraft which is appropriate for the procedure to be validated; and

(c) the experience required for an airline transport pilot in the relevant category of aircraft as described in the Civil Aviation (Personnel Licensing) Regulations, 2020 except that the flight validation pilot shall not have to be the pilot-in-command of the validation flight, and shall not be required to have the type rating on the aircraft used for the validation.

(3) The instrument flight procedures designer shall provide all the data required to conduct a flight validation, flight inspection, and flight simulator evaluation to the entity that conducts the exercise.

19. Approval of instrument flight procedures

(1) An instrument flight procedure for use by civil aircraft within Uganda shall not be published unless the instrument flight procedure is approved by the Authority.

(2) The Authority shall only accept for approval, instrument flight procedures, submitted by an approved flight procedure designer.

(3) Where an instrument flight procedure is designed by an approved procedure designer, independent of the designated instrument flight procedure design service provider, the submission of the instrument flight procedure for approval shall be in accordance with these Regulations.

20. Publication of instrument flight procedure designs

The instrument flight procedure design service provider shall—

(a) provide the instrument flight procedure designs or charts, to the aeronautical information service provider for publication in the Aeronautical Information Publication; and

(b) accompany the instrument flight procedure with a narrative, which describes the procedure in textual format.

21. Use of automation in procedure design and flight validation

(1) The instrument flight procedure design service provider who uses an automated flight procedure design tool shall validate the tool at all times.

(2) Validation of software shall be in accordance with the requirements prescribed by the Authority.

(3) The scope of validation shall include compliance with ICAO PANS-OPS criteria.

(4) The flight validation tools required under this regulation shall include the use of equipment that—

(a) has the precision, and accuracy which is traceable to appropriate standards and which is necessary for the validation being performed;

(b) has known measurement uncertainties including, software, firmware and crosswind uncertainties;

(c) records the actual flight path of a validation aircraft;

(d) is checked before being released for use, and at intervals not exceeding the calibration intervals recommended by the manufacturer, to establish that the system is capable of verifying the integrity of the instrument flight procedure; and

(e) is operated in accordance with the flight validation system procedures and criteria, by persons who are competent and knowledgeable on the system used.

22. Errors in published instrument flight procedures

(1) The instrument flight procedure design service provider who provides an instrument flight procedure service shall establish procedures for recording, investigating, correcting, and reporting any identified error and any identified non-conformance or suspected non-conformance with these Regulations.

(2) The procedure required by sub regulation (1) shall require that—

(a) an instrument flight procedure is immediately withdrawn from operational use if the error or non-conformance affects, or may affect, the safety of an aircraft operation;

(b) the error or non-conformance is corrected, and certified by a person who is authorised by the designated instrument flight procedure design service provider;

(c) the correction required under paragraph (b) is clearly identified and promulgated by the most appropriate means relative to the operational significance of the error or non-conformance; and

(d) the source of the error or non-conformance is identified, and—

(i) if possible, eliminated to prevent a recurrence;

(ii) preventive action is taken to ensure that the source of the error or non-conformance does not affect the integrity of any other instrument flight procedure; and

(iii) the Authority is immediately notified, of a promulgated information incident relating to an error or non-conformance referred to in sub regulation (1).

23. Aerodrome operating minima

(1) The requirements for aerodrome operating minima are as specified in the Civil Aviation (Operation of Aircraft -General Aviation) Regulations, 2020, The Civil Aviation (Operation of Aircraft- Helicopters) Regulations, 2020 and The Civil Aviation (Operation of Aircraft - Commercial Air transport Aeroplane) Regulations, 2020.

(2) The procedures for establishing aerodrome operating minima shall be prescribed by the Authority.

(3) The instrument flight procedure design service provider shall ensure that an obstacle clearance altitude or height (OCA/H) is published

24. Application for exemption

(1) A person may apply to the Authority for an exemption from any provision of these Regulations.

(2) A person who requires an exemption from any provision of these Regulations shall, except in case of emergency, apply to the Authority, at least sixty days before the proposed effective date for the exemptions.

(3) An application for exemption shall contain—

(a) the name and contact address including the telephone number, electronic mail address and fax of the applicant, if any;

(b) a citation of the specific provision or requirement from which the applicant seeks exemption;

(c) justification for the exemption;

(d) a description of the type of operations to be conducted under the proposed exemption;

(e) the proposed duration of the exemption;

(f) an explanation of how the exemption would be in the public interest;

(g) a detailed description of the alternative means by which the applicant shall ensure the level of safety equivalent to that established by the regulation for which exemption is sought;

(h) a safety risk assessment carried out in respect of the exemption applied for;

(i) if the applicant handles international operations and seeks to operate under the proposed exemption, an indication on

whether the exemption contravenes any provision of the Standards and Recommended Practices of the International Civil Aviation Organisation (ICAO); and

(j) any other information that the Authority may require.

(4) Where the applicant seeks emergency processing of an application for exemption, the application shall contain supporting facts and reasons for not filing the application within the time specified in subregulation (2) and justification for considering the application for emergency processing.

(5) The Authority may in writing, reject an application made under subregulation (4), where in the opinion of the Authority, the justification given for emergency processing is not satisfactory.

(6) The application for exemption shall be accompanied by the fee prescribed by the Authority.

25. Review and publication of request for exemption

(1) The Authority shall review the application for exemption referred to in regulation 24 for accuracy and compliance and if the application is satisfactory, the Authority shall publish in the Gazette, the aeronautical information circular or a newspaper with wide circulation, a summary of the application for comments, within a time as may be prescribed.

(2) Where the applicant has not fully complied with the application requirements, the Authority shall, in writing, request the applicant, to comply prior to publication or making a decision under subregulation (3).

(3) Where the request is for emergency relief, the Authority shall publish the decision as soon as possible after processing the application.

26. Evaluation of request for exemption

(1) Where an applicant satisfies the requirements for a request for exemption, the Authority shall evaluate the request to—

(a) determine whether an exemption would be in public interest;

(b) determine, after a technical evaluation, whether the applicant's proposal provides a level of safety which is equivalent to that established by the regulation for which an exemption is sought; and

(c) determine whether granting the exemption contravenes these Regulations.

(2) For the purposes of sub regulation (1) (b), where the Authority determines that a technical evaluation of the request may impose a significant burden on the technical resources of the Authority, the Authority may on that basis, reject the request for exemption.

(3) The Authority shall, based on the evaluation under subregulaton (1), grant or refuse to grant an exemption with conditions or limitations.

27. Approval or rejection of request for exemption

(1) The Authority shall notify the applicant in writing of the decision to grant or refusal to grant an exemption and shall publish a summary of its evaluation and the decision.

(2) The summary referred to in sub-regulation (1) shall specify the duration of the exemption, if any, and the conditions or limitations of the exemption, if any.

(3) Where the exemption affects a significant population of the aviation community, the Authority shall publish the summary in the aeronautical information circular.

28. Compliance with conditions of the exemption

An instrument flight procedure design service provider shall comply with any condition specified by the Authority in the exemption.

29. Validity of an exemption

The validity of an exemption issued under these Regulations shall be dependent on compliance by the instrument flight procedure design service provider with any condition that the Authority may specify in the exemption.

Part IV—Offences and Penalties

30. Penalties

(1) A person who contravenes any provision of these Regulations shall on conviction be liable to a fine not exceeding twelve currency points or to a term of imprisonment not exceeding six months or both, and in case of a continuing contravention, each day of the contravention shall constitute a separate offence.

(2) Where it is proved that an act or omission of any person, which would otherwise have been a contravention by that person of a provision of these Regulations was due to any cause that was not avoidable by the exercise of reasonable care by that person, the act or omission shall not be considered to be a contravention of that provision by that person.

31. Cancellation or suspension of certificate or exemption

In addition to the penalty in regulation 30, the certificate or exemption of the person who is convicted may be cancelled or suspended, as the case may be.

32. Appeal

Where a person is aggrieved by any order made under these Regulations the person may, within twenty one days of receipt of the order, appeal to court against the order.

SCHEDULE

Regulation 2

CURRENCY POINT

A currency point is equivalent to twenty thousand Uganda shillings.

Cross References

1. Civil Aviation (Certification of Air Navigation Services) Regulations, 2020.
2. Civil Aviation (Units of Measurement to be used in Air and ground Operations) Regulations, 2020.
3. Civil Aviation (personnel Licensing) Regulations, 2020
4. Civil Aviation (Operation of Aircraft - General Aviation) Regulations, 2020
5. Civil Aviation (Operation of Aircraft - Helicopters) Regulations, 2020
6. Civil Aviation (Operation of Aircraft - Commercial Air Transport - Aeroplane) Regulations, 2020

ENG. MONICA NTEGE AZUBA,
Minister of Works and Transport.