# KINGDOM OF BAHRAIN Ministry of Transportation and Telecommunications





# **CIVIL AVIATION PUBLICATION 100**

# GUIDANCE for INSTRUMENT FLIGHT PROCEDURE DESIGNER APPROVAL

#### **Forward**

Operation Instruction 2/17 prohibits making designs for Instrument Flight Procedures for aerodromes, heliports, helicopter landing areas (HLAs) or airspace within the Bahrain Flight Information Region (FIR) unless expressly approved to do so by the BCAA. This document provides guidance on the expectations of the BCAA when considering such approval.

ASSD/CAP/100 Page **2** of **17** Issue 1 Rev 0 - December 2017

#### **Contents**

| Forward  | 2  |
|--|----|
| Chapter 1 General Provisions                       | 4  |
| 1 Scope  | 4  |
| 2 Definitions and Acronyms                         | 4  |
| 3 Recommendations for Entities Requesting Approval | 4  |
| 4 Applications for Approval                        | 5  |
| 5 Issue and Validity of Approval                   | 6  |
| 6 Privileges of Approval                           | 6  |
| Chapter 2 CERTIFICATION REQUIREMENTS               | 6  |
| 2 Training   | 7  |
| 3 Facility Requirements                            | 8  |
| 4 Documentation                                    | 8  |
| 6. IFP Design Process                              | 10 |
| 7 Design Standards                                 | 10 |
| 8. IFP Acceptance                                  | 11 |
| 9. Environmental Considerations                    | 11 |
| 10 Validation of IFP                               | 11 |
| 11 Ground Validation                               | 12 |
| 12 Flight Validation                               | 12 |
| 13 Maintenance of IFP's                            | 14 |
| 14 IFP Records                                     | 14 |
| 15. Safety and Quality Management System           | 15 |
| 16 Safety Inspections and Audits                   | 15 |
| 17 Organizational Exposition                       | 15 |
| Appendix 1 Application Form                        | 17 |

#### **Chapter 1 General Provisions**

#### 1 Scope

- 1.1. This CAP provides information and guidance for:
- 1.1.1. The approval of an Organization and/or person who are, or want to become an Instrument Procedure Designer (APD);
- 1.1.2. Instrument Flight Procedure (IFP) acceptance procedure;
- 1.1.3. Validation of IFP;
- 1.1.4. Maintenance of IFP, and
- 1.1.5. Training Requirements for Approved Procedure Designers (APD).
- 1.2. The aim of this document is to provide guidance on the BCAA's expectations that Instrument Flight Procedures (IFPs):
- 1.2.1. Are designed in accordance with the appropriate standard as recommended in Chapter 2 part 7 of this CAP;
- 1.2.2. Are safe and flyable;
- 1.2.3. Meet Air Traffic Management requirements; and
- 1.2.4. Are environmentally acceptable.

#### 2 Definitions and Acronyms

2.1 Definitions existing in ICAO Documents (as per Chapter 2 Part 4) form part of this CAP, supplemented by the definitions contained in CAR003. Where there are differences between the definitions in the sources, CAR003 has precedence.

#### 3 Recommendations for Entities Requesting Approval

- 3.1 For the purpose of this CAP, an Approved Procedure Designer (APD) may be either:
- 3.1.1. An organization employing one or more suitably qualified individuals; or
- 3.1.2. A suitably qualified individual.
- 3.2 No person shall make an Instrument Flight Procedure for the Bahrain FIR except under the authority of, and in accordance with the provisions of, a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace (as per Operation Instruction 2/17).
- 3.3 For the purpose of this CAP, an Approved Procedure Designer (APD) is a person who has met the BCAA competency recommendations and holds a BCAA approval for the design of

ASSD/CAP/100 Page **4** of **17** Issue 1 Rev 0 - December 2017

instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace within the Bahrain FIR.

- 3.4 For the purpose of this CAP, a Proponent is defined as an aerodrome certificate holder, or a representative there-of, or an ANSP, who proposes a new IFP, or a change to or withdrawal of, an IFP.
- 3.5 For the purpose of this CAP, an Instrument Flight Procedure (IFP) is:
- 3.5.1. A Standard Instrument Arrival (STAR), or
- 3.5.2. A Standard Instrument Departure (SID), or
- 3.5.3. An Instrument Approach Procedure (IAP), or
- 3.5.4. An MSA or TAA, or
- 3.5.5. Holding procedure, or
- 3.5.6. A visual flight procedure, or
- 3.5.7. An ATS route
- 3.5.8. Items 3.5.6 and 3.5.7 above do not apply to procedures used solely by aircraft operating under Visual Flight Rules.

#### 4 Applications for Approval

- 4.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should complete form ADP 01 (In Appendix 1 to this CAP) and submit it to the BCAA Director of Aviation Safety & Security.
- 4.2 All elements of the form should be completed and should include:
- 4.2.1. A written statement setting out the name, qualifications and relevant experience of the individual who is proposed to be the chief designer for the applicant's organization; and
- 4.2.2. A written statement setting out the qualifications and relevant experience of any other member of the applicant's personnel whose duties would, if the approval were granted to the applicant, include carrying on design work under the approval; and
- 4.2.3. A copy of the operations manual under which the applicant proposes to design, or engage in design work on, terminal instrument flight procedures of the type or types concerned (when such a manual is used).
- 4.2.4. An organizational exposition as recommended by Chapter 2 part 17.
- 4.3 If an applicant has previously been granted a procedure design approval, and the approval was cancelled, the applicant must include with the application any information to show that the applicant could now properly design IFP's of the type or types concerned.
- 4.4 The form ADP 01 may be submitted in either electronic or paper form along with the exposition recommended by Chapter 2 part 17, and payment of the appropriate fee specified by the BCAA.

ASSD/CAP/100 Page **5** of **17** Issue 1 Rev 0 - December 2017

#### 5 Issue and Validity of Approval

- 5.1 An applicant is entitled to an approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace if:
- 5.1.1. The applicant and persons holding positions listed in Chapter 2 part 1.1.2-4 are acceptable to the

Authority; and

- 5.1.2. The organizations exposition as recommended by Chapter 2 part 17 is acceptable to the Authority; and
- 5.1.3. The Authority is satisfied that the granting of the approval is not contrary to the interests of aviation safety.
- 5.2 The BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace remains in force until it expires, is suspended or revoked.
- 5.3 The holder of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace that expires, is suspended or is revoked should surrender the certificate of approval to the Authority.
- 5.4 The validity of the approval is based upon the continued operation in accordance with Civil Aviation Regulations, Civil Aviation Publications, Directives and Information Bulletins published by the Authority.
- 5.5 The approval will remain valid subject to periodic surveillance audits conducted at the discretion of the Director Aviation Safety & Security confirming ongoing maintenance of the accepted standards.
- 5.6 The Authority should undertake a complete approval review at least once in every three year period following the issue of an approval.

#### 6 Privileges of Approval

6.1 The BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace will specify the Instrument Procedure Design Services that the approval holder is authorized to provide.

#### **Chapter 2 CERTIFICATION REQUIREMENTS**

#### 1. Personnel Requirements

- 1.1 The applicant for BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should engage, employ or contract (depending on the size of the organization):
- 1.1.1. A person identified as the Chief Executive, who has the authority within the applicant's organization to ensure that the service listed in its exposition can be financed and is provided in accordance with the recommendations of this CAP; and

ASSD/CAP/100 Page **6** of **17** Issue 1 Rev 0 - December 2017

- 1.1.2. A Chief Designer who is responsible for ensuring that the organization complies with the design criteria recommendations of this CAP, who authorizes the IFP for promulgation and use; and
- 1.1.3. An accountable manager responsible for ensuring that the organization complies with the training and certification recommendations of this CAP; and
- 1.1.4. An accountable manager responsible for the provision of a safety management system according to the requirements of ANTR Volume III Part 19; and
- 1.1.5. Sufficient personnel to manage, supervise, and support the APD.
- 1.2 Qualifications and experience details for the persons nominated by the applicant for the positions listed in Chapter 2, 1.1 above should be forwarded to the Authority for acceptance prior to the person being named in that position by the applicant.
- 1.3 The persons listed in Chapter 2, 1.1.4 above should ultimately be responsible to the Chief Executive.
- 1.4 The applicant should establish procedures to:
- 1.4.1. Ensure the competence of those personnel who:
- a) Supervise personnel providing the IPD services; and
- b) Provide the Instrument Procedure Design services listed in the applicant's exposition.
- 1.4.2. Provide training and assessment for those Instrument Procedure Design services in accordance with the recommendations of Chapter 2 part 2 of this CAP; and
- 1.4.3. Provide immediate design support for those Instrument Procedure Design services; and
- 1.4.4. Provide personnel listed in Chapter 2 part1.1. 2-4 with written evidence of the scope of their authorization; and
- 1.4.5. Ensure that those personnel hold, where appropriate, current qualifications.

#### 2 Training

- 2.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should establish a training program for staff that is developed, implemented and evaluated in accordance with a competency based approach.
- 2.2 Details of such an approach are described in ICAO Document 9906, The Quality Assurance Manual for Flight Procedure Design, Volume II.
- 2.3 An IPDSP should establish procedures, in accordance with the requirements of ICAO Document 9906, The Quality Assurance Manual for Flight Procedure Design, Volume II to ensure that the initial training of APDs ensures that the individual is able to demonstrate an acceptable level of competency in at least the following aspects:
- 2.3.1. Applicable IFP design software where applicable; and
- 2.3.2. Skill in designing IFP; and
- 2.3.3. ICAO DOC 8168, Volumes I and II; and

ASSD/CAP/100 Page **7** of **17** Issue 1 Rev 0 - December 2017

- 2.3.4. Other relevant ICAO Documents as specified in Chapter 1 part 4 below.
- 2.4 An ADP should establish procedures to ensure the ongoing competency of designers in accordance with the requirements of ICAO PANS-OPS Document 8168, Volume II, Part 1, Section 2, Chapter 4 and ICAO DOC 9906 Volume II.

#### **3 Facility Requirements**

3.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should establish offices and facilities that are appropriate for the Instrument Procedure Design service/s listed in their exposition.

#### **4 Documentation**

- 4.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should:
- 4.1.1. Document the format and standards for the IFP designed under the authority of their approval; and
- 4.1.2. Hold copies of relevant reference materials, standards, practices and procedures, and any other documentation that is necessary for the IFP service listed in their exposition.
- 4.2 These documents should include, but not be limited to:
- 4.2.1. Annex 2,
- 4.2.2. Annex 4,
- 4.2.3. Annex 5,
- 4.2.4. Annex 6,
- 4.2.5. Annex 10,
- 4.2.6. Annex 14,
- 4.2.7. Annex 15,
- 4.2.8. ICAO DOC 4444,
- 4.2.9. ICAO DOC 7030,
- 4.2.10. ICAO Doc 8071,
- 4.2.11. ICAO Doc 8126.
- 4.2.12. ICAO Doc 8168 VOL I, ICAO Doc 8168 VOL II,
- 4.2.13. ICAO Doc 8697,
- 4.2.14. ICAO Doc 9274,
- 4.2.15. ICAO Doc 9365
- 4.2.16. ICAO Doc 9368.
- 4.2.17. ICAO Doc 9371,
- 4.2.18. ICAO DOC 9501,
- 4.2.19. ICAO DOC 9613,
- 4.2.20. ICAO DOC 9643,
- 4.2.21. ICAO DOC 9674,

ASSD/CAP/100 Page **8** of **17** Issue 1 Rev 0 - December 2017

- 4.2.22. ICAO DOC 9708
- 4.2.23. ICAO DOC 9849,
- 4.2.24. ICAO DOC 9905,
- 4.2.25. ICAO DOC 9906 Volume I, ICAO DOC 9906 Volume II.
- 4.2.26. ICAO DOC 9931
- 4.2.27. Bahrain CAR 003
- 4.2.28. Bahrain ANTR Volume III Part 19
- 4.3 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should establish a procedure to control all the documentation required by Chapter 2, 4.1.2, to ensure that:
- 4.3.1. The documentation is reviewed and authorized by appropriate personnel before issue; and
- 4.3.2. Current issues of relevant documentation are available to staff at all locations where they need access to such documentation for the flight procedure design service listed in their exposition; and
- 4.3.3. All obsolete documentation is promptly removed from all points of issue or use; and
- 4.3.4. Changes to documentation are reviewed and approved by appropriate personnel; and
- 4.3.5. The current version of each item of documentation can be identified to preclude the use of out of date editions.

#### 5 Criteria for the Approval of ADPs.

- 5.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should provide evidence of the following:
- 5.1.1. Specialist procedure design training in accordance with a competency based approach. (One such an approach is described in ICAO Document 9906, Volume II, Flight Procedure designer Training);
- 5.1.2. Proof of successful completion of a PANS-OPS training course based on ICAO PANS OPS Document 8168 conducted by an organization or qualified individual acceptable to the ASSD of the BCAA.
- 5.1.3. Where no formal training course has been completed, the BCAA may accept evidence of a comprehensive in–house training and development program under the supervision of an APD.
- 5.1.4. Evidence of recent IFP design work which should include evidence of specific designs that have been approved for use;
- 5.1.5. Appropriate references if experienced outside of Bahrain;
- 5.1.6. Aviation experience, including a working knowledge of ATM, ATC, ATFM and ASM.
- 5.2 In addition, each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should include a statement indicating knowledge of:
- 5.2.1. Navigation, navigation systems and geography to the level of an instrument rated pilot;
- 5.2.2. Aircraft operations and performance;
- 5.2.3. AIS and understanding of Annex 15 requirements;

ASSD/CAP/100 Page **9** of **17** Issue 1 Rev 0 - December 2017



- 5.2.4. Aerodrome safeguarding and Annex 14 obstacle surface requirements;
- 5.2.5. Geodetics.
- 5.3 Each application for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should include a copy of:
- 5.3.1. An acceptable Quality management system (QMS) in accordance with ICAO PANS-OPS DOC 8168 Volume II, Chapter 4, Quality Assurance; and ICAO Document 9906, Volume 1, Quality Assurance Manual for Flight Procedure Design;
- 5.3.2. An acceptable Safety Management System (SMS) in accordance with ANTR Volume III Part 19.

#### 6. IFP Design Process

- 6.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should provide evidence of the following process being followed for all IFPD services:
- 6.1.1. Conceptual design, including planned implementation dates, and resources needed to achieve the task where appropriate and required by the Authority;
- 6.1.2. The FPD, including the procedure layout, the relevant calculation outputs, coordinates and a textual description of the intended procedure, draft IFP charts and ARINC 424 path terminators where applicable;
- 6.1.3. Validation and verification reports for the IFP;
- 6.1.4. Approval of the procedure by the authority as recommended in this CAP; and
- 6.1.5. Documentation throughout the various stages from the input through the publication process.
- 6.2 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should document the effective date and AIRAC of the aeronautical information used in the design.
- 6.3 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports and airspace should document the obstacle and terrain data used in the design.

#### 7 Design Standards

- 7.1 Responsibility for the design of IFPs has been vested in the Civil Aviation Affairs.
- 7.2 IFPs should be designed in accordance with the guidance contained within ICAO PANS-OPS

ASSD/CAP/100 Page **10** of **17** Issue 1 Rev 0 - December 2017

DOC 8168 Volume II and or ICAO DOC 9905 as appropriate, as supplemented by information contained within the Bahrain AIP, and any variations from these documents approved by the BCAA.

- 7.3 IFPs should be designed in accordance with the processes detailed in Chapter 2, 6.1 of this CAP, and with respect to consultation with stakeholders in the affected airspace.
- 7.4 IFPs should also be designed in compliance with the requirements of any BCAA ATM Strategic Plan or policy and any BCAA PBN Plan or policy.

#### 8. IFP Acceptance

- 8.1 The IFPs acceptance are based upon the following:
- 8.1.1. BCAA has approved the APD through evaluation of their training, APD experience, quality procedures and working practices as specified in this CAP;
- 8.1.2. BCAA evaluation and acceptance of completed IFP designs and documentation as described in this CAP.
- 8.2 The BCAA will only accept IFP designed by an approved APD.
- 8.3 The ASSD will maintain a list of approved APDs.
- 8.4 An approved APD may only design procedures for navigation aids or navigation systems shown in the scope section of their approval.
- 8.5 Proposed new routes or amendments to existing routes should be submitted to the Authority supported by an evaluation from an APD.

#### 9. Environmental Considerations

- 9.1 Consideration should be given in the design of IFPs to the effect of the design on the environment, and also to the environmental policy of the Bahrain Government and BCAA (as published).
- 9.2 All terminal IFP should be designed to consider continuous climb and descent operations.

#### 10 Validation of IFP

- 10.1 The validation of conventional and RNAV IFPs is required under:
- 10.1.1. ICAO PANS-OPS Document 8168, Volume II,
- 10.1.2. ICAO Document 8071, Volumes I and II,
- 10.1.3. ICAO Document 9906, Volume I

ASSD/CAP/100 Page **11** of **17** Issue 1 Rev 0 - December 2017

- 10.2 The IFP design process starts with the collection of relevant data, proceeds through the design phase then ground and/or flight validation prior to publication.
- 10.3 Therefore validation should occur at the collection of data phase, the ground and/or flight validation stage and, in the case of RNAV IFP, the validation of the navigation database ARINC 424 coding instructions.
- 10.4 An APD should establish procedures to ensure that data required for the design of an IFP meets the requirements of ICAO Document 9906, Volume I, Paragraph 7.2.
- 10.5 An APD should prepare an IFP validation package to enable an Independent APD to carry out a Ground validation of the IFP.
- 10.6 The package should include:
- 10.6.1. A plan view of the final approach obstacle evaluation,
- 10.6.2. Complete documentation identifying obstacles, obstructions and terrain relevant to the IFP, including identifying the controlling obstacle/terrain,
- 10.6.3. Narrative description of the IAP, segment by segment.
- 10.6.4. Plan and profile views of the IAP.
- 10.6.5. Data relating to each fix and holding pattern involved in the IAP,
- 10.6.6. Confirmation that Navigation aid coverage, if applicable, is satisfactory,
- 10.6.7. Draft chart of the procedure suitable for use by the flight validation crew.

#### 11 Ground Validation

- 11.1 Ground validation of any new or amended IFP's is required and should be conducted by an Independent APD.
- 11.2 Where procedures share common segments, these need only be assessed once.
- 11.3 Any concerns or changes required by the Independent APD should be communicated to the APD who should determine whether or not the IFP should be revised. Such concerns or changes should be included in the IFP documentation.

#### 12 Flight Validation

12.1 A flight validation should be carried out for the initial certification of an IFP based on ground navigation aids and in other IFP's when the ground validation determines it is necessary or when determined as necessary by the Authority. Flight validation would normally be the responsibility of the entity requesting the design work.

ASSD/CAP/100 Page **12** of **17** Issue 1 Rev 0 - December 2017

- 12.2 In the case of a RNAV IFP, the Authority may consider requiring only a flight simulator flyability and crew workload check to be part of the validation process. The Proponent should request authorization for a flight simulator validation in lieu of flight validation for every applicable RNAV IFP that will be considered for exemption from flight validation. For RNP AR IFPs a full flight simulator test database produced by a navigation database supplier should be used. The navigation database suppliers must comply with RTCA/DO-200A and be in possession of a Type 2 Letter of Acceptance (LOA), issued by the appropriate regulatory authority.
- 12.3 The Authority may consider requiring a flight validation to be part of the validation process for RNAV IFPs in, but not limited to, the following situations:
- 12.3.1. The IFP does not comply with PANS-OPS criteria, or
- 12.3.2. The IFP requires speed restrictions to be applied, or
- 12.3.3. Where segment lengths are significantly shorter than PANS-OPS optimum lengths; or
- 12.3.4. Descent gradients are steeper than 3.5° for precision approaches or 6.1° for non-precision approaches; or
- 12.3.5. The IFP is to be used in an obstacle rich environment; or
- 12.3.6. There is a SDF in the final approach segment; or
- 12.3.7. Track changes at a fix of 90° or more on an RNAV IFP, and
- 12.3.8. All RNP AR IFP.
- 12.4 The objective of a flight validation is to:
- 12.4.1. Verify the obstacle that is determined as the controlling obstacle for each segment and to check that no new obstacles have been erected since the IFP was created, or that no obstacle details are grossly inaccurate, to the extent that it may affect the IFP; and
- 12.4.2. Prove the fly-ability of an IFP whose ground validation caused some concern about track adherence or crew workload.
- 12.5 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should establish procedures to ensure that flight validation is carried out by an organization acceptable to the Authority.
- 12.6 When required by the introduction of new ground based navigation facilities to be incorporated in an IFP, a flight inspection of the required navigation aids should take place prior to the flight validation taking place.
- 12.7 Flight validations for obstacle validation should take place in daylight, in VMC and flown at the minimum published altitudes for the relevant segments of the IFP.
- 12.8 The final approach segment should be flown 100ft below MDA on a non-precision approach and ½ scale deflection low, according to the DA, on a precision approach or APV approach.

ASSD/CAP/100 Page **13** of **17** Issue 1 Rev 0 - December 2017

- 12.9 Flight Validation at night should take into consideration the factors identified in ICAO DOC 8071 Volume I, paragraph 1.16 —Flight Inspection at Night.
- 12.10 All segments of an instrument approach procedure that is below the Minimum Sector Altitude (MSA) should be flown.

#### 13 Maintenance of IFP's

- 13.1 Each Proponent should ensure that each IFP designed under their responsibility is reviewed whenever:
- 13.1.1. There is a change to the obstacle environment which may affect the IFP,
- 13.1.2. There is a change in navigation aid provision which may affect the IFP,
- 13.1.3. There is a change in airspace that may affect the IFP,
- 13.1.4. There is a change in any other factor that may affect the IFP,
- 13.1.5. A period of 5 years has lapsed since the IFP was designed or last reviewed.

#### 14 IFP Records

- 14.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should establish and maintain appropriate documents to support their IFP submission. These should include, but not be limited to the following documents:
- 14.1.1. Reference to all source documentation;
- 14.1.2. Reference to all source data;
- 14.1.3. Reference to all source geographical charts/data;
- 14.1.4. Reference to the appropriate AIRAC validity of the Bahrain AIP aeronautical data used;
- 14.1.5. Reference to atmospheric conditions used;
- 14.1.6. References to any differences to ICAO DOC 8168 Volume II and if appropriate ICAO DOC 9613 and DOC 9905. Any differences should include an appropriate approval obtained from the BCAA;
- 14.1.7. Reference to any specific requirements and/or instructions;
- 14.1.8. Reference to mountainous terrain if appropriate;
- 14.1.9. Reference to any speed and/or altitude restrictions;
- 14.1.10. For all PBN IFP, ARINC 424 database coding;
- 14.1.11. Draft AIP submission; and
- 14.1.12. Draft IFP Chart in accordance with ANNEX 4.
- 14.2 The documentation in 14.1 above becomes the property and hence the responsibility of the Proponent once the APD has officially signed over the documentation to the Proponent. Thereafter the APD would only be responsible to store a record of the official handover form signed by both parties.

ASSD/CAP/100 Page **14** of **17** Issue 1 Rev 0 - December 2017

14.3 All records related to an IFP should be retained for a period of 2 years beyond the date at which the IFP is replaced or withdrawn from use.

#### 15. Safety and Quality Management System

- 15.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports, HLA's and airspace should provide:
- 15.1.1. An acceptable Quality management system (QMS) in accordance with ICAO PANS-OPS DOC 8168 Volume II, Chapter 4, Quality Assurance; and ICAO Document 9906, Volume 1, Quality Assurance Manual for Flight Procedure Design.
- 15.1.2. An acceptable Safety Management System (SMS) in accordance with ANTR Volume III Part 19.

#### **16 Safety Inspections and Audits**

16.1 BCAA may conduct audits of an APD at any time and at its discretion.

#### 17 Organizational Exposition

- 17.1 Each applicant for the grant of a BCAA approval for the design of instrument flight procedures (IFPs) for aerodromes, heliports and airspace should provide an exposition containing:
- 17.1.1. A statement signed by the Head of the APD on behalf of the applicant's organization confirming that the exposition and any included manuals define the organization and demonstrate its means and methods for ensuring ongoing meeting of the expectations described in this CAP; and
- 17.1.2. the exposition and any included manuals are required to be complied with by its personnel at all times; and
- 17.1.3. that the organisation has sufficient financial strength to provide the services contained within the organisation's exposition; and
- 17.1.4. the titles and names of the person or persons recommended by Chapter 2 part 1.1. 2-4; and
- 17.1.5. The duties and responsibilities of the person or persons specified in the above Chapter2 part 1.1. 2-4, including matters for which they have responsibility to deal directly with the Authority on behalf of the organization; and
- 17.1.6. An organisation chart showing lines of responsibility of the persons specified in Chapter 2 part 1.1; and
- 17.1.7. Details of the applicant's staffing structure; and
- 17.1.8. A document matrix detailing where the recommendations of Chapter 2, part 1 to part 4, part 6 and parts 9 to 14, are contained within the organizations operational manuals.

ASSD/CAP/100 Page **15** of **17** Issue 1 Rev 0 - December 2017

- 17.1.9. Procedures to control, amend and distribute the exposition.
- 17.2 The applicant's exposition should be acceptable to the Authority.
- 17.3 Should the applicant be unable to demonstrate any aspect of the guidance as to the BCAA's expectations described in this CAP, the applicant's exposition should contain an explanation and/or mitigation for that situation.

ASSD/CAP/100 Page **16** of **17** Issue 1 Rev 0 - December 2017

### **Appendix 1 Application Form ADP01**

| Applicant:                 |  |
|----------------------------|--|
| Organization:              |  |
| Address:                   |  |
| Contact:                   |  |
| Supporting Documents list: |  |
|                            |  |
|                            |  |
|                            |  |
|                            | the authorized representative of the Applicant, do hereby apply ed Procedure Designer. I further affirm that the information correct at the time of application. |
|                            |  |
|                            |  |
| Signed:                    | Date:  |
| Position:                  |  |
|                            |  |
|                            |  |

Address for service: Director, Aviation Safety & Security, Civil Aviation Affairs, PO Box 586, Manama, Kingdom of Bahrain. <a href="http://www.mot.gov.bh">http://www.mot.gov.bh</a> Fax: +973 17 329983

ASSD-OF33-AANR (Rev. 0 - 17/1/2018)



# **Application Form ADP01**

| Applicant:                 |  |
|----------------------------|--|
| Organization:              |  |
| Address:                   |  |
| Contact:                   |  |
| Supporting Documents list: |  |
|                            |  |
|                            |  |
|                            |  |
|                            | chorized representative of the Applicant, do hereby apply cedure Designer. I further affirm that the information t at the time of application. |
| Signed:                    | Date:  |
|                            | Date.  |
| Position:                  |  |
|                            |  |
|                            |  |
|                            |  |

Address for service: Director, Aviation Safety & Security, Civil Aviation Affairs, PO Box 586, Manama, Kingdom of Bahrain. <a href="http://www.mot.gov.bh">http://www.mot.gov.bh</a> Fax: +973 17 329983