

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
FOURTH MEETING OF THE DIRECTORS OF CIVIL AVIATION
OF THE CENTRAL CARIBBEAN**

(Cayman Islands, 17 - 20 May 2000)

Agenda Item 2: Results of the CAR/SAM/3 RAN

**Results of the Regional Air Navigation Meeting CAR/SAM/3
in the area of Aerodrome Operational Planning (AOP)**

(Presented by the Secretariat)

Summary

In this working paper, ICAO presents to the meeting the results achieved by the Regional Air Navigation Meeting CAR/SAM/3 in the area of Aerodrome Operational Planning (AOP).

Reference: Preliminary Report of the Third Caribbean/South American Regional Air Navigation Meeting (Buenos Aires, October 1999)

1. INTRODUCTION

1.1 The Third Caribbean/South American Regional Air Navigation Meeting (CAR/SAM/3 RAN) was held by ICAO in October 1999 in Buenos Aires, Argentina. At this meeting the Aerodrome Operational Planning (AOP) Committee dealt with the following subjects under Items 2, 3 and 4 of the agenda:

Item 2 – Location of Regular and Alternate Aerodromes

Item 3 – Aerodrome Planning

Item 4 – Aerodrome Services

This paper contains a description of the topics covered at the meeting for the information of this meeting. The recommendations and conclusions adopted in each area, including the list of aerodromes and Table AOP 1, are contained in **Appendices A, B and C** for agenda items 2, 3 and 4 respectively.

1.2 A new format for the CAR/SAM Air Navigation Plan was adopted at this regional air navigation meeting which consists of two volumes: Volume I – Basic Air Navigation Plan (ANP) and Volume II – Facilities and Services Implementation Document (FASID). In relation to the AOP part, the list of regular and alternate aerodromes is contained in the Basic ANP and Table AOP 1 of aerodrome physical characteristics, radio aids and visual aids is contained in the FASID.

1.3 One State and several Territories of this meeting of Directors of Civil Aviation of the Central Caribbean did not participate directly in the AOP Committee at the CAR/SAM/3 RAN. For this reason it is considered essential that those States and Territories which were absent from the AOP Committee be aware of the topics which were discussed, as well as the recommendations and conclusions that were adopted for the operational planning of aerodromes in the region. For those States and Territories which did participate in the AOP Committee, this is an opportunity to review the results and note any changes which have been identified after the meeting. In particular, the content of the list of aerodromes and the planned requirements for aerodromes contained in the Table AOP 1 need to be reviewed by all States and Territories with the objective of proposing any necessary amendments to correct the information for the aerodromes.

1.4 It is planned to hold an informal meeting in the field of aerodromes (AGA/AOP) between 26 and 28 July 2000. The meeting will be held in the ICAO Regional Office in Mexico City and the working language for the meeting shall be Spanish. States and Territories are encouraged to participate in this meeting and that an Aerodromes representative be sent to the informal meeting to review the AOP part of the revised CAR/SAM ANP/FASID and to discuss pertinent technical issues in the AGA field.

2. AGENDA ITEM 2 - LOCATION OF REGULAR AND ALTERNATE AERODROMES

2.1 On the basis of the information available, the Meeting developed a list of aerodromes required for regular use by international commercial air transport and international general aviation aircraft.

2.2 Operations at regular aerodromes required for international commercial air transport were examined in order to select appropriate aerodromes to serve as alternates to each regular aerodrome. This selection of alternate aerodromes was based primarily on safety considerations and took into account such factors as route stage distances, aircraft types, meteorological conditions, economic considerations, where applicable, and the capability and availability of suitable alternates in the States concerned. Wherever possible, regular aerodromes were selected as alternates. Where this was not possible, additional aerodromes were selected.

2.3 The list of regular and alternate aerodromes in the Central Caribbean region approved by the meeting is contained in Appendix A to this paper and the regular aerodromes and their designation, contained in column 1 of the list, are contained in Part III of the CAR/SAM Basic Air Navigation Plan (ANP).

3 AGENDA ITEM 3 - AERODROME PLANNING

3.1 The Table AOP 1 of the Air Navigation Plan concerning physical characteristics, radio aids for approach and landing, rescue and fire fighting and visual aids as well as provision of reports of runway visual range at the aerodromes is intended to be used for planning purposes.

3.2 The ICAO Air Navigation Commission had agreed on the use of a standard format for Table AOP 1 of all Air Navigation Plans (ANPs) which introduced several new concepts. Some of the more significant changes introduced in the new format of Table AOP 1 compared to the old format are:

- a) introduction of required rescue and fire fighting service (RFF) category;
- b) inclusion of air traffic service requirements;
- c) use of the critical aircraft all-up-mass to indicate pavement strength requirements;
- d) a new method of indicating requirements in respect of visual approach slope indicators;
and
- e) inclusion of requirements related to Runway Visual Range (RVR).

3.3 The Meeting reviewed the requirements for each of the aerodromes in the Table AOP 1. The examination took into account the critical aircraft, route stage distances, the mass of the aircraft as well as the other relevant data available at the meeting. The Meeting developed its recommendations for the Table AOP 1 on a technical basis keeping in view the projected traffic growth.

3.4 The Table AOP 1 (including information on alternate aerodromes discussed under Agenda Item 2) for aerodromes in the Central Caribbean region approved by the meeting is contained in Appendix B- to this paper and in Part III of the CAR/SAM facilities and services implementation document (FASID). The Meeting recognized that the Table AOP 1 would require periodical revisions for updating it and formulated a recommendation on the implementation of planned requirements for facilities and services for aerodromes. In relation to the follow-up of this action, the following recommendations are proposed:

Draft Recommendation 4/a – Action for Aerodromes Departments

That the Directors of Civil Aviation pass this paper on to the Aerodromes departments in their administrations, of their respective States and Territories, so that they will be aware of the topics which were covered, as well as the recommendations and conclusions that were adopted for the operational planning of the aerodromes. In particular, the content of the list of aerodromes and the planned requirements for aerodromes contained in the Table AOP 1 need to be reviewed with the aim to propose any necessary amendments to correct this information.

Draft Recommendation 4/b – Participation in the AGA/AOP Informal Meeting

That the Directors of Civil Aviation of Spanish speaking States/Territories of the Central Caribbean note the AGA/AOP Informal Meeting planned between 26 and 28 July 2000 in Mexico and prepare for their participation with an Aerodromes representative, of their respective States and Territories*, to review the AOP part of the CAR/SAM ANP/FASID and also to discuss various technical issues pertinent to the aerodromes field.

4. AGENDA ITEM 4 - AERODROME SERVICES

4.1 General

4.1.1 The Meeting was advised that this agenda item on the facilities and services required at aerodromes was an important one in view of its close link to the issue of shortcomings and deficiencies in the Air Navigation field in the CAR/SAM Region. It was noted that the CAR/SAM Planning and Implementation Regional Group (GREPECAS) had reviewed the implementation of ICAO provisions, amongst others, in the AGA field. The aerodromes topics discussed included the following:

- Shortcomings and deficiencies
- Implementation of physical characteristics and visual and non-visual aids
- Aerodrome Equipment, Installations and Services
- Condition of the movement areas - runway surface unevenness and runway surface friction characteristics
- Removal of disabled aircraft
- Rescue and fire fighting services
- Planning for aerodrome emergencies
- Bird hazard control and reduction
- Secondary power supply
- Fencing and Security Lighting
- Maintenance
- Land use and environmental control

* The English language States and Territories of the Central Caribbean region are invited to the Eastern Caribbean informal working group meeting where an item on Aerodromes will be included in the agenda.

4.2 Shortcomings and Deficiencies

4.2.1 The Meeting noted that the CAR/SAM Planning and Implementation Regional Group (GREPECAS) had held meetings with the view to encourage States and Territories to implement the recommendations of the previous RAN meetings. In addition to the list of shortcomings and deficiencies in the physical characteristics, visual and non-visual aids and aerodrome rescue and fire fighting services maintained by the ICAO regional offices, useful information had also been received from IFALPA and IATA. GREPECAS noted that States and Territories were not giving high priority to implement and upgrade some facilities and services, and stressed the need for greater commitment with the view to eliminate the shortcomings and deficiencies.

4.2.2 The Meeting considered a working paper on shortcomings and deficiencies. It was, however, observed that some of the shortcomings and deficiencies were somewhat outdated as necessary rectification works were in progress or had been completed. Consequently, it was felt that the list needed to be updated. Additionally, in view of limited participation in the meeting, it was not possible to discuss the shortcomings and deficiencies in detail and, therefore, it was recommended that it should be taken up during the next GREPECAS meeting. Considering the importance of the subject, the Meeting developed a recommendation on the identification of air navigation specific shortcomings and deficiencies:

4.2.3 The process for the identification and monitoring of shortcomings and deficiencies in the field of Aerodromes in the region has been neglected which is evidenced by the incomplete and out of date information contained in the existing table of shortcomings and deficiencies, contained in Appendix C to this paper. In the interest of airport operational safety and with the proposed future expansion of the safety oversight programme to include airport operations, greater emphasis is required in the identification, verification and correction of shortcomings and deficiencies in the field of Aerodromes. In relation to the follow-up of this action, the following recommendation is proposed.

Draft Recommendation 4/c – Update of the Shortcomings and Deficiencies Table

That States and Territories:

- a) Review the existing table of shortcomings and deficiencies in the AGA field and update the information contained
- b) Identify present shortcomings and deficiencies at international airports which are not included in the table
- c) Prepare a programme for the correction of shortcomings and deficiencies identified
- d) Provide the information established in a), b) and c) for their international aerodromes to the ICAO Regional Office by the end of July 2000 (AGA/AOP Informal Meeting) to update the table used for monitoring the identification, verification and correction of shortcomings and deficiencies in the AGA field.

4.3 Implementation of Physical Characteristics and Visual and Non-Visual Aids

4.3.1 The Meeting noted that, in spite of some improvements on this subject since the previous RAN Meeting, there were deficiencies in the provision of visual aids at many CAR/SAM Region aerodromes causing concerns regarding safety of aircraft operations.

4.3.2 The Meeting concurred with the observation that the deficiencies in the provision of visual aids at many aerodromes in the CAR/SAM Region were mainly due to lack of adequate resources. It recognized the importance of the provision of visual aids from an aircraft operational safety point of view. The Meeting also noted that there was a growing trend of privatisation of airports in the region and felt that the need to ensure compliance with relevant ICAO provisions should be emphasized. Accordingly, the Meeting agreed to adopt a recommendation on the implementation of physical characteristics and visual and non-visual aids and a conclusion on the resources for the implementation of aerodrome facilities and services.

4.3.3 In relation to the follow-up of this issue, the ICAO NACC Regional Office held the first seminar on Airport Privatisation for the NAM/CAR/SAM regions in Guatemala during the period from 13 to 16 December. The objectives of the seminar were as follows:

- Promote a broader knowledge on the ICAO position with regard to private sector participation in the ownership, management and operation of airports and reiterate the unaltered paramount obligations of ICAO member States in accordance with the Convention on International Civil Aviation.
- Foster a forum for the exchange of knowledge and experience on airport privatisation between States, ICAO and international organizations.

A total of 58 delegates from nine States and Territories, three international organizations, two regional organizations, one international airport operator and two consulting firms participated in the seminar. The seminar was held over a 4 day period. A total of 13 papers were presented at the seminar by representatives from ICAO HQ (AGA and ARFM Sections), ICAO Regional Offices in Mexico and Lima (AGA and AT), Colombia, ACI, IATA, CLAC, an airport operator and 2 specialist consultants. Digital file copies of the seminar report and papers and presentations are available for viewing, printing and downloading on the web page for the ICAO Regional Office for North America, Central America and the Caribbean at following Internet address – <http://www.icao.int/nacc/>.

4.4 Bird Hazard and Environmental Protection

4.4.1 Bird hazard control and reduction

The Meeting was informed that this subject of aircraft operational safety at or in the vicinity of aerodromes was sometimes not given due importance. There were instances of bird strike reports not having been submitted to ICAO as required in Annex 14, Volume I, Chapter 9, Section 9.5. The need for

such information and its use in the analysis on a global scale was noted. The Meeting also noted that many States and Territories in the region had established bird strike hazard committees and some were yet to do so. Therefore, the Meeting made a conclusion on bird hazard control and reduction.

4.4.2 Land use and environmental control

The Meeting was advised that this was a subject of growing importance. It was noted that aerodromes were employment generators and consequently, resulted in the development of residential zones around airports. Where land was scarce, this problem was further accentuated. However, it was noted that the environmental aspects were already covered to a reasonable extent in ICAO documents. Nevertheless, the issue of the lack of suitable provisions in Annex 14 was identified in the discussions. It was noted that States and Territories regulations on land use adjacent to airports needed greater attention and local co-ordination. Consequently, the Meeting formulated a recommendation on land use at airports and adjacent areas.

4.4.3 With the objective to improve the knowledge on these issues in States and Territories in the region, the following recommendation is proposed:

Draft Recommendation 4/d – Participation in the Seminar on Bird Hazard and Environmental Protection at Airports

That the Directors of Civil Aviation note the seminar planned for October or November 2000 and prepare their participation with an Aerodromes representative, of their respective States and Territories. The topics proposed for the seminar are bird, environmental and land use control at airports.

5. SUGGESTED ACTIONS FOR THE MEETING

5.1 On the basis of the information presented by this working paper, the Meeting is invited to approve Recommendations 4/a, 4/b, 4/c and 4/d, as well as Recommendation 4/e to note the information contained in this working paper, and adopt the corresponding actions so that each State (or Group of States) and International Organizations in the Central Caribbean Region:

- a) implement the relevant conclusions and recommendations of the CAR/SAM/3 RAN Meeting;
- b) review the corresponding parts of the approved Basic ANP and FASID and in order to keep them updated, present to the ICAO Regional Office the necessary proposals for amendments, additions and deletions; and
- c) implement, so as to achieve the international requirements established in the CAR/SAM Regions Basic ANP and FASID, the necessary measures for improving the efficiency and safety of air navigation in the Central Caribbean Region

**APPENDIX A – CONCLUSIONS AND RECOMMENDATION OF AGENDA ITEM 2 -
LOCATION OF REGULAR AND ALTERNATE AERODROMES****Conclusion 2/1 - Planning for en-route alternate aerodromes**

That the GREPECAS, review and select en-route alternate aerodromes, including the needs of extended range operations by twin-engined aeroplanes (ETOPS), for inclusion in column 3 of the list of regular and alternate aerodromes.

Recommendation 2/2- Regular and alternate aerodromes

That the aerodromes in Appendix A to the Report on Agenda Item 2 constitute the aerodromes required for the international commercial air transport operations considered by the Meeting and that the appropriate Air Navigation Plan documents be amended accordingly.

List of Regular and Alternate Aerodromes

Explanation of the List

COLUMN HEADING	DESCRIPTION
CITY/AERODROME	Name of the city and aerodrome, preceded by the location indicator.
USE	Designation of the aerodrome as: <ul style="list-style-type: none"> <li data-bbox="586 667 1252 699">RS international scheduled air transport, regular use; <li data-bbox="586 709 1308 741">RNS international non-scheduled air transport, regular use; <li data-bbox="586 751 1214 783">RG international general aviation, regular use; and <li data-bbox="586 793 1263 825">AS international scheduled air transport, alternate use <p data-bbox="586 867 1435 1136">Note: When an aerodrome is needed for more than one type of use, normally only the use highest on the above list is shown. An exception is that AS aerodromes are identified even when they are required for regular use by international non-scheduled air transport or international general aviation, as some specifications in Annex 14, Volume I place special requirements on these aerodromes.</p>
DESTINATION	
ALTERNATE AERODROME	Destination alternate aerodromes for the regular aerodrome listed in Column 1, or if the aerodrome listed in Column 1 serves only as an alternate, the regular aerodromes for which it is a destination alternate. The aerodrome is shown by listing the name of the city, preceded by the location indicator.
EN-ROUTE ALTERNATE	En-route alternate aerodromes for ETOPS (extended range operations by aeroplanes with two turbine power units) operations to the regular aerodrome listed in Column 1.
ROUTE STAGES SERVED BY ALTERNATE	The route stages served by the destination alternate are shown by listing the location indicators of the departure aerodrome(s). "All" means that the destination alternate aerodrome serves all route stages to the regular aerodrome. The route stages served by an en-route alternate aerodrome are shown by listing the location indicators of the departure aerodromes(s) or departure and destination aerodromes in brackets.

APPENDIX B – CONCLUSIONS AND RECOMMENDATIONS OF AGENDA ITEM 3 - AERODROME PLANNING

Recommendation 3/1 - General (Table FASID AOP 1)

The list of regular and alternate aerodromes required for international scheduled air transport, non-scheduled air transport, and general aviation operations as agreed in the CAR/SAM/3 RAN Meeting is given in Table FASID AOP 1.

Conclusion 3/2 - Amendment of the Table AOP 1

That the Table AOP 1 attached to this report be reviewed and updated at regular intervals by the CAR/SAM Regional Planning and Implementation Group (GREPECAS).

Recommendation 3/3 - Implementation of physical characteristics, visual and non-visual aids at aerodromes

That States study the planned provisions of facilities and services listed in Table AOP 1 and develop a plan for their implementation based on the requirements of projected air traffic in consultation with aircraft operators.

Conclusion 3/4 - Aerodromes in the vicinity of international boundaries

That States, in cooperation with each other and with assistance from ICAO as required, make arrangements for aerodromes located in the vicinity of international boundaries so as to ensure that the provisions in ICAO regulatory documents are met and continue to be met in the future.

Conclusion 3/5 - Retention of visual and non-visual aids in excess of those tabulated in Table AOP 1

That States which already provide at aerodromes visual and non-visual aids in excess of those indicated in Table AOP 1, should give consideration to their retention from an operational safety point of view.

PHYSICAL CHARACTERISTICS, RADIO AND VISUAL AIDS AT AERODROMES

Explanation of the table

General

Table AOP 1 shows the operational requirements for physical characteristics, radio navigation aids, visual aids and runway visual range (RVR) at each aerodrome.

Columns 5 to 9 for physical characteristics relate to runways and taxiways. The physical characteristics of taxiways and aprons should be appropriate for the runways with which they are related.

Columns 4, and 10 to 13 show the requirements for air traffic services, radio and visual aids and reporting the RVR for the runway with which the entry is associated. These aids are generally indicated by "x" and the "x" indicates that the aid should be in accordance with the type of runway (Column 7). If the aid is different from the type of runway, then a "1", "2" or "3" is entered to indicate Category I, II or III respectively.

COLUMN

1 Name of the city and aerodrome, preceded by the location locator.

Designation of the aerodrome as:

- RS** - international scheduled air transport, regular use;
- RNS** - international non-scheduled air transport, regular use;
- RG** - international general aviation, regular use; and
- AS** - international scheduled air transport, alternate use.

When an aerodrome is needed for more than one type of use, normally only the use highest on the above list is shown. An exception is that AS aerodromes are identified even when they are required for regular use by international non-scheduled air transport or international general aviation, as some specifications in Annex 14, Volume I, place special requirements on these aerodromes.

Example 1 - An aerodrome required for both RS and RG use would only be shown as RS in the list.

Example 2 - An aerodrome required for both RS and AS use would only be shown as RS in the list. However, the Table AOP 1 may still show specific requirements for AS use.

- 2 Alternate aerodromes for the regular aerodromes listed in Column 1, or if the aerodrome listed in Column 1 serves only as an alternate, the regular aerodromes for which it is an alternate. The aerodrome is shown by listing the name of the city, preceded by the location indicator.
- 3 Required Rescue and Fire Fighting Service (RFF):
- The required level of protection expressed by means of an Aerodrome RFF Category Number, in accordance with Annex 14, Volume I, Chapter 9, Section 9.2.
- 4 Air traffic services
- APP** - Approach control service should be provided (shown by an "x") and when an "R" is shown, it indicates that the service should be provided with radar.
- TWR** - Aerodrome control tower should be provided (shown by an "x") and when an "R" is shown, it indicates that the service should be provided with an aerodrome surface movement radar.
- ATIS** - Automatic terminal information service should be provided and shown by an "x".
- AFIS** - Aerodrome flight information service should be provided and shown by an "x".
- 5 Runway designation numbers
- 6 Aerodrome reference code for aerodrome characteristics expressed in accordance with Annex 14, Volume I, Chapter 1.
- 7 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume I, Chapter 1, are:
- NINST** - non-instrument runway;
- NPA** - non-precision approach runway;
- PA1** - precision approach runway, Category I;
- PA2** - precision approach runway, Category II;
- PA3** - precision approach runway, Category III.
- 8 Taxiway (TWY) to be provided to threshold of associated runway.
- 9 Required runway length expressed in terms of a balanced field length. In planning, account is taken of local conditions. If the requirement for alternate use is more critical, the aircraft type and runway length required are also indicated below the abbreviation "AS".

Critical aircraft for pavement strength and required pavement strength expressed as the all-up mass in thousands of kilograms. The operational mass of an aircraft, such as the A3XX, B747 and MD11, which may have a bearing on the design of culverts, cable ducts, bridge overpasses, etc. is also shown. If the aircraft requiring the aerodrome for alternate use is more critical, the aircraft type and runway strength required are also indicated below the abbreviation "AS".

Note 1.- A specific aircraft model based on the best available sources of information should be selected for planning runway length as this requirement is particularly affected by aircraft model differences. Aircraft models should thus be reviewed carefully to see that the correct one is used in determining the aerodrome characteristics. The Air Navigation Commission has directed that RAN meetings provide in the plan as realistic figures as possible on runway length and pavement strength requirements at individual aerodromes.

Note 2.- For international general aviation aerodromes, when there is no requirement for the runway to be paved, the pavement strength may be shown as "UNPAV".

Note 3.- Should a requirement for more than one runway be indicated for an aerodrome, the lengths of the secondary runways should be planned as appropriate. A specification concerning the lengths of such runways will be found in Annex 14, Volume I, Chapter 3, paragraph 3.1.7.

Note 4.- When the length or pavement strength is not a current requirement, the year in which it will be required is entered.

10 Radio navigation aids (approach and landing);

ILS - Instrument landing system, shown against the runway to be served and indicated by an "x" if the ILS is the same category as the runway type (Column 7) or, if it is different, by a numeral 1, 2 or 3 to indicate a Facility Performance Category I, II or III, respectively. The addition of a "D" indicates that a distance measuring equipment (DME) should be provided, e.g. as a substitute for marker beacon components of the required ILS. An "*" indicates that the ILS provides Category II signal quality, but without continuity of service provided by redundant equipment and automatic change-over.

VOR - Very high frequency omnidirectional radio range. An "x" indicates that the aid should be provided. The addition of a "D" indicates that a DME is associated with the required VOR facility.

NDB/L - Non-directional beacon, or locator. An "x" indicates that one of the aids should be provided.

- GNSS** - Global Navigation Satellite System, shown against the runway to be served and indicated by an Ax@ if the GNSS supports the same category as the runway type or, if it is different, by an appropriate designator followed by the letter G or S to indicate ground-based augmentation system (GBAS) or satellite-based augmentation system (SBAS), as appropriate.
- 11 Lighting aids
- PA** - Precision approach lighting system, Category I, II or III shown by an "x" if the aid is the same category as the runway type (Column 7) or if it is different by the numeral 1, 2 or 3 against the runway to be served, to indicate the type of system required.
- SA** - Simple approach lighting system, shown by an "x" against the runway to be served.
- VA** - Visual approach slope indicator system, shown by an "L" or an "S" against the runway to be served. The letter "L" indicates that the system should be PAPI or T-VASIS (AT-VASIS) and the letter "S" indicates that the system should be PAPI (APAPI).
- RWY** - Runway edge, threshold and runway end lighting. An "x" indicates that these aids should be provided.
- CLL** - Runway centre line lighting, shown by an "x" against the runway to be served.
- TDZ** - Runway touchdown zone lighting, shown by an "x" against the runway to be served.
- TE** - Taxiway edge lighting. An "x" indicates that the aid should be provided. This requirement pertains to the entire aerodrome and only one entry is made when planning requirements for more than one runway are shown.
- TC** - Taxiway centre line lighting. An "x" indicates that this should be provided for the particular runway with which the entry is associated.
- STB** - Stop bars. An "x" indicates that stop bars should be provided for the runway with which the entry is associated.

- B** - Aerodrome or identification beacon. An "x" indicates that the aid should be provided. This requirement pertains to the entire aerodrome and only one entry is made.
- 12 Marking aids
- DES** - Runway designation marking, shown by an "x" against the runway to be served.
- CLM** - Runway centre line marking. An "x" indicates that the aid should be provided.
- THR** - Runway threshold marking, shown by an "x" against the runway to be served.
- TDZ** - Runway touchdown zone marking, shown by an "x" against the runway to be served.
- SST** - Runway side stripe marking. An "x" indicates that the aid should be provided.
- AMG** - Aiming point marking, shown by an "x" against the runway to be served.
- TWY** - Taxiway centre line and, where required, edge marking. An "x" indicates that the aid should be provided.
- HLD** - Taxiway holding position marking (renamed Runway holding position marking in Amendment No. 3 to Annex 14, Volume I), shown by an "x" against the runway to be served. The pattern of the marking should conform to the provisions of Annex 14, Volume I, Section 5.2.9.
- 13 Runway visual range (RVR)
- TDZ** - Observations should be provided representative of the touchdown zone.
- MID** - Observations should be provided representative of the middle of the runway.
- END** - Observations should be provided representative of the end portion of the runway.

APPENDIX C – CONCLUSIONS AND RECOMMENDATIONS ON AGENDA ITEM 4 - AERODROME SERVICES

Recommendation 4/1 - Identification of air navigation specific shortcomings and deficiencies

That:

- a) in accordance with the methodology approved by the Council, users of facilities and services notify States and the appropriate regional offices of ICAO concerning aerodrome requirements and possible shortcomings or deficiencies which have been identified, together with technical documentation so that they can be analyzed and validated;
- b) the information submitted by users to the regional offices is forwarded to the States concerned for them to make the appropriate comments and corrections; and
- c) States advise, within a reasonable time-frame, the regional offices on the corrective actions taken or planned to be implemented so as to update the list of shortcomings and deficiencies.

Recommendation 4/2 - Implementation of physical characteristics and visual and non-visual aids

That:

- a) States make every effort to ensure that the required physical characteristics of their aerodromes are in accordance with the Standards and Recommended Practices specified in Annex 14, Volume I;
- b) States ensure that the required visual and non-visual aids are implemented at their aerodromes; and
- c) ICAO encourage those States in the process of privatization of their aerodromes to ensure continued compliance with ICAO provisions by specifying in the privatization contracts a requirement to meet relevant ICAO Standards and Recommended Practices.

Conclusion 4/3 - Resources for implementation of aerodrome facilities and services

That:

- a) States adopt measures to ensure that the income generated by the airports is made available for the development and maintenance of their facilities and services, in accordance with the principles contained in ICAO Airport Economics Manual (Doc 9562); and
- b) ICAO, through its Technical Co-operation Bureau and regional offices, continue to provide necessary assistance to States.

Conclusion 4/4 - Aerodrome equipment, installations and services

That for the general improvement of safety, efficiency and regularity of aircraft operations, States take appropriate action to provide as soon as possible the equipment, installations and services recommended in Annex 14, Volume I, Chapter 8 and 9.

Recommendation 4/5 - Improvement of runway surface conditions

That:

- a) States carry out a study to identify runways which have deficiencies in respect of surface friction characteristics, rubber deposit removal, runway surface unevenness, and the drainage system;
- b) where deficiencies are identified, the information should be promulgated by States in accordance with the provisions of Annex 15 and remedial measures taken through the application of appropriate techniques; and
- c) ICAO continue to develop further specifications in this regard.

Recommendation 4/6 - Additional aircraft recovery equipment kit

That aircraft operators give consideration to the desirability of providing an aircraft recovery equipment kit at an airport closer to, or within, the Caribbean Region.

Conclusion 4/7 - Updating of disabled aircraft removal plan

That States taking into account the special aircraft recovery kits available at particular airports and in consultation with the aircraft operators and, where appropriate, aircraft manufacturers, update as necessary and periodically the plan for the removal of disabled aircraft.

Conclusion 4/8 - Rescue and fire fighting services

That:

- a) the attention of States concerned be drawn to existing deficiencies in the rescue and fire fighting services at their aerodromes;
- b) States give priority to the provision of adequate rescue and fire fighting services at their international airports in accordance with the provisions of Annex 14, Volume I;
- c) ICAO, through the regional offices, where necessary, continue the practice of carrying out reviews of the status of RFF services at international airports in States in their respective areas of accreditation;
- d) States continue efforts on annual training of RFF personnel including familiarization of the types of aircraft operating at their aerodromes in consultation with aircraft operators; and
- e) States establish a time-frame to rehabilitate by appropriate means, defective RFF vehicle(s).

Conclusion 4/9 - Implementation of aerodrome emergency plans

That:

- a) ICAO, through the regional offices, where necessary, continue assisting States with the preparation of airport emergency plans at their airports;
- b) each State designate a national co-ordinator for airport emergency plans, as well as a medical coordinator for the same plans;
- c) likewise, each airport have its respective emergency plan co-ordinator and emergency plan medical co-ordinator; and
- d) each airport be provided with a properly equipped emergency operations centre, to be operative the entire time the airport is in operation, as well as with mobile units for the emergency operations centre.

Conclusion 4/10 - Bird hazard control and reduction

That States confronting problems of bird strike hazard:

- a) create a bird strike committee responsible for the overall management of a bird reduction programme, involving civil aviation authorities, airport authorities, aircraft operators, local authorities, environmental bodies as well as universities, to ensure the necessary co-ordination for reducing bird strike hazard in and around aerodromes, to comply with the provisions of Annex 14, Volume I and Chapter 2 of the Airport Services Manual, Part 3 and make use of relevant expertise to advise on bird hazard reduction methods;
- b) take necessary management measures of the habitat on and in the vicinity of the aerodromes to make it less attractive to birds in accordance with Chapter 6 of the Airport Services Manual, Part 3;
- c) use effective dispersal measures as the situation dictates;
- d) remove basic attractions to birds and, in particular food, nesting sites and resting places;
- e) avoid the establishment of refuse dumps in the vicinity of airports, and where this is unavoidable, these should be located no closer than 13 km (refer to the Airport Services Manual, Part 3, Chapter 7);
- f) encourage aircraft operators to provide aerodrome authorities with timely reports on bird strike incidents/accidents involving their aircraft;
- g) submit to ICAO, on a regular basis, bird strike reports to facilitate effective use of the IBIS programme as called for in ICAO Doc 9332-AN/909; and
- h) ensure that the most recent information about the presence of birds and their migratory routes in certain seasons of the year, that could cause damage to aircraft, is available with the air traffic control tower in order to warn pilots of such a danger;

Conclusion 4/11 - Power supply at aerodromes

That States:

- a) give priority to the provision of adequate power supply at their aerodromes in accordance with the specifications and criteria set out in Annex 10, Volume I and Annex 14, Volume I;
- b) organize at various levels electrical equipment maintenance courses;
- c) ensure that the technical personnel is constantly kept abreast of new technologies by implementing adequate training programmes and if necessary, through ICAO technical co-operation projects, bilateral assistance or funds-in-trust; and

d) reinforce exchanges of experience in this field, and possibly call on experts available in some States in the region to assist other States.

Conclusion 4/12 - Aerodrome fencing

That States:

- a) for security and safety reasons, urgently provide and maintain at their aerodromes adequate fences or other suitable barriers to prevent entry to the movement areas of unauthorized persons and/or animals large enough to be a hazard to aircraft; and
- b) give particular attention to the provision of perimeter roads for security patrols and the necessary exit gates with adequate access for rescue and fire fighting vehicles in case of an emergency.

Conclusion 4/13 - Establishment of preventive maintenance programmes

That:

- a) States should establish and put into practice at their respective international aerodromes an airport maintenance programme, as well as a training programme for all personnel involved in the aerodrome maintenance, as well as the necessary resources for its implementation;
- b) States ensure the availability of relevant ICAO documentation at their airports for ready reference;
- c) States should take appropriate measures to prevent foreign object damage to aircraft in the movement areas; and
- d) States adopt and implement stringent actions on the supervision and follow-up of the maintenance programme.

Recommendation 4/14 - Land use at airports and adjacent areas

That:

- a) States revise and/or adopt regulations governing the use of land adjacent to airports in order to prevent the construction of obstacles, obstruction of visual aids, interference with radio aids and presence of birds;
- b) States adopt regulations which govern the use of lands adjacent to airports taking into account the impact of aircraft noise; and
- c) ICAO consider the possibility of incorporating in Annex 14, Volumes I and II, provisions relating to land use in the vicinity of airports taking into account aircraft operations and public safety.

LIST OF AIR NAVIGATION SHORTCOMINGS AND DEFICIENCIES IN THE CENTRAL CARIBBEAN REGION

EXPLANATION OF THE TABLE

Identification:

1. **Requirements:** Air navigation facilities, services and procedures contained in the Regional Air Navigation Plan.
2. **States/facilities:** States responsible for implementation and the facilities, services and procedures to be implemented.

Shortcomings/Deficiencies:

3. **Description:** Brief description of the shortcoming/deficiency. For the purpose of this methodology, a situation where a facility is not installed or a service is not provided in accordance with a regional air navigation plan is considered to be a shortcoming. A situation where an existing facility or service is partially unserviceable, incomplete or not operated in accordance with appropriate ICAO specifications and procedures is considered to be deficiency. The net effect of either a shortcoming or a deficiency is a negative impact on safety, regularity and/or efficiency of international civil aviation.
4. **Date first reported:** Date of first notification of the shortcoming/deficiency.
5. **Status of Implementation:** S = Shortcoming, D = Deficiency
6. **Remark on the Source of the information:** Important references that generated the information (for example: Meeting, Mission Report, information supplied by a State or by a user, etc.).

Corrective action:

7. **Description:** A brief description of the corrective action to be adopted.
8. **Executing body:** *Body responsible of the execution.*
9. **Date of completion:** *Date (established by the State or States involved or Planning and Implementation Group in conformity with the State) foreseen for the completion of the corrective action.*

10. **P = Assessment and prioritization:**

A general guideline would be to have three levels of priority organized on the basis of safety, regularity and efficiency assessment as follows:

“U” priority = **Urgent** requirements having a **direct** impact on **safety** and requiring **immediate** corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

“A” priority = **Top priority** requirements **necessary** for air navigation **safety**.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

“B” priority = **Intermediate** requirements **necessary** for air navigation **regularity and efficiency**.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

APPENDIX A - LIST OF REGULAR AND ALTERNATE AERODROMES IN THE CENTRAL CARIBBEAN
APENDICE A - LISTA DE AERODROMOS REGULARES Y DE ALTERNATIVA EN EL CARIBE CENTRAL

CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
1	2	3	4
ARUBA (NETHERLANDS)			
TNCA	ORANJESTAD/Reina Beatrix, Aruba I. RS	SKBQ Barranquilla SVM I Caracas TNCB Kralendijk SVMC Maracaibo TNCC Willemstad	KATL, KJFK, KMIA, KTPA, SKBO, SPIM EHAM, SKRG, SPIM, SVJC, SVMC, TJSJ ALL EHAM, KATL, KJFK, KMIA, KTPA, SKBO, SKBQ, SKRG, SPIM, SVVA, TNCC ALL
BAHAMAS			
MYBS	ALICE TOWN/South Bimini, Bimini I. RS	MYGF Freeport KMIA Miami MYNN Nassau	KMIA - KMIA
MYSM	COCKBURN TOWN/San Salvador I. RS	MYEG George Town MYNN Nassau MYLS Stella Maris	- - -
MYGF	FREEPORT/Freeport Intl, Grand Bahama I. RS	MYAM Marsh Harbour KMIA Miami MYNN Nassau MYGW West End KPBI West Palm Beach	KFLL, KMIA, KPBI KCLE, KIAD, KLUK, KORD, KRDU, KRIC, SKWI ALL KCLE, KFLL, KIAD, KLUK, KMIA, KORD, KPBI, KRDU, KRIC, SKWI KCLE, KIAD, KLUK, KORD, KRDU, KRIC, SKWI

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	CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
	1	2	3	4
MYEG	GEORGE TOWN/George Town, Exuma I. RS	MYNN MYEH MYLS	Nassau North Eleuthera Stella Maris	KFLL, KMIA KFLL, KMIA KFLL, KMIA
MYEM	GOVERNOR'S HARBOUR/Governor's Harbour, Eleuthera I. RS	MYGF MYAM MYNN	Freeport Marsh Harbour Nassau	KFLL, KMIA KFLL, KMIA KFLL, KMIA
MYAM	MARSH HARBOUR/Marsh Harbour, Abaco I. RS	MYGF MYNN MYAT	Freeport Nassau Treasure Cay	KFLL, KMIA, KPBI KFLL, KMIA, KPBI KFLL, KMIA, KPBI
MYNN	NASSAU/Nassau Intl, New Providence I. RS	KFLL MYGF MUHA KMIA MYEH KTPA	Fort Lauderdale Freeport Habana Miami North Eleuthera Tampa	CYYZ, KATL, KCLT, KEWR, KLGA, KLUK, KMCO, KPHL CYYZ, KATL, KCLT, KEWR, KFLL, KLGA, KLUK, KMCO, KMIA, KPHL, MBPV, MUHA EGLL, LFPO, MBPV, MKJS, MWCR CYYZ, EGLL, EMCO, KATL, KEWR, KFLL, KLGA, KPHI, LFPO, MKJS KCCT, KFLL, KLUK, KMCO, KMIA, KPBI, MBPJ EGLL, LFPO
MYEH	NORTH ELEUTHERA/North Eleuthera, Eleuthera I. RS	MYEM MYAM MYNN	Governor's Harbour Marsh Harbour Nassau	KFLL, KMIA KFLL, KMIA KFLL, KMIA
MYLS	STELLA MARIS/Long Island I. RS	MYSM MYEG MYNN	Cockburn Town George Town Nassau	KFLL KFLL KFLL

CITY/AERODROME/USE CIUDAD/AERODROMO/USO		DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO		EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
1		2		3	4
MYAT	TREASURE CAY/Treasure Cay, Abaco I. RS	MYGF MYAM MYNN	Freeport Marsh Harbour Nassau		KFLL , KMCO , KMIA KFLL , KMCO , KMIA KFLL , KMCO , KMIA
MYGW	WEST END/West End, Grand Bahama I. RNS & AS	MYNN KPBI	Nassau West Palm Beach		- -
CAYMAN ISLANDS (UNITED KINGDOM)					
MWCB	CAYMAN BRAC/Gerrard Smith Intl RS	MMUN MWCR MUHA KMIA MKJS MYNN	Cancún Georgetown Habana Miami Montego Bay Nassau		- - - - - -
MWCR	GEORGETOWN/Owen Roberts Intl RS	MMUN MMCB MUHA MKJP MKJS	Cancún Caymen Brac Habana Kingston Montego Bay		KATL , KCLT , KIAH , KLUK , KMIA , MHLC , MKJP , MKJS , MYNN KIAH , KMCO , KMIA , MHLC , MKJS MHLC , MKJP , MKJS , MYNN KATL , KCLT , KLUK , KMCO , KMIA , MYNN KATL , KCLT , KLUK , KMCO , KMIA , MHLC , MYNN

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CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA	
1	2	3	4	
CUBA				
MUCM	CAMAGÜEY/Ignacio Agramonte RS	MUCA MUHA MUHG MKJP MYNN MUCU MUVR	Ciego de Avila Habana Holguín Kingston Nassau Santiago de Cuba Varadero	EDDF EDDF EDDF EDDF EDDF EDDF EDDF
MUCL	CAYO LARGO DEL SUR/Vilo Acuña RS	MUCM MMUN MUHA MUHG MKJP MKJS MUVR	Camagüey Cancún Habana Holguín Kingston Montego Bay Varadero	ALL ALL ALL ALL ALL - ALL
MUCA	CIEGO DE AVILA /Máximo Gómez RS	MUCM MUHA MUHG MKJP MYNN MUCU MUVR	Camagüey Habana Holguín Kingston Nassau Santiago de Cuba Varadero	EDDF EDDF EDDF EDDF EDDF EDDF EDDF

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CITY/AERODROME/USE CIUDAD/AERODROMO/USO		DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO		EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
1		2		3	4
MUHA	HABANA /José Martí RS	MUCM	Camagüey		CYYZ, EBGB, EDDF, EGKK, LEPA, MDSV, MKJS, MROC, MYNN, SBGL, SAEZ, SKBO, SLVR, SVMI, TFFF, TNCC, UUEE
		MMUN	Cancún		CYUL CYYZ, MKJS, MMMD, MMMX, MPTO, MYNN, SAEZ, SCEL, SEGU
		KFLL	Fort Lauderdale		-
		MUHG	Holguín		LEPA, LFPO, MDSV, SVMI, TFFF, TNCC
		MKJP	Kingston		EDDF, LEMD, MPTO, MROC, SAEZ, SBGL, SCEL, SEGU, SKBO, SLVR, SVMI, TFFF, TNCC, UUEE
		KMIA	Miami		CYYZ, EDDF, LEMD, LFPO, LIMC, LIRF, MMMD, MMUN, MYNN, SCEL
		MKJS	Montego Bay		EDDF, LEMD, MPTO, MROC, SAEZ, SBGL, SEGU, SKBO, SLVR, SVMI, TFFF, TNCC, UUEE
		MYNN	Nassau		CYUL, CYYZ, EBGB, EDDF, LEMD, LFPO, LIMC, LIRF, MMMD, MMMX, UUEE
		MUCU	Santiago de Cuba		EBGB, EGKK, LEPA, LFPO, LIRF, MDSV, MMMX, SBGL, SKBO, SLVR, SVMI, TFFF, TNCC
MUVR	Varadero		CYUL, EBGB, EGKK, LEMD, LEPA, LFPO, LIMC, LIRF, MKJS, MMUN, MPTO, MROC, MYNN, SAEZ, SBGL, SCEL, SEGU, SKBO, SLVR, UUEE		
MUHG	HOLGUÍN /Frank País RS	MUCM	Camagüey		EDDF, EDDL, EHAM, LFPO
		MUHA	Habana		ALL
		MKJP	Kingston		EDDF, EDDL, EHAM, LFPO
		MYNN	Nassau		EDDF, EDDL, EHAM, LFPO
		MTPP	Port au Prince		EDDF, EDDL, EHAM, LFPO
		MUCU	Santiago de Cuba		EDDF, EDDL, EHAM, LFPO
		MUVR	Varadero		ALL

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CITY/AERODROME/USE CIUDAD/AERODROMO/USO		DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO		EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
1		2		3	4
MUCU	SANTIAGO DE CUBA/Antonio Maceo RS	MUCM	Camagüey		LFPO, LIRF, LPPT
		MUHA	Habana		ALL
		MUHG	Holguín		LFPO, LIRF, LPPT
		MKJP	Kingston		LFPO, LIRF, LPPT
		MKJS	Montego Bay		-
		MYNN	Nassau		LFPO, LIRF, LPPT
		MTPP	Port au Prince		LFPO, LIRF, LPPT
		MUVR	Varadero		ALL
MUVR	VARADERO/Juan Gualberto Gómez RS	MUCM	Camagüey		EDDF, EDDL
		MMUN	Cancún		CYMX, CYYZ
		MUHA	Habana		ALL
		MUHG	Holguín		CYMX, CYYZ, EDDF, EDDL
		MKJP	Kingston		EDDF, EDDL
		MYNN	Nassau		ALL
		MUCU	Santiago de Cuba		EDDF, EDDL
DOMINICAN REPUBLIC					
MDBH	BARAHONA/Arpto. Internacional María Montes RS	MDPP	Puerto Plata		-
		MDPC	Punta Cana		-
		MDSO	Santo Domingo		-
MDHE	HERRERA/Arpto. Internacional de Herrera RS	MDLR	La Romana		-
		MDSO	Santo Domingo		-

	CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
	1	2	3	4
MDLR	LA ROMANA /La Romana Intl RS	MKJP MTPP MDPP MDPC TJSJ MDSJ	Kingston Port-au-Prince Puerto Plata Punta Cana San Juan Santo Domingo	KMIA KMIA, TJSJ KMIA, TJSJ KMIA, TJSJ KMIA KMIA, TJSJ
MDPP	PUERTO PLATA/Gregorio Luperón Intl RS	MKJP MTPP TJSJ MDST MDSJ	Kingston Port-au-Prince San Juan Santiago Santo Domingo	EDDF, EDDH, EDDK, EDDL, EDDM, EDDS, EH AM, ETBS, ETLS, KJFK, KMIA EDDF, EDDH, EDDK, EDDL, EDDM, EDDS, EH AM, ETBS, ETLS, KJFK, KMIA, MVPV EDDF, EDDH, EDDK, EDDL, EDDM, EDDS, EH AM, ETBS, ETLS, KJFK, KMIA EBPV, TJSJ ALL
MDPC	PUNTA CANA /Punta Cana Intl RS	MKJP MDLR MTPP MDPP TJSJ MDSJ	Kingston La Romana Port-au-Prince Puerto Plata San Juan Santo Domingo	KJFK, KMIA, SCEL, SKBO TJSJ EDDF, EDDH, EDDL, EDDM, EDDS, EDKB, EDVV, EH AM, ETBS, ETLS, KJFK, KMIA, LFPO, LPPT, SCEL, SKBO - EDDF, EDDH, EDDL, EDDM, EDDS, EDKB, EDVV, EH AM, ETBS, ETLS, KJFK, KMIA, LFPO, LPPT, SCEL, SKBO ALL
MDST	SANTIAGO/Cibao Intl RS	MTPP MDPP MDSJ	Port-au-Prince Puerto Plata Santo Domingo	TJSJ TJSJ TJSJ

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	CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
	1	2	3	4
MDS	SANTO DOMINGO/De Las Americas Intl RS	SVMI MKJP MKJS TFFR MTPP MDPP MDPC TJSJ	Caracas Kingston Montego Bay Pointe à Pitre Port-au-Prince Puerto Plata Punta Cana San Juan	MPTO KEWR, KJFK, KMIA, MPTO KEWR, KJFK, KMIA, MPTO - MPTO, SVMI, TNCA, TNCC EDDF, EDDL, KEWR, KJFK, KMIA, LEMD, LIMC, LIRF EDDF, EDDL, LEMD, LIMC, LIRF, SVMI, TJSJ, TNCA, TNCC EDDF, EDDL, LEMD, LIMC, LIRF, SVMI, TNCA, TNCC
HAITI				
MTCH	CAP HAITIEN/Cap Haitien Intl RS	MTPP MDPP MUCU	Port-au-Prince Puerto Plata Santiago de Cuba	MBPV MBJT, MBPV MBJT, MBPV
MTTP	PORT-AU-PRINCE/Port-au-Prince Intl RS	MTCH MKJP MDPP TJSJ MUCU MDS	Cap Haitien Kingston Puerto Plata San Juan Santiago de Cuba Santo Domingo	MDS, TFFG CYUL, KJFK, KMIA, MPTO, TNCC CYUL, KJFK, KMIA, MDS, TFFR, TNCC KJFK, TFFG, TFFR CYUL, MPTO CYUL, KJFK, KMIA, MPTO, TFFG, TFFR, TNCC

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CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
1	2	3	4
JAMAICA			
MKJP KINGSTON/No rman Manley Intl RS	SKBQ Barranquilla MUHA Habana MKJS Montego Bay MYNN Nassau MTPP Port-au-Prince TJSJ San Juan MUCU Santiago de Cuba MDSD Santo Domingo		- CYYZ ALL CYYZ, KFL, JFK, KMIA KFL, JFK, KMIA, MPTO, MUHA, TAPA, TNCC, TNCM - CYYZ, MPTO, MUHA, MWCR, TAPA, TNCC, TNCM CYYZ, JFK, KMIA, MPTO, TAPA, TNCC, TNCM
MKJS MONTEGO BAY/Sangster Intl RS	SKBQ Barranquilla MUHA Habana MKJP Kingston MYNN Nassau MTPP Port-au-Prince TJSJ San Juan MUCU Santiago de Cuba		KLAX, TLPL CYYZ, EDDF, EDDL, EGLL ALL KATL, KBWI, KCLT, KEWR, KFL, KIAD, JFK, KLAX, KMCO, KMIA, KORD, KPHL, KSTL, KTPA ALL EDDF, EDDL, EGLL CYYZ, EDDF, EDDL, EGLL, MUHA, MWCR, MYNN, TLPL
NETHERLANDS ANTILLES (THE NETHERLANDS)			
TNCB KRALENDIJK/Flamingo, Bonaire I. RS	SKBQ Barranquilla SVM Caracas SVMC Maracaibo TNCA Oranjestad TJSJ San Juan TNCC Willemstad		KATL, KMIA EHAM, KATL, KMIA, TNCA KATL, KMIA ALL EHAM, KATL, KMIA ALL

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	CITY/AERODROME/USE CIUDAD/AERODROMO/USO	DESTINATION ALTERNATE AERODROME AERODROMO DE ALTERNATIVA DE DESTINO	EN-ROUTE ALTERNATE AERODROME AERODROMO DE ALTERNATIVA EN RUTA	ROUTE STAGES SERVED BY ALTERNATE ETAPAS SERVIDAS POR AERODROMO DE ALTERNATIVA
	1	2	3	4
TNCC	WILLEMSTAD/Hato, Curaçao I. RS	SKBQ Barranquilla SVMI Caracas		KMIA, MKJP, MPTO, MUHA, SKBO EHAM, KMIA, MDSD, MKJP, MUHA, SEGU, SEQU, SKBO, SMJP, SVMC, TJSJ, TNCM, TTPP
		TNCB Kralendijk SVMC Maracaibo TNCA Oranjestad		ALL MPTO, SEGU, SEQU, SKBO EHAM, KMIA, MDSD, MKJP, MPTO, MUHA, SEQU, SKBO, SMJP, SVJC, SVMC, SVMI, SVVA, TJSJ, TNCM, TTPP
		TJSJ San Juan		EHAM
TURKS AND CAICOS ISLANDS				
(UNITED KINGDOM)				
MBGT	GRAND TURK/Grand Turk Intl RS	MBPV Providenciales MDPP Puerto Plata MBSC South Caicos		KMIA, MTCH, MYNN KMIA MTCH, MYNN
MBPV	PROVIDENCIALES/Providenciales Intl RS	MTCH Cap Haitien MBGT Grand Turk MDPP Puerto Plata		MKJP, MYGF, MYNN ALL KMIA, MKJP
MBSC	SOUTH CAICOS/South Caicos Intl RS	MTCH Cap Haitien MBGT Grand Turk MBPV Providenciales		- - -
TIST	SAINT THOMAS/Cyril E. King RS	TISX Christiansted TJSJ San Juan TJVQ Vieques		ALL KATL, KMIA, KJFK, KPHL TFEJ, TJFA, TJSJ, TNCM, TQPF, TUPJ, TUPW

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**APPENDIX C - REPORTING FORM ON AIR NAVIGATION SHORTCOMINGS AND DEFICIENCIES
IN THE AGA FIELD IN THE CENTRAL CARIBBEAN REGION**

Identification		Shortcomings/Deficiencies				Corrective action			
Requirements	States/ facilities	Description	Date first reported	S/D	Remarks	Description	Executing Body	Date of complete	P
1	2	3	4	5	6	7	8	9	10
RWY surface conditions (Annex 14, Vol. I, Chap. 3)									
Taxiway parallel to runway (ANP, Table AOP 1)									
RWY end safety area (Annex 14, Vol. I, Chap. 3)									
Obstacles (Annex 14, Vol. I, Chap. 4)									
Radio aids (ANP, Table AOP 1)									
Visual aids (Annex 14, Vol. I, Ch. 5)	Bahamas, FREEPORT/ Int. Aerodrome	Deficient RWY markings	1996	D	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Require re-painting	Bahamas		A

