



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

Second ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR) Region

(ICAO/IATA/CANSO PBN/2)

Final Report

San Jose, Costa Rica, 7 to 9 December 2016

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List of Contents

Contents	Page
Index	i-1
Historical	ii-1
ii.1 Place and Date of the Meeting.....	ii-1
ii.2 Opening Ceremony.....	ii-1
ii.3 Officers of the Meeting	ii-1
ii.4 Working Languages	ii-1
ii.5 Schedule and Working Arrangements.....	ii-1
ii.6 Agenda	ii-2
ii.7 Attendance	ii-2
ii.8 Draft Conclusions and Decisions	ii-2
ii.9 List of Working and Information Papers and Presentations	ii-3
List of Participants	iii-1
Contact Information	iv-1
Agenda Item 1	1-1
<i>Follow-up Implementation of PBN Routes as Agreed in the Third NAM/CAR Air Navigation Implementation Working Group Meeting ANI/WG/3 Meeting</i>	
1.1 <i>Proposal for Amendment (PfA) to ICAO Doc 7030 — Regional Supplementary Procedures and Doc 8733 — Air Navigation Plan - Caribbean and South American Regions (PfA 1)</i>	
1.2 <i>Implementation date for Area Navigation (RNAV) routes in coordination with the SAM Region</i>	
1.3 <i>PBN airspace concept implementation projects (ARESAC, Piarco FIR, etc.)</i>	
Agenda Item 2	2-1
<i>Follow-up of Updated Air Traffic Service (ATS) Letters of Agreement (LoAs)</i>	
2.1 <i>Application of 40 NM between adjacent FIRs in CAR and SAM Regions</i>	
2.2 <i>Application of 20 NM between adjacent FIRs in CAR and SAM Regions</i>	
Agenda Item 3	3-1
<i>Review proposals of new PBN Routes, Implementation and trials in the FIRs of the CAR Region and Coordination with Adjacent Regions (PfA 2)</i>	
Agenda Item 4	4-1
<i>Other business</i>	

HISTORICAL

ii.1 Place and Date of the Meeting

The Second ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the CAR Region (ICAO/IATA/CANSO/PBN/2) was held at the Intercontinental Hotel in San Jose, Costa Rica, from 7 to 9 December 2016.

ii.2 Opening Ceremony

Mr. Julio Siu, Deputy Regional Director of the North American, Central American and Caribbean (NACC) Office from the International Civil Aviation Organization (ICAO) provided opening remarks and thanked the Civil Air Navigation Services Organization (CANSO) for hosting the meeting. Mr. Riaaz Mohammed, ANIWG PBN Task Force Rapporteur, provided some opening remarks; Mr. Marco Vidal, Manager Safety and Flight operations, from IATA and Mr. Javier Vanegas, Regional Director for Latin American and Caribbean Affairs, CANSO, welcomed the participants to San Jose, Costa Rica, and officially opened the meeting.

ii.3 Officers of the Meeting

The ICAO/IATA/CANSO/PBN/2 Meeting was chaired by Mr. Riaaz Mohammed. Mr. Victor Hernández, Regional Officer, Air Traffic Management and Search and Rescue (ATM/SAR) served as Secretary of the Meeting and was assisted by Mr. Romy Gallegos, Regional Officer, Technical Assistance (TA), Mr. Raúl Martínez, Regional Officer, Aeronautical Information Management (AIM) both from the ICAO NACC Regional Office; Mr. Roberto Arca, ATM/SAR Consultant from the ICAO SAM Regional Office, and Mr. Andreas Meyer, Safety Management Officer, from ICAO Headquarters.

ii.4 Working Languages

The working language of the Meeting was English and the working papers, information papers and Draft report of the meeting were available to participants in said language.

ii.5 Schedule and Working Arrangements

It was agreed that the working hours for the sessions of the meeting would be from 09:00 to 17:00 hours daily with adequate breaks. Ad hoc Groups were created during the Meeting to do further work on specific items of the Agenda.

ii.6 Agenda

Agenda Item 1: Follow-up Implementation of PBN Routes as Agreed in the Third NAM/CAR Air Navigation Implementation Working Group Meeting ANI/WG/3 Meeting

- 1.1** Proposal for Amendment (PfA) to ICAO Doc 7030 — *Regional Supplementary Procedures* and Doc 8733 — *Air Navigation Plan - Caribbean and South American Regions (PfA 1)*
- 1.2** Implementation date for Area Navigation (RNAV) routes in coordination with the SAM Region
- 1.3** PBN airspace concept implementation projects (ARESAC, Piarco FIR, etc.)

Agenda Item 2: Follow-up of Updated Air Traffic Service (ATS) Letters of Agreement (LoAs)

- 2.1** Application of 40 NM between adjacent FIRs in CAR and SAM Regions
- 2.2** Application of 20 NM between adjacent FIRs in CAR and SAM Regions

Agenda Item 3: Review proposals of new PBN Routes, Implementation and trials in the FIRs of the CAR Region and Coordination with Adjacent Regions (PfA 2)

Agenda Item 4: Other business

ii.7 Attendance

The Meeting was attended by 19 States from the NAM/CAR/SAM Regions, and three International Organizations, totalling 57 delegates as indicated in the list of participants.

ii.8 Draft Conclusions and Decisions

The Meeting recorded its activities as Draft Conclusions and Decisions as follows:

DRAFT

CONCLUSIONS: Actions that need approval from the ANIWG.

DECISIONS: Internal activities of the ANIWG PBN Task Force.

ii.8.1 Conclusion

Number	Title	Page
2/1	<i>PROPOSAL OF NEW PBN ROUTES</i>	3-1

Se presenta un resumen ejecutivo de esta conclusión en el **Apéndice A** a este informe.

ii.9 List of Working and Information Papers and Presentations

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Approval of the Meeting Agenda and Schedule	8/11/16	Secretariat
WP/02	1	Review of the Conclusions from the Previous ICAO/IATA/CANSO PBN Meeting as agreed in the Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3) Meeting	8/11/16	Secretariat

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	List of Working, Information Papers and Presentations	28/11/16	Secretariat
IP/02	2	Status of the Optimization and harmonization of the Longitudinal Separation Minima in the SAM Region		IATA

PRESENTATIONS

Number	Agenda Item	Title	Presented by
1	3	Proyecto Red de Rutas PBN FIR Habana	Cuba
2	3	Proposal for Amendment	Dominican Republic
3	3	PIARCO FIR (TTZP) PBN Route Proposals	Trinidad and Tobago
4	1.2	GNSS/RNAV Non- Radar Longitudinal Separation in the Caribbean	United States
5	3	Houston to Havana Route Proposal	United States
6	1.2	Reunión PBN	Mexico
7	3	Proyecto Red de Rutas PBN FIR HABANA	Cuba
8	4	ADS-B Data as a source for analytical solutions for traffic behaviour in airspace	Secretariat
9	1.1	Análisis de la propuesta de enmienda al plan de navegación aérea- CAR/SAM	Mexico

ICAO/IATA/CANSO PBN/2
Historical

ii – 4

PRESENTATIONS			
Number	Agenda Item	Title	Presented by
10	3	Proceso de implementación PBN en El Salvador	El Salvador
11	1.2	Reestructuración del Espacio aéreo superior Centroamericano	COCESNA
12	3	New route TBG - OBIKE	CURACAO
13	1.3	Reingeniería ARESAC 2017	Costa Rica
14	4	PBN Implementation 2017	Secretariat

Refer to the Meeting web page:

<http://www2010.icao.int/NACC/Pages/meetings-2016-pbncar.aspx>

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Agenda Item 1 Follow-up Implementation of PBN Routes as Agreed in the Third NAM/CAR Air Navigation Implementation Working Group Meeting ANI/WG/3 Meeting

1.1 The Secretariat presented WP/01, inviting the Meeting to approve the provisional agenda and schedule. The Meeting approved the agenda as presented in the Historical section of this report with minor changes to the schedule.

1.2 The Meeting reviewed the Conclusions related to the PBN implementation made by the Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3).

1.3 In accordance with the Conclusion ANI/WG/3/4 “*Development of a Proposal For Amendment (Pfa) to Doc 8733 - Air Navigation Plan — Caribbean and South American Regions*”, presentations from Costa Rica, Cuba, Curacao, Guatemala, Dominican Republic, El Salvador, Mexico, Nicaragua, Trinidad and Tobago, United States and COCESNA were shown.

Proposal for Amendment (Pfa) to ICAO Doc 7030 — Regional Supplementary Procedures and Doc 8733 — Air Navigation Plan - Caribbean and South American Regions

1.4 The Meeting updated information for the Proposal for Amendment (Pfa) development to Doc 8733 – *Air Navigation Plan — Caribbean and South American Regions*, as included in **Appendix B** to this Report. Appendix B is available on the ICAO web page. The Meeting discussed relevant actions on the Proposal for Amendment implementation as follows:

- Route proposals were reviewed one by one, allowing the interaction among stakeholders in order to concur in modifications, changes and agreements
- United States noted that the PBN ATS Routes within its FIRs may be used by aircraft below FL180 and that for regulatory reasons, it does not use the Upper or Lower designator prefixes to differentiate
- Dominican Republic did not reflect Venezuela and Curaçao requirements
- Colombia agreement is required on waypoints in the Maiquetia and Curaçao FIRs
- Jamaica expressed concern for not concluding their proposal
- ICAO will assist States with the assign of 5 LNC with ICARD system usage

1.5 Cuba notified their consent is needed with verbal authorization from their authority for the new RNAV routes for what it can be proceeded with the inclusion of this information in the PFA to CAR/SAM Air Navigation Plan, expecting that in the following days appropriate documentation will be received in order to approve the project. Due to the importance of this implementation, the Meeting noted with great satisfaction the efforts performed and congratulated Cuba for achieved goals.

1.6 The Meeting noted that each significant point is identified by a navigation facility name or a Five-Letter Name-Code (5LNC) available in ICARD system. The significant points of each ATS route are those which identify route ends, FIR boundaries or an equivalent point are 300 NM or more from another significant point, indicate a heading change of 30° or more, and other points considered necessary. Locations shown in parentheses indicate significant points outside the CAR/SAM Regions.

Implementation date of new Area Navigation (RNAV) routes in coordination with the SAM Region

1.7 The Meeting agreed on the table that shows the agreements between States on the approved routes and agreed deadlines for 2017 publication. Additionally, that States should timely publish and implement using the AIRAC cycle by 22 June 2017, all information of the ATS routes, and operational requirements and applicable procedures for filing Flight Plan (FPL).

PBN airspace concept implementation projects (ARESAC, Piarco FIR, etc.)

1.8 Under P/03, Trinidad and Tobago presented PIARCO PBN implementation progress and routes harmonization within the FIR, including the FIR boundary SAM States. The Meeting recognized the progress and leadership of Trinidad and Tobago in PBN matters.

1.9 Under P/13, ARESAC coordinator, Costa Rica, presented a reengineer structure for the ARESAC Project to be faced in 2017, starting with the change of coordinator, now COCESNA. Costa Rica highlighted project member's lack of interest and urged States to give importance to the Phase II implementation process. Costa Rica also requested ICAO's commitment to support this Regional project.

1.10 The Secretariat committed to provide additional support to the ARESAC Project by urging States to cooperate with it.

Agenda Item 2 Follow-up of Updated Air Traffic Service (ATS) Letters of Agreement (LoAs)

2.1 As agreed at the first PBN meeting in Ft. Lauderdale, Florida, all participating States agreed, to the extent applicable, to reduce longitudinal separation from 80 NM to 40 NM between transferred air traffic operating in the Flight Information Regions (FIRs) of the CAR Region. Some States, in some areas, further agreed to reduce separation to 20 NM between transferred air traffic operating in the CAR Region FIRs.

2.2 LoAs for the coordination and operational procedures between the air traffic control facilities continue to be negotiated and signed. As discussions have now included FIRs of States in the ICAO South America (SAM) Region, States and Air Navigation Service Providers (ANSPs) have agreed to further review and introduce applicable longitudinal separation minima of 40 NM or 20 NM between transferred air traffic operating in the FIRs of the CAR region and adjacent FIRs of the SAM Region.

2.3 The table at **Appendix C** highlights the current status of longitudinal separation reduction in both the CAR and SAM Regions. Additional discussion between States and ANSPs will be conducted intersessionally, with further review of the activity scheduled for the Third ICAO/IATA/CANSO Performance-Based Navigation (PBN) harmonization, modernization and implementation meeting in May 2017.

Agenda Item 3: Review proposals of new PBN Routes, Implementation and trials in the FIRs of the CAR Region and Coordination with Adjacent Regions

3.1 During discussions on this agenda item, States and Air Navigation Service Providers (ANSPs) of the CAR and SAM Regions agreed to further review Air Traffic Service (ATS) new Routes, in order to introduce all the new requirements of the air traffic operating in the FIRs of the CAR Region and adjacent FIRs of the SAM Region, in this regard the Meeting agreed on the following:

**DRAFT CONCLUSION
PBN2/1**

PROPOSAL OF NEW PBN ROUTES

That CAR States submit routes which have been agreed by the respective adjacent FIRs to ICAO for a Second Proposal for Amendment (PfA2) not later than **27 February 2017**.

3.2 The Federal Aviation Administration (FAA) will submit proposed Area Navigation (RNAV) routes from the METROPLEX and “Y” projects to harmonize regional ATS route network.

3.3 In order to have better coordination and harmonization within the sub-regions, the ANIWG PBN Taskforce selected Regional champions shown in Table 1:

Region	Champion	eMAIL	States/Organizations/FIR's Champion is responsible for coordinating routes with
E/CAR	Robert Rooplal – Trinidad and Tobago	rrooplal@caa.gov.tt	USA – New York Oceanic; San Juan (South Eastern Routes from San Juan through Piarco) Trinidad and Tobago Venezuela (Westerly routes from Piarco through Maiquetia) Guyana Suriname Brazil – FIRs to be determined as Brazil's airspace is so large that coordination with Brazil's western FIR may be required for both ECAR and CCAR Champions
NOTE 1: For East/West routes that traverse through E/CAR-C/CAR sub-regions, coordination between Champions of the both sub-regions will be required			
Eastern C/CAR	Alexi Batista – Dominican Republic	alexi.batista@idac.gov.do alexismbr991@hotmail.com	USA – San Juan (Westerly/South Westerly routes); Miami Haiti Curacao Venezuela - coordination may be required with Western CCAR Champion on some routes Brazil – FIRs to be determined as Brazil's airspace is so large that coordination with Brazil's western FIR may be required for both

Region	Champion	eMAIL	States/Organizations/FIR's Champion is responsible for coordinating routes with
			ECAR and CCAR Champions
NOTE 2: For East/West routes that traverse through Eastern C/CAR and Western C/CAR sub-regions, coordination between Champions of the both sub-regions will be required			
Western C/CAR	Courtney Malcolm - Jamaica Christopher Chambers (former)	courtney.malcolm@jcaa.gov.jm	USA – Miami, Houston
			Panama
			Colombia
			Venezuela – coordination may be required with Eastern CCAR Champion on some routes
NOTE 3: For East/West routes that traverse through Western C/CAR and Central America sub-regions, coordination between Champions of the both sub-regions will be required			
NOTE 4: SAM FIRs south of Panama and Colombia need to be added if routes are going to flow into these FIRs from Central Caribbean			
Central America	César Turcios Valiente	cesar.turcios@cocesna.org	USA - Houston
			Mexico
			COCESNA*
			Panama
NOTE 5*: This project, while dealing with upper level routes, recognizes the need for information to be coordinated with lower level sectors. In the case of Central America, the Central American Champion will need to provide information to PBN PoC's of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua.			
NOTE 6: SAM FIRs south of Panama and Colombia need to be added if routes are going to flow into these FIRs from Central America			

Table 1 – NAM/CAR/SAM PBN Airspace Harmonization Project Champions (coordinators)

3.4 Cuba – P1, Curacao – P12, Dominican Republic – P2, and Trinidad and Tobago – P3 presented new ATS routes to be proposed for the second Proposal for Amendment, to be coordinated with adjacent FIRs through their Regional champions.

Agenda Item 4 Other Business

4.1 Under P/08 the Secretariat presented the ICAO Big Data – Automatic dependent surveillance – broadcast (ADS-B) Project, that is an integral module of the ICAO Safety Information Monitoring Service, aimed at providing States with analytical solutions tools in all operational domains. It is aimed at offering quantitative analysis based on information derived from ADS-B data. The presentation provides an overview of the analytical capabilities of this type of analysis regarding airspace usage, directed at PBN procedures and usage. It is of interest the capability to analyse the effective usage of implemented PBN procedures, the efficiency analysis of air traffic en-route and in terminal airspace. This will allow, in combination with other data capturing mechanisms, to provide hot-spots for mid-air collisions, which have been identified as a top safety priority by the Pan America Regional Aviation Safety Team (PA-RAST). The latter provides data for a holistic risk assessment in the implementation of new route structures. To expand the ADS-B analysis ICAO has started working with States to increase the coverage of ground based ADS-B receivers ahead of space-based ADS-B implementation.

4.2 Under P/14 the Secretariat presented the review of the Meeting, and agreed next Meeting to be held in May 2017 considered for 5 days, in Miami, United States.

4.3 It was concluded the need for intersessional work, monthly teleconferences with Regional champions, need for sharepoint/web access, and to be decided who should attend.

4.4 Some of the topic for the next Agenda will be:

- Review of Completed Proposal for Amendment (PfA)
- Submission/Briefings of New Proposals
- Presentation by States
- Review of Progress on Longitudinal Separation
- Break-out sessions by Regions facilitated by Champions
- Briefings by IATA on Operational Matters

**APPENDIX A
EXECUTIVE CONCLUSION**

Number	Conclusion/Decision	Responsible for action	Deadline
C2/1	PROPOSAL OF NEW PBN ROUTES		
	That CAR States submit routes which have been agreed by the respective adjacent FIRs to ICAO for a Second Proposal for Amendment (PfA2) not later than 27 February 2017.	Regional PoC Champion	27 February 2017

**PROPOSAL FOR AMENDMENT OF THE CARIBBEAN AND SOUTH AMERICAN REGIONS –
AIR NAVIGATION PLAN, VOLUME II, E-ANP (DOC 8733)
(SERIAL NO. NACC 17/01- ATM)**

APPENDIX A – ADD NEW ATS ROUTE

L216		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
GTK/VOR	21° 26.98' N	071° 8.06' W
JARED	20° 23'54.8''N	070° 27'03.5''W

UL216		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
JARED	20° 23'54.8''N	070° 27'03.5''W
DCY/VOR	19° 16'14''N	069°26'27''W
POKAK	16°00'00''N	068°34'00''W
KABON	14°11'58.2''N	068°12'02.4''W
MIQ/VOR	10°36'29.4''N	066°59'51.6''W

UL221		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
VESKA	16° 00'00'' N	070°45' 00'' W
ALEZI	16° 22'54.71''N	070° 07'45.53''W
NUNEZ	16° 55'04.33''N	069° 14'56.19''W
MIRRA	17° 12'44.10''N	068°45'38.13''W
SATOE	17°40'00''N	068°00'00''W

L221		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
SATOE	17°40'00''N	068°00'00''W
TAYOG	17°54'15.6''N	066°51'15''W
JOSHE	18°14'32.4''N	066°30'03.6''W

UL342		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ENPUT	08° 12.4' N	072° 22.4' W
CHAVE	12°30'08.4''N	070°45'46.2''W
KARUM	16° 00'00.00''N	069°24'00.00''W
ABREU	16° 31'27.16''N	069° 11'28.9''W
FIDEL	16° 59'30.39''N	069° 00'15.43''W
YOREL	17° 36'13.46''N	068° 45'28.1''W
PNA/VOR	18° 34'02.00''N	068° 23'00.00''W

L349		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ANU/VOR	17° 07' 33'' N	061° 48' 01'' W
GABAR	17° 21' 12.0" N	063° 00' 00.0" W
GISSO	17° 29' 37.76" N	065° 46' 42.88" W
SATOE	17° 40'00.00''N	068° 00'00.00''W

UL349		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
SATOE	17° 40'00.00''N	068° 00'00.00''W
ARIAS	17° 46'29.75''N	069° 22'31.62''W
IDACO	17° 50'50.66''N	070° 22'20.69''W
DCR/VOR	17° 55'56.28''N	071° 38'52.19''W
OBSIS	17° 50' 58.9"N	74° 8' 7.27" W
PESTO	17°33'59''N	082°02'52''W
CISNE	17°24'12''N	083°57'52''W
BZE/VOR	17° 32.4' N	088° 18.8' W

UL 452		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ANADA	15° 00' 00.00 N	064° 08' 46".49 W
ITLUV	13° 16' 19.66" N	062° 59' 26".68" W
MINDA	08 ⁰ 55' 00".09 N	060 ⁰ 09' 34".54 W
ASASO	04 ⁰ 35' 09".11N	057 ⁰ 51' 52".88"W
ACARI	01° 57' 26" N	056° 29' 20" W
IBDAN	08 ⁰ 07' 30" S	051 ⁰ 51' 20" W
DOLVI	13° 39' 50" S	049° 02' 07" W
BSI/VOR	15° 52' 19" S	048° 01' 19" W

UL462		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ANU/VOR	17° 07' 33.16" N	061° 48' 00.00" W
ETBIG	13° 19' 48.00" N	060° 03' 35.00" W
LUTCH	08° 55' 15.52" N	058° 05' 44.60" W
ILRAV	06 ⁰ 23' 47.04"N	057 ⁰ 00' 00.00"W
GENAT	02° 29' 13" N	055° 19' 24" W
ILRIP	09° 38' 36" S	049° 15' 59" W
RUSTE	12° 15' 28" S	048° 14' 29" W
AFTER	16° 44' 31" S	045° 42' 31" W
SIDOL	19° 04' 07" S	044° 20' 35" W

UL468		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
PIGBI	17°41'21.38" N	071° 43'40.7" W
ALSYN	16° 48' 44" N	071° 25' 08.9" W
JULIO	16° 00' 00" N	071° 08' 08.6" W
ABA/VOR	12° 30.3' N	069° 56.6' W

L576		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
BDA/VOR	32° 22' 16.43" N	064° 41' 33.28" W
SEAVR	29° 41' 55.89N	063° 04' 25.02W
RKDIA	21° 00' 00.00N	060° 00' 00.00 W
CITRS	18° 00' 00.00N	059° 00' 00.00 W

UL576		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
CITRS	18° 00' 00.00N	059° 00' 00.00W
LESUD	15° 38' 29.11N	058° 10' 46.33W
ROPVA	13° 05' 00.00N	057° 19' 33.00W
PIPUV	10° 42' 25.32N	056° 31' 43.45W
TRAPP	09° 05' 05.00" N	055° 59' 29.00" W
ZY/VOR	05° 27' 01.00" N	055° 11' 03.00" W
SIROS	02° 28' 28.00" N	054° 41' 33.00" W

L577		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ANU/VOR	17° 07' 33" N	061° 48' 01" W
ELOPO	17° 39' 00.2" N	062° 33' 15.8" W
PJM VOR/DME	17° 28' 25.70" N	063° 07' 05.78" W
STT VOR/DME	18° 21' 20.94" N	065° 01' 28.40" W
ANTEX	18° 29' 00.00" ' N	068° 00' 00" W

UL577		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ANTEX	18° 29' 00.00" N	068° 00' 00.00" W
CDO/VOR	18° 25' 58.57" N	069° 40' 02.38" W
ETBOD	18° 31' 00.00" N	071° 53' 00" W
BENET	18° 15.0' N	074° 39.7' W
MAMBI	19° 27.0' N	082° 02.8' W
DANUL	20° 11' 35.4' N	085° 19' 15.6W
CZM	20° 30.27.4' N	086° 54' 43.7' W

**PROPOSAL FOR AMENDMENT OF THE CARIBBEAN AND SOUTH AMERICAN REGIONS – AIR
NAVIGATION PLAN, VOLUME II, E-ANP (DOC 8733)
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ATTACHMENT B – AMEND ATS ROUTES

UL212		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
NOSAT ^[odfm1]	21° 57' 50 49" N	085° 58' 54 52" W
LIBAS	21° 53' 03" N	084° 59' 33" W
NUKEG	21° 51' 23" N	084° 39' 01" W
UNG/NDB	21°45'21"N	082°52'41"W
MNELA ^[odfm2]	21° 42' 59" N	082° 54' 44" W
TANDL ^[odfm3]	214103N	0823057W
SOSINANTAD	213819N	0815653W
UCL/VOR ^[odfm4]	21° 36' 18" N	081°31'58"W
PERLA	21°34'50"N	080°49'59"W
KOTAX ^[odfm5]	213029N	0805423W
UCM/VOR	21°26'15"N	077°48'03"W
YOYIS OYISA ^[odfm6]	211606N	0792103W
CHUTO ^[odfm7]	211200N	0785430W
UNIKU ^[odfm8]	210757N	0782815W
DAFER DAXES ^[odfm9]	205526N	0770705W
UHG/VOR ^[odfm10]	20° 47' 53" N	076°18' 11" W
MIULS ^[odfm11]	204622N	0761250W
TADAS ^[odfm12]	202358N	0745359W
URLAM	19°57'55"N 195755N	073°22'18"W 0732218W

UL216UL339		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
GTK/VOR ^[odfm13]	21° 26.98' N	071° 8.06' W
SEKAR ^[odfm14]	20° 25' 00.00" N	070° 47' 42.00" W
PTA/VOR ^[odfm15]	19° 45' 33.00" N	070° 34' 14.00" W
CDO/VOR	18° 25' 58.57" N	069° 40' 02.38" W
POKAK	16° 00' 00.00" N	068° 34' 00.00" W
KABON	124445N	0674122W
MIQ/VOR	103634.10N	0665922.80W

<u>KARUM</u>	<u>16°00'38.4''N</u>	<u>069°24'21''W</u>
<u>PJG VOR</u>	<u>12°12'27.6''N</u>	<u>069°01'29.4''W</u>
<u>REPIS</u>	<u>11° 44' 42''N</u>	<u>068° 44'59.4''W</u>
<u>PBL VOR</u>	<u>10°29'14.4'' N</u>	<u>068°04'40.2''W</u>

UM328		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
SELEK	20° 05' 41'' N	082° 24' 55'' W
<u>UCL/VOR</u>	<u>21° 36' 18''N</u>	<u>081° 31'58'' W</u>
<u>SOLOS</u> [odfm16]	<u>22° 16' 00'' N</u>	<u>081° 16' 13'' W</u>
<u>LUISO</u> [odfm17]	<u>22° 33' 29'' N</u>	<u>081° 09' 18'' W</u>
<u>ALILU</u>	<u>23° 00' 47'' N</u>	<u>080° 58' 44'' W</u>
<u>ORNEG</u> [odfm18]	<u>24° 00' 00'' N</u>	<u>080° 58' 43'' W</u>

UM330		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
<u>KEFER</u> [odfm19]	23 46.2' N	077 02.6' W
<u>ENAMO</u>	<u>23°34'14''N</u>	<u>077°22'14''W</u>
<u>POCHO</u> [odfm20]	<u>23 26' 17''N</u>	<u>077 12' 20''W</u>
<u>YAPOS</u> [odfm21]	<u>22 36' 54''N</u>	<u>078 01' 09''W</u>
<u>UCJ/VOR</u>	<u>22°28'03''N</u>	<u>078°18'43''W</u>
<u>UCA/VOR</u>	<u>22°00'54''N</u>	<u>078°48'57''W</u>
<u>REGLA NELID</u> [odfm22]	21 58' 45''N	078 38' 55''W
<u>FUTAS</u> [odfm23]	<u>212948N</u>	<u>0790730W</u>
<u>YOYIS OYISA</u> [odfm24]	21 16' 06''N	079 21' 03''W
<u>ENAMO</u>	<u>23°34'14''N</u>	<u>077°22'14''W</u>
<u>ELUSI ILASI</u> [odfm25]	19 59' 57''N	080 36' 21''W
<u>GCM/VOR</u>		
<u>UMAKA</u> [odfm26]	18° 03.3' N	82° 07.4' W
<u>BONOS</u> [odfm27]	16 03' 43'' N	83 19' 36'' W

UL345 [odfm28]		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
SELEK	20° 05' 41'' N	082° 24' 55'' W
<u>SOSIN</u> [odfm29]	<u>21° 38' 16'' N</u>	<u>081° 56' 15'' W</u>
<u>ALNOX</u>	<u>22° 21' 58'' N</u>	<u>081° 43' 13'' W</u>
<u>IKPUM-IKBIX</u>	<u>24° 00' 00'' N</u>	<u>081° 26' 20'' W 081°14'00'' W</u>

UL417		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
<u>BORDO</u> [odfm30]	24° 00' 00'' N	078° 27' 30'' W
<u>UMZ/VOR</u>	<u>20°18'10''N</u>	<u>077°05'58''W</u>
<u>YAPOS</u> [odfm31]	<u>22° 36' 54'' N</u>	<u>078° 01' 09'' W</u>
<u>VENTU</u> [odfm32] <u>NEFTU</u>	<u>20° 47' 27'' N</u> <u>20°39'35''N</u>	<u>077° 26' 30'' W</u> <u>077°28'47''W</u>

<u>PULKA</u>	<u>19° 16' 20'' N</u>	<u>076° 57' 38'' W</u>
BEMOL	19° 20' 26'' N	077° 05' 36'' W
<u>ARUXA</u>	<u>03° 28' 5600.4S</u>	<u>069° 47' 4236W</u>
<u>ISARA</u>	<u>103624S</u>	<u>0674036W</u>

UL464		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
PTA/VOR[odfm33]	19° 45' 33.00'' N	070° 34' 14.00'' W
<u>STARKJARED</u> [odfm34]	<u>20° 23' 54.8'' N</u>	<u>070° 27' 03.5'' W</u>
<u>RNTRY</u>		
<u>SEBUG</u>		
<u>LENUS</u>		
<u>MANII</u>		
CERDA[odfm35]	22° 44.71' N	069° 54.1' W

UL471 [odfm36]		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
NAGEL	-----	-----
PABEL	20° 27' 12'' N	083° 57' 06'' W
<u>UNG/VOR</u>		
<u>UZG/VOR</u>		
<u>TADPO</u>		
<u>JUSTO</u> [odfm37]	<u>22° 05' 04'' N</u>	<u>083° 25' 26'' W</u>
<u>MNELA</u> [odfm38]	<u>21° 42' 59'' N</u>	<u>082° 54' 44'' W</u>
<u>DUTAN</u>	<u>22° 40' 18'' N</u>	<u>082° 13' 34'' W</u>
<u>SIVAK</u> [odfm39]	<u>22° 51' 53'' N</u>	<u>082° 04' 55'' W</u>
<u>KIMUP</u> [odfm40]	<u>22° 59' 50'' N</u>	<u>082° 15' 50'' W</u>
<u>IKPUM</u> [odfm41] <u>IKBIX</u>	<u>24° 00' 00'' N 24° 00' 00'' N</u>	<u>081° 26' 20'' W 081° 14' 00'' W</u>

UB503		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ENAMO[odfm42]	23° 34' 14'' N	077° 22' 14'' W
<u>UNV/VOR</u>	<u>21° 23' 42'' N</u>	<u>077° 13' 51'' W</u>
<u>UMZ/VOR</u>	<u>20° 18' 10'' N</u>	<u>077° 05' 58'' W</u>
<u>BEMOL</u>	<u>19° 20' 26'' N</u>	<u>077° 05' 36'' W</u>
<u>DAFER</u>	<u>20° 55' 26'' N</u>	<u>077° 07' 05'' W</u>
<u>KALED</u>	<u>19° 50' 05'' N</u>	<u>077° 00' 52'' W</u>
<u>RABAG</u>	<u>19° 15' 03'' N</u>	<u>076° 51' 58'' W</u>
VIKRO[odfm43]	19° 00' 56'' N	076° 16' 29'' W
<u>BOBKA</u> [odfm44]	<u>15° 00' 00'' N</u>	<u>075° 12' 48'' W</u>
IROTI[odfm45]	08° 154' 1903'' N	073° 301' 2543'' W
BGA/VOR[odfm46]	070754N	0731104W

UR506		
<i>SIGNIFICANT POINT</i> <i>PUNTO SIGNIFICATIVO</i>	<i>LATITUDE</i> <i>LATITUD</i>	<i>LONGITUDE</i> <i>LONGITUD</i>
NUDAL	21° 15' 48" N	085° 37' 14" W
<u>NORIL</u>	<u>21° 47' 43" N</u>	<u>084° 44' 58" W</u>
<u>NUKEG</u>	<u>21° 51' 23" N</u>	<u>084° 39' 01" W</u>
<u>KALNO</u> ^[odfm47]	<u>22° 41' 00" N</u>	<u>083° 18' 37" W</u>
<u>NAKRO</u>	<u>22° 51' 36" N</u>	<u>083° 19' 13" W</u>
UHA/VOR	22° 58' 43" N	082° 25' 35" W

UR625		
<i>SIGNIFICANT POINT</i> <i>PUNTO SIGNIFICATIVO</i>	<i>LATITUDE</i> <i>LATITUD</i>	<i>LONGITUDE</i> <i>LONGITUD</i>
ENAMO ^[odfm48]	23° 34' 14" N	077° 22' 14" W
<u>YOLAS</u> ^[odfm49]	<u>22° 10' 22" N</u>	<u>077° 24' 23" W</u>
<u>LAROZ</u> ^[odfm50]	<u>21° 19' 30" N</u>	<u>077° 25' 40" W</u>
<u>NEFTU</u> ^[odfm51]	<u>20° 47' 27" N</u>	<u>077° 26' 30" W</u>
<u>UMZ/VOR</u>	<u>20° 18' 10" N</u>	<u>077° 05' 58" W</u>
MATOS	19° 29' 23" N	077° 28' 26" W

UZ637		
<i>SIGNIFICANT POINT</i> <i>PUNTO SIGNIFICATIVO</i>	<i>LATITUDE</i> <i>LATITUD</i>	<i>LONGITUDE</i> <i>LONGITUD</i>
PABEL	20° 27' 12" N	083° 57' 06" W
<u>POPAJ</u> ^[odfm52]	<u>21° 00' 44" N</u>	<u>083° 18' 02" W</u>
<u>TANDL</u> ^[odfm53]	<u>21° 41' 03" N</u>	<u>082° 30' 57" W</u>
<u>NOXAL</u> ^[odfm54]	<u>22° 21' 58" N</u>	<u>081° 43' 13" W</u>
<u>ALILU</u>	<u>23° 00' 47" N</u>	<u>080° 58' 44" W</u>

UL776 ^[RR55]		
<i>SIGNIFICANT POINT</i> <i>PUNTO SIGNIFICATIVO</i>	<i>LATITUDE</i> <i>LATITUD</i>	<i>LONGITUDE</i> <i>LONGITUD</i>
<u>BSI/VOR</u> ^[odfm56]	<u>15° 52' 31" S</u>	<u>047° 32' 53" W</u> ^[RR57]
<u>MEVOS</u> ^[odfm58]	<u>10° 24' 10" S</u>	<u>050° 29' 98" W</u> ^[RR59]
<u>SIMUV</u>	<u>15° 33' 26" S</u>	<u>047° 20' 48" W</u> ^[RR60]
<u>VARSO</u>	<u>14° 19' 23" S</u>	<u>048° 06' 59" W</u> ^[RR61]
<u>OPTEN</u>	<u>10° 29' 39" S</u>	<u>049° 54' 07" W</u> ^[RR62]
<u>TIR/NDB</u> ^[odfm63]	<u>02° 13' 08.40N</u>	<u>055° 56' 30.60W</u> ^[RR64]
<u>NIDNA</u>	<u>05° 01' 21.35N</u>	<u>057° 24' 00.07W</u>
<u>KORTO</u>	<u>08° 55' 06".00 N</u>	<u>059° 26' 47".00 W</u> ^[RR65]
<u>PARSU</u> ^[odfm66]	<u>05° 01' 21.35N</u>	<u>057° 24' 00.07W</u> ^[RR66]
<u>KORTO</u>	<u>08° 55' 06" N</u>	<u>059° 26' 47" W</u>
<u>NEKOB</u>		
<u>KAISU</u>		
<u>ANU/VOR</u>		

VIBSI	13°26' 07".00"N	062° 15' 22".00"W	RR68]
GEECE [odfm69]	15°00'00".00 N	063° 15' 00" .00W	RR70]

L-34-UM795		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
TANIA [odfm71]	24°01'48"N	079°31'42"W
PIGBO	21°18'49"N	079°07'46"W
GONIS	20°00'00"N	078°56'11"W
CHUTO [odfm72]	21°12'00"N	078°54'30"W
NIBOS [odfm73] NIBEO	20°00'08"N	078°38'45"W
SIA/VOR		
COLBY	15°00'00"N	078°32'00"W
ENPAN

UB879		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
NOSAT [odfm74]	21° 57' 49" N	085° 58' 52" W
TABDU	22° 14' 38" N	085° 34' 50" W
MUPKI	22° 36' 25" N	085° 03' 43" W
AMEVO	22°32'30"N	085°25'54"W
VINKA	23°12'02"N	084°48'00"W
CANOA [odfm75]	24° 00' 00" N	083° 03' 00" W

**PROPOSAL FOR AMENDMENT OF THE CARIBBEAN AND SOUTH AMERICAN REGIONS –
AIR NAVIGATION PLAN, VOLUME II, E-ANP (DOC 8733)
(SERIAL No. NACC 16/01- ATM)**

ATTACHMENT C – DELETE ATS ROUTES

UB500		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
UCL/VOR	21°36'18''N	081°31'58''W
PISIS	20°12'40''N	082°55'55''W

UR519		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
GERONA NDB	21°45'21''N	082°52'41''W
NUDAL	21°15'48''N	085°37'14''W

UR630		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
UCL/VOR	21°36'18''N	081°31'58''W
BISTO	20°22'25''N	083°39'57''W

UG633		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ETBOD	18°31'00.00''N	071°53'00.00''W
PITEX	18°24'13.00''N	071°06'27.00''W
LECKY	18°13'30.00''N	069°53'43.00''W
CDO/VOR	18°25'58.57''N	069°40'02.38''W
DARSI	18°10'39.00''N	068°33'31.00''W
POBEP	18°11'16.90''N	068°24'38.62''W

UB760		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
BORDO	24°00'00''N	078°27'30''W
IMELA	23°25'14''N	078°11'03''W
UNV/VOR	21°23'42''N	077°13'51''W

UL793		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
ASIVO	19°57'36.00"N	069°41'33.00"W
CDO/VOR		
MEDIB	17°49'35.00"N	069°31'41.00"W
TEKOL	16°00'00.00"N	069°06'54.00"W

UG-880		
<i>SIGNIFICANT POINT PUNTO SIGNIFICATIVO</i>	<i>LATITUDE LATITUD</i>	<i>LONGITUDE LONGITUD</i>
DCR/VOR	17°55'56.28"N	071°38'52.19"W
MOGAM	18°02'13.71"N	070°23'53.12"W
POLUX	18°03'48.27"N	070°04'17.89"W
PIRON	18°05'52.70"N	068°37'47.97"W
VODEL	18°06'50.02"N	069°25'12.12"W
ALEVI	18°09'31.00"N	068°49'14.00"W
DARSI	18°10'39.00"N	068°33'31.00"W
POBEP	18°11'16.90"N	068°24'38.62"W
MELLA	18°13'00.00"N	068°00'00.00"W

- END -

Appendix C to the Report
Position of SAM FIRs and with CAR ADJACENT FIRs regarding use of 40/20 NM GNSS/DME

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
Trinidad & Tobago (Includes Antigua & Barbuda, Barbados)	United States (San Juan)	TBD	TBD	TBD	TBD	<p>Currently 10Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Trinidad and Tobago will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	Guyana	iMPLEMENTED	June 30, 2016	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>Analysis will be conducted over the first six months of use and a decision will be made by June 2017 as to the timeframe to reduce to 20 NM</p>
	Suriname	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>Currently there is a VHF communication challenge</p>

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						for T&T at position TRAPP. Solutions to this challenge are being investigated.
	Venezuela	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>Meeting set between T\$T and Venezuela to discuss. T&T is ready to implement 40NM GNSS with Venezuela SAFETY ANALYSIS NEEDED</p>
Curacao	San Juan	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	DR	Agreed but LOA/MOA needed	TBD	TBD		Currently 10 Mins MNT

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
		A319, remain at 80nm by end of 2017 possible 40 NM				
	Venezuela	Agreed via telcon to be confirmed	TBD	TBD	TBD	Currently 10 Mins MNT
	Jamaica	Agreed but LOA needed	TBD	TBD	TBD	Currently 10 Mins MNT
	Haiti	UG444 remain at 80nm based on Curacao's VHF situation	TBD	TBD	TBD	Currently 10 Mins MNT Discussions ongoing
	Colombia	Agreed but LOA needed A319, UG444 remain at 80nm	DEC 2016	TBD		Currently 10 Mins MNT
COCESNA (Costa Rica, Honduras, Belize, El Salvador, Nicaragua)	Mexico	Implemented	In effect	TBD	TBD	Challenge to Reduction to 20 is due to required separation between Mexico and Houston
	Cuba	N/A	N/A	Implemented	implemented	Data sharing agreements in effect. 2017 proposed RADAR handoffs
	Jamaica	Implemented	In effect	Discussions		Limitation is VHF at BDY with Jamaica. Request has been made by Jamaica for

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica
	Panama	Implemented	In effect	Reduce to 20NM in a certain area that include the FIX points. <ul style="list-style-type: none"> • UM659 LESIR • UM328 PAPIN • UR773/UA502 POXON • UL655 EGODI • UG440 ISEBA • UA317 BUFE0 • UM796 PADUR • UM419 ANSON • UA322 AMUBI • UR505 DURAM Maintain 40NM the next points: <ul style="list-style-type: none"> • UA552 FALLA • UA321 PELRA 		<ul style="list-style-type: none"> •

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
	Colombia	Agreed	TBD 2017	TBD	TBD	LOA being revised.
Dominican Republic	Haiti	LOA signed in Ft. Lauderdale Florida march 2016	Implementation Date TBD	TBD	TBD	Discussions Ongoing
	Curacao	TBD A319, remain at 80nm	TBD	TBD	TBD	
	Miami	Discussion with Miami re procedural contingency				Currently 10 NM Surveillance in use Discussion if required
	San Juan	Willing to reduce. Procedural. Discussion with San Juan (SJ RQS 15 and 20 MINS)	TBD			Currently 10 Mins MNT US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation. Discussions ongoing on LOA for 10NM Separation

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						<p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
Mexico	COCESNA	Already implemented (Surveillance) (MEX RQS 15 MINS in PACIFIC) Discussion about procedural use of 40NM with GNSS				<p>Northbound traffic from COCESNA Challenge to Reduction to 20 is due to required separation between Mexico and Houston</p> <p>Radar data sharing discussions ongoing</p>
	Houston	N/A				<p>Continental – 10 NM miles Surveillance</p> <p>The proposed separation standard is currently being reviewed by FAA HQs to determine applicability in ZHU offshore airspace.</p>
		N/A				<p>Oceanic 10 minutes (MNT)</p> <p>The proposed separation standard is currently being</p>

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						reviewed by FAA HQs to determine applicability in ZHU offshore airspace.
	Albuquerque	N/A				<p>Currently Continental – 10NM miles Surveillance</p> <p>Bilateral Discussions required</p>
	Los Angeles	N/A				<p>Currently 10 nm Surveillance</p> <p>Bilateral Discussions required</p>
	Cuba	TBD	TBD	TBD	TBD	<p>Currently 40 nm (surveillance)</p> <p>Discussion regarding use of 40NM procedural under a letter of agreement</p>
Haiti	Kingston	TBD	TBD	TBD	TBD	<p>10 Mins MNT</p> <p>Discussions Ongoing</p>
	Cuba	TBD	TBD	TBD	TBD	<p>10 Mins MNT</p> <p>Discussions Ongoing</p>
	Dominican Republic	TBD	TBD	TBD	TBD	<p>10 Mins MNT</p> <p>Discussions Ongoing</p>
	Miami	TBD	TBD	TBD	TBD	<p>10 MINS MNT</p>

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
	Curacao	LOA agreement in place	Operational from?			
Guyana	Trinidad & Tobago	Agreed	May 31 2016	TBD	TBD	
	Suriname	Agreed	May 31, 2016	TBD	TBD	
	Brazil	Signed	Implemented	TBD	TBD	
	Venezuela	TBD	TBD	TBD	TBD	
Suriname	Guyana					10 Mins MNT
	Brazil	Suriname in favour	TBD	TBD	TBD	Sent draft to Brazil. TELCON on April 7 for discussion
	French Guiana	TBD	TBD	TBD	TBD	10 Mins MNT
	Trinidad and Tobago	Suriname willing, Trinidad and Tobago has challenges with VHF	TBD	TBD	TBD	Currently 10 MIN Currently there is a VHF communication challenge for T&T at position TRAPP.
Bahamas					Discussions needed with US Separation standards does not apply with US.	
Colombia	PANAMA	Agreed Air traffic flying between the FIRs	Implemented 2016	As agreed between FIRs	December 2016	

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
		maintain 20 nm separation				
	JAMAICA	Agreed	When?			20nm will depend on establishing communication in the north of the Barranquilla FIR
	CURACAO	Agreed	December 2016	TBD	TBD	
	VENEZUELA	TBD	TBD	TBD	TBD	
Cuba	COCESNA	N/A	N/A	20 NM Implemented	Implemented	Data sharing agreements in effect. 2017 proposed RADAR handoffs
	MEXICO	TBD	TBD	TBD	TBD	Currently 40 nm (surveillance) Discussion regarding use of 40NM procedural under a letter of agreement
	HAITI	TBD	TBD	TBD	TBD	10 Mins MNT Discussions Ongoing
	JAMAICA	TBD	TBD	TBD	TBD	Currently 40nm overflight based on surveillance, 20nm landing based on surveillance.

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						Use of GNSS procedural minima to be discussed
Panama	COCESNA	LOA signed October 2016 effective November 2016	Implemented	Reduce to 20NM in a certain area that include the FIX points. <ul style="list-style-type: none"> • UM659 LESIR • UM328 PAPIN • UR773/UA502 POXON <ul style="list-style-type: none"> • UL655 EGODI • UG440 ISEBA • UA317 BUFE0 • UM796 PADUR • UM419 ANSON • UA322 AMUBI • UR505 DURAM Maintain 40NM the next points: <ul style="list-style-type: none"> • UA552 FALLA • UA321 PELRA 	WHEN?	
	COLOMBIA	LOA Agreed Air traffic flying between the FIRs maintain 20 nm	September 2016	As agreed between FIRs	December 2016	

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
		separation				
	JAMAICA	Agreed	November 2016 effective 10 December 2016 1 May 2016	40 NM Separation	TBD	LOA with Kingston signed November 2016, effective 10 December 2016.
United States	TRINIDAD AND TOBAGO	TBD	TBD	TBD	TBD	<p>Currently 10Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Trinidad and Tobago will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	CURACAO	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing</p>

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						<p>the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	DR	<p>Willing to reduce Procedural</p> <p>Discussion with San Juan</p>				<p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	MEXICO (Reference Above)					

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
	HAITI	TBD	TBD	TBD	TBD	10 MNT
Jamaica	Curacao	Agreed	TBD	TBD	TBD	<p>Currently 10 Min MNT in use</p> <p>Discussions on ground to ground communications in progress and LOA revision to be signed soon.</p> <p>Automated coordination being investigated.</p>
	COCESNA	Implemented EXCEPTION: UM782 10 MIN MNT	In effect	Discussions	TBD	Limitation is VHF at BDY with Jamaica. Request has been made by Jamaica for solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica
	PANAMA	agreed	10 Dec 2016	TBD	TBD	
	COLOMBIA	Implemented	In use	TBD	TBD	
	HAITI	TBD	TBD	TBD	TBD	
	CUBA	TBD	TBD	TBD	TBD	Currently 40nm overflight based on surveillance, 20nm landing based on surveillance.

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
						Use of GNSS procedural minima to be discussed

ARGENTINA						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
CORDOBA	IQUIQUE	OG				
	LA PAZ	YES	01/01/17			
	EZEIZA			YES	13/10/2016	
	MENDOZA			YES	13/10/2016	
	RESISTENCIA			YES	13/10/2016	VHF Com. Constrains
RESISTENCIA	ASUNCION	YES	01/01/17			
	LA PAZ	YES	01/01/17			
	CORDOBA			YES	13/10/2016	
	CURITIBA	YES	01/01/17			
	EZEIZA			YES	13/10/2016	
	MONTEVIDEO	YES	01/01/17			
EZEIZA	COMODORO RIVADAVIA			YES	13/10/2016	
	MENDOZA			YES	13/10/2016	
	PUERTO MONTT	OG				
	CORDOBA			YES	13/10/2016	
	RESISTENCIA			YES	13/10/2016	
	MONTEVIDEO	YES	01/01/17	YES	2010	PAPIX, KUKEN and DORBO 20NM
MENDOZA	EZEIZA			YES	13/10/2016	
	SANTIAGO	OG				
	CORDOBA			YES	13/10/2016	
COMODORO RIVADAVIA	EZEIZA			YES	13/10/2016	
	PUNTA ARENAS	OG				
	PUERTO MONTT	OG				

BOLIVIA						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
LA PAZ	AMAZÓNICO	YES	01/01/17			
	ASUNCION	YES	01/01/17			
	CURITIBA	YES	01/01/17			
	CORDOBA	YES	01/01/17			
	LIMA	OG				
	IQUIQUE	OG				
	RESISTENCIA	YES	01/01/17			

BRAZIL						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
AMAZÓNICO	BRASILIA	---	---	---	---	10NM
	BOGOTÁ	YES	13/10/16			
	CAYENNE	---	---	---	---	10 Minutes
	CURITIBA	---	---	---	---	10NM
	GEORGETOWN	YES	07/01/16			
	LA PAZ	YES	01/01/17			
	LIMA	YES	31/03/16			COM/SUR required, does not apply, overflights from/to La Paz FIR
	MAIQUETIA	YES	23/10/16			
	PARAMARIBO	YES	13/10/16			
	RECIFE	---	---	---	---	10NM
	ATLANTICO	---	---	---	---	10 Minutes
BRASILIA	AMAZÔNICO	---	---	---	---	10NM

	CURITIBA	---	---	---	---	5NM
	RECIFE	---	---	---	---	5NM
CURITIBA	ASUNCION	YES	Mar/2016			
	AMAZONICO	---	---	---	---	10NM
	BRASILIA	---	---	---	---	5NM
	LA PAZ	YES	01/01/17			
	MONTEVIDEO	YES	01/01/17			
	RECIFE	---	---	---	---	5NM
	RESISTÊNCIA	YES	01/01/17			
	ATLÂNTICO	---	---	---	---	10 Minutes
RECIFE	AMAZÔNICO	---	---	---	---	10NM
	BRASÍLIA	---	---	---	---	5NM
	CURITIBA	---	---	---	---	5NM
	ATLÂNTICO	---	---	---	---	10 Minutes
ATLÂNTICO	AMAZÔNICO	---	---	---	---	10 Minutes VHFCom. problems
	CURITIBA	---	---	---	---	
	RECIFE	---	---	---	---	
	CAYENNE	---	---	---	---	

CHILE						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/ DME	Date of Implementation	20 NM GNSS/ DME	Date of Implementation	
SANTIAGO	IQUIQUE					5NM
	LIMA	OG				
	MENDOZA	OG				
	PUERTO MONTT					5NM
IQUIQUE	CORDOBA	OG				
	LA PAZ	OG				
	LIMA	OG				
PUERTO MONTT	SANTIAGO					5NM
	PUNTA ARENAS					5NM
	EZEIZA	OG				
	COMODORO RIVADAVIA	OG				
PUNTA	PUERTO MONTT					5NM

ARENAS	COMODORO RIVADAVIA	OG				
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COLOMBIA						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
BOGOTÁ	AMAZÔNICO	YES	13/10/16			
	CENAMER	NO				80 NM due to VHF/HF Communications Constrains
	GUAYAQUIL	YES	13/10/16			Reduced separation of 40 NM is applied. Memorandum of Understanding among ATC service providers signed.
	LIMA	YES	31/03/16			COM SUR required, does not apply overflights
	MAIQUETIA	OG				
	PANAMÁ	YES	Oct/16			
	BARRANQUILLA	YES				
BARRANQUILLA	MAIQUETIA	OG				
	PANAMÁ	YES	Oct/16			
	BOGOTÁ	YES				
	KINGSTON	YES	30/Ago/2013			
	CURAÇAO					No available information

ECUADOR						
ACC	ACC ADJ	Longitudina separationl				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
GUAYAQUIL	BOGOTÁ	YES	13/10/16			Reduced separation of 40 NM is applied. Memorandum of Understanding among ATC service providers signed.
	LIMA	YES	31/03/16			COM/SUR required, does not apply overflights. Updated with signing of LoA during SAM/IG/18, limitations on overflights is eliminated since 10/11/16.
	CENAMER	NO	---	N/A	---	Oceanic Separation

FRENCH GUIANA						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
CAYENNE	AMAZÔNICO	---	---	---	---	10 Minutes
	PARAMARIBO	---	---	---	---	10 Minutes
	PIARCO	---	---	---	---	10 Minutes

GUYANA						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
GEORGETOWN	AMAZONICO	YES	7/Jan/2016			
	PIARCO	YES	30/Jun/2016			
	MAIQUETIA	YES	30/01/2017			
	PARAMARIBO	YES	31/May/2016			

PANAMÁ						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
PANAMÁ	BOGOTÁ	YES	Oct/16			
	BARRANQUILLA	YES	Oct/16			
	CENAMER	YES	18/Oct/2012	OG	TBD	20NM under consideration in Panama
	KINGSTON	YES	10/Dec /2016			

PARAGUAY						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
ASUNCION	CURITIBA	YES	Mar/16			
	LA PAZ	YES	01/01/17			
	RESISTÊNCIA	YES	01/01/17			

PERU						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
LIMA	AMAZONICO	YES	31/03/16			COM/SUR required, does not apply overflights to/from La Paz FIR
	BOGOTÁ	YES	31/03/16			COM/SUR required, does not apply overflights
	SANTIAGO	OG				
	IQUIQUE	OG				
	GUAYAQUIL	YES	31/03/16			COM/SUR required, does not apply overflights. LoA signed during SAM/IG/18, overflights limitation is eliminated since 10/11/16.
	LA PAZ	OG				

SURINAME						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
PARAMARIBO	AMAZÓNICO	YES	13/10/16			Signed
	GEORGETOWN	YES	31/05/16			Signed

	PIARCO	N/A				Oceanic Separation
	CAYENNE	N/A	---	---	---	Oceanic Separation

URUGUAY						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
MONTEVIDEO	CURITIBA	YES	01/01/17			
	EZEIZA	YES	01/01/17	YES	2010	PAPIX KUKEN DORBO 20NM
	RESISTENCIA	YES	01/01/17			

VENEZUELA						
ACC	ACC ADJ	Longitudinal separation				Comments
		40 NM GNSS/DME	Date of Implementation	20 NM GNSS/DME	Date of Implementation	
MAIQUETIA	AMAZONICO	YES	23/10/15			
	BOGOTA	OG				
	BARRANQUILLA	OG				
	PIARCO					Negotiating
	CURAZAO	NO				Curazao does not accept.
	SAN JUAN	NO				
	GEORGETOWN	YES	30/01/2017			