Belize Airport
Concession Company
Limited

AERONAUTICAL STUDY OF PHILIP S.W. GOLDSON INTERNATIONAL AIRPORT

EMERGENCY ACCESS ROADS FOR RUNWAY 07 AND 25.

Belize Airport
Concession Company
Limited

SECTION 1. GENERAL

EMERGENCY ACCESS ROADS FOR RUNWAY 07 AND 25.

NAMES AND SIGNATURES OF THE PERSONS WHO PREPARED THIS STUDY

WINDELL THOMPSON
Management

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JORGE ESPAT
Approval

Signature:

Contents

INTRODUCTION

LOCATION OF THE PHILIP S.W. GOLDSON INTERNATIONAL AIRPORT IN BELIZE

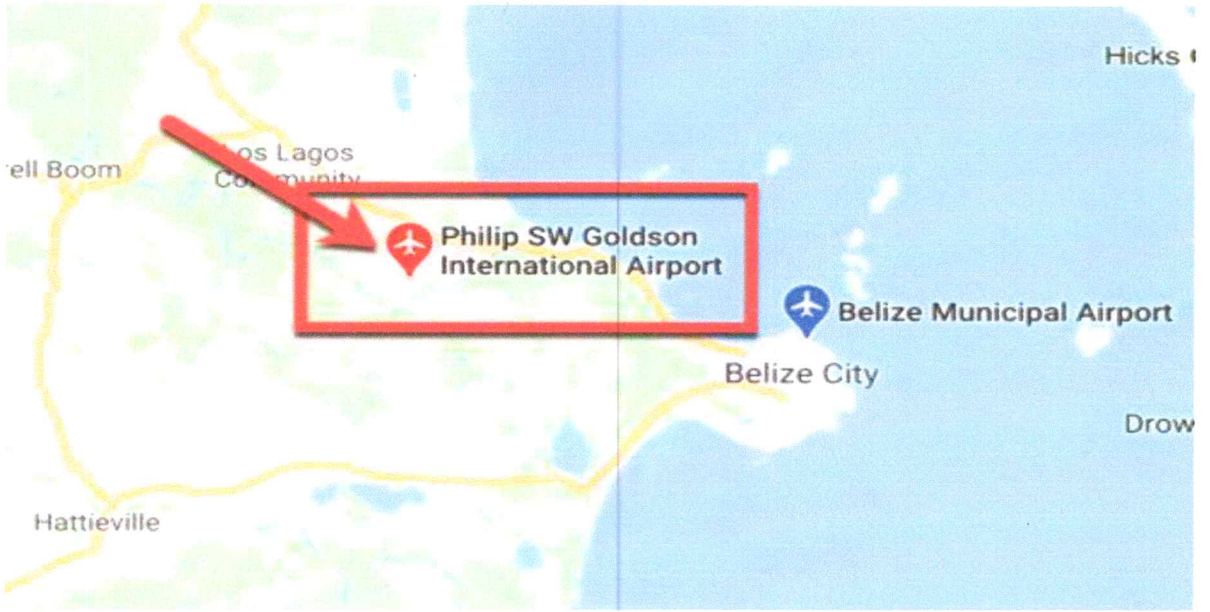

Figure 1 Philip S. W. International Airport Location **Source:** Microsoft Bing/Belize Airport

The PGIA is Belize's only international airport located 10 miles from Belize City in Ladyville, Belize District. It is owned by the Government of Belize and Belize Airports Authority and operated by the Belize Airport Concession Company Limited under a Concession Agreement. In 2024, there were over 4,800 international flights, 29,387 domestic flights, approximately 1,229,000 domestic and international arriving and departing passengers and 643,000 kilograms of cargo. Currently, eleven international and two domestic airlines operate from the PGIA with scheduled flights to the USA, Canada, Latin America, the Caribbean and Europe. These airlines are: Alaska Air, American Airlines, COPA, Delta, JetBlue Airways, Southwest, Spirit, Sun Country, Transportes Aereos Guatemaltecos (TAG), United, WestJet, Air Canada, Maya Island Air and Tropic Air.

The airport was originally built in 1943, when a 5,000 feet asphalt runway, a taxiway and a small apron were constructed. In 1944, a terminal building was constructed and inaugurated on 15 January, 1945.

The name of the airport is dedicated to the memory of a Belizean nationalist, Hon. Philip S.W. Goldson.

Some airfield dimensions include a 9,900 feet runway length and a 735,800 sq. ft. parking apron, with a total of 16 large aircraft parking slots. The Airport Terminal Building has a total of 150,000 sq. ft. and contains Terminals #1 and #2, International Arrival and Departure Halls, a Domestic Arrival Hall, restaurants, snack outlets, duty free and duty paid shops, a bank, and various other services. More About P.G.I.A: **Source P.G.I.A. Website: https://www.pgiabelize.com/about-us/.**

OBJECTIVE

a. To comply with BCAR 139 as referenced below:

The aerodrome operator has not provided emergency access routes to approach areas to facilitate the achievement of minimum response times. Particular attention shall be paid to providing easy access to approach areas up to 1 km from the threshold, or at least within the limits of the aerodrome. Where fencing is provided, the need for convenient access to outside areas shall be considered. Service roads must have a resistant or hard surface, capable of supporting the heaviest vehicles that will use them and be usable in all weather conditions.

BCAR: Does not comply with BCAR 139.319 (k) (1) (2)

b. To ensure effective Emergency Response time to runway 07 and 25 for any Accidents and incidents by providing emergency access road within the aerodrome apron, taxiway to Runway west and east areas and by implementing coordinated compensating measures for areas beyond the perimeter fence where the 1 km emergency access requirement cannot be achieved.

SCOPE

This aeronautical study assesses the availability, adequacy, and limitations of emergency access routes serving Runway 07 and 25, including access from the Crash Fire Rescue (CFR) station via Taxiway B to the runway.

The scope includes the evaluation of compliance for the emergency access road requirements within the aerodrome boundary; and, the assessment of compensating measures, including coordination with external emergency response agencies, for approach areas located beyond the perimeter fence, where direct access up to 1 km from the runway west and east is not feasible due to physical and fencing constraints.

SECTION 2. Risk Analysis

Physical Scenario Characterization

This aeronautical study considers the physical characteristics of Philip S. W. Goldson International Airport (PGIA) and its surrounding environment as they relate to operational safety. The physical scenario includes the aerodrome layout, runway configuration, movement areas, rescue and firefighting services (CFR), and adjacent infrastructure.

1. **The P.G.I.A has a security road for the airport perimeter inspection by security personnel.**
2. The unpaved perimeter road goes west from CFR to beyond Runway 07 in the direction of the river, then north around Runway 07, then east along the perimeter of the airport property towards Runway 25, then south beyond Runway 25 and west towards the ATB.

As a compensating measure, a **Memorandum of Understanding (MoU)** is in place between the **Belize Airport Concession Company Limited (BACC)** and the **National Emergency Management Organization (NEMO)** to ensure coordinated emergency response beyond the aerodrome boundary.

- Continued waterlogging also presents long-term maintenance challenges for B.A.C.C.

Safety Constraints for the Maintenance of Security Road.

Given that the affected areas are prone to seasonal flooding and located near ecologically sensitive areas in the northeast and southeast of the P.G.I.A Runway 07 and 25, any major construction efforts to build emergency roads require mitigation measures and engineering solutions that are currently beyond the airport's operations.

1. First Phase:

   1.1. The Taxiway Delta expansion project.

2. Second Phase:

   2.1. Efforts will be concentrated on the completion of the emergency roads after the Taxiway Delta expansion project ends.

   2.2. Emergency Road:

   An email was sent to the Director of Civil Aviation in October, 2023 giving our commitment to construct an emergency road at either end of the runway as per the BCAR 139. It was stipulated in the email that this work would commence at the completion of the Airport Expansion Project, as materials from the Project would be used to develop these roads.

A survey of the property measuring the distance between the RESA for Threshold 25 and our property line, it was discovered we didn't have the 1 km distance required. We will, however, build an emergency road on our existing property line which will connect with the public road and controlled by a security gate.

As it relates to the emergency road from the RESA for threshold 07 to our property line, there are two factors affecting this road.

The existing soil condition stipulated in the report by Professional Engineering Service in 2006 is very swampy and not conductive for any construction.

The other factor is that we cannot meet the 1 km distance as required due to the size of the limited property.

In order to mitigate this issue, we have built a security road able to support a fully loaded fire tender from directly behind the fire station to the river. It doesn't have the required distance from the RESA for Threshold 07. Additionally, we will be building a boat dock which will allow the first responder to get over the river, if so required.

Once we have adequate fill materials, the second phase of the plans is to continue this road around the swamp allowing greater access for first responders in the event of an emergency.

Source: P.E.S. Ltd.

Figure 2 Apron and runway expansion: Source Edward Burke Photographer

SECTION 2.1

General Description

The aerodrome provides emergency access routes for **Crash Fire Rescue (CFR)** vehicles using **existing runway and taxiway infrastructure**, which allows rapid access to the movement area and runway environment.

Due to **perimeter fencing limitations**, it is not feasible to extend emergency access roads beyond the aerodrome boundary up to 1 km from the runway thresholds.

(a) **The Security road** surrounding the airport will serve to provide sufficient terrain or adequate terrain for an Emergency road.

The Available Land for the Construction of Emergency Road to west Runway 07

- The located road is near to the security fence at the north side of the runway and the other security fence is located at the south side of the runway and it borders the west side of the runway.
- The road located near to the fence line is the Security Road (unpaved).

Figure 3 Runway 07/25 Source Edward Burke Photographer

The Available Land for the Construction of Emergency Road to East Runway 25

- The located Road is near to the security fence at south side of the runway and the other security fence is located at the north side of the runway and it borders the east side of the runway.
- The road located in the north side near to the fence line is the Security road (unpaved).

Figure 4 Runway 25 Source: Edward Burke Photographer

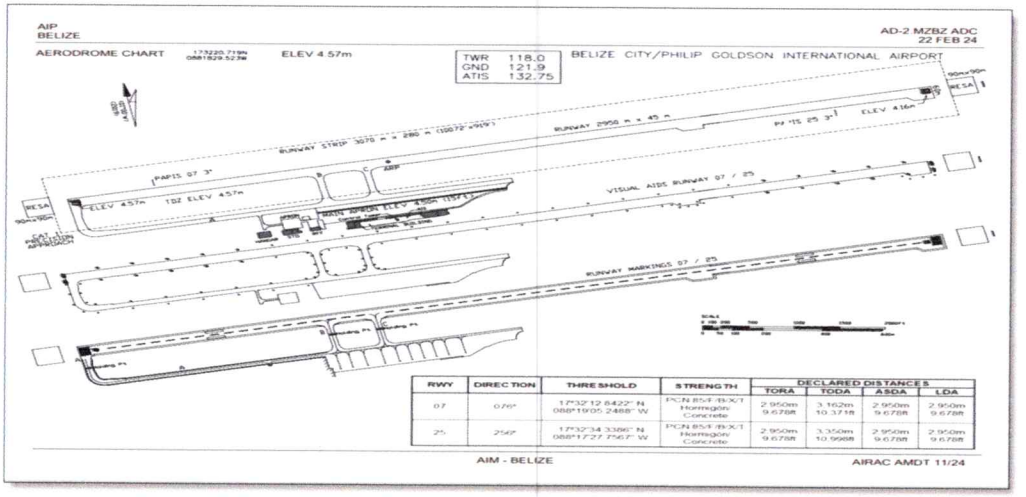

Figure 5: Aerodrome Chart. Source: https://civilaviation.gov.bz/

Emergency Access Road – Runway 07

Description:

For **Runway 07**, emergency access is provided as follows:

- CFR vehicles depart from the **CFR Station.**
- Access the movement area via **Taxiway B.**
- Proceed directly along the runway toward **Runway 07 threshold and approach area.**
- The runway and taxiway surfaces are capable of supporting the heaviest emergency vehicles and are usable in all weather conditions.

This configuration allows CFR vehicles to reach the runway threshold and the critical runway environment within established response time.

CRF

- Crash Fire Rescue (CFR) vehicles are able to reach the runway ends using the existing runway and taxiway infrastructure, ensuring timely access to the incident location. Upon arrival, CFR personnel implement established emergency response, which include positioning vehicles in accordance with standard operating practices, deploying the required firefighting hoses, and applying appropriate firefighting agents to suppress and control any fire. This ensure effective response capability within the movement area, even in the absence of dedicated emergency access roads.
-

Compliance Assessment – RWY 07

- Emergency access roads are available within the aerodrome boundary.
- Surfaces are resistant, paved, and suitable for emergency vehicles.
- Access up to **1 km beyond the runway threshold** cannot be provided due to **perimeter fencing limitations.**

Compensating Measures – RWY 07

1. Formal **MoU with NEMO** ensures emergency response coverage beyond the aerodrome boundary.
2. Coordination procedures are defined for off-aerodrome emergency response.
3. Emergency scenarios beyond the fence line are addressed through national emergency response mechanisms.

Emergency Access Road – Runway 25

Description:

For **Runway 25**, emergency access is provided using the same operational concept:

- CFR vehicles depart from the **CFR Station.**
- Access the movement area via **Taxiway B.**
- Proceed along the runway environment toward **Runway 25 threshold and approach area.**
- Runway and taxiway pavements are suitable for continuous use by emergency vehicles under all weather conditions.

This arrangement ensures timely access to the runway environment and threshold area for Runway 25.

CRF

- Crash Fire Rescue (CFR) vehicles are able to reach the runway ends using the existing runway and taxiway infrastructure, ensuring timely access to the incident location. Upon arrival, CFR personnel implement established emergency response, which include positioning vehicles in accordance with standard operating practices, deploying the required firefighting hoses, and applying appropriate firefighting agents to suppress and control any fire. This ensure effective response capability within the movement area, even in the absence of dedicated emergency access roads.

Compliance Assessment – RWY 25

- Emergency access is available within the aerodrome boundary.
- Pavement strength and surface conditions meet emergency vehicle requirements.
- Access to approach areas up to 1 km from the threshold cannot be provided due to physical and fencing constraints and unavailability of land.

Compensating Measures – RWY 25

- Emergency response beyond the aerodrome boundary is covered through the **MoU between BACC and NEMO.**
- Defined coordination ensures availability of external emergency resources.
- This arrangement compensates for the inability to provide direct emergency access roads beyond the perimeter fence.

Emergency access road from CFR station to Runway 07 and 25.

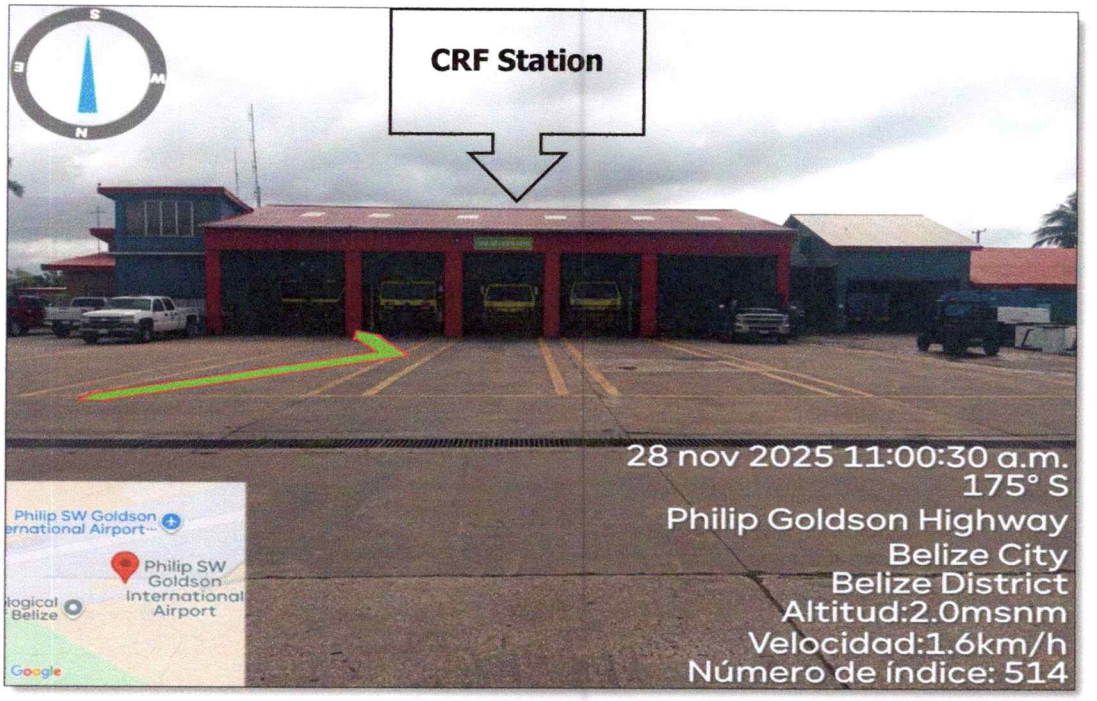

Figure -6 CFR STATION Source: Safety Management system [SMS]

Figure-7 CFR STATION Front View Source: Safety Management system [SMS]

Figure- 8 Taxiway [B] to Runway 07 Source: Safety Management system [SMS]

Figure- 9 Taxiway bravo to Runway 07 Source: Safety Management system [SMS]

Figure- 10 Taxiway bravo to Runway 25 Source: Safety Management system [SMS]

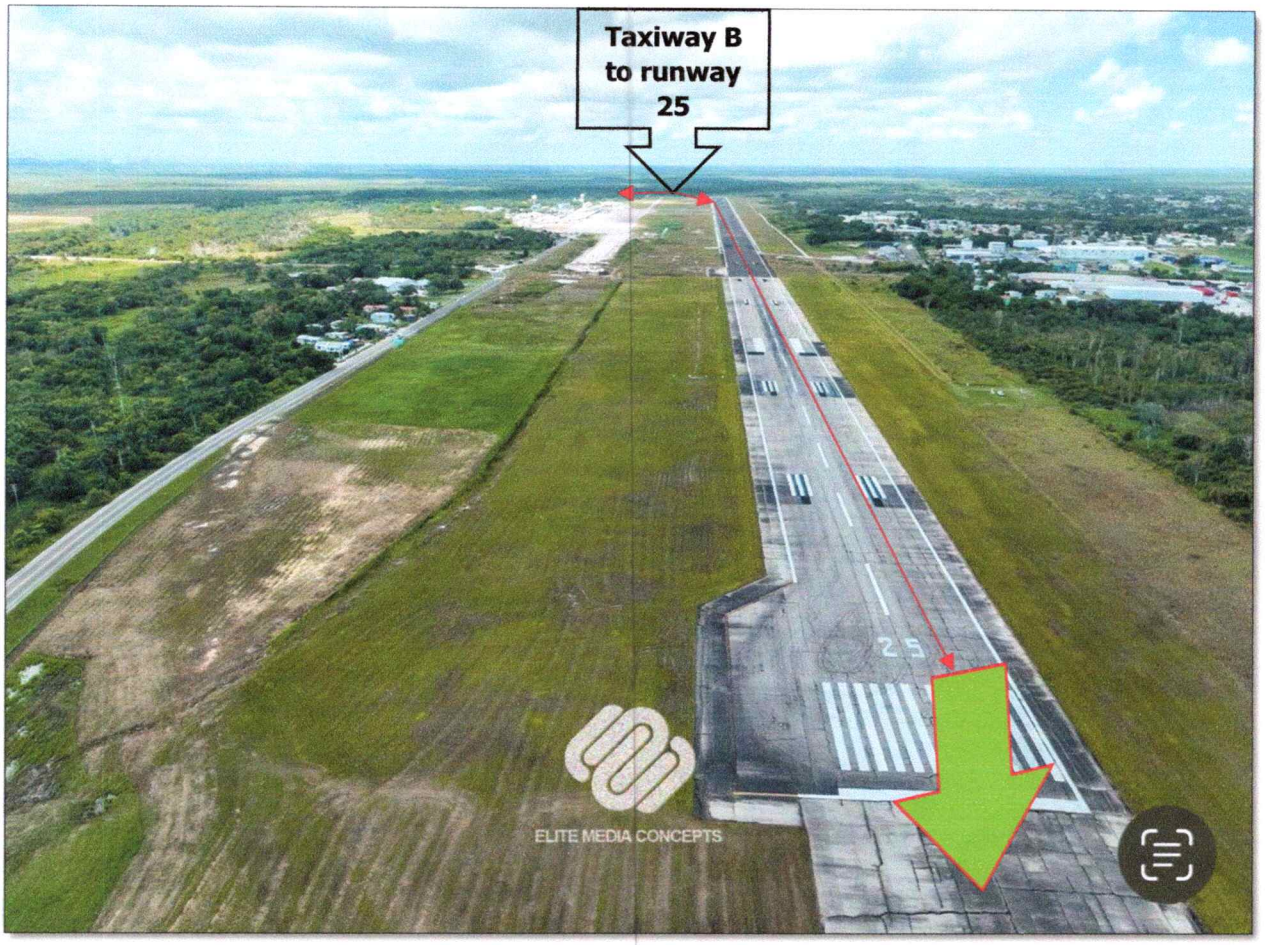

Figure- 11 Taxiway bravo to Runway 25 Source: Safety Management system [SMS]

Review page 17 Figure-12 Taxiway bravo to Runway 07-25 Grid map.

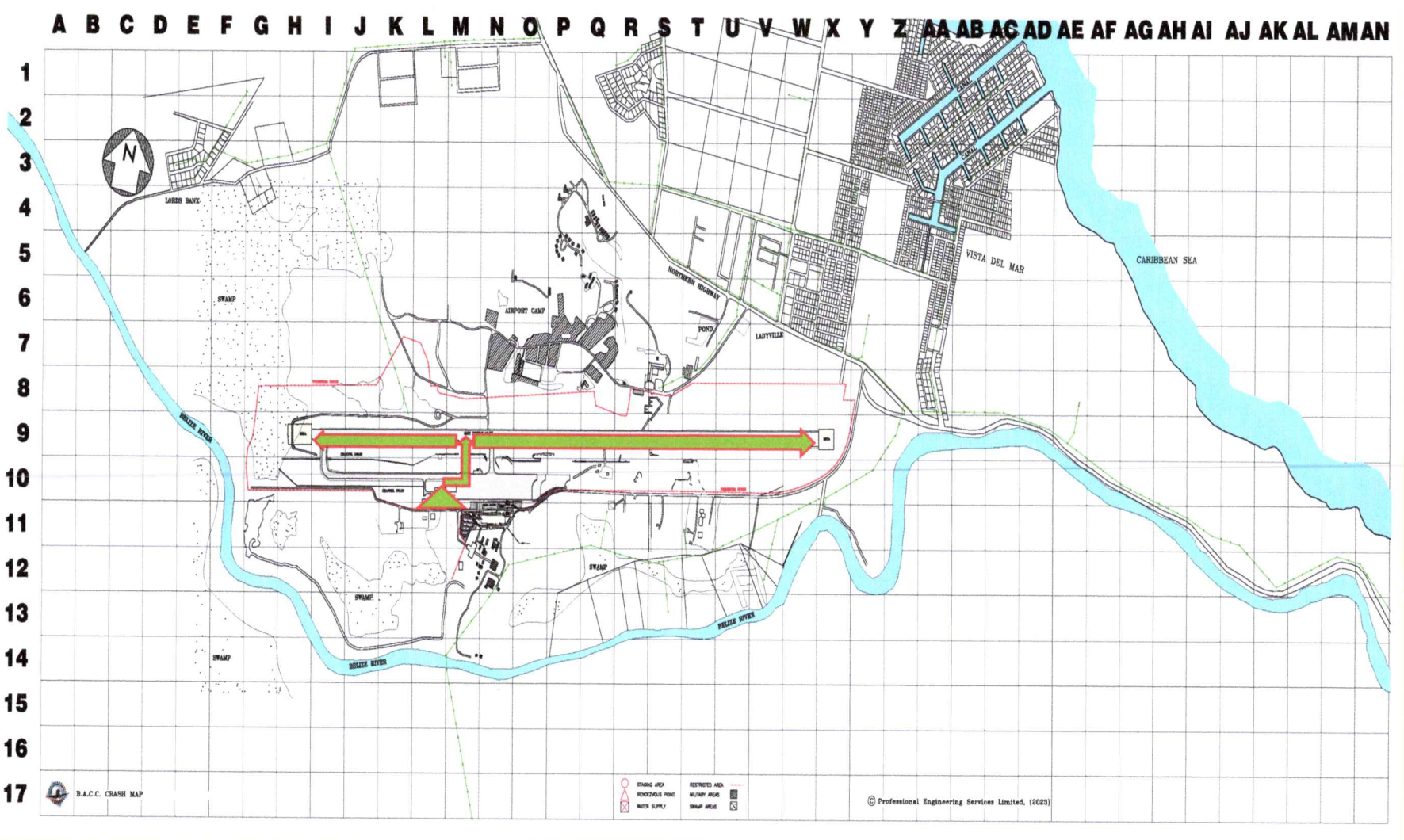

Figure-12 Taxiway bravo to Runway 07-25 Grid map. Source B.A.C.C./C.O.O.

SECTION 3.

TABLES OF EVALUATION AND CLASSIFICATION OF RISK

Likelihood	*Meaning*	*Value*
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur, but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Note.— This is an example only. The level of detail and complexity of tables and matrices should be adapted to the particular needs and complexities of each organization. It should also be noted that organizations might include both qualitative and quantitative criteria.

Table -1 Safety Risk Probability Source of the Tables of evaluation and classification of Risk: Aerodrome Operation Manual Volume 2, Annex 6.

Severity	*Meaning*	*Value*
Catastrophic	• Aircraft / equipment destroyed • Multiple deaths	A
Hazardous	• A large reduction in safety margins, physical distress or a workload such that operational personnel cannot be relied upon to perform their tasks accurately or completely • Serious injury • Major equipment damage	B
Major	• A significant reduction in safety margins, a reduction in the ability of operational personnel to cope with adverse operating conditions as a result of an increase in workload or as a result of conditions impairing their efficiency • Serious incident • Injury to persons	C
Minor	• Nuisance • Operating limitations • Use of emergency procedures • Minor incident	D
Negligible	• Few consequences	E

Table -2 Safety risk Severity table. Source of the Tables of evaluation and classification of Risk: Aerodrome Operation Manual Volume 2, Annex 6.

Safety Risk	*Severity*				
Probability	*Catastrophic A*	*Hazardous B*	*Major C*	*Minor D*	*Negligible E*
Frequent 5	5A	5B	5C	5D	5E
Occasional 4	4A	4B	4C	4D	4E
Remote 3	3A	3B	3C	3D	3E
Improbable 2	2A	2B	2C	2D	2E
Extremely improbable 1	1A	1B	1C	1D	1E

Note.— In determining the safety risk tolerability, the quality and reliability of the data used for the hazard identification and safety risk probability should be taken into consideration.

Table 3 Safety risk matrix Source of the Tables of evaluation and classification of Risk: Aerodrome Operational Manual Volume 2, Annex 6.

Safety Risk Index Range	*Safety Risk Description*	*Recommended Action*
5A, 5B, 5C, 4A, 4B, 3A	INTOLERABLE	Take immediate action to mitigate the risk or stop the activity. Perform priority safety risk mitigation to ensure additional or enhanced preventative controls are in place to bring down the safety risk index to tolerable.
5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A	TOLERABLE	Can be tolerated based on the safety risk mitigation. It may require management decision to accept the risk.
3E, 2D, 2E, 1B, 1C, 1D, 1E	ACCEPTABLE	Acceptable as is. No further safety risk mitigation required.

Table-4 Safety risk Tolerability Source of the Tables of evaluation and classification of Risk: Aerodrome Operation Manual Volume 2, Annex 6.

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Description of Activity [1]	Generic Hazard [2]	Specific components of the Hazard [3]	Consequences [4]	Existing Defenses [5]	Risk Index [6]	Subsequent Actions to Reduce Risks [7]	Risk Tolerability [8]	Responsible Entity [9]
		Threat		Proactive Barries		Reactive Barries		
Absence of a suitable emergency access road capable of supporting CFR vehicles during an emergency response to the Runway 07-25 thresholds. Mission: Mitigation with an Aeronautical Study. Personnel: P.C.I.A. Certification Team.	Inadequate emergency access infrastructure within the aerodrome.	1. Unpaved perimeter road becomes unusable during adverse weather.	1. Delayed emergency response time to runway or remote airport areas.	1.1 ATC instructions. 1.2 MET information. 1.3 Emergency Plan [ANNEX 3]. 1.4 Application of Memorandum of Understanding (MoU) with NEMO. 1.5 Pre-positioning of CRF Vehicules and Emergency Resources. 1.6 Periodic structural inspection and condition monitoring of the Security emergency access road.	Safety Risk Index Range: 4C (Tolerable).	**1.The B.A.C.C.: will provides the emergency access roads from:** Crash Fire Rescue (CFR) station using the existing Taxiway and Runway and, which allows a rapid access to the movement area to the western and eastern side of the runway towards the incident or accident site. The B.A.C.C. will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles. **2.The B.A.C.C.:** will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles. **3. Application of the Airport Grid Map for CFR Route Identification and Location Reference.** **3.1 During the Dry season,** the soil conditions within the runway strip are capable of supporting CFR vehicle operations from the runway edge up to 33 ft (10 m) inside the runway strip. **3.2 During the rainy season,** soil conditions within the runway strip may become unsuitable for heavy vehicle operations. Therefore, CFR vehicles shall operate primarily on the runway surface to ensure safe mobility and maintain effective emergency response capability.	Safety Risk Index Range: 3C (Tolerable).	1. B.A.C.C./P.G.I.A 2. B.A.C.C./P.G.I.A 3. B.A.C.C./P.G.I.A
			2. Inability of emergency vehicles to access the incident location.	1.1 ATC instructions. 1.2 MET information. 1.3 Emergency Plan [ANNEX 3]. 1.4 Application of Memorandum of Understanding (MoU) with NEMO. 1.5 Pre-positioning of CRF Vehicules and Emergency Resources. 1.6 Periodic structural inspection and condition monitoring of the Security emergency access road.	Safety Risk Index Range: 4C (Tolerable).	**1.The B.A.C.C.: will provides the emergency access roads from:** Crash Fire Rescue (CFR) station using the existing Taxiway and Runway and, which allows a rapid access to the movement area to the western and eastern side of the runway towards the incident or accident site. The B.A.C.C. will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles. **2.The B.A.C.C.:** will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles. **3. Application of the Airport Grid Map for CFR Route Identification and Location Reference.** **3.1 During the Dry season,** the soil conditions within the runway strip are capable of supporting CFR vehicle operations from the runway edge up to 33 ft (10 m) inside the runway strip. **3.2 During the rainy season,** soil conditions within the runway strip may become unsuitable for heavy vehicle operations. Therefore, CFR vehicles shall operate primarily on the runway surface to ensure safe mobility and maintain effective emergency response capability.	Safety Risk Index Range: 3C (Tolerable).	1. B.A.C.C./P.G.I.A 2. B.A.C.C./P.G.I.A 3. B.A.C.C./P.G.I.A

Based on the effectiveness of these measures, the residual risk associated with operations on Runway 07 and 25 whit the available mitigation is considered tolerable **Safety Risk Index Range: 3C (Tolerable).**

Signatures Elaborated by	Wendell Thompson [S.M.S]	Signatures Aprove by	Jose Espat [C.E.O.]	**Risk No.: 2/2026** Febraury 6, 2026

Table – No. 7 Risk Analysis

Source of the **Tables of Evaluation and Classification of Risk:** AOM Volume 2, Annex 6.

Belize Airport Concession Company Limited

Description of Activity [1]	Generic Hazard [2]	Specific components of the Hazard [3]	Consequences [4]	Existing Defenses [5]	Risk Index [6]	Subsequent Actions to Reduce Risks [7]	Risk Tolerability [8]	Responsible Entity [9]
		Threat		**Proactive Barries**		**Reactive Barries**		
Absence of a suitable emergency access road capable of supporting CFR vehicles during an emergency response to the Runway 07/25 thresholds. **Mision:** Mitigation with an Aeronautica Study. **Personnel:** P.G.I.A. Certification team.	Inadequate emergency access infrastructure within the aerodrome.	1. Unpaved perimeter road becomes unusable during adverse weather.	1. Delayed emergency response time to runway or remote airport areas.	1.1 ATC instructions. 1.2 MET information. 1.3 Emergency Plan [ANNEX 3]. 1.4 Application of Memorandum of Understanding (MoU) with NEMO. 1.5 Pre-positioning of CRF Vehicules and Emergency Resources. 1.6 Periodic structural inspection and condition monitoring of the Security emergency access road.	Safety Risk Index Range: 4C (Tolerable).	**1.The B.A.C.C.: will provides the emergency access roads from:** Crash Fire Rescue (CFR) station using the existing Taxiway and Runway and, which allows a rapid access to the movement area to the western and eastern side of the runway towards the incident or accident site. The B.A.C.C. will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles. **2.The B.A.C.C.:** will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles. **3. Application of the Airport Grid Map for CFR Route Identification and Location Reference.** **3.1 During the Dry season,** the soil conditions within the runway strip are capable of supporting CFR vehicle operations from the runway edge up to 33 ft (10 m) inside the runway strip. **3.2 During the rainy season**, soil conditions within the runway strip may become unsuitable for heavy vehicle operations. Therefore, CFR vehicles shall operate primarily on the runway surface to ensure safe mobility and maintain effective emergency response capability.	Safety Risk Index Range: 3C (Tolerable).	1. B.A.C.C./P.G.I.A 2. B.A.C.C./P.G.I.A 3. B.A.C.C./P.G.I.A
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Based on the effectiveness of these measures, the residual risk associated with operations on Runway 07 and 25 whit the available mitigation is considered tolerable **Safety Risk Index Range: 3C (Tolerable).**

Risk No.: 2/2026

Signatures:		Signatures:		Febraury 6, 2026
Elaborated by:	Windell Thompson [S.M.S]	Aprove by.	Jorge Espat [C.E.O.]	

SECTION 4.

Justification for Non-Compliance with BCAR 139.319 Rescue and Firefighting: Operational requirement for 07/25

(k) Emergency access roads.

(1) Emergency access roads to approach areas shall be provided by the aerodrome operator on an aerodrome where terrain conditions permit their construction, so as to facilitate achieving minimum response times. Particular attention shall be given to the provision of ready access to approach areas up to 1 km from the threshold, or at least within the aerodrome boundary. Where a fence is provided, the need for convenient access to outside areas shall be taken into account.

(2) The aerodrome operator shall ensure that emergency access roads for rescue and firefighting vehicles and service roads have a resistant or hard surface, capable of supporting the heaviest vehicles which will use them, and be usable in all weather conditions. Roads within 90 m of a runway shall be surfaced to prevent surface erosion and the transfer of debris to the runway.

The Top Event:

Failure of the emergency access road to support CFR vehicles during an emergency response to the Runway 07/25 thresholds.

1. If the top event occurs, and the emergency access road is unable to support the weight of CFR vehicles, the vehicles may become immobilized or delayed. Upon arrival, CFR personnel implement established emergency response, which include positioning vehicles in accordance with standard operating practices, deploying the required firefighting hoses, and applying appropriate firefighting agents to suppress and control any fire. This ensure effective response capability within the movement area, even in the absence of dedicated emergency access roads.

2. Proactive Barriers- ATC instructions, MET information, Emergency Plan [ANNEX 3], Application of Memorandum of Understanding (MoU) with NEMO, Pre-positioning of CRF Vehicles and Emergency Resources, Periodic structural inspection and condition monitoring of the Security emergency access road.

The aerodrome does not comply with the requirements of BCAR 139 the sequence will be to manage the risk severity:

- Safety Risk Index Range: 4C (Tolerable).

Subsequent Actions to Reduce Risks

In accordance with Annex 6 safety Management Manual, a formal safety Assessment was conducted to evaluate the risks associated with insufficient load-bearing capacity for the CRF vehicles.

3. Reactive Barriers:

As a compensating measure, a **Memorandum of Understanding (MOU)** is in place between the **Belize Airport Concession Company Limited (BACC)** and the **National Emergency Management Organization (NEMO)** to ensure coordinated emergency response beyond the aerodrome boundary.

Full compliance with the 1 km emergency access road requirement is not achievable due to perimeter fencing constraints and airport property; however, effective emergency response is ensured within the aerodrome boundary and beyond through a formal Memorandum of Understanding with NEMO.

3.1. **The B.A.C.C.: will provides the emergency access roads from:** Crash Fire Rescue (CFR) station using the existing Taxiway and Runway and, which allows a rapid access to the movement area to the western and eastern side of the runway towards the incident or accident site.

3.2. **The B.A.C.C.:** will ensure that Vegetation and Foreign Object Debris is removed from six meters on both sides of the runway strip to ensure that there's is sufficient surface resistances to support an aircraft or vehicles.

3.3. **Application of the Airport Grid Map for CFR Route Identification and Location Reference**

The Airport Grid Map shall be used as a reference tool to support rapid location identification and coordination during emergency response operations.

Runway Emergency Routes for incidents occurring on Runway 07 and Runway 25 shall be identified and verified using the Airport Grid Map. During periods of the work in progress expansion, particularly during heavy rainfall, adverse weather conditions when surface conditions may deteriorate, or during the dry season, CFR vehicles and essential emergency equipment may be strategically pre-positioned closer to critical areas adjacent to Runway 07/25 to ensure rapid emergency response capability.

3.3.1. **Location Reference**

CFR personnel shall use the grid map reference system to identify specific locations during an emergency response: Grid reference numeral 9 corresponds to the North-East sector (Runway 07) and South-West sector (Runway 25). Additional grid references from Item H through Item X provide extended location identification within the aerodrome emergency planning area.

3.3.2. **Conditions (Dry Season)**

During the Dry season, the soil conditions within the runway strip are capable of supporting CFR vehicle operations from the runway edge up to 33 ft (10 m) inside the runway strip.

3.3.3. **Conditions (Rainy Season)**

During the rainy season, soil conditions within the runway strip may become unsuitable for heavy vehicle operations. Therefore, CFR vehicles shall operate

primarily on the runway surface to ensure safe mobility and maintain effective emergency response capability.

4. Based on the effectiveness of these measures, the residual risk associated with operations on Runway 07 and 25 whit the available mitigation is considered tolerable

   - Safety Risk Index Range: 3C (Tolerable).

SECTION 5.

Conclusion

Safety Assessment and Final Determination

The assessment identified that the aerodrome does not currently fully comply with the requirement to provide dedicated emergency access roads extending up to **1 km beyond the thresholds of Runways 07 and 25**. At present, emergency access routes within the aerodrome boundary are **limited and not fully paved**, which may restrict vehicle mobility under certain environmental conditions, particularly during periods of heavy rainfall.

Despite this limitation, the implementation of operational mitigation measures—specifically the strategic pre-positioning of CFR resources during adverse weather conditions and the application of the Airport Grid Map to facilitate rapid location identification and coordinated response—provides an effective operational framework to support emergency response activities on Runway 07/25.

Furthermore, the existence of a formal **Memorandum of Understanding (MoU) with the National Emergency Management Organization (NEMO)** ensures that additional emergency response capability is available outside the aerodrome boundary when required. This coordinated arrangement provides a compensating safety measure that supports emergency response operations in accordance with the safety intent of **BCAR 139**.

Based on the hazard identification, risk assessment, and evaluation of the implemented mitigation measures, the **residual risk associated with the current emergency access limitations is assessed as tolerable and operationally acceptable** for continued aerodrome operations, provided that the mitigation measures described in this study remain in place and are subject to periodic operational review.

In addition, following the completion of the **Taxiway DELTA expansion project**, **Belize Airport Concession Company Limited (B.A.C.C.)** commits to upgrading the existing security road to function as a **dedicated emergency access route for rescue and firefighting vehicles**. The upgraded route will be constructed with a **hard, load-bearing surface capable of supporting the heaviest CFR vehicles and designed for use under all weather conditions**, thereby enhancing emergency response capability and improving alignment with applicable aerodrome safety requirements.

SECTION 6.

ANNEXES

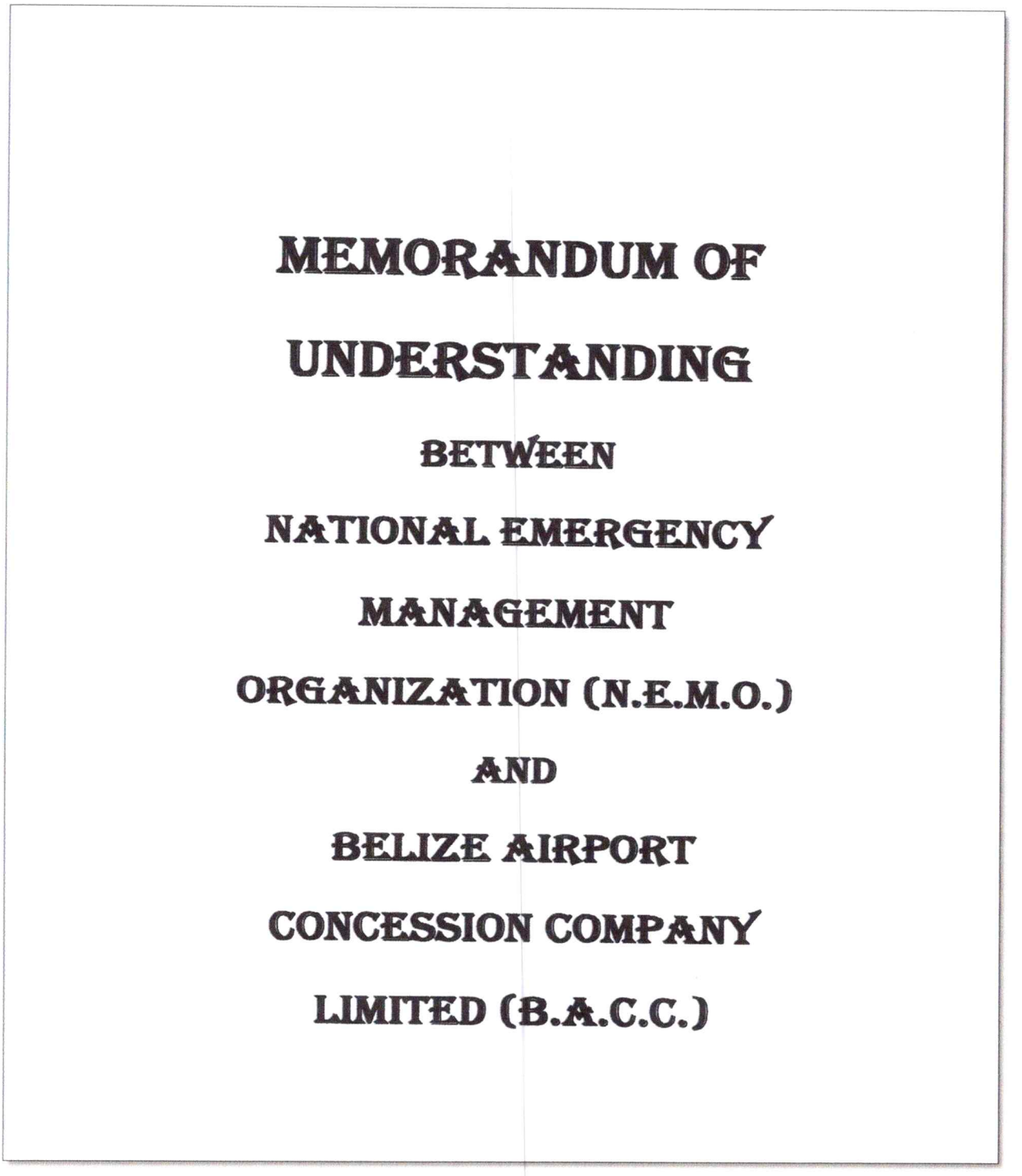

Figure – 16. Source: Aerodrome Operational Manual Volume 1- Appendix 6.