

**ETHIOPIAN CIVIL AVIATION
AUTHORITY AERODROME
SAFETY AND STANDARD DIRECTORET**

Visual Aids for Denoting Restricted Use Area

February, 2015

	ETHIOPIAN CIVIL AVIATION AUTHORITY AERODROME SAFETY AND STANDARDS DIRECTORATE	REF. ECAA-AC-AGA020/2015
		Rev. 0 Date: February, 2015
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PREAMBLE

WHEREAS, it is desirable to consolidate and modernize the aviation Advisory Circular to bring them to international standards,

WHEREAS, it is important to set the Advisory Circular as to how the regulatory, administrative, technical and supervisory activities of the Authority shall be performed in the one hand and setting the duties, obligations and standards that shall be respected by operators and aviation personnel,

WHEREAS, it is necessary, to provide detailed Advisory Circular for the administration of license, certification, investigation and enforcement of aviation laws.

NOW THEREBY, The Authority under its power given by Article 92/2 of the Civil Aviation Proclamation No. 616/2008 issued the following Advisory Circular.

1. SHORT TITLE

This Advisory Circular may be cited as “Advisory Circular for Visual Aids for Denoting Restricted Use Area, No. ECAA-AC-AGA020/2015”

2. REPEAL AND INAPPLICABLE LAWS

No law, directive, order or practice shall, in so far as it is inconsistent with this Advisory Circular, be applicable with respect to matters provided for by this Advisory Circular.

3. EFFECTIVE DATE

This Advisory Circular shall come into force as of February/ 2015.

Done at Addis Ababa, February, 2015


Wosaryetsh Hunegnaw (Col.)
Director General



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GENERAL

This Advisory Circular contains information about standards, practices and procedures that the Authority has found to be an Acceptable Means of Compliance with the associated rule.

An Acceptable Means of Compliance is not intended to be the only means of compliance with a rule, and consideration will be given to other methods of compliance that may be presented to the Authority. When new standards, practices or procedures are found to be acceptable, they will be added to the appropriate Guidance Document.

PURPOSE

This Advisory Circular provides methods, acceptable to the Authority, for showing compliance with the works on aerodromes requirements of Ethiopian Civil Aviation Rules and Standards (ECARAS) Part 12 and explanatory material to assist in showing compliance.

RELATED Standards

This circular relates specifically to **ECAA MOIS Chapter 11**

1. INTRODUCTION

The airport operator is responsible for controlling any work in progress on the aerodrome and establishing the safety requirements and procedures. This AC provides guidance for compliance with these responsibilities

2. GENERAL REQUIREMENTS

According to Part 12 Section 12.3 of the Ethiopian Civil Aviation Rules and Standards, 2013 an aerodrome operator shall, in writing, notify the Aeronautical Information Services of any change to any aerodrome facility or equipment or the level of service at the aerodrome

- (a) Which has been planned in advance; and
- (b) Which is likely to affect the accuracy of the information contained in any publication by the Aeronautical Information Services before effecting the change.

2.1 SPECIFIC REQUIREMENTS FOR MOVEMENTS AREA CLOSURE

The Airport Operator is responsible for:

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- Obliterating all normal runway and taxiway markings when a runway or taxiway or portion thereof is permanently closed;
- Not operating the lighting system on a closed runway or taxiway or portion thereof except as required for maintenance purposes.

3. Marking and lighting of unserviceable areas

3.1 Closed runways and taxiways, or parts thereof

Application

A. Permanently closed runway or taxiway

A closed marking shall be displayed on a runway or taxiway, or portion thereof, which is permanently closed to the use of all aircraft and disconnect the lighting circuits. For runways, obliterate all runway markings, and place “X’s” at end and at (300-m) intervals. For taxiways, place an “X” at least at the entrance of the closed taxiway.

B. Temporarily closed runway or taxiway

A closed marking should be displayed on a temporarily closed runway or taxiway or portion thereof, except that such marking may be omitted when the closing is of short duration (less than 3 days) and adequate warning by air traffic services is provided.

Location

On a runway a closed marking shall be placed at each end of the runway, or portion thereof, declared closed, and additional markings shall be so placed that the maximum interval between markings does not exceed 300 m. On a taxiway a closed marking shall be placed at least at each end of the taxiway or portion thereof closed.

Characteristics

The closed marking shall be of the form and proportions as detailed in Figure 1, Illustration

- a) When displayed on a runway, and shall be of the form and proportions as detailed in Figure 1(a), Illustration
- b) When displayed on a taxiway as detailed in Figure 1 (b), Illustration.

The marking shall be white when displayed on a runway and shall be yellow when displayed on a taxiway.



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Note – When an area is temporarily closed, frangible barriers or markings utilizing materials other than paint or other suitable means may be used to identify the closed area.

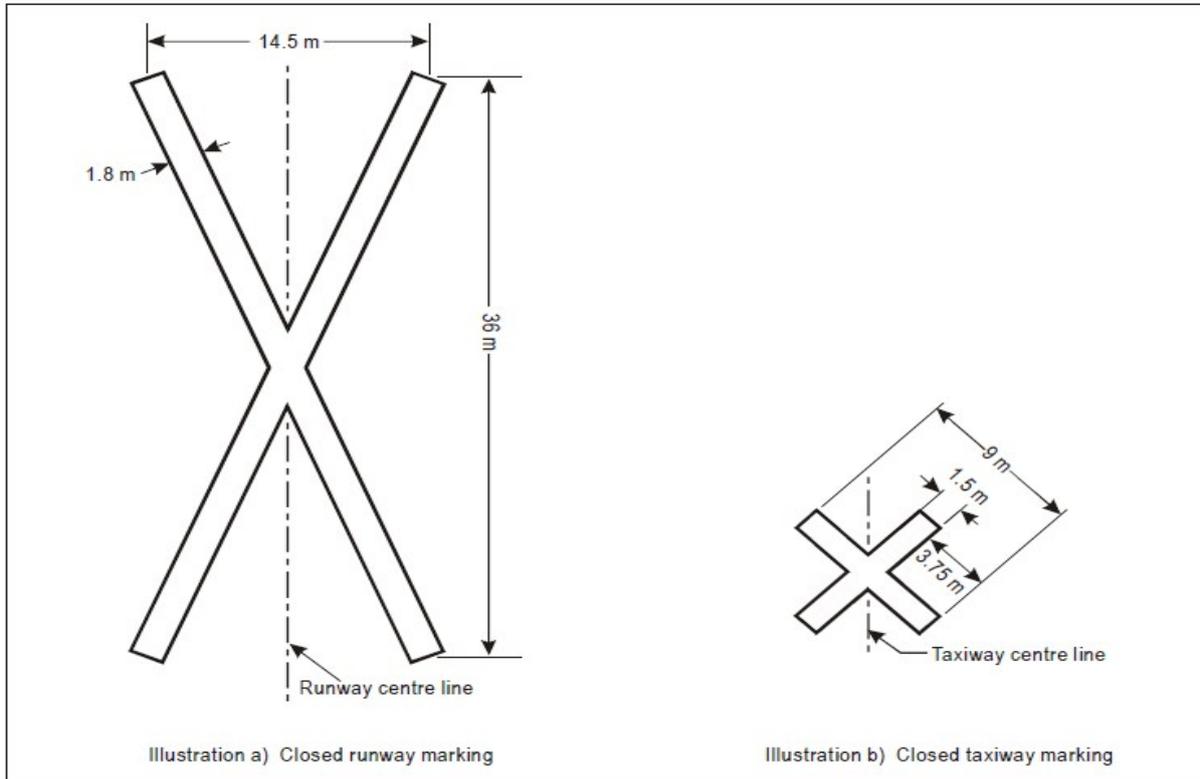


Fig.1 Closed runway and taxiway marking

When a runway or taxiway or portion thereof is permanently closed, all normal runway and taxiway markings shall be obliterated.

Lighting on a closed runway or taxiway or portion thereof shall not be operated, except as required for maintenance purposes.

In addition to closed markings, when the runway or taxiway or portion thereof closed is intercepted by a usable runway or taxiway which is used at night, Unserviceability lights shall be placed across the entrance to the closed area at intervals not exceeding 3 m.

C. PERMANENTLY CLOSED AERODROME

When the airport is closed permanently, mark the runways as permanently closed, disconnect the airport beacon, and place an “X” in the segmented circle or at a central location if no segmented circle exists.

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3.2 Non-load-bearing surfaces

Application

Shoulders for taxiways, runway turn pads, holding bays and aprons and other non-load-bearing surfaces, which cannot readily be distinguished from load-bearing surfaces and which, if used by aircraft, might result in damage to the aircraft shall have the boundary between such areas and the load-bearing surface marked by a taxi side stripe marking.

Location

A runway side stripe marking should consist of two stripes, one placed along each edge of the runway with the outer edge of each stripe approximately on the edge of the runway, except that, where the runway is greater than 60 m in width, the stripes should be located 30 m from the runway centre line.

Where a runway turn pad is provided, the runway side stripe marking should be continued between the runway and the runway turn pad.

Characteristics

A runway side stripe should have an overall width of at least 0.9 m on runways 30 m or more in width and at least 0.45 m on narrower runways.

Location

A taxi side stripe marking shall be placed along the edge of the load bearing pavement, with the outer edge of the marking approximately on the edge of the load-bearing pavement.

Characteristics

A taxi side stripe marking shall consist of a pair of solid lines, each 15 cm wide and spaced 15 cm apart and the same colour as the taxiway centre line marking.

Note – Guidance on providing additional transverse stripes at an intersection or a small area on the apron is given in the ICAO Aerodrome Design Manual, Part 4.

3.3 Pre-threshold area

Application

When the surface before a threshold is paved and exceeds 60 m in length and is not suitable for normal use by aircraft, the entire length before the threshold shall be marked with a chevron marking.



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Location

A chevron marking shall point in the direction of the runway and be placed as shown in Figure 2.

Characteristics

A chevron marking shall be of conspicuous colour and contrast with the colour used for the runway markings; it should preferably be yellow. It should have an over-all width of at least 0.9 m.

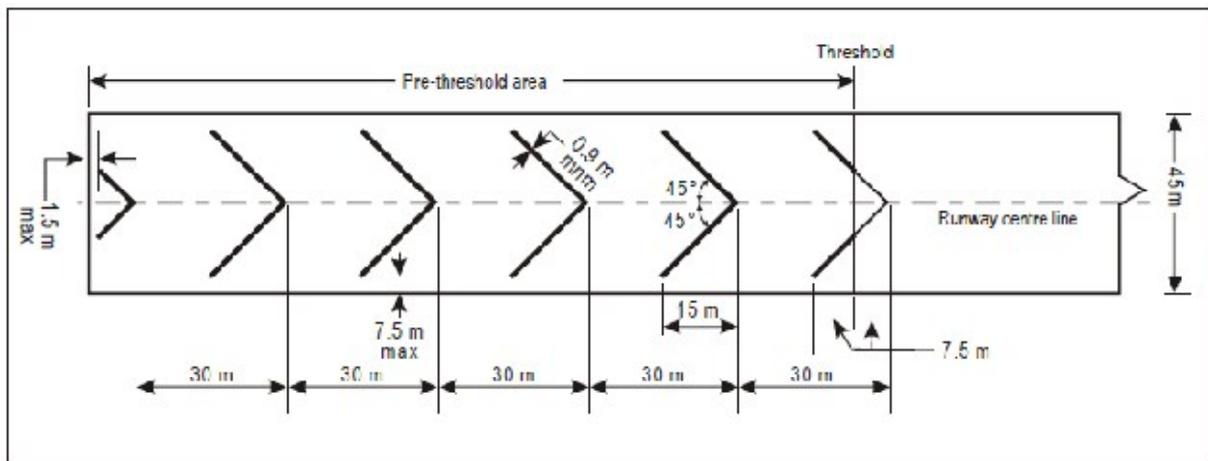


Fig.2 Pre-threshold marking

3.4 Unserviceable areas

Application

Unserviceability markers shall be displayed wherever any portion of a taxiway, apron or holding bay is unfit for the movement of aircraft but it is still possible for aircraft to bypass the area safely. Unserviceability markers shall also be displayed at the entrances to a permanently or temporarily closed runway or taxiway, or part thereof. On a movement area used at night, unserviceability lights shall be used.

Note – Unserviceability markers and lights are used to guide aircraft to bypass a portion of a taxiway, apron or holding bay that is unfit for normal movement are intended for such purposes as warning pilots of a hole in a taxiway or apron pavement or outlining a portion of pavement, such as on an apron, that is under repair. They are not suitable for use when a portion of a runway becomes unserviceable, nor on a taxiway when a major portion of the width becomes unserviceable. In such instances, the runway or taxiway is normally closed.

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Location

Unserviceability markers and lights shall be placed at intervals sufficiently close so as to delineate the unserviceable area.

Where a temporarily unserviceable area exists, it may be marked with fixed-red lights. These lights should mark the most potentially dangerous extremities of the area. A minimum of four such lights should be used, except where the area is triangular in shape where a minimum of three lights may be employed. The number of lights should be increased when the area is large or of unusual configuration. At least one light should be installed for each 7.5 m of peripheral distance of the area. If the lights are directional, they should be orientated so that as far as possible their beams are aligned in the direction from which aircraft or vehicles will approach. Where aircraft or vehicles will normally approach from several directions, consideration should be given to adding extra lights or using Omni directional lights to show the area from these directions. Unserviceable area lights should be frangible. Their height should be sufficiently low to preserve clearance for propellers and for engine pods of jet aircraft.

Characteristics of unserviceability markers

Unserviceability markers shall consist of conspicuous upstanding devices such as flags, cones or marker boards.

Characteristics of unserviceability lights

Unserviceability light shall consist of a red fixed light. The light shall have intensity sufficient to ensure conspicuity considering the intensity of the adjacent lights and the general level of illumination against which it would normally be viewed. In no case shall the intensity be less than 10 cd of red light.

Characteristics of unserviceability cones

An unserviceability cone should be at least 0.5 m in height and red, orange or yellow or any one of these colours in combination with white.

Characteristics of unserviceability flags

An unserviceability flag should be at least 0.5 m square and red, orange or yellow or any one of these colours in combination with white.

Characteristics of unserviceability marker boards

An unserviceability marker board should be at least 0.5 m in height and 0.9 m in length, with alternate red and white or orange and white vertical stripes.



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