

**AIRPORT STANDARDS DIRECTIVE 514
[ASD 514]**

**VISUAL AIDS FOR DENOTING RESTRICTED
USE AREAS**



**AIRPORTS STANDARD DIVISION
DEPARTMENT OF CIVIL AVIATION MALAYSIA**

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TABLE OF CONTENTS

	<i>Page</i>
INTRODUCTION	1
APPLICABILITY	1
AUTHORITY	1
1. Closed runways and taxiways, or parts thereof	1
2. Non-load-bearing surfaces	2
3. Pre-threshold area	3
4. Unserviceable areas	3
5. Deviations	5

INTRODUCTION

This Airport Standards Directive contains specifications that prescribe the visual aids for denoting restricted used areas that shall be provided at aerodrome

This Directive has been written in general terms. Specific advice could be obtained from the Authority at:

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Level 1 Block Podium B 4G4 Precinct 4
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OBJECTIVE

This Airport Standards Directive [Directive] is intended to serve guidance to aerodrome operators pertaining to ICAO mandatory requirement on the visual aids for denoting restricted used areas.

The implementation of this Directive will ensure facilities, equipments and operational procedures at certified aerodromes are in compliance with SARPS specified in Annex 14 to the Convention on International Civil Aviation, and to national standards and practices as defined under Airport Standards Directives published by Director General of Civil Aviation.

APPLICABILITY

The specification in this directive shall apply for aerodromes used for international operations, in any state of Malaysia.

AUTHORITY

The Authority is the Director General of Civil Aviation Malaysia under the provision of Section 2B, 2C and 24O Civil Aviation Act 1969 (Act 3).

1. CLOSED RUNWAYS AND TAXIWAYS, OR PARTS THEREOF

Application

1.1 A closed marking shall be displayed on a runway or taxiway or portion thereof which is permanently closed to the use of all aircraft.

1.2 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 and adequate warning by air traffic services is provided.

Location

1.3 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

1.4 The closed marking shall be of the form and proportions as detailed in Figure 7-1, Illustration a), when displayed on a runway, and shall be of the form and proportions as detailed in Figure 7-1, Illustration b), when displayed on a taxiway. The marking shall be white when displayed on a runway and shall be yellow when displayed on a taxiway.

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.

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

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

1.7 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.

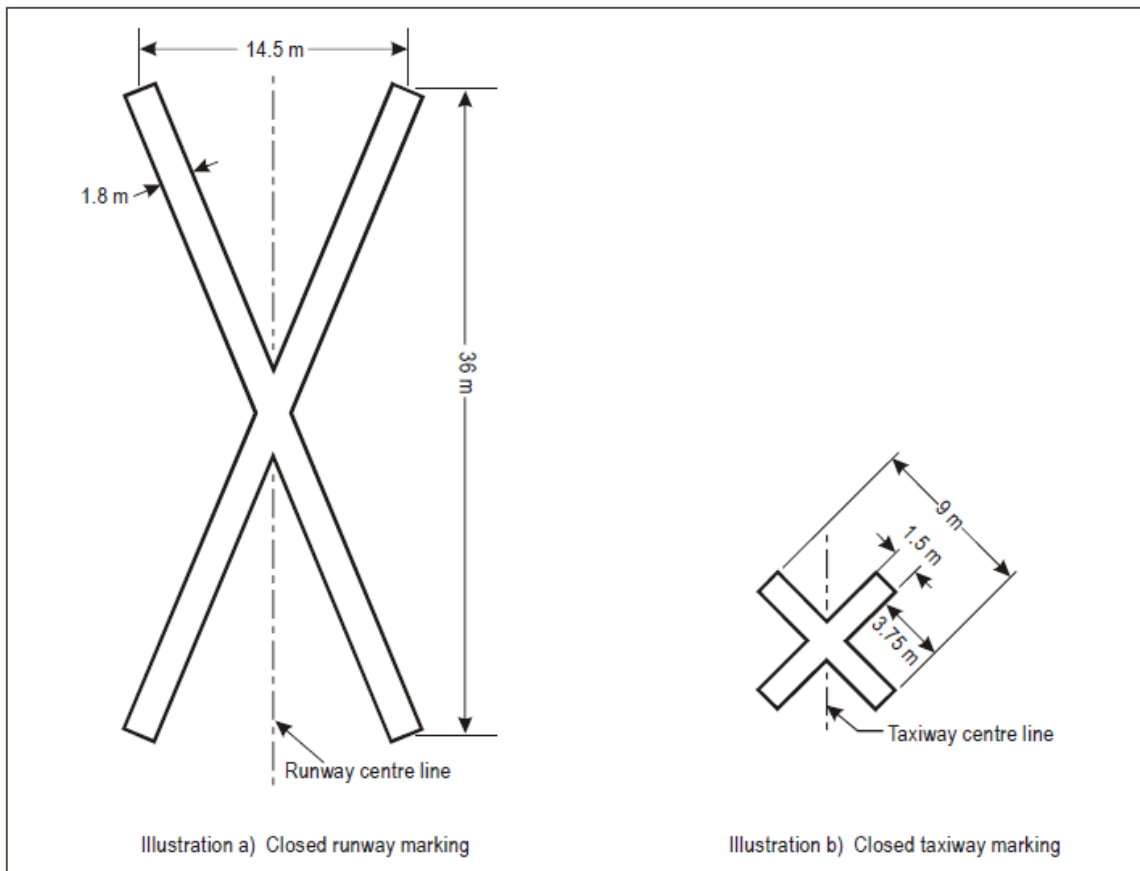


Figure 1. Closed runway and taxiway markings

2. NON-LOAD-BEARING SURFACES

Application

2.1 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.

The marking of runway sides is specified in ASD501.

Location

2.2 A taxi side stripe marking should 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

2.3 A taxi side stripe marking should 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.

Guidance on providing additional transverse stripes at an intersection or a small area on the apron is given in the Aerodrome Design Manual (Doc 9157), Part 4.

3. PRE-THRESHOLD AREA

Application

3.1 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 should be marked with a chevron marking.

Location

3.2 A chevron marking should point in the direction of the runway and be placed as shown in Figure 7-2.

Characteristics

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

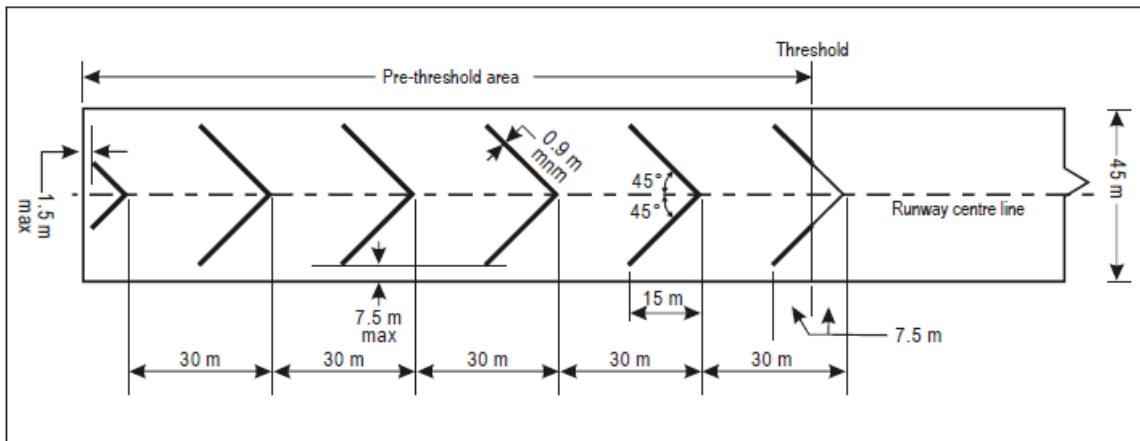


Figure 2. Pre-threshold marking

4. UNSERVICEABLE AREAS

Application

4.1 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. On a movement area used at night, unserviceability lights shall be used.

Unserviceability markers and lights are used 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.

Location

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

Guidance on the location of unserviceability lights is given in Attachment A, Section 14.

Characteristics of unserviceability markers

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

Characteristics of unserviceability lights

4.4 An unserviceability light shall consist of a red fixed light. The light shall have an 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

4.5 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

4.6 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

4.7 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.

5. DEVIATIONS

5.1 The Department of Civil Aviation shall notify and publish deviation from any Standards and Recommended Practices contained in ICAO Annex 14 in the Aeronautical Information Services publications in compliance to the Article 38 of the Convention on International Civil Aviation.

5.2 The Appendices to this Directive shall be taken, construed, read and be part of this Directive.

DATO' SRI AZHARUDDIN BIN ABDUL RAHMAN
Director General
Department of Civil Aviation
Malaysia

Dated : 26 April 2016