## Federal Aviation Agency

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AC NO: AC 150/5340-7

ATRPORTS

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SUBJECT: MARKING OF DECEPTIVE, CLOSED, AND HAZARDOUS AREAS ON AIRPORTS

- 1. PURPOSE. This advisory circular sets forth standards and practices recommended by the Federal Aviation Agency for the guidance of the public in marking and re-marking deceptive, closed, and hazardous areas on airports. The uniform application of these standards, generally introduced by "shall" or "will", is necessary for the safety or regularity of air navigation; and the uniform application of these practices, generally introduced by "should", is desirable in the interest of safety, regularity, or efficiency of air navigation.
- 2. <u>PUBLICATION CANCELLED</u>. This publication replaces Technical Standard Order N16b, dated May 20, 1960. No substantive changes have been made to the TSO N16b text in placing it in the Advisory Circular System.
- 3. APPLICATION. The standards and practices contained herein apply whenever there is a closed or hazardous area on the airport or whenever a deceptive area exists and the airport authority determines that an operational need exists to mark the same. Existing markings, not in accordance with those described in this circular, should be replaced or modified as soon as possible.
- 4. GENERAL REQUIREMENTS. In the interest of safety, regularity, or efficiency of aircraft operations, the FAA has formulated the following requirements:
  - a. Marking of Deceptive Areas shall be done in accordance with the requirements set forth below. Configurations complying with the requirements are detailed on the indicated figures. Figure 1, Attachment 1 shows a portion of a hypothetical airport indicating marking of deceptive areas and marking for closed and hazardous areas.
    - (1) <u>Deceptive Areas on the Approach End of Runways</u> adjacent to thresholds shall be marked by chevron markings as follows:

- Chevron Marking Layout. The index point for the layout of chevron markings on blast pads is the point of intersection of the runway centerline and the threshold line. The apex of the initial full chevron, on the approach to the threshold, is at a point 50 feet outward from the index point. Subsequent chevrons are placed on 100-foot centers as indicated on Figure 2. Partial chevrons are placed as indicated on this figure. The apex of the chevrons will be on the centerline with each leg making an angle of 45 degrees with the centerline. The width of stroke of the chevrons will be at least 3 feet. chevrons will terminate not more than 5 feet inside the edge of the deceptive area, but need not extend beyond the extended edge of the usable runway. A 50-foot spacing between chevrons may be used when the length of area (Figure 2) is less than 250 feet, in which case the first full chevron starts at the index point.
- (2) Displaced Thresholds. Where the landing threshold is located up runway from the end of the runway pavement, three conditions prevail. One condition is that in which the paved area on the approach to the relocated threshold is used for taxiing and can be used for takeoff of aircraft. In this case, all markings indicating that the area is usable as a runway landing area are obliterated. Criteria for marking areas of this type will be found in TSO-N10b, "Marking of Serviceable Runways and Taxiways". In the second condition, a deceptive area exists on the approach side of the threshold, which is not used for landing, taxiing, or takeoff. This area will be marked as outlined in paragraph 4a(1)(a) and as shown on Figure 2. the third condition, as shown on Figure 3, a portion of the area on the approach side of the displaced threshold is usable only for taxiing of aircraft, while the rest of the area is a In this case, markings indicating that portion deceptive area. of the area as usable as a runway landing or takeoff area are obliterated and marking indicating that the portion of the area is to be used for taxiing only is applied. Other areas in excess of taxiing use are marked as taxiway shoulder areas as outlined in paragraph 4a(5).
- (3) Runway Shoulders. When the shoulders of a runway are determined to be deceptive or when the full width of an existing runway is not intended for use by aircraft, then the surface outside the usable runway will be marked with partial chevrons as indicated on Figure 4. These partial chevrons are in continuation of the chevrons used in marking as indicated in paragraph 4a(1)(a) and shown on Figure 2. These chevrons have the same index point. The apex of the partial chevrons is on the centerline of the runway as indicated. Chevrons will be laid out uniformly from both ends of the runway.

- (4) Holding Pads and Apron Areas are sometimes provided with shoulder stabilization which has the appearance of pavement but which is not intended for aircraft use. This stabilization is provided both as a part of a continuous taxiway shoulder stabilization and independently at holding pads to prevent blast erosion. Figure 5 shows a hypothetical holding pad at the end of a runway in which both sides of the taxiway and holding pad have been provided with stabilized shoulders. Markings will be provided on the stabilized area under the following criteria.
  - (a) On Straight Sections of holding pads and apron areas having stabilized shoulders, a marking will be placed at each point of tangency and additional markings will be uniformly spaced between the two key markings. The spacing will not exceed 100 feet. See Figure 5. The markings will be at least 3 feet in width, commencing at the edge of the holding pad and extending outward on a line perpendicular to the centerline of the taxiway to a point not more than 5 feet inside the outer edge of the shoulder stabilization.
  - (b) On Curved Sections of holding pads and apron areas having stabilized shoulders, the markings will be uniformly spaced between the markings placed at the points of tangency of the curves. The spacing of the markings will not exceed 50 feet measured at the widest distance, i.e., on the outside of exterior curves and next to the taxiway pavement on interior curves. The markings will be placed essentially radially.
  - (c) <u>Holding Pads Only</u>. Where shoulder stabilization is provided for the holding pads only and the shoulders of the taxiways are not stabilized, a mark will also be placed at each end of the holding pad shoulder stabilization area.

## (5) Taxiway Shoulders.

(a) On Straight Sections of taxiways, the shoulder stabilization will be marked with lines uniformly spaced between the lines located at the points of tangency of curves as indicated in paragraph 4a(4)(a). The lines will be perpendicular to the centerline of the taxiway beginning at the edge of the taxiway and extending outward to a point not more than 5 feet inside the outer edge of the shoulder stabilization. See Figure 5. The spacing between the lines will not exceed 100 feet. The width of the line will be at least 3 feet.

- (b) <u>Curved Sections</u> of taxiways which have been provided with shoulder stabilization will be marked in the same manner as stabilization on curved sections of holding pads. See paragraph 4a(4)(b).
- b. <u>Closed Runways and Taxiways</u>. The following instructions provide details for laying out and placing the required markings. Crosses will be used for this purpose. Dimensions of the crosses are shown on Figure 6.
  - (1) Permanently Closed Runways and Taxiways. When runways and/or taxiways have been permanently closed to aircraft traffic, all markings indicating a usable runway or taxiway will be obliterated. The method used to obliterate these markings will be locally determined. The crosses will be placed on the runway or taxiway near the ends and at 1000-foot intervals on each closed runway or taxiway, as indicated on Figure 1, with dimensional requirements as shown in the table on Figure 6. When a closed runway or taxiway is intersected by a usable runway or taxiway, crosses will be placed on the closed surface on each side of the usable surface as indicated on Figure 1.
  - (2) Temporarily Closed Runway and Taxiway. Runways and taxiways which have been temporarily closed will be marked with crosses of the same size and color as those used to mark permanently closed areas. The crosses will be constructed of any suitable locally available material such as fabric, plywood, or other similar material. They will be held in place in the manner locally determined to be suitable. The crosses used to denote a temporarily closed runway will normally be positioned over the runway numerals.
- c. Incidental Failed and Hazardous Areas. Where a relatively small area of a runway, taxiway, or apron has failed or for any other reason becomes hazardous for aircraft operation and it is not intended to close the entire area to operations, the incidental area will be marked with flags for day marking and red lights for night marking of the hazardous area. Flags used will be of red materials and not less than 18 inches square. When danger flags are made of fabric, a wire stiffener will be used to hold the flag in an extended position. Flags will be so mounted that they in themselves do not produce a hazard.
- d. <u>Closed Airports</u>. When the entire landing area is rendered unsafe by a hazardous condition, the field shall be declared closed and marked as follows:

- (1) Day Marking. At airports having the segmented circle marker, the cross indicating a closed field shall be placed in the circle in accordance with AC No. 150/5340-5, "Segmented Circle Airport Marker System" (formerly TSO-N5a). At other airports, a cross shall be placed at a central location readily visible from the air.
- (2) Night Marking. Runway, boundary, and landing direction indicator lights shall be extinguished. Lanterns or flare pots shall be placed so as to outline the day marking cross. The beacon shall remain in operation unless the airport is to be closed permanently, in which case the appropriate regional director should be notified BEFORE extinguishing the beacon.
- e. <u>Notification</u>. Notice of closed runways and taxiways, airport hazardous areas, and closed airports, as described in paragraphs 4b, 4c, and 4d above, should be immediately reported to the appropriate Flight Service Station or other FAA offices for NOTAM promulgation as required, and for transmission to the National Flight Data Center (Attention: AT-435) for appropriate action.
- 5. <u>DETAIL REQUIREMENTS</u>. Color for all surface markings shall be aviation surface yellow.
- 6. DEFINITIONS.
  - a. <u>Deceptive Areas</u>. Any surface or area which appears usable but which, due to the nature of its structure, is not intended for normal operational use by aircraft.
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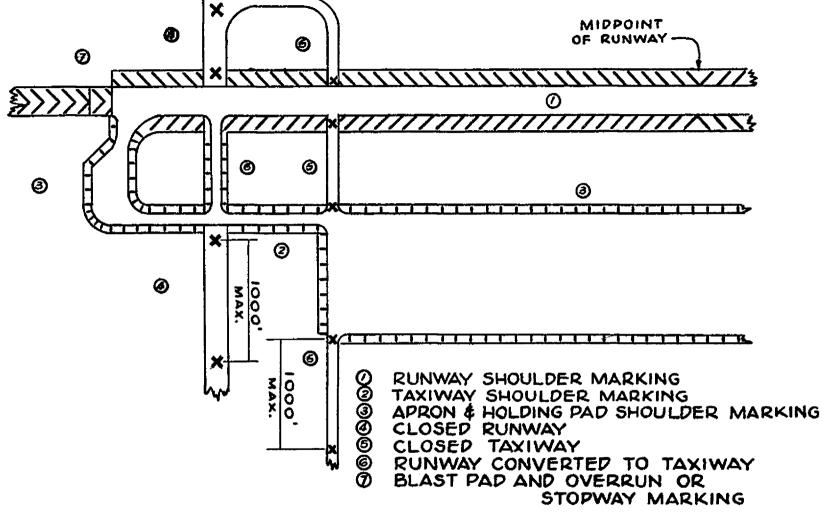
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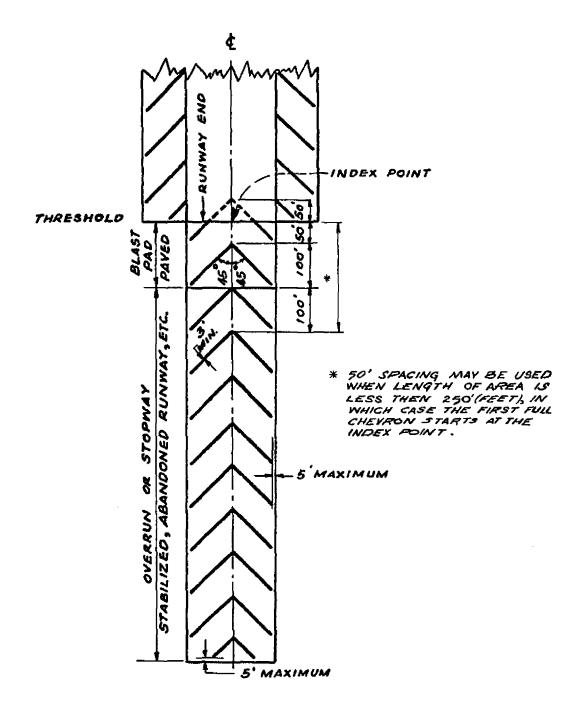
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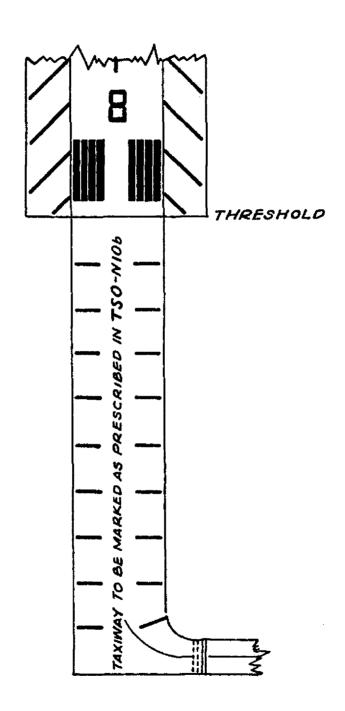
Figure 1



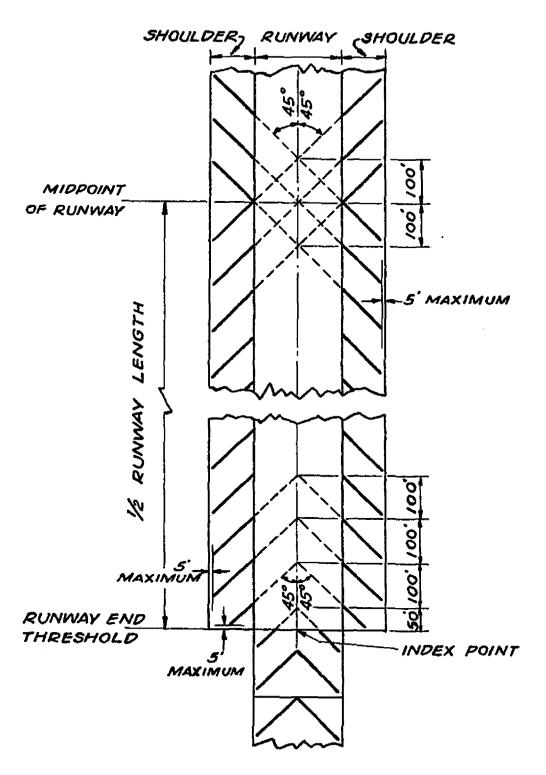
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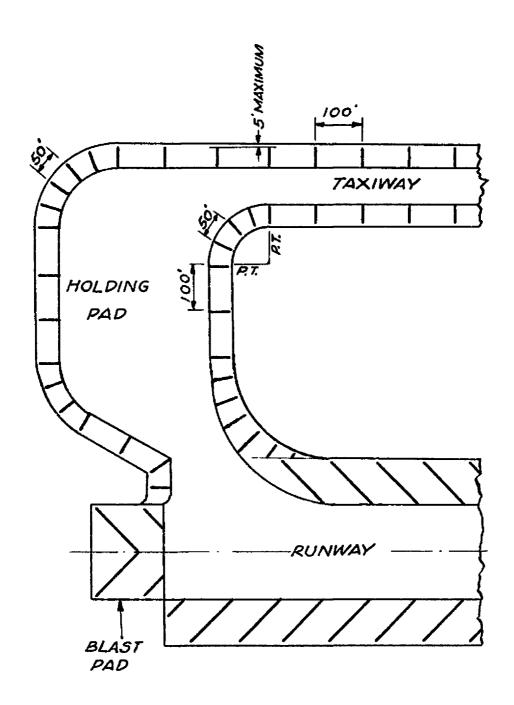
Figure 2



MARKING OF DECEPTIVE AREA CREATED BY RELOCATED THRESHOLD Figure 3

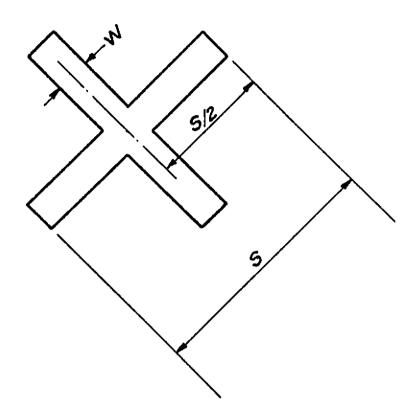


RUNWAY SHOULDER MARKING Figure 4



HOLDING PAD SHOULDER MARKING

Figure 5



	CLOSED RUNWAY	CLOSED TAXIWAY	
	Length = 60'	Length = 30'	
W	Width - 10'	Width = 5'	

CROSS FOR CLOSED RUNWAY OR TAXIWAY Figure 6