August 27, 2018

TDOT AERONAUTICS ENGINEERING UPDATE

Greetings,

As we face both funding limitations and aging infrastructure, we must constantly seek ways to maximize our available resources. Today, I have two very important updates that will enable us to own and operate a more cost effective aviation system in the State.

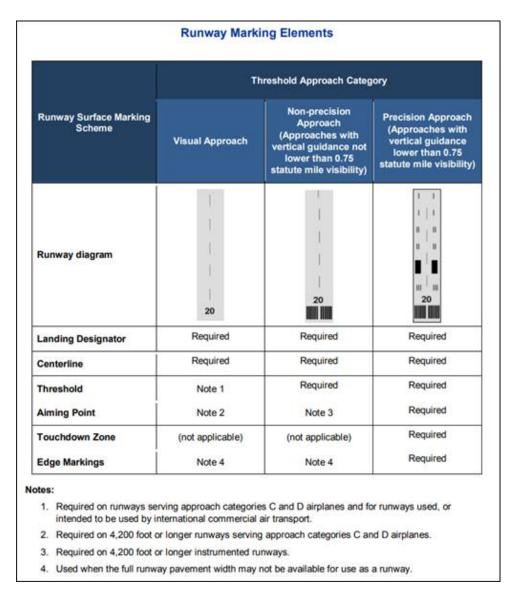## RADIO-CONTROLLED AND VARIABLE INTENSITY LIGHTING SYSTEM REQUIREMENTS

In accordance with the issuance of TDOT Policy 170-02, dated February 1, 2018; the requirement for airports to operate Medium or High Intensity lighting systems at 10% or greater in order to receive state funding has been removed. Licensed airports within the State of Tennessee may now operate their airport lighting systems as desired or required by 14 CFR Part 139, section 311. Airport owners with existing medium or high intensity systems are encouraged to retrofit the system with a radio-controlled unit meeting Specification L-854 that also complies with the guidance in AC 150/5345-53D. Eligible airports may submit a grant request for State funding, subject to normal procedures for review and approval for funding requests.

Airports with existing radio controls in use may adjust the settings to allow the system to go off when not activated by either a ground or air user.

MINIMUM REQUIRED RUNWAY SURFACE MARKING SCHEMES FOR PAVED RUNWAYS

Historically, TDOT Aeronautics has required runway edge markings, aiming points, and threshold bars as a default to runways across the state, more specifically General Aviation airports. Going forward, we are taking a more cost effective approach that is consistent with FAA minimum standards.

Not only is it important to be consistent with minimum standards, but it is also practical to understand what minimum runway marking elements are required and why. The key factor in determining the proper runway marking scheme is based on your threshold approach category, designated as: visual, non-precision, and precision approaches. The quick reference table in Chapter 1 (page 6) of FAA Southern Region Airports Division: *A Quick Reference to Airfield Standards* displays the minimum runway marking elements. Below is an image of this information.

Runway Surface Marking Scheme	Threshold Approach Category		
	Visual Approach	**Non-precision Approach** (Approaches with vertical guidance not lower than 0.75 statute mile visibility)	**Precision Approach** (Approaches with vertical guidance lower than 0.75 statute mile visibility)
Runway diagram			
Landing Designator	Required	Required	Required
Centerline	Required	Required	Required
Threshold	Note 1	Required	Required
Aiming Point	Note 2	Note 3	Required
Touchdown Zone	(not applicable)	(not applicable)	Required
Edge Markings	Note 4	Note 4	Required

Runway Marking Elements

Notes:

1. Required on runways serving approach categories C and D airplanes and for runways used, or intended to be used by international commercial air transport.
2. Required on 4,200 foot or longer runways serving approach categories C and D airplanes.
3. Required on 4,200 foot or longer instrumented runways.
4. Used when the full runway pavement width may not be available for use as a runway.

FAA Southern Region Airports Division: A Quick Reference to Airfield Standards – *Runway Marking Elements*

The same information can be found in FAA AC 150/5340-1L, Table 2-1 (page 13): Minimum required runway surface marking schemes for paved runways. Additionally, as stated in this AC, "An airport operator may paint a runway with additional surface marking schemes than required, such as a visual runway with runway edge markings or the aiming point marking, if deemed necessary by the FAA" or the TDOT Aeronautics Division. In such cases, the airport may be liable for 100% of the costs of any additional surface markings beyond the minimum requirements. In summary, there will be future circumstances where you may not need runway edge markings, aiming points, and/or threshold bars depending on the Threshold Approach Category.

Adhering to these minimum standards will enable us to accomplish more each year with the funding that is available. We look forward to continuing our joint efforts to ensuring a successful State aviation system.

Sincerely,

TN TDOT Department of Transportation

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