NOTICES TO AIRMEN (NOTAM) FOR THE CONTINUED OPERATIONAL EVALUATION OF RUNWAY STATUS LIGHTS (RWSL) AT THE DALLAS/FORT WORTH INTERNATIONAL AIRPORT, DALLAS, TEXAS

PURPOSE

The Federal Aviation Administration (FAA) will be conducting an assessment of Takeoff Hold Lights (THLs), part of the Runway Status Lights System (RWSL), on Runway 18L/36R at the Dallas/Fort Worth International Airport (DFW) commencing on or about December 22, 2005, and continuing for approximately one year. The existing Runway Entrance Lights (RELs) will continue to operate along with the newly installed THLs. RWSL is an experimental system that uses both primary and secondary surveillance to dynamically turn on/off lights. RWSL seeks to improve airport safety by indicating when it is unsafe to cross, enter or take off from a runway. RWSL is an automatic, advisory backup system expected to prevent or reduce the severity of runway incursions.

LIGHTING

RWSL conveys the runway occupancy status, indicating when a runway is unsafe to enter through the use of in-pavement warning Runway Entrance Lights (RELs) and when it is unsafe to take off through the use of in-pavement warning Takeoff Hold Lights (THLs). RELs and THLs have been installed on Runway 18L/36R.

The RELs are a series of five red, in-pavement lights spaced evenly along the taxiway centerline from the taxiway hold line to the runway edge. One REL is placed just before the hold line and one REL is placed near the runway centerline. All RELs are directed toward the runway hold line and are oriented to be visible only to pilots and vehicle operators entering or crossing the runway from that location. RELs are operational at the following intersections of Runway 18L/36R:

- **West Side:** at Taxiways Y, Z, WJ, WK, G8, WL, WM, B, and A
- **East Side:** at Taxiways Y, Z, B, and A

THLs are directed toward the approach end of the runway and are visible to pilots 1) in position for takeoff, or 2) just commencing departure, or 3) on final approach to land. There are four sets of THLs, each comprising a series of eleven red in-pavement lights at 100’ spacing along the runway centerline. The four sets of THLs are operational at the full-length and intersection departure positions on Runway 18L/36R, as follows:

- **Runway 18L:** from 875’ beyond the runway threshold for a length of 1000’ and from 875’ beyond the northern edge of the Y taxiway intersection for a length of 1000’
- **Runway 36R:** from 875’ beyond the runway threshold for a length of 1000’ and from 875’ beyond the southern edge of the A taxiway intersection for a length of 1000’
OPERATION

RWSL is an advisory system for use by pilots and vehicle operators and helps maintain situational awareness. It operates independently of Air Traffic Control. Status lights have two states: ON (lights are illuminated red) and OFF (lights are off) and are switched automatically based on information from the airport surface surveillance systems. These surveillance systems include airport surveillance radars (ASRs), surface detection radars (ASDE-3 or ASDE-X) and multilateration information from the ASDE-X surveillance system.

**IT IS IMPORTANT THAT TRANSPONDERS BE TURNED ON AND KEPT ON WHILE TAXIING IN THE MOVEMENT AREA SO THAT BEACON-BASED POSITION AND AIRCRAFT IDENTIFICATION DATA ARE AVAILABLE TO RWSL.**

Pilots should maintain an awareness of the Runway Status Lights. RELs that are ON (illuminated red) indicate that the runway ahead is not safe to enter or cross. THLs that are ON (illuminated red) indicate that the runway is not safe for takeoff. **RED MEANS STOP!** Pilots should remain clear of a runway when an REL along their taxi route is illuminated. Pilots should not take off when a THL on the runway ahead is illuminated. Lights that are off convey no meaning.

**THE SYSTEM IS NOT, AT ANY TIME, INTENDED TO CONVEY APPROVAL OR CLEARANCE TO PROCEED ONTO A RUNWAY OR TO TAKE OFF FROM A RUNWAY.**

Pilots remain obligated to comply with all ATC clearances, except when compliance would require crossing an illuminated red REL or THL. In such a case, the crews should HOLD SHORT of the runway for RELs or STOP the aircraft for THLs (if possible), CONTACT ATC, and await further instructions.

If the pilots notice an illuminated red REL and remaining clear of the runway is impractical for safety reasons, then crews should proceed according to their best judgment of safety (understanding that the illuminated REL indicates the runway is unsafe to cross or enter) and contact ATC at the earliest opportunity. If the pilots notice an illuminated red THL and aborting takeoff from the runway is impractical for safety reasons, then crews should proceed according to their best judgment of safety (understanding that the illuminated THLs indicate the runway is unsafe for takeoff) and contact ATC at the earliest opportunity. If the pilots are on short final and notice an illuminated red THL, then crews should inform ATC they are going around because of red lights on the runway.

ATC may disable RWSL at any time if in their judgment the system is interfering with normal, safe operations.

Pilots are requested when taxiing on the runway to limit taxi speed to below 30 knots so as not to unnecessarily turn on the RELs, except when directed otherwise.
HOURS OF TESTING

During the current phase of testing, the RWSL system will be operational 24/7 except for short maintenance periods. The current operational status of the RWSL system will be broadcast on the ATIS.

TEST CONFIGURATIONS AND RUNWAYS

Although the system has been designed to operate under all DFW operating configurations, testing will only be conducted on the West airfield when the runway instrumented with RWSL, Runway 18L/36R, is in use (i.e., during both South flow and North flow runway configurations).

PILOT EVALUATION

An important part of the assessment includes collecting feedback from pilots. A brief list of questions will be posted on the website. It is essential that pilots respond to surveys available on various venues including the RWSL website via the Internet, http://www.RWSL.net, in flight operations offices and domiciles at the DFW airport. Voluntary interviews with pilots will be conducted during the test period. Pilots are encouraged to respond with comments by e-mail to:

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Please note that pilot feedback is essential to an accurate assessment of the acceptability and utility of the RWSL system.

ATTACHMENT

![Drawing of DFW runway diagram for west side with THLs and RELs on runway 18L/36R.](image)

Figure 1. DFW west side with THLs and RELs on runway 18L/36R.
Drawing of Runway Entrance Lights (RELs) along a straight taxiway centerline.

**Figure 2. Illustration of Runway Entrance Lights (RELs) along a taxiway centerline.**  
(not to scale)

Drawing of Takeoff Hold Lights along a runway centerline

**Figure 3. Illustration of Takeoff Hold Lights (THLs) along a runway centerline.**  
(not to scale)
Photograph of L861-S fixture

Figure 4. Photograph of L861-S fixture.

Drawing of generic runway with red THLs.

Figure 5. THL Operational Concept.

Drawing of RWSL at DFW with surveillance sources shown illuminated in red

Figure 6. Conceptual diagram of the Runway Status Light System with surveillance sources driving RELs and THLs shown illuminated in red