Runway 3R-21L Declared Distances

DEKALB-PEACHTREE AIRPORT

Declared Distances

Declared distances are the distances the airport owner declares available for use in meeting an airplane's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements.
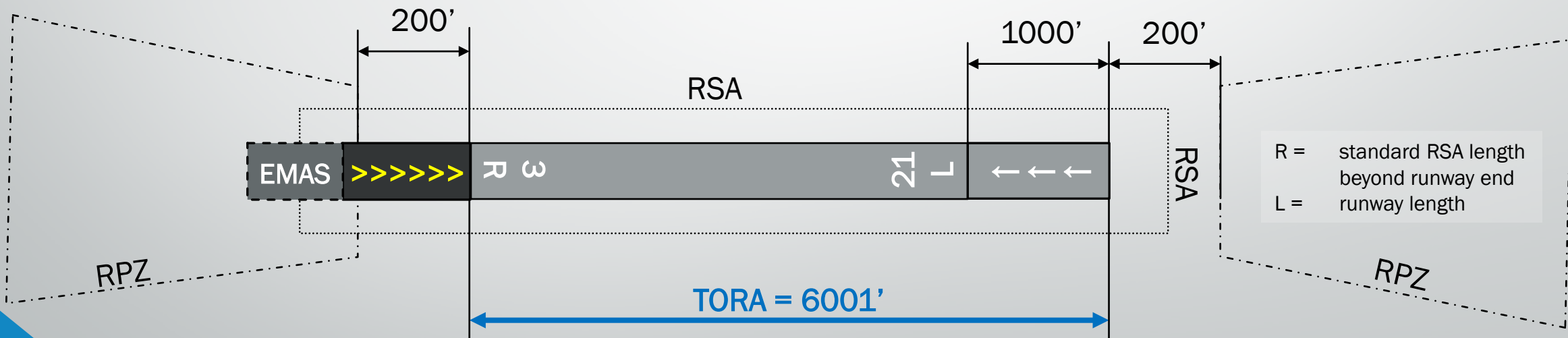
But why? Safety Area requirements have changed over time. When 3R-21L was built the *guideline* was for 600' of RSA. Then this was changed to 1000', still a guideline only. More recently, the RSA distances have become a *requirement* and if airports can't meet the requirement, they must use declared distances.

- Takeoff Run Available (TORA) – the runway length declared available and suitable for the ground run of an aircraft taking off

- Takeoff Distance Available (TODA) – the TORA plus the length of any remaining runway or clearway beyond the far end of the TORA; the full length of TODA may need to be reduced because of obstacles in the departure area

- Accelerate-Stop Distance Available (ASDA) – the runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff

- Landing Distance Available (LDA) – the runway length declared available and suitable for landing an aircraft

Takeoff Run Available (TORA)

- The TORA is the runway length declared available and suitable for the ground run of an aircraft taking off

- When the full runway beyond the start of takeoff is available for the takeoff run, the departure end of the TORA is located at the end of the runway.


200'   1000'   200'

RSA

EMAS >>>>>>> R 3   21 L ← ← ←   RSA

R = standard RSA length beyond runway end
L = runway length

RPZ   TORA = 6001'   RPZ

3R
TORA = L = 6001'

21L
TORA before EMAS = L = 6001'
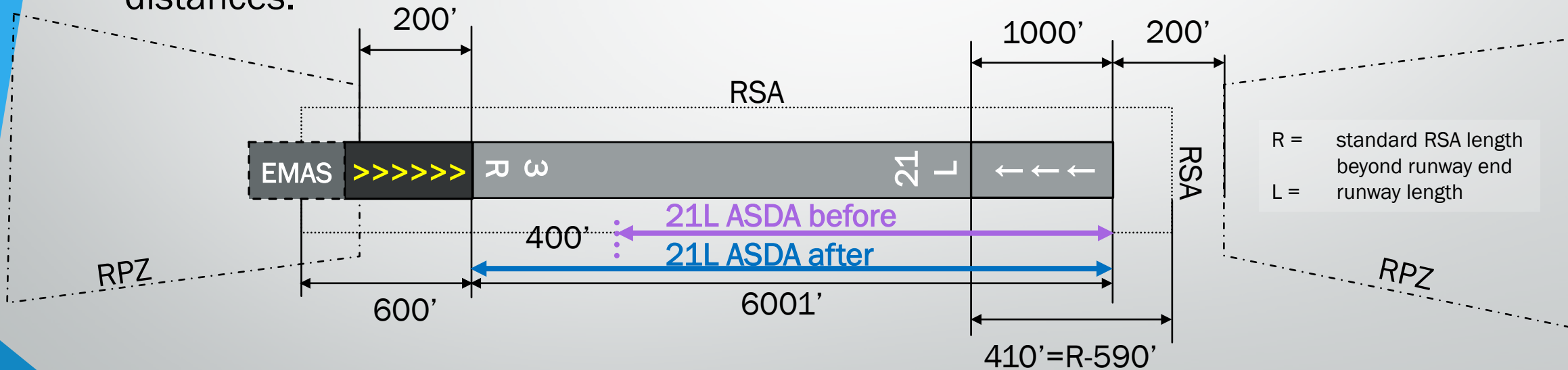TORA after EMAS = L = 6001'

Takeoff Distance Available (TODA)

- The TODA is the TORA plus the length of any remaining runway or clearway beyond the far end of the TORA; the full length of TODA may need to be reduced because of obstacles in the departure area

- When only the full runway beyond the start of takeoff is available for takeoff distance, the departure end of the TODA is located at the end of the runway

3R
TODA = L = 6001'

21L
TODA before EMAS = L = 6001'
TODA after EMAS = L = 6001'
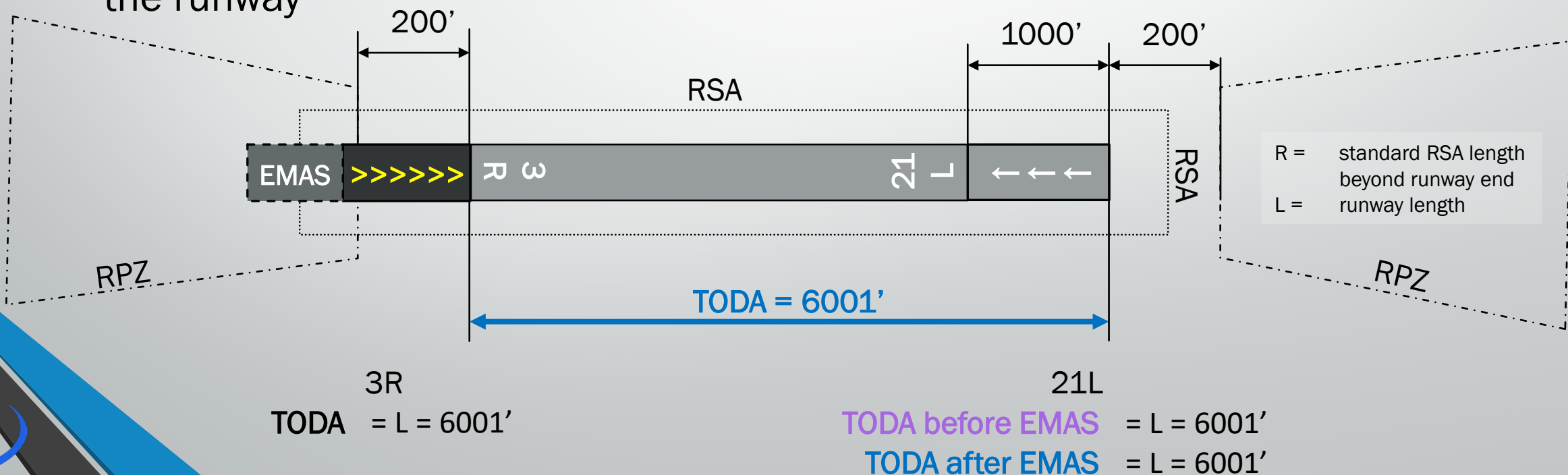
Accelerate-Stop Distance Available (ASDA)

- The ASDA extends the length of runway plus stopway (if any) declared available and suitable for satisfying accelerate-stop distance requirements for a rejected takeoff

- When the standard RSA/ROFA length beyond the end of the runway is not obtainable, additional RSA/ROFA may be obtained beyond the ASDA by reducing the ASDA. It may be necessary to use EMAS in conjunction with declared distances.

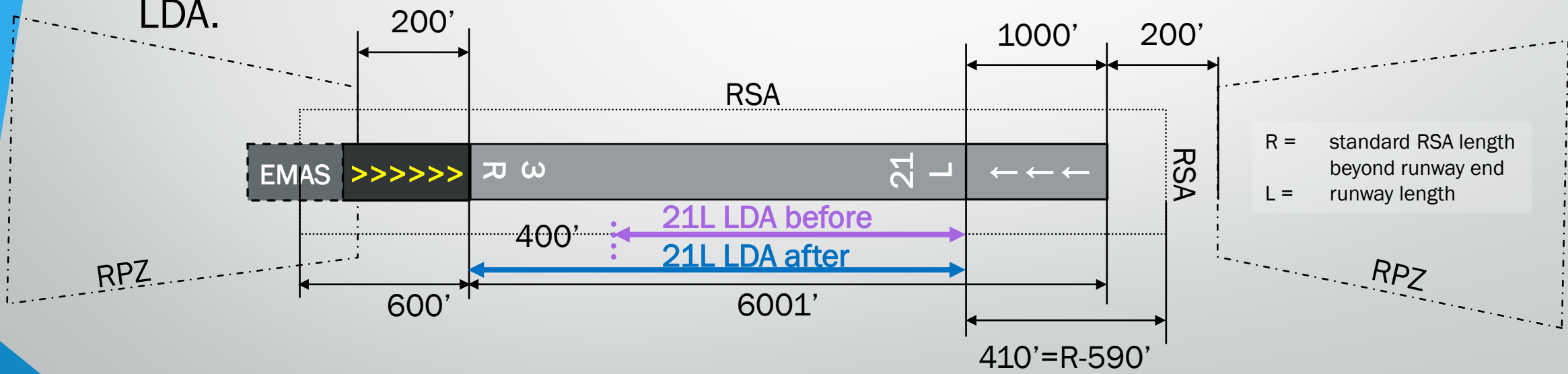R = standard RSA length beyond runway end
L = runway length

3R
ASDA = L – 590' = 5411'

21L
ASDA before EMAS = L – 400' = 5601'
ASDA after EMAS = L = 6001'

Landing Distance Available (LDA)

- The LDA is the runway length declared available and suitable for landing an aircraft

- The LDA begins at the threshold.

- Except when a stopway exists as part of the ASDA, the LDA ends at the same location as the end of the ASDA. A stopway cannot be part of the LDA.

3R
LDA   = L − 590' = 5411'

21L
LDA before EMAS   = L − 400' − 1000' = 4601'
LDA after EMAS   = L − 1000' = 5001'

In the event of an overrun into the EMAS, the ASDA and LDA would change:

3R

TORA	= L = 6001'
TODA	= L = 6001'
ASDA	= L − 590' = 5411'
LDA	= L − 590' = 5411'

21L

TORA	= L = 6001'
TODA	= L = 6001'
ASDA	= L − 657.5 = 5343.5'
LDA	= 5343.5' − 1000' = 4343.5'

200'

1000'   200'

RSA

EMAS   >>>>>>>   3 R   21 L   ← ← ←

RSA

21L ASDA

21L LDA

342.5'

= R - 657.5'

6001'

500'=R-500'

410'=R-590'

RPZ

RPZ

R = standard RSA length beyond runway end
L = runway length