Highline Forum

Question asked – Are arrivals lower now than they were a couple of years ago?
Sea-Tac Airport Runways
Data Analysis

• 1 Month of arrival flight track data for each runway end
  – June 2013
  – June 2015 (center runway analysis – April)
  – June 2017

• June typically has a mix of north and south flow, a mix of Instrument Landing System (ILS) and Visual Approaches with average number of aircraft.

• ILS Aircraft have to be established on the glideslope at the last approach fix (as close as 4.5 NM at SEA), but can intercept it farther out.
Runway 16L arrival altitude analysis compared to a 3 degree glideslope

Actual average altitude for aircraft at 3 NM
- June 2013 = 1374 feet
- June 2015 = 1400 feet
- June 2017 = 1393 feet

3 degree calculated altitudes
16L Arrival Altitude Scatter Plot at 3 NM
Runway 16R arrival altitude analysis compared to a 3 degree glideslope

Actual average altitude for aircraft at 3 NM

- June 2013 = 1368 feet
- June 2015 = 1396 feet
- June 2017 = 1371 feet

3 degree calculated altitudes
16R Arrival Altitude Scatter Plot at 3 NM
Runway 16C arrival altitude analysis compared to a 3 degree glideslope

Actual average altitude for aircraft at 3 NM:
- June 2013 = 1391 feet
- April 2015 = 1404 feet
- June 2017 = 1400 feet

3 degree calculated altitudes
16C Arrival Altitude Scatter Plot at 3 NM
Actual average altitude for aircraft at 3 NM

- June 2013 = 1323 feet
- June 2015 = 1348 feet
- June 2017 = 1335 feet

3 degree calculated altitudes
34L Arrival Altitude Scatter Plot at 3 NM

2017 = 2013 =

1200
Runway 34C arrival altitude analysis compared to a 3 degree glideslope

Actual average altitude for aircraft at 3 NM
- June 2013 = 1299 feet
- April 2015 = 1324 feet
- June 2017 = 1376 feet

3 degree calculated altitudes
34C Arrival Altitude Scatter Plot at 3 NM
Runway 34R arrival altitude analysis compared to a 2.75 degree glideslope

Actual average altitude for aircraft at 3 NM
- June 2013 = 1281 feet
- June 2015 = 1264 feet
- June 2017 = 1251 feet

2.75 degree calculated altitudes
34R Arrival Altitude Scatter Plot at 3 NM
Departure Altitudes

• Altitudes of departing aircraft vary depending on:
  – Wind
  – Temperature
  – Aircraft type
  – Amount of fuel
  – Amount of passengers
  – Amount of cargo
  – Air Traffic Control Instructions
Conclusion

• Question asked – Are arrivals lower now than they were a couple of years ago?
  – Altitudes remain consistent along the glideslopes throughout the compared years