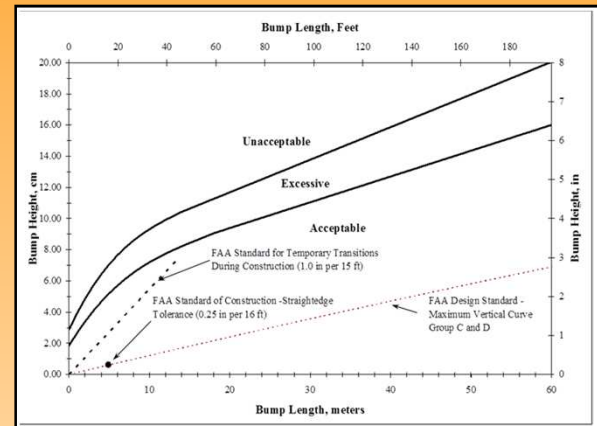


The **Boeing Bump Index (BBI)** has been used to evaluate runway roughness for many years. However, did you know that BBI has two *major* limitations? These limitations could be preventing BBI from providing you with the correct information.

1. **BBI can only evaluate one roughness event at a time.** Roughness that often produces pilot and passenger complaints are caused by multiple bumps and dips in a row
2. **BBI does not use the aircraft's speed.** An aircraft will respond much differently if encountering a bump at a high speed as opposed to a slow speed.



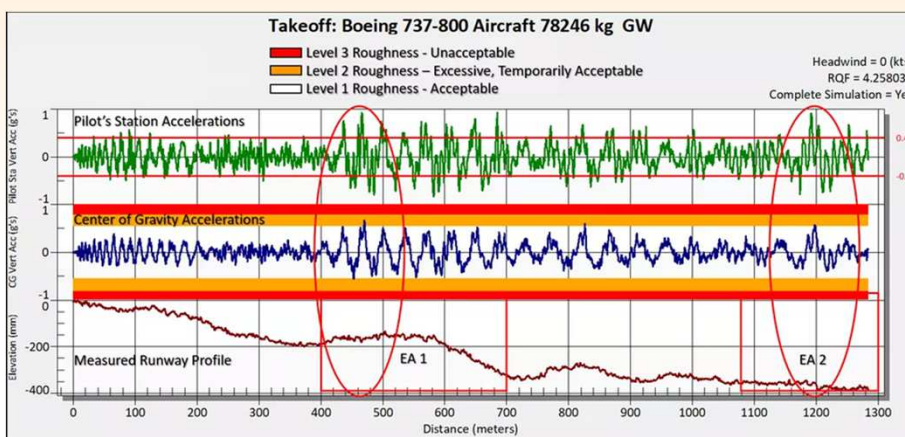
How does APR improve BBI? We use aircraft simulation to predict the aircraft's response. As stated in Boeing Report D6-81746, Boeing used the measured vertical accelerations at the aircraft's center of gravity (CG) to develop BBI's categories of roughness.

Level 1 Roughness – Acceptable
.25g to .54g at the CG

Level 2 Roughness – Temporarily Acceptable
.55g to .79g at the CG

Level 3 Roughness – Unacceptable
.80g and up at the CG

Using aircraft simulation, APR can predict the CG's response to the runway's measured profile and determine if the roughness is acceptable, excessive or unacceptable using Boeing's criteria. APR's technology, called **BBI+**, can overcome the limitations of BBI and still provide you with the guidance developed by Boeing and approved by the FAA.



BBI+PLUS

Please contact **APR** today about APR's BBI+ Service