

Introduction to APR Consultants, Inc.

Michael Gerardi

APR Consultants, Inc.

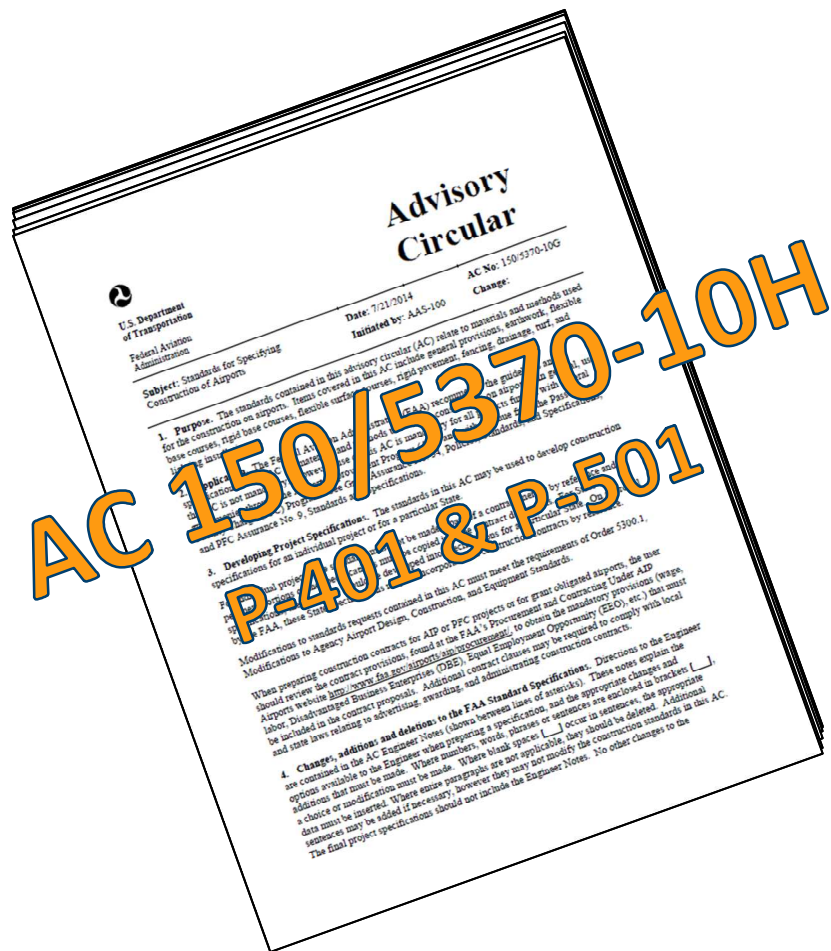
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Background on APR



- In Business Since 1993
 - Aircraft Simulation Technology
 - Profile Measurement Device
- Technology was Used to Identify Runway Roughness

Smoothness Acceptance Testing



Smoothness Acceptance Testing



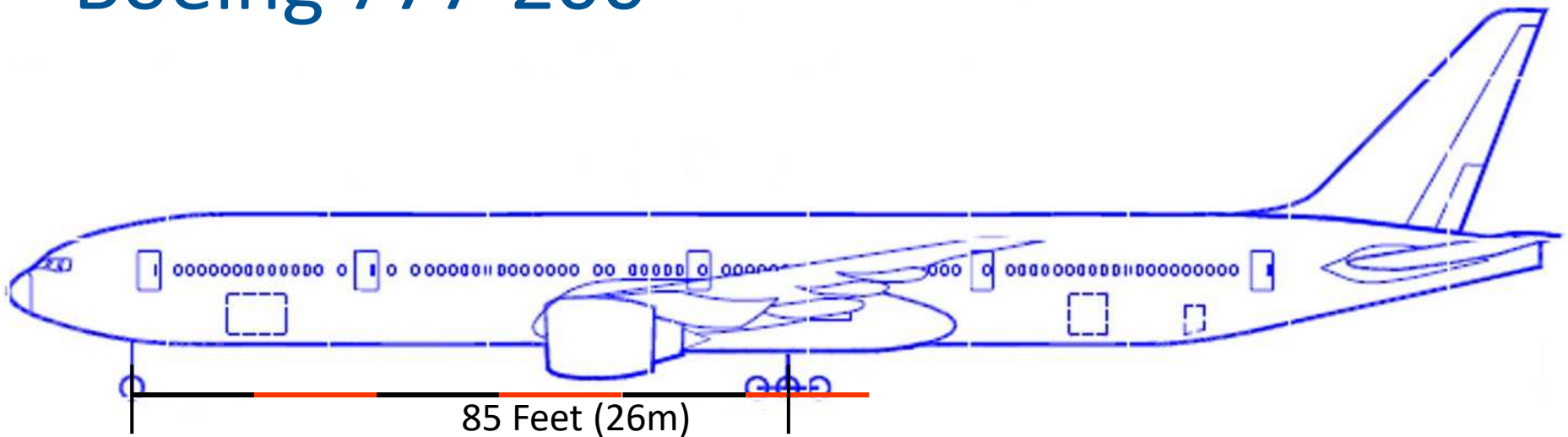
- High-Speed Inertial Profiler
 - Fast
 - Accurate
 - Repeatable
 - Produces a Profile Index
 - Identifies Must Grinds
 - Produces Electronic Reports on the Spot

Most New Runways Are “Smooth”



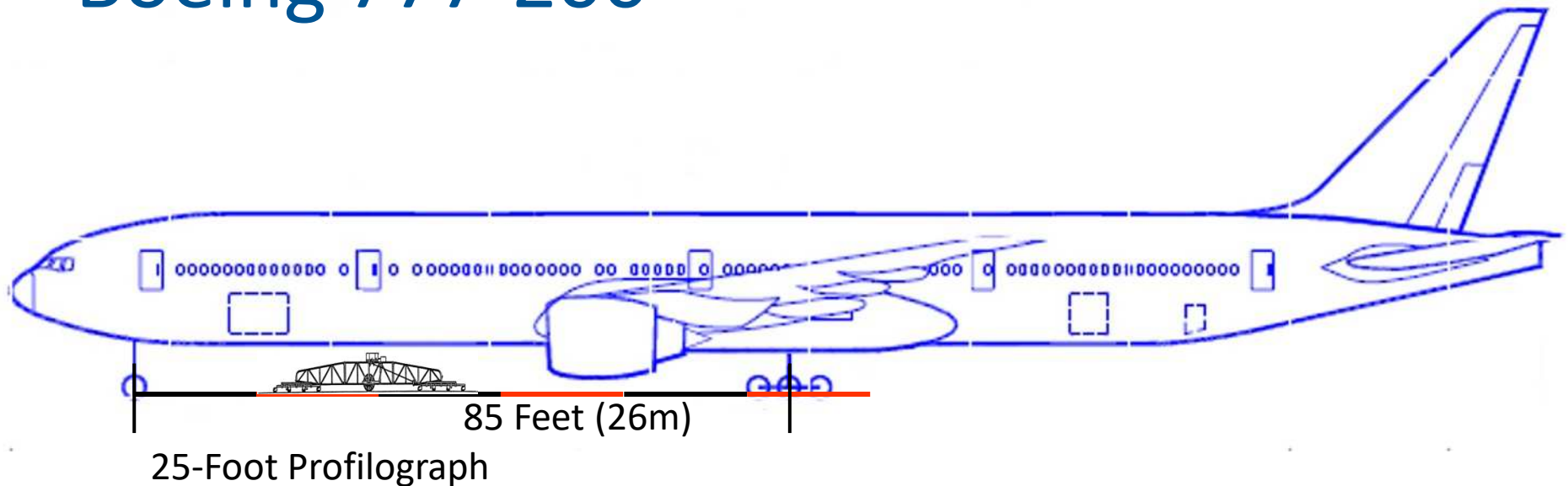
But There Could Still Be *Roughness*

Boeing 777-200



- Nose to Main Gear Spacing of 85 Feet
- Rotation Speed Up To 190 Knots
- Sensitive to Roughness Wavelengths Up To 300 Feet in Length

Boeing 777-200



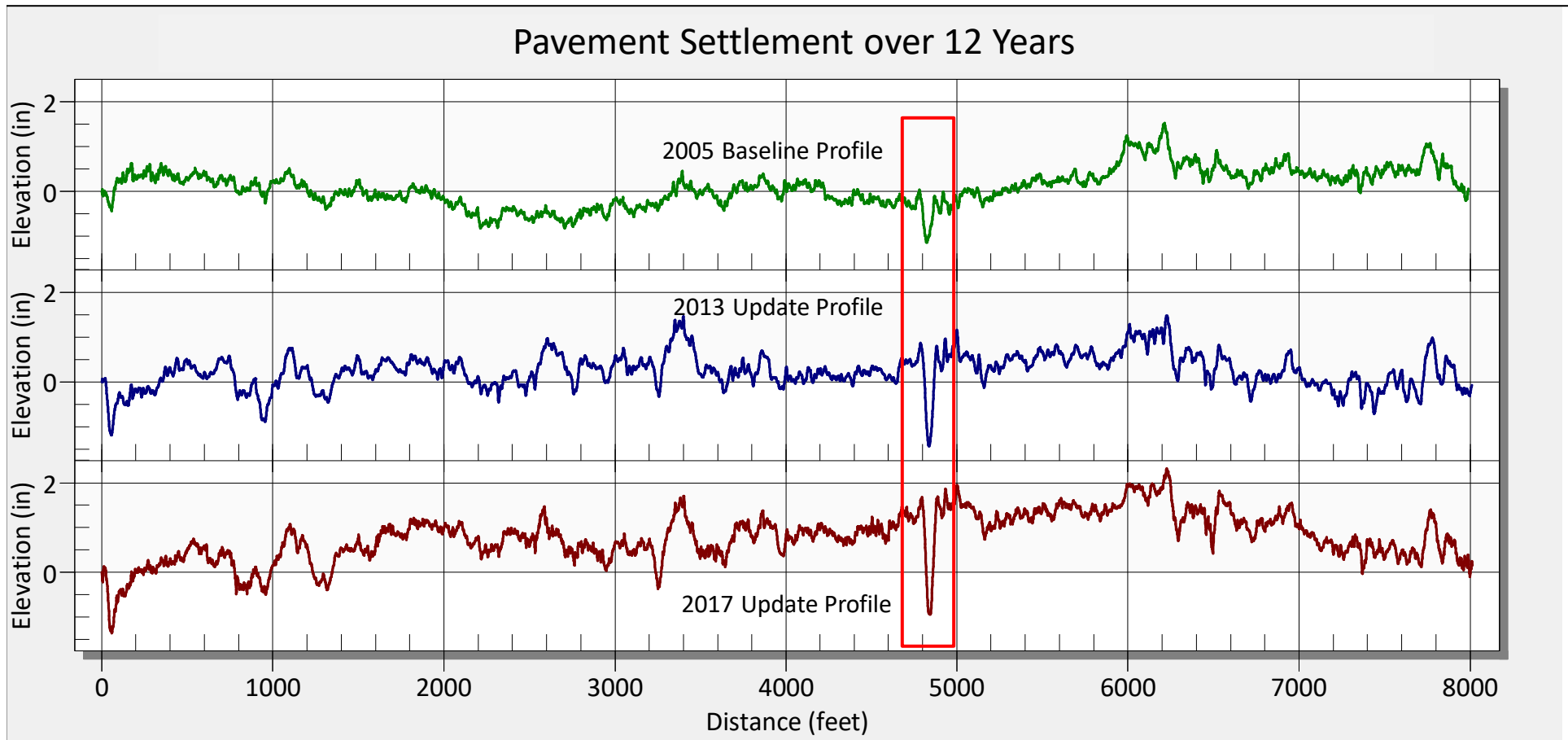
- The Profilograph is incapable of Identifying the Longer Wavelength Events that Affect Today's Commercial Jet Fleet Mix.
- You Can Achieve Smoothness Goals and Still Have Roughness.

Runways Change With Time

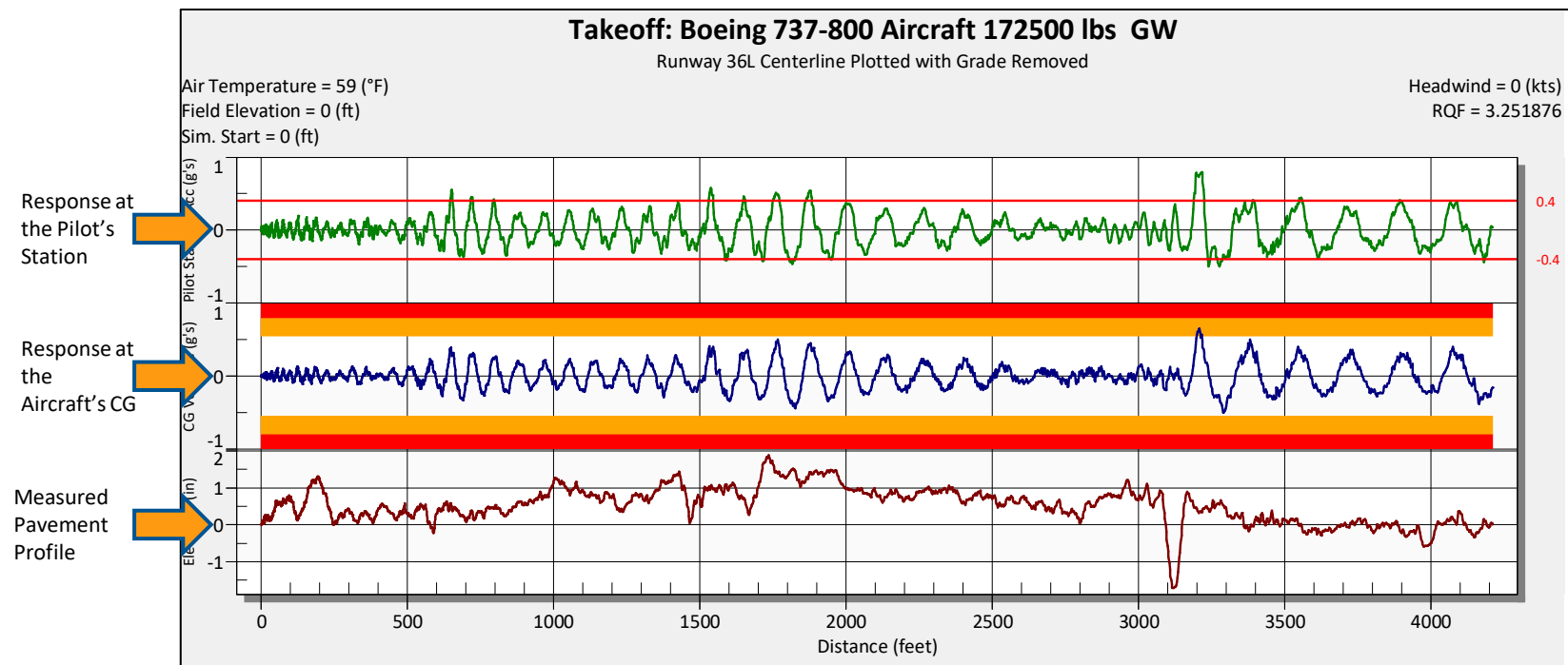


- Runways Change With Time
- Changes to the Runway's Profile can Create Pavement Roughness
- APR is the World's Leader in Identifying and Quantifying Pavement Roughness
 - Profile Measurement
 - Aircraft Simulation
 - Straightedge Analysis

Settlement of a PCC Runway



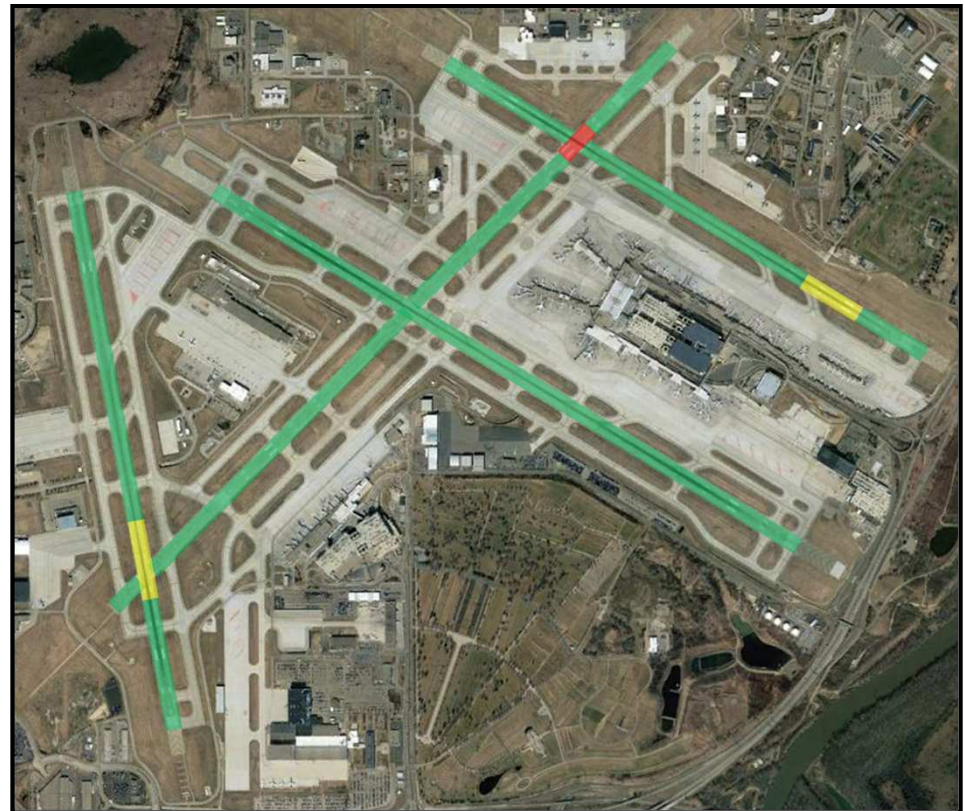
Aircraft Simulation



- A 737-800 Performing a Takeoff Operation
- Encounters Roughness at 3,100 feet Predicted to Produce Excessive Responses

Integrate Profile Monitoring into PMS

- Using Profile Measurement Devices Discussed in this Presentation, Changes to the Profile can be Tracked
- Like Other PMS Elements, Measure and Assess Periodically
 - 3-5 Years
- Allows Managers to Predict Problems and Manage Maintenance



Why Choose APR?

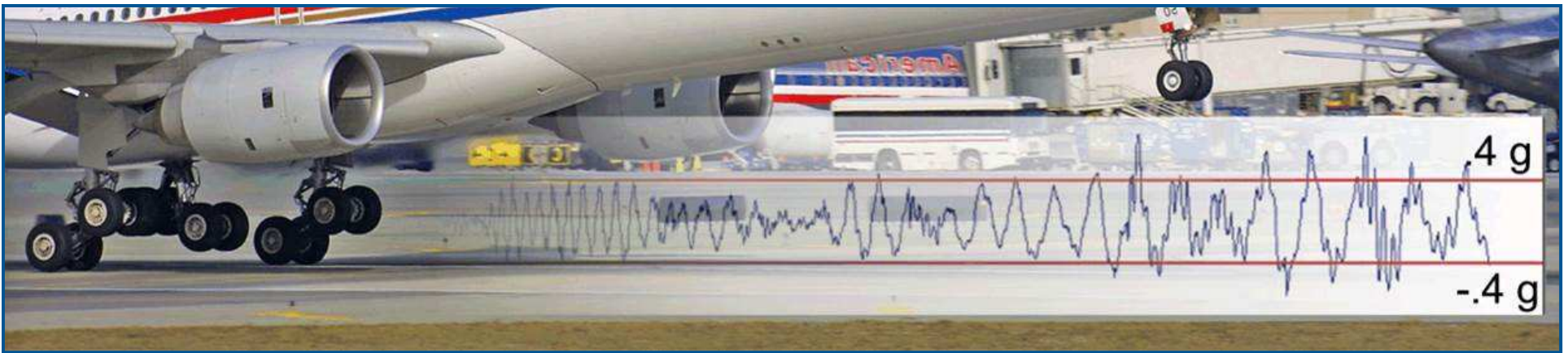
- APR Has All the Tools and Experience to Evaluate Airfield Pavements from Smoothness to Roughness.
- APR is the Only Company that Routinely Conducts Baseline Profiles for Future Comparisons.
- APR is the Only Company that Offers Real-World Aircraft Simulation Capability.
- APR's Services are Consistent with the FAA's Goals for the 40-Year Pavement.

- Commercial and Military Airport Services

- Pavement Design Evaluation
- New Pavement Acceptance
- Dispute Resolution
- Pavement Management
- Prioritize Pavement Maintenance
- Pilot Reported Roughness
- Optimize Repairs
- Establish a Baseline Profile for Tracking



Your Time and Consideration is Appreciated



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