

Executing the Corrective Action Plan



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Proposal Note 555
Workshop
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Overview

- Taking the Plan from the Software to the Field
 - Layout and Marking in the Field
 - Surface Macrotexture and Establishing Head Depth
- Confidence in the Plan means
 - Trust in the software
 - Trust in the Profiler
 - Trust in the Grinding Equipment
- Predicted vs. Actual Results
- What works well and not so well
- Questions

From Software to Field

- Determine Machine to use
 - Same machine in ProVAL used in field
- Determine Grind Location Bounds
- Mark/measure off of known points
 - Deck/Approach Slab interface
 - Approach Slab/Deck interface
- Account for Texture of Surface
- Execute the Plan that was developed

Take the right equipment to the field

Don't bring a knife to a gun fight!



Confidence comes with Experience

Trust:

- ProVAL & Grinding Simulation
- Profiler & Inertial Road Profiles
- The Diamond Grinding Equipment

Results are easily validated with post correction profiles and analysis.

Diamond Grinder Operator Experience & Naked Eye

Most of the roughness that affects Ride Quality is difficult to impossible to see with the naked eye!

Therefore:

What can and cannot be corrected with grinding needs to be determined with road profiles and the software!

Diamond Grinder Operator Experience & Naked Eye

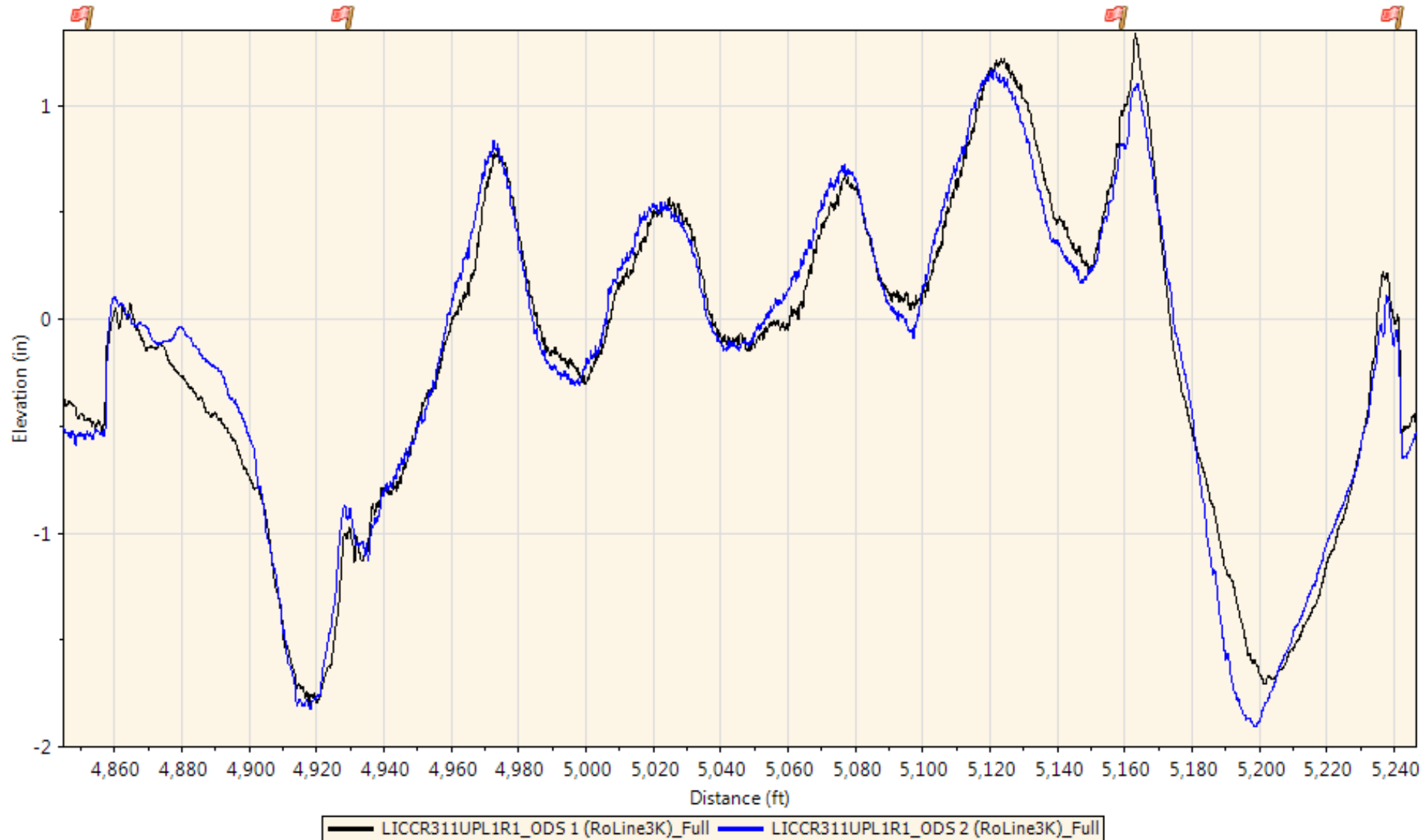
- We have fixed roughness events on bridges that operators have told us could not be fixed by grinding (But ProVAL suggested otherwise)
- Operators attempted to improve roughness events (to no avail) that ProVAL suggested could not be improved by grinding

From Software to Field

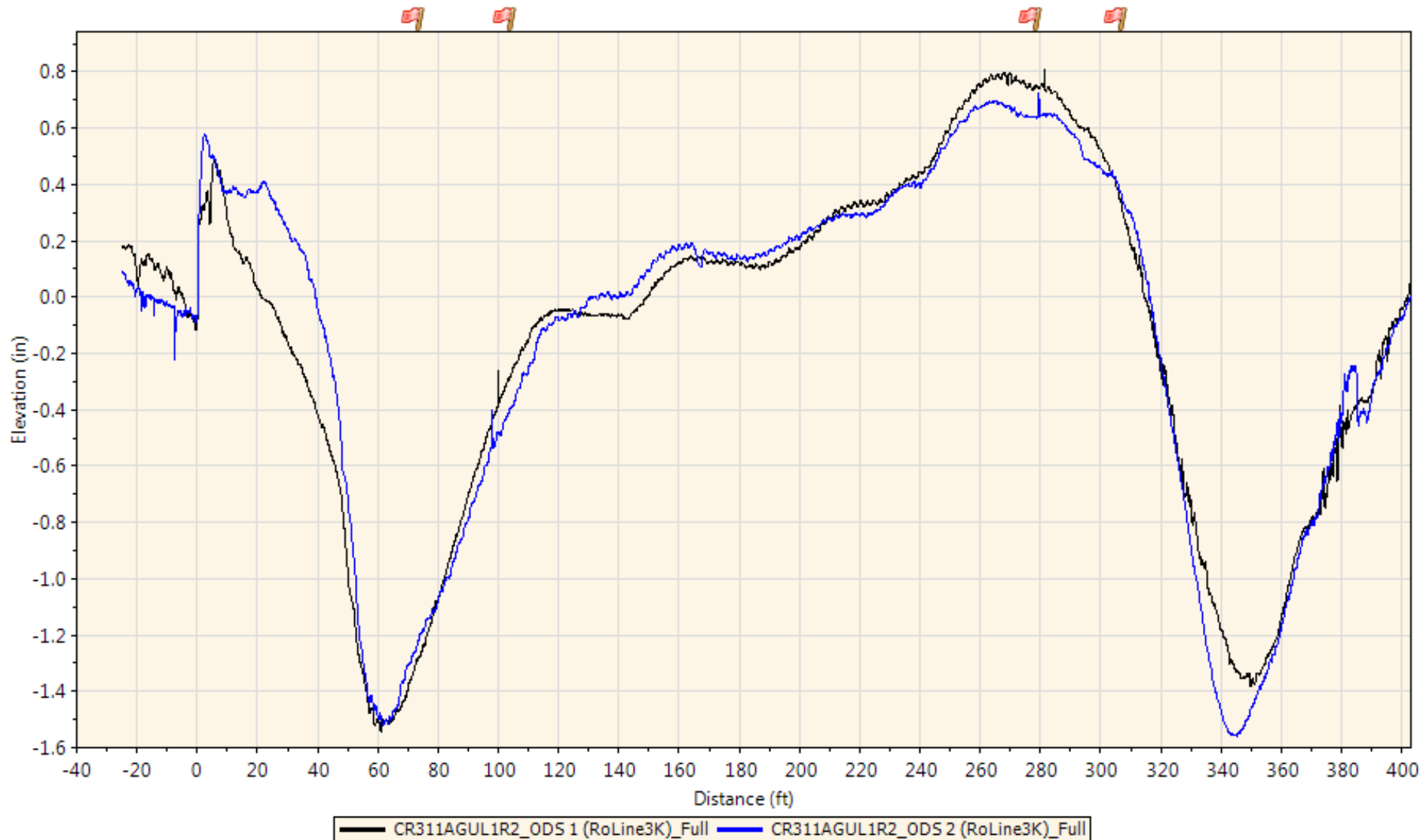
Real world example

1. Poor Riding Bridge Profiles Collected
2. Diamond Grinding Analysis & Corrective Action Plan Developed
"sight unseen"
3. Grinding company executes the plan without alterations
4. Post grinding profiles collected

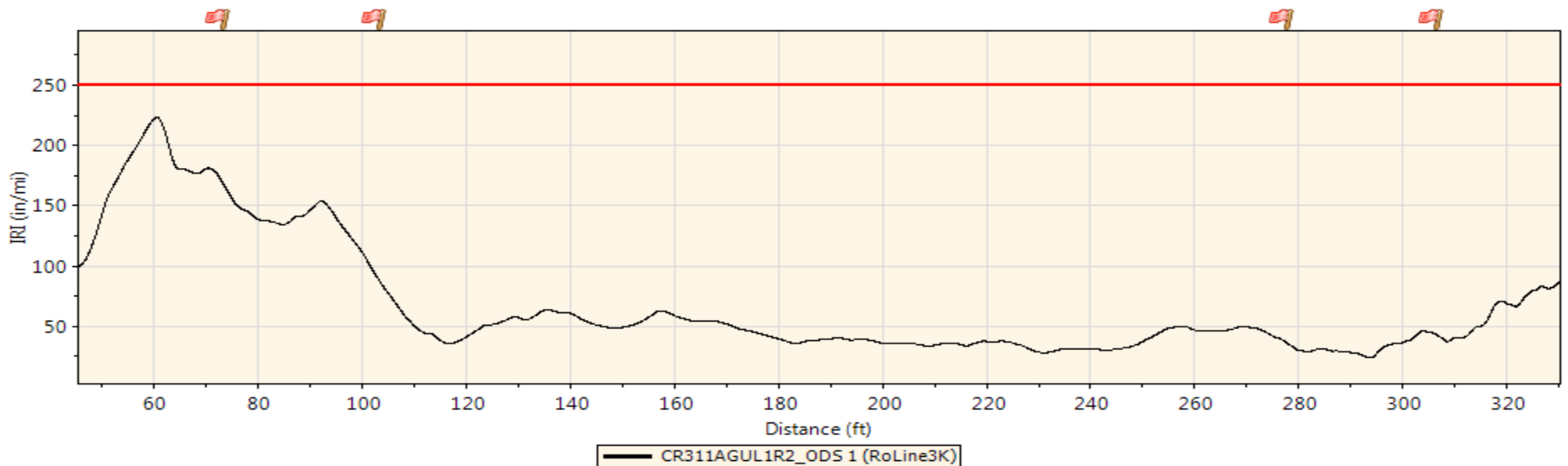
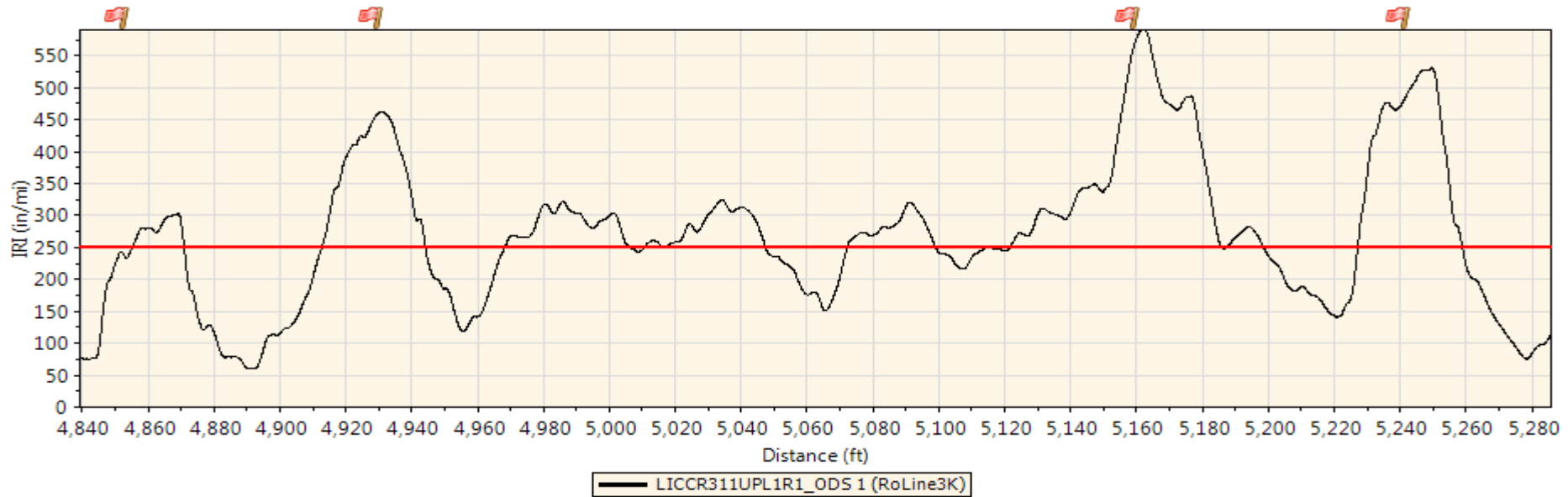
Bridge before Grinding profile



Bridge after Grinding profile



Before and After Localized Roughness



Questions?
