

# Evaluation of Rail Shear at Concrete Tub Crossings

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# Project Background

- Objective: Assessment of rail shear at the transition onto and off of railroad concrete tub crossings to determine if an increase in speed to 40 mph can be done safely.
- Reasoning: Historically, speed through concrete tub crossings has been limited to 25 mph due to concerns in the rail shear as the train passes from an area of lower stiffness to an area of higher stiffness at the tub.



# Concrete Tub Crossing Overview



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# Observed Field Performance – High Speed Tub Crossing

- Observed and instrumented tub crossing with trains passing in speeds ranging from about 10 to 60 mph.
- Little Maintenance
- Most damage appears to come from heavy trucks



# Crossing Vehicle Traffic



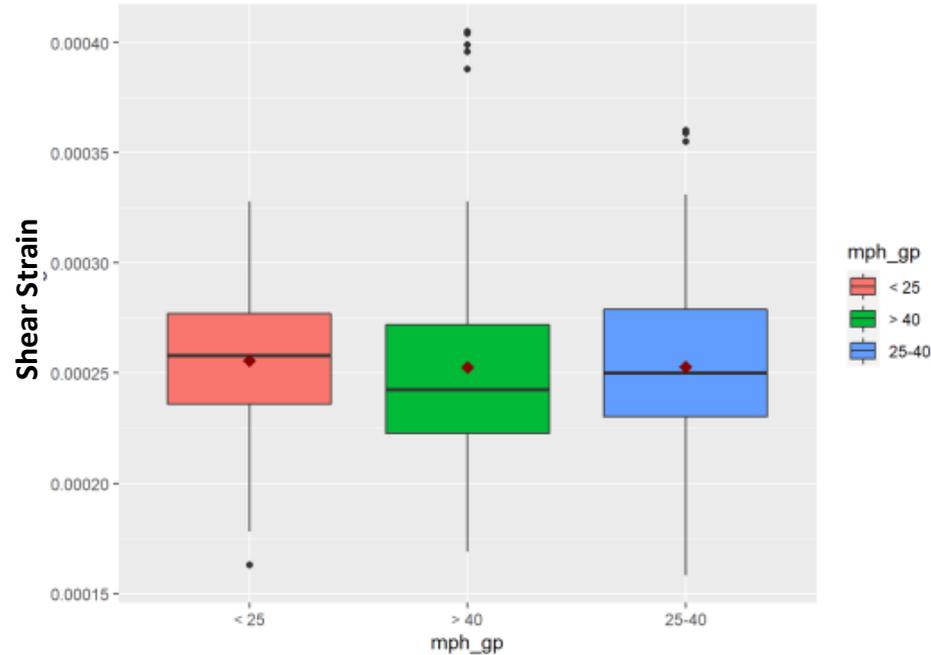
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# Testing – Strain Gauges

- Instrumentation of rail with strain gauges
- Measure in area of tub transition as well as further down track



# Preliminary Results Analysis



# Acknowledgements



U.S. Department of Transportation  
**Federal Railroad Administration**

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# Thank You

# Questions?