

Block Rail – Current Best Practices and Experience on Recent Projects

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Key Presentation Take Aways

- Block Rail Applicability
- Block Rail Installation
- Unique Trackwork Specific to Block Rail
- FAQ's / Ongoing Issues
- Questions

Rail Options – Rail Sections



Girder Rail



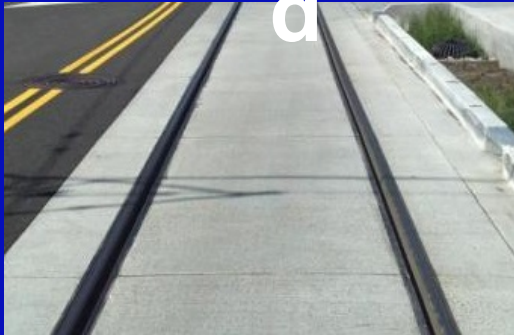
Tee Rail



Block Rail

Rail Options - Uses

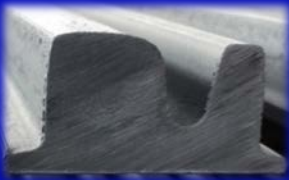
Embedded



Ballasted



DF Track

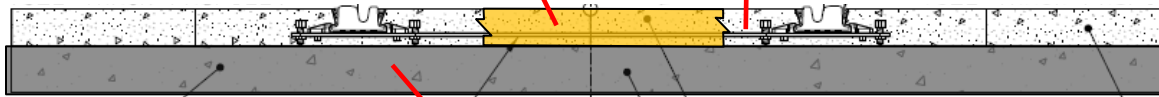


Rail Options - Uses

Shallow Slab Embedded on Structure

Shallow 4 1/2"
Track Slab

Block Rail on flat bar
with leveling screws



Existing/Proposed
Bridge Deck



Rail Options - Durability

**Concrete Flange
More Prone to
Spalling**



Rail Options - Narrow Tired Vehicles

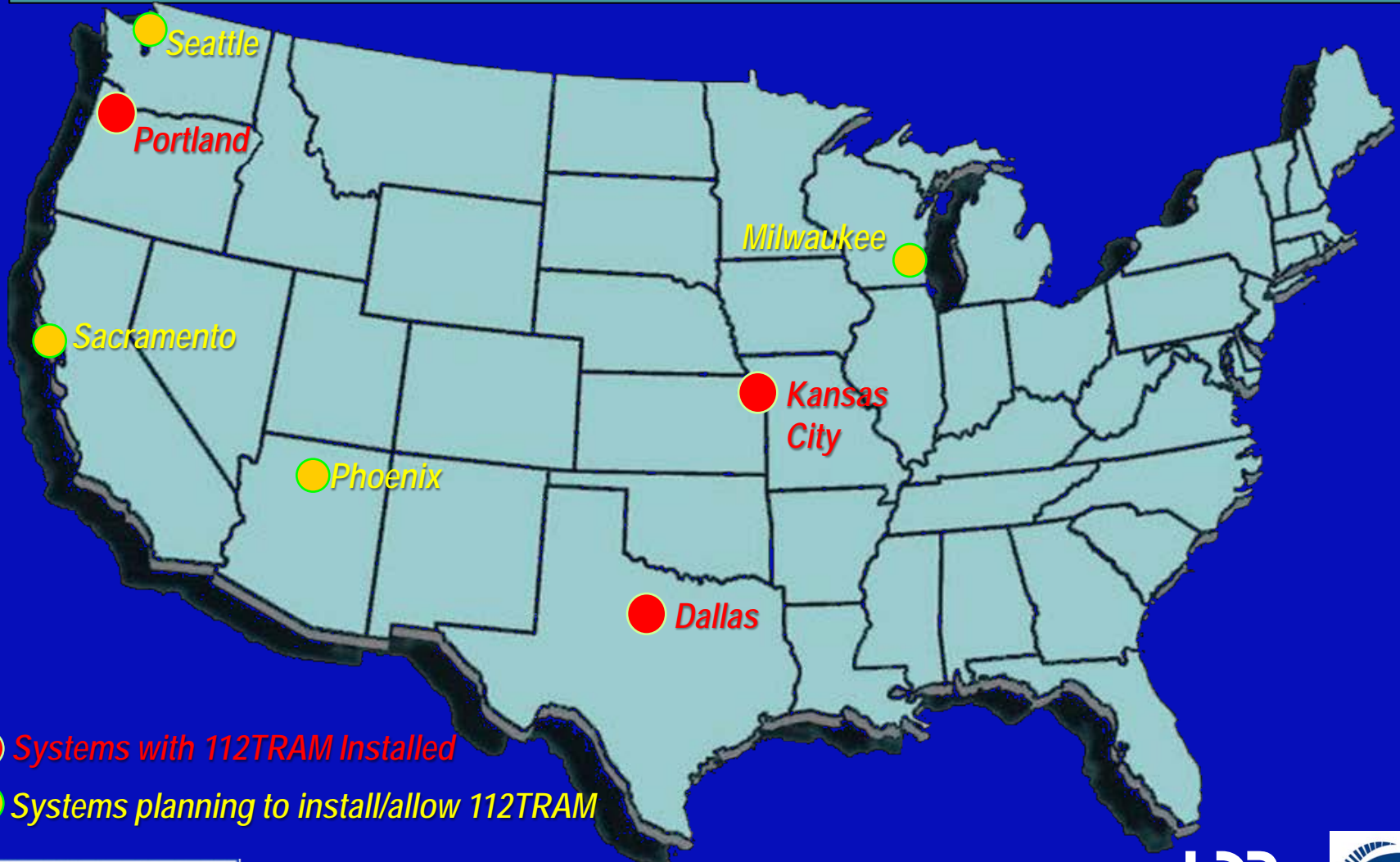


Tee Rail



Block/Girder Rail

Block Rail - Who is Using it?



● *Systems with 112TRAM Installed*

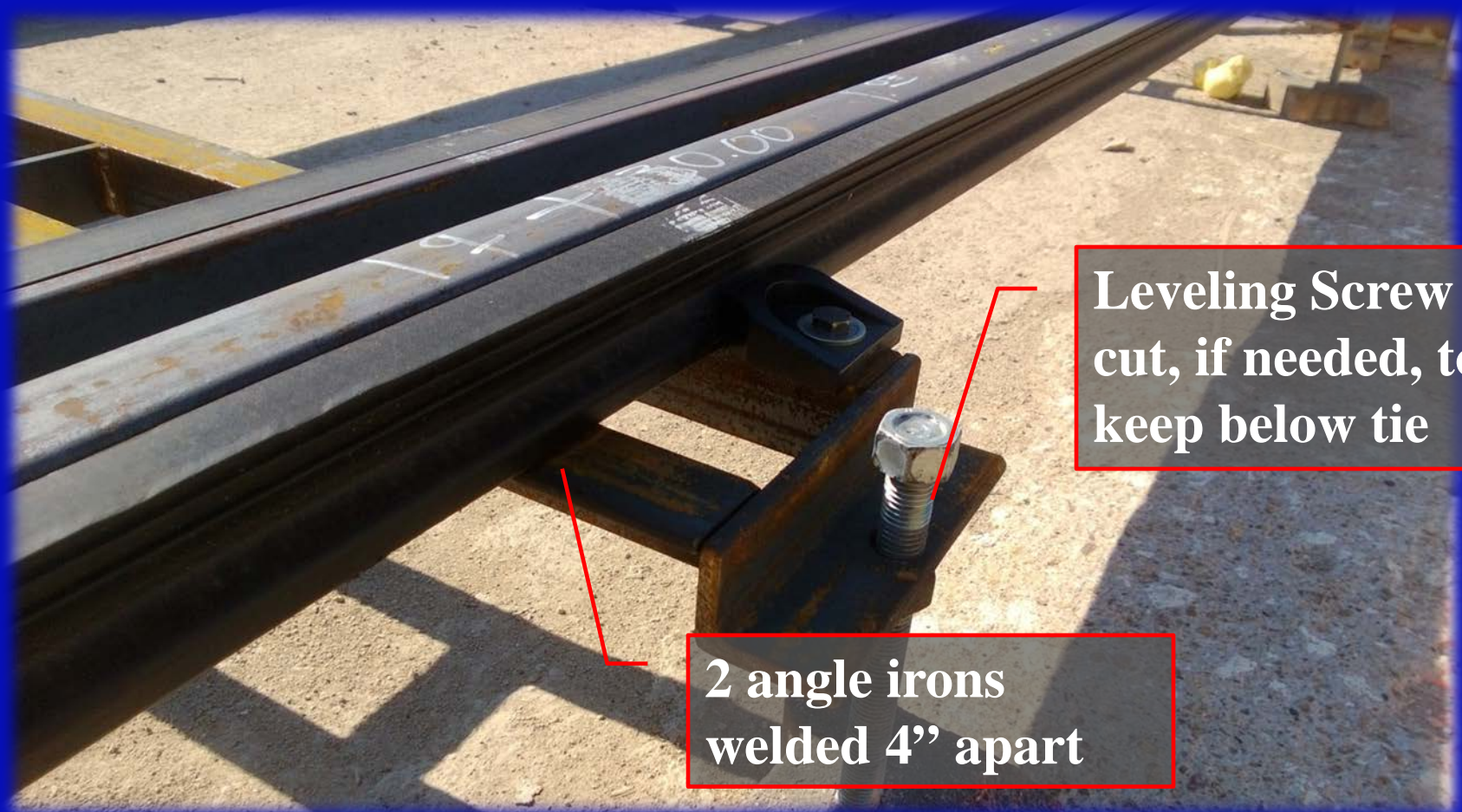
● *Systems planning to install/allow 112TRAM*



13th National Light Rail & Streetcar Conference



Installation - Tie



Leveling Screw –
cut, if needed, to
keep below tie

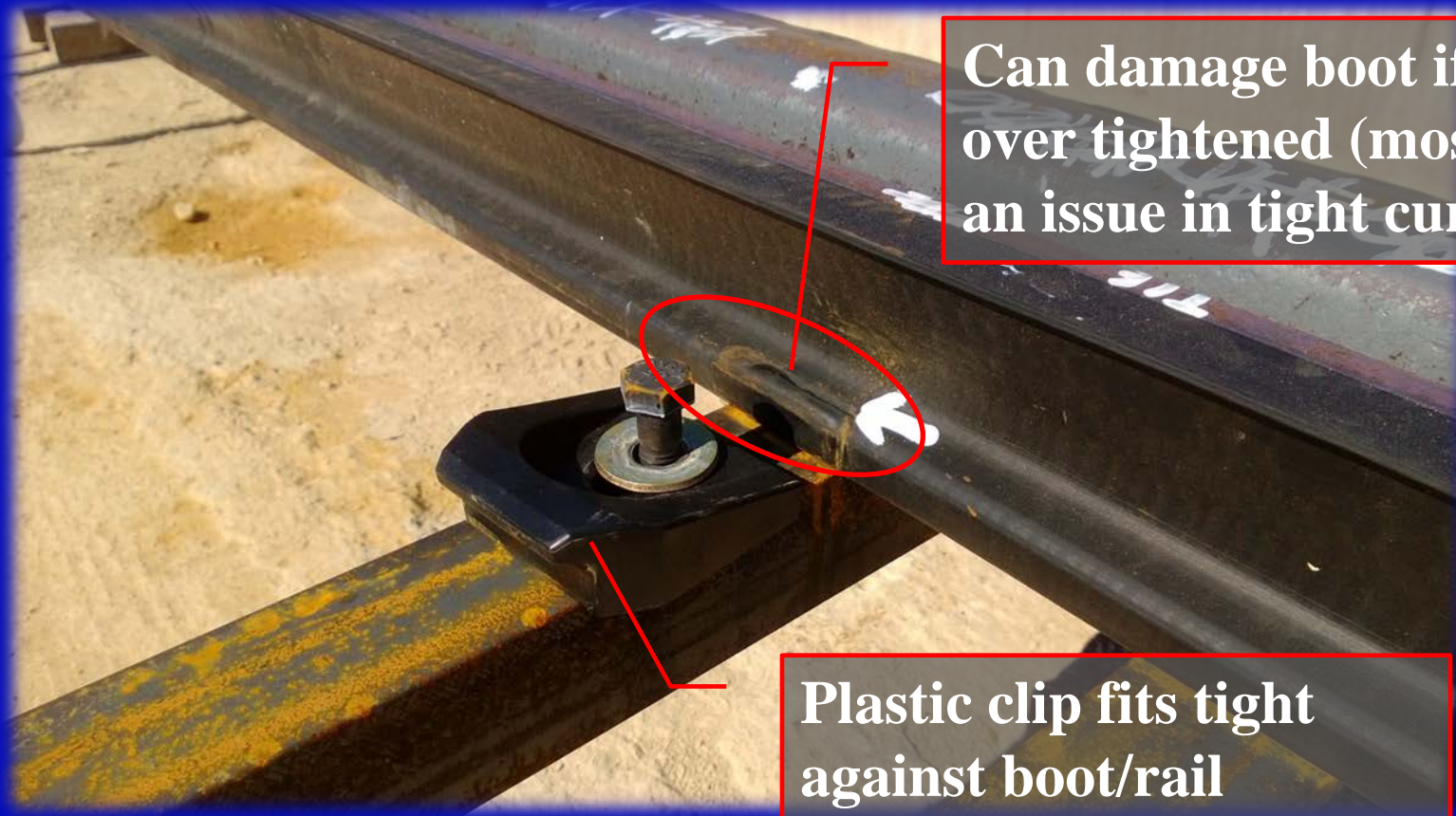
2 angle irons
welded 4” apart

Installation – Crack Protection



3' rebar pieces placed over ties.

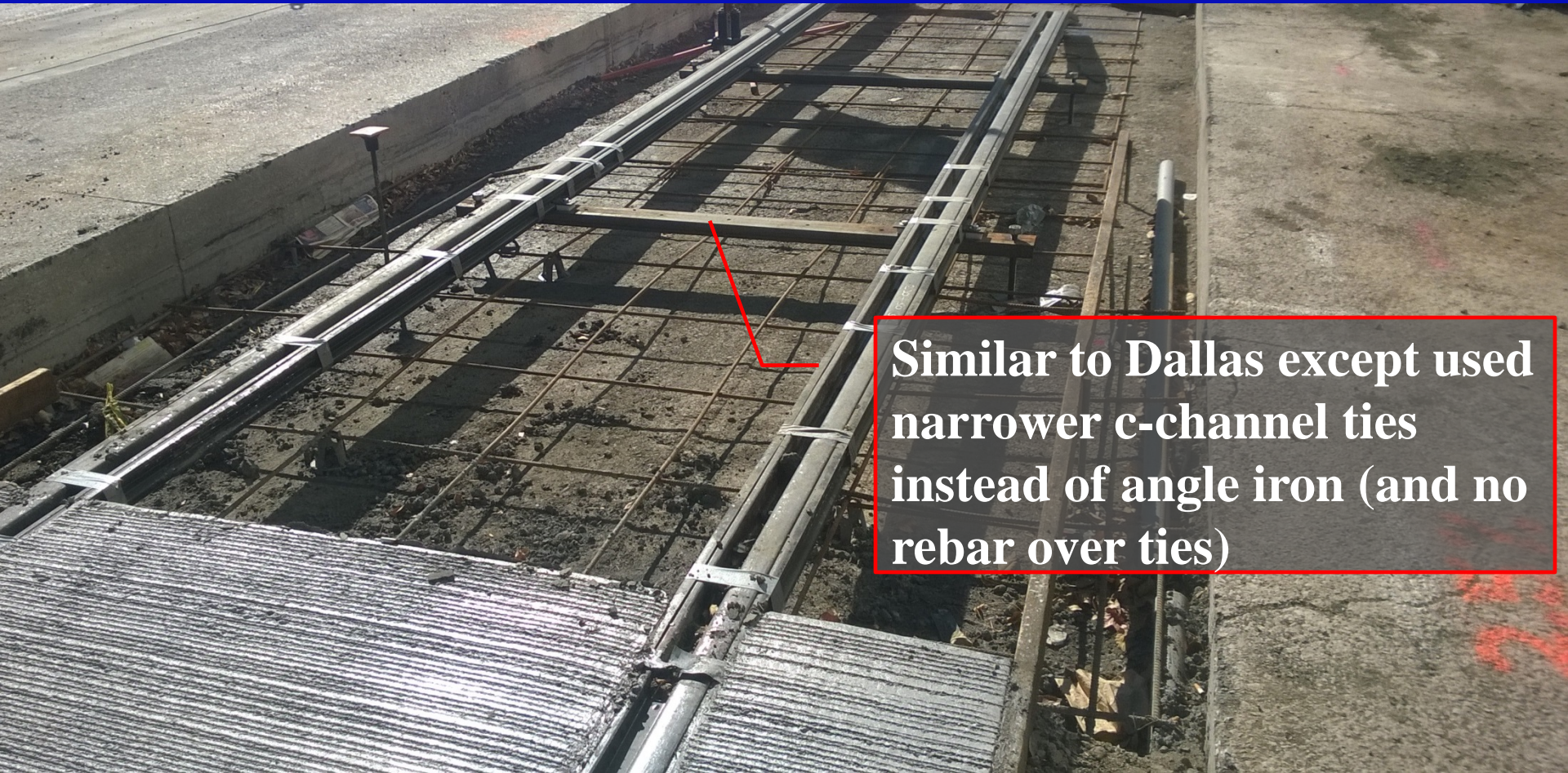
Installation - Clip



Can damage boot if over tightened (mostly an issue in tight curves)

Plastic clip fits tight against boot/rail

Installation – Alternate used in KCMO

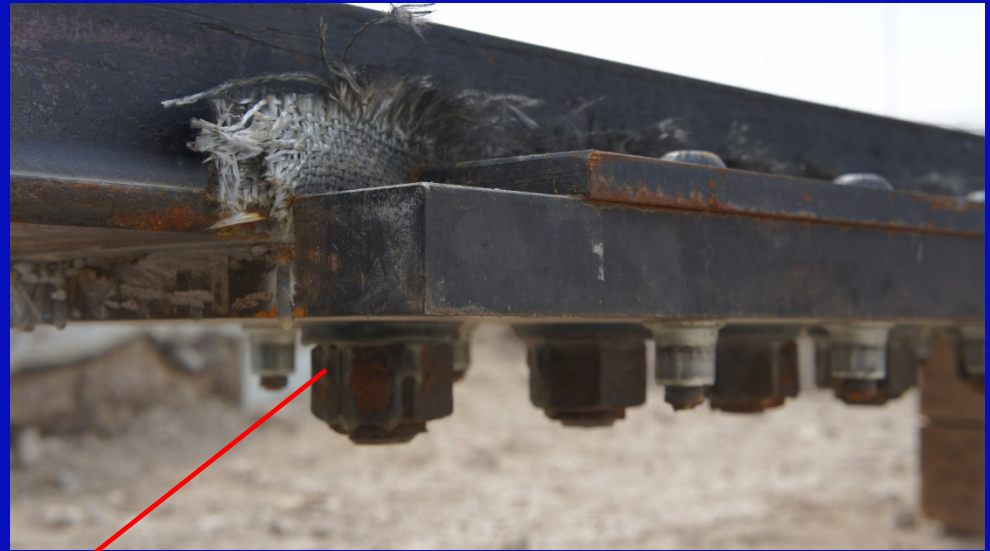


Similar to Dallas except used narrower c-channel ties instead of angle iron (and no rebar over ties)

Installation - Pre-Curved Rail

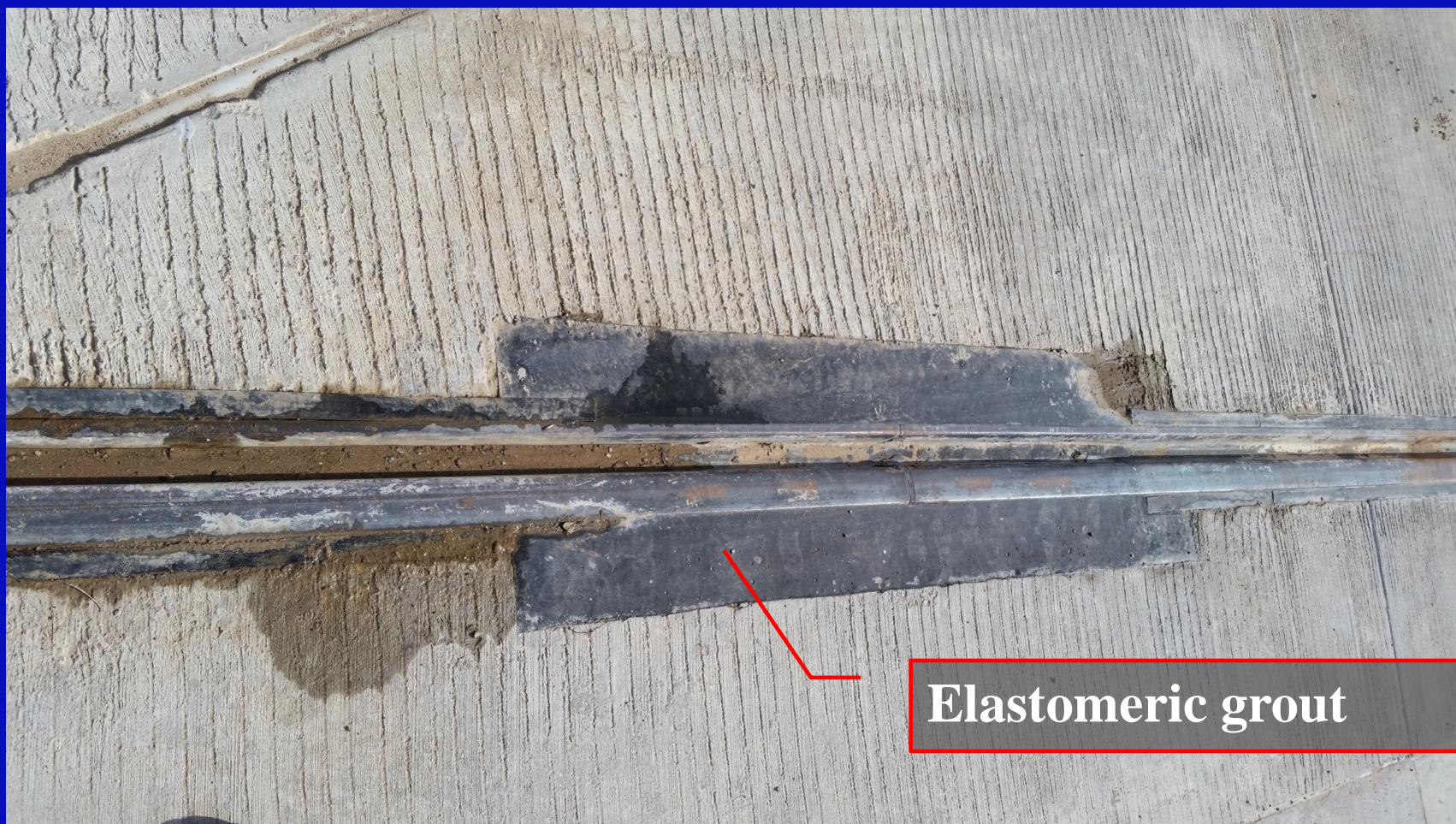


Trackwork - Insulated Joint



Bolts through the rail flangeway – No failures to report

Trackwork - Insulated Joint



Elastomeric grout

Trackwork – Transition Rails

Curved transitions are also possible – used in KCMO at the end of a turnout



Stock tee rail welded to end of machined transition

Transition piece machined from solid piece of steel

Trackwork - Transition Rail



Elastomeric grout

Transition

Rubber boot

FAQ's/Ongoing Issues

- Head Hardening not possible on 112TRAM
- Turnouts
- Debris in Flangeway
- Cost
- Lead Time



Thanks!

