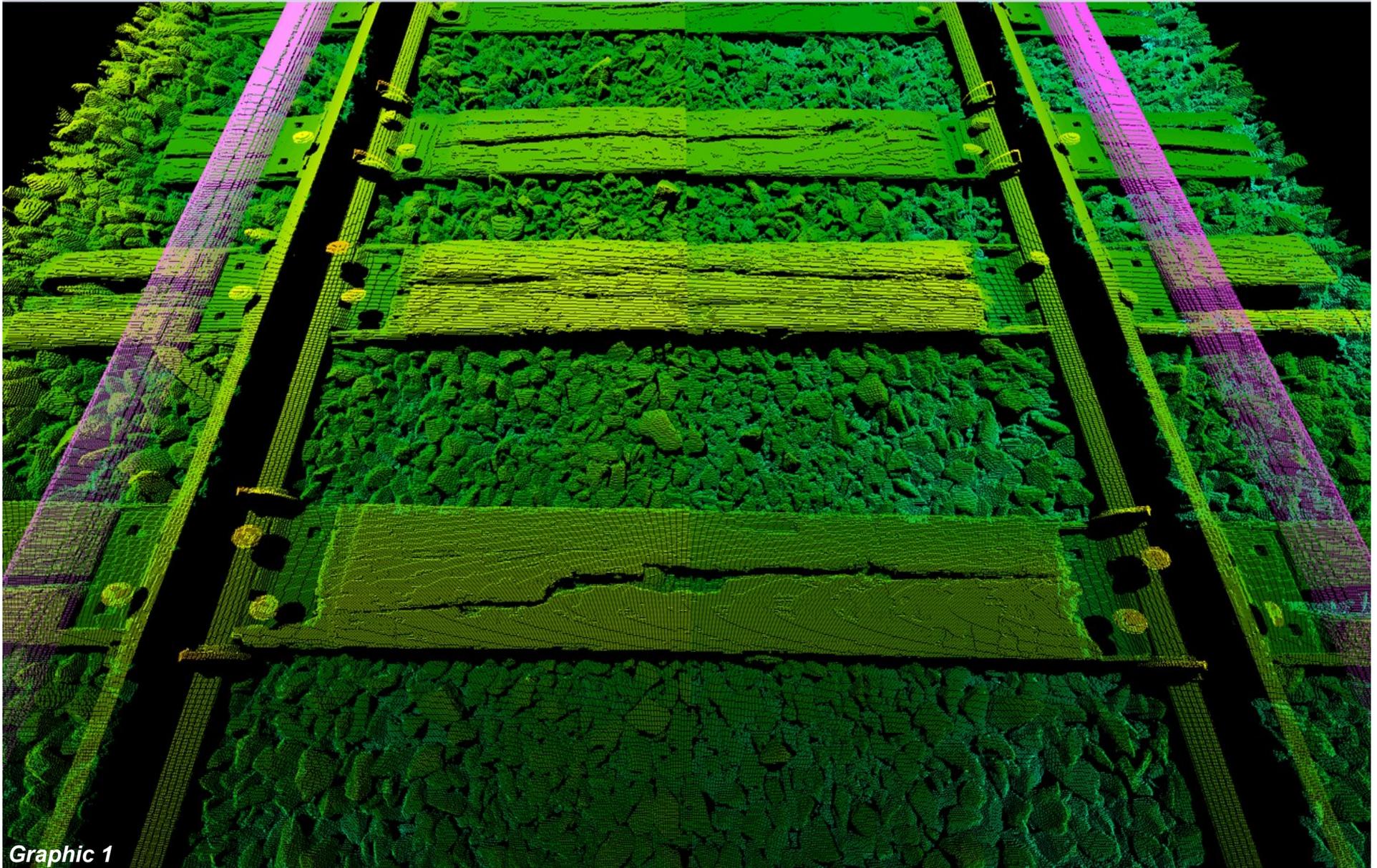


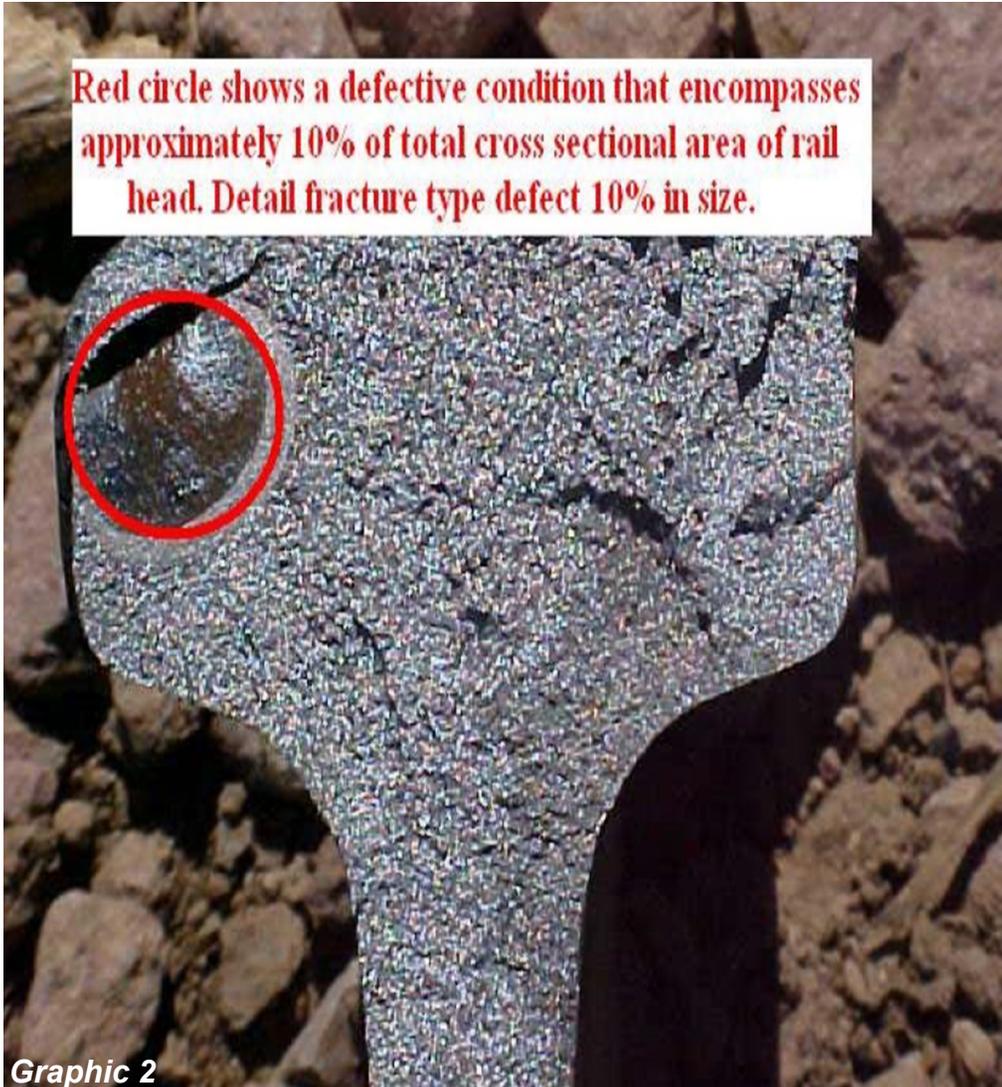
# *Rail tie infrared scan identifies poor tie conditions*



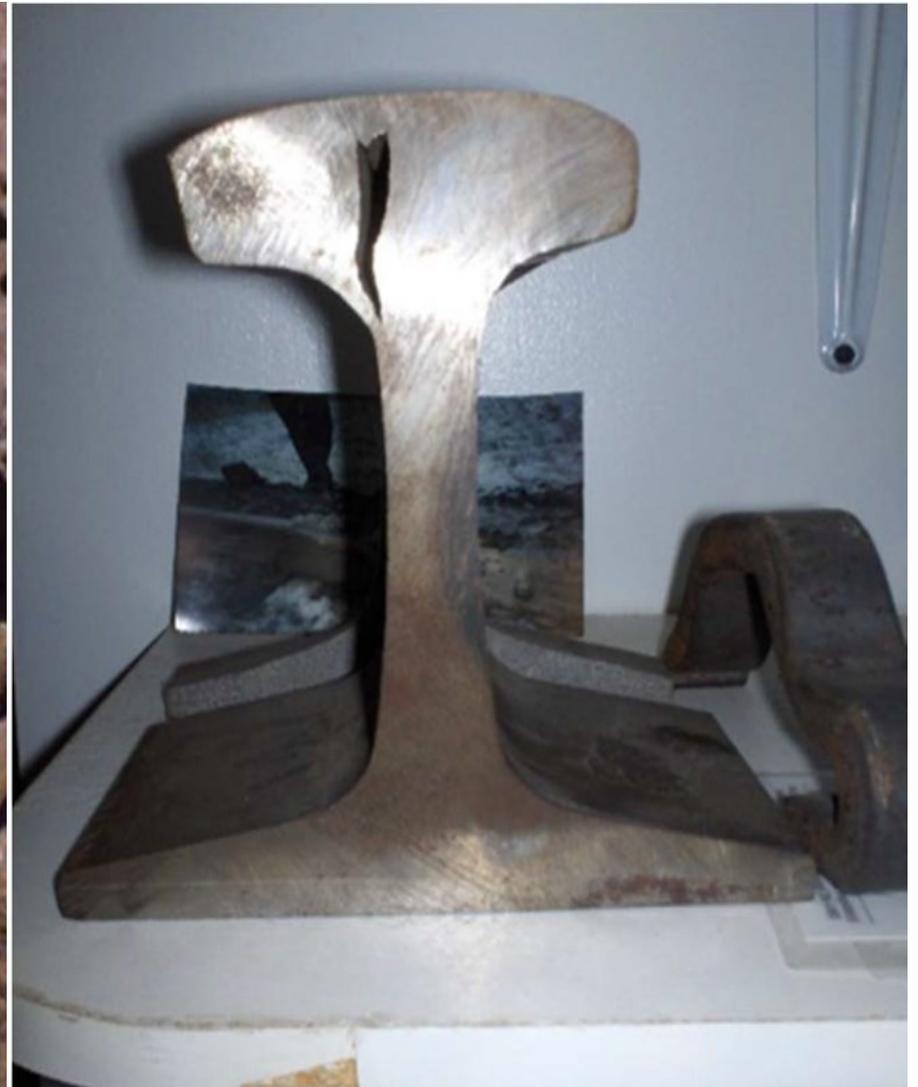
Graphic 1

# Examples of Rail Defects

Red circle shows a defective condition that encompasses approximately 10% of total cross sectional area of rail head. Detail fracture type defect 10% in size.



Graphic 2



*Geometry Vehicles test track structure, alignment and gauge*



**TGC2**



**TGC3**

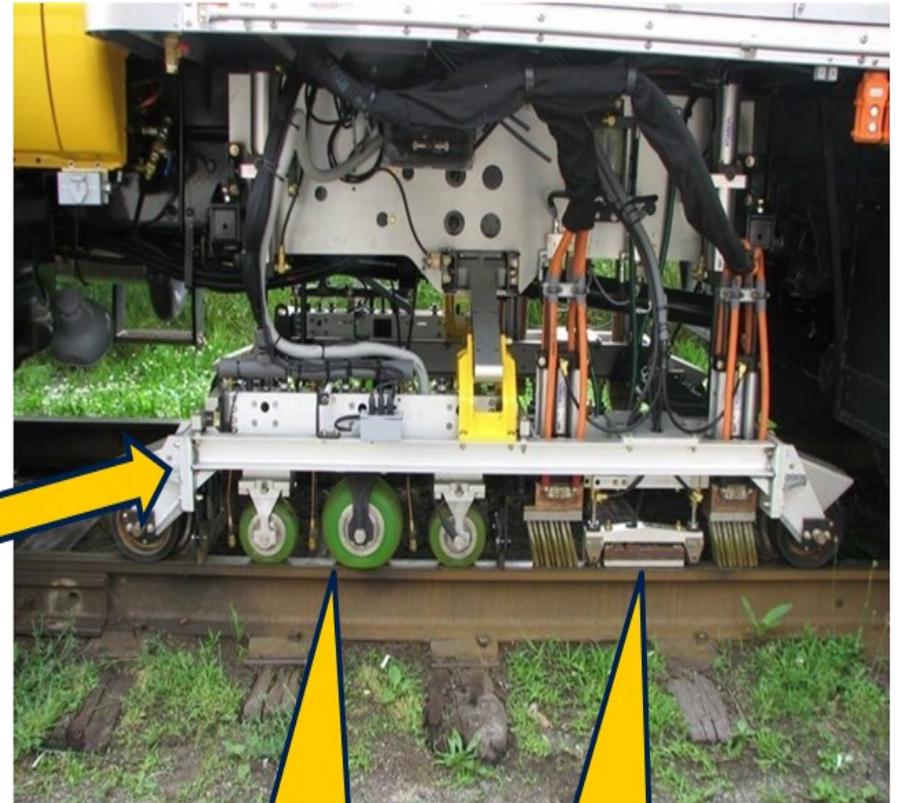


**GMS1**



**GMS2**

# Sperry Car tests for internal rail defects and rail surface conditions

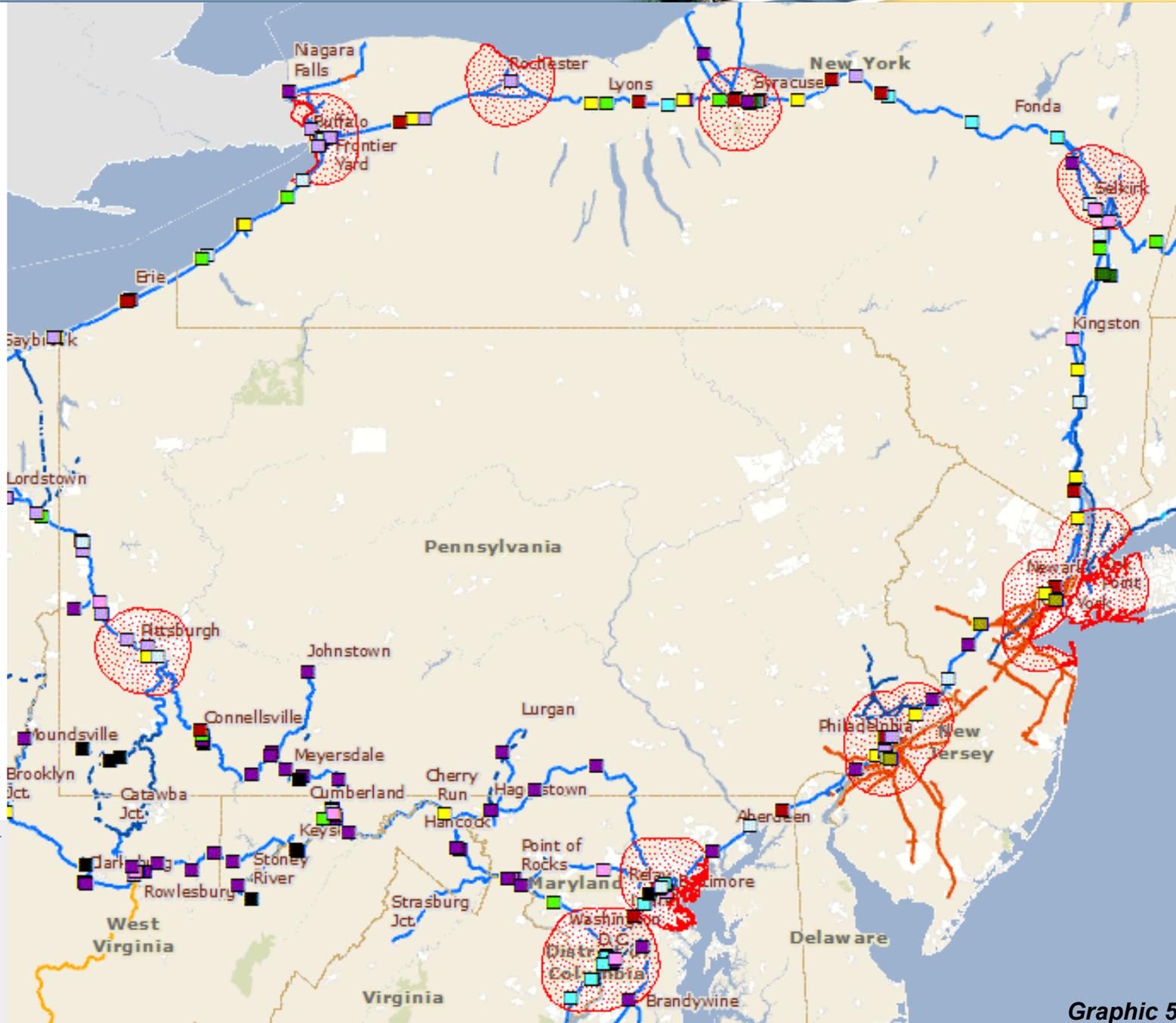


Ultrasonic system

Electrical current system

Graphic 4

*SecureNOW  
system as  
seen by  
PEMA*



*Graphic 5*