

Engineering Trespassers Out of Rail Corridors

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For Session 3 – Design, Technology and Infrastructure
Federal Railroad Administration
2012 ROW Fatality & Trespass Prevention Workshop
St. Louis, MO

Outline

- Collision Factors & Pedestrian Behavior
- The Shortest Distance...
- Things Don't Work As Planned
- Pedestrian Safety Requirements
- Strategies and Solutions

Ped-LRT Collision Factors*

- Distractions (Cell Phones/Headsets, etc.)
- Not Paying Attention
- Ignoring Audible and/or Visual Warning Devices
- Rushing to Catch Trains or Cross Roadways
- Intoxication
- Trespassing (willful)

*TCRP Research Results Digest 84

Pedestrian Behavior

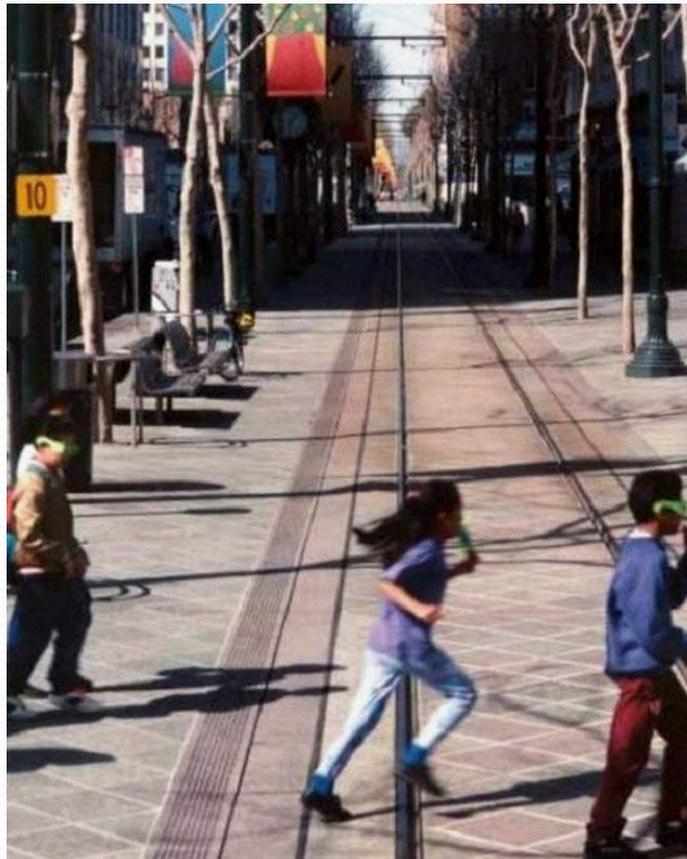
- Pedestrians tend to look down not up



LA Metro Blue Line LRT, Los Angeles, CA

Pedestrian Behavior

- Pedestrians may lack awareness or be distracted



VTA LRT System, San Jose, CA

The Shortest Path...

- Pedestrians create their own pathways



UPRR, Pomona, CA



Caltrain, Burlingame, CA

- Pedestrians tend to take the shortest route

Opposites attract...



Del Mar
High School

Residential
Neighborhood

Ad Hoc “Crossing Zone”



Expect the unexpected...



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Surprising, at first...

Field Test Report

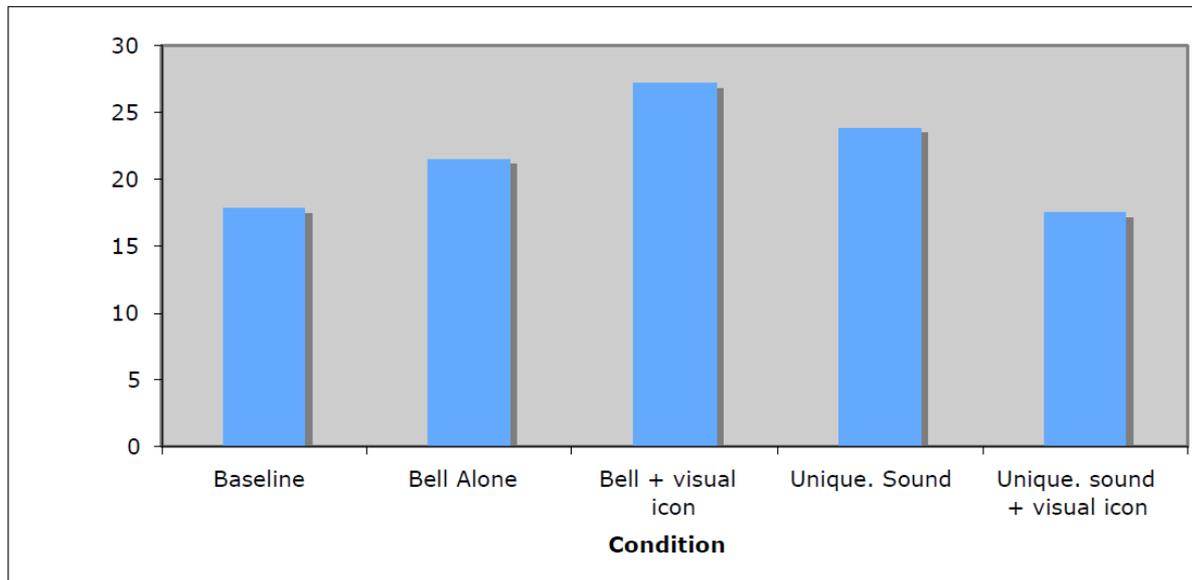
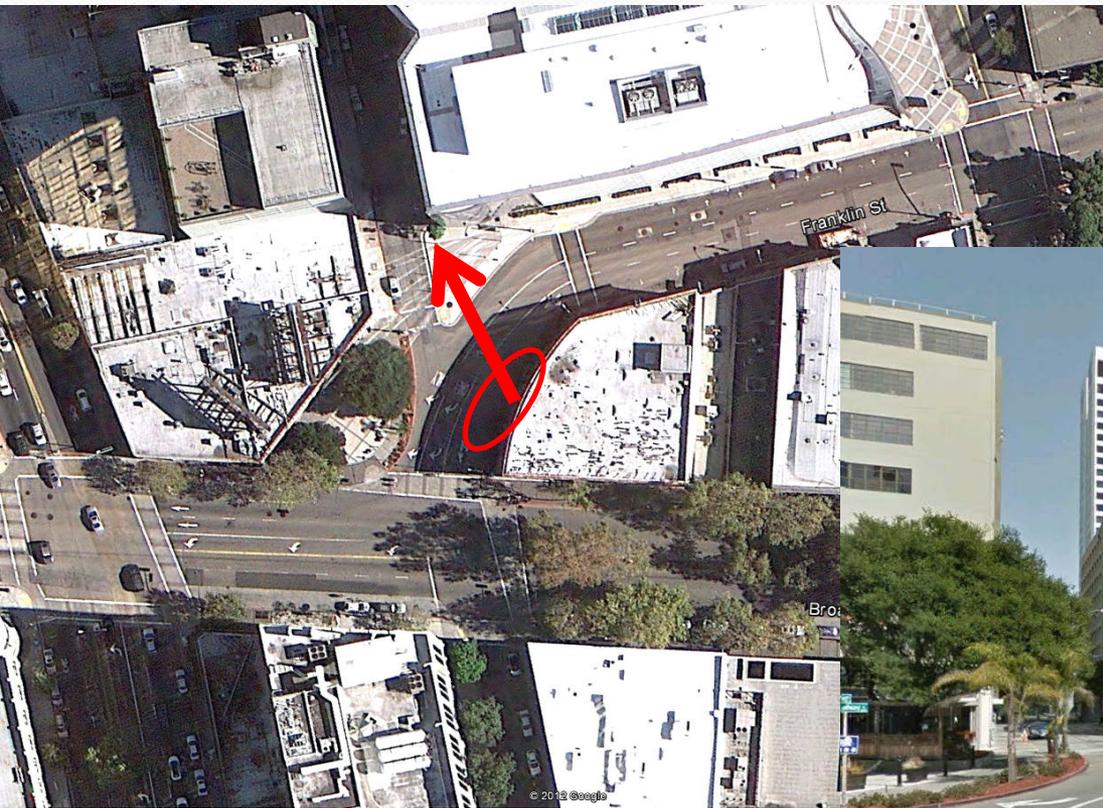
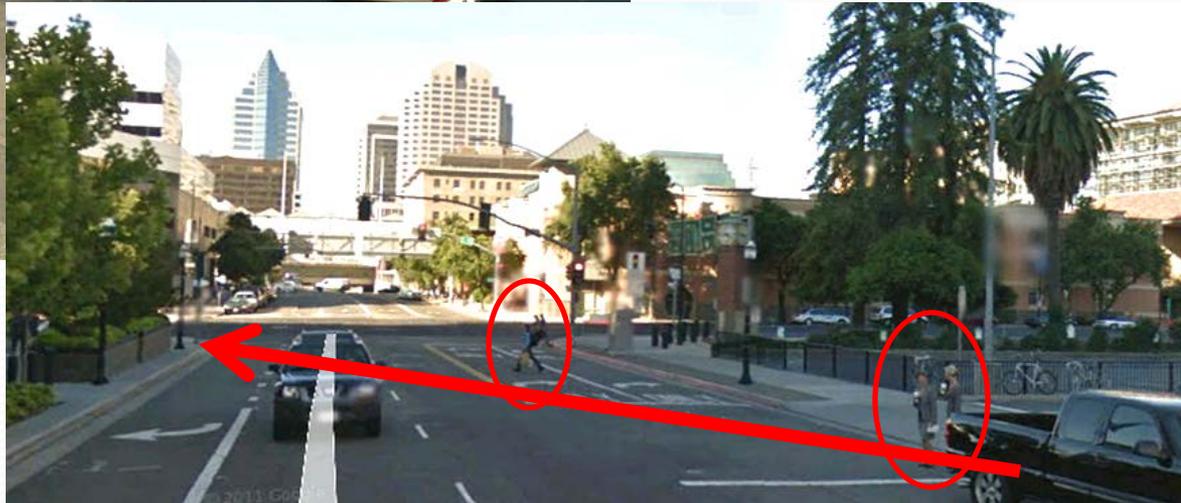


Figure 5 Percent violators dashing across rails during each condition

Not surprising...



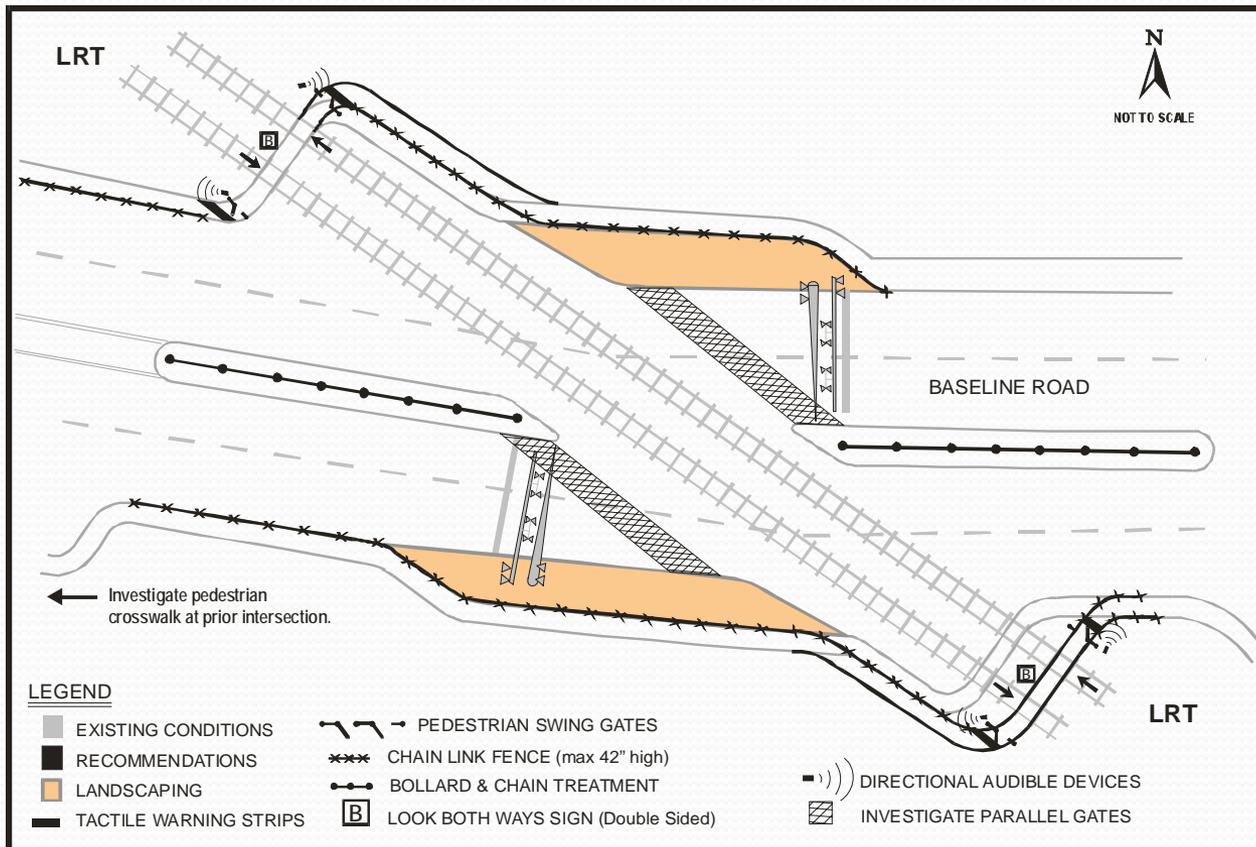
Also not surprising...



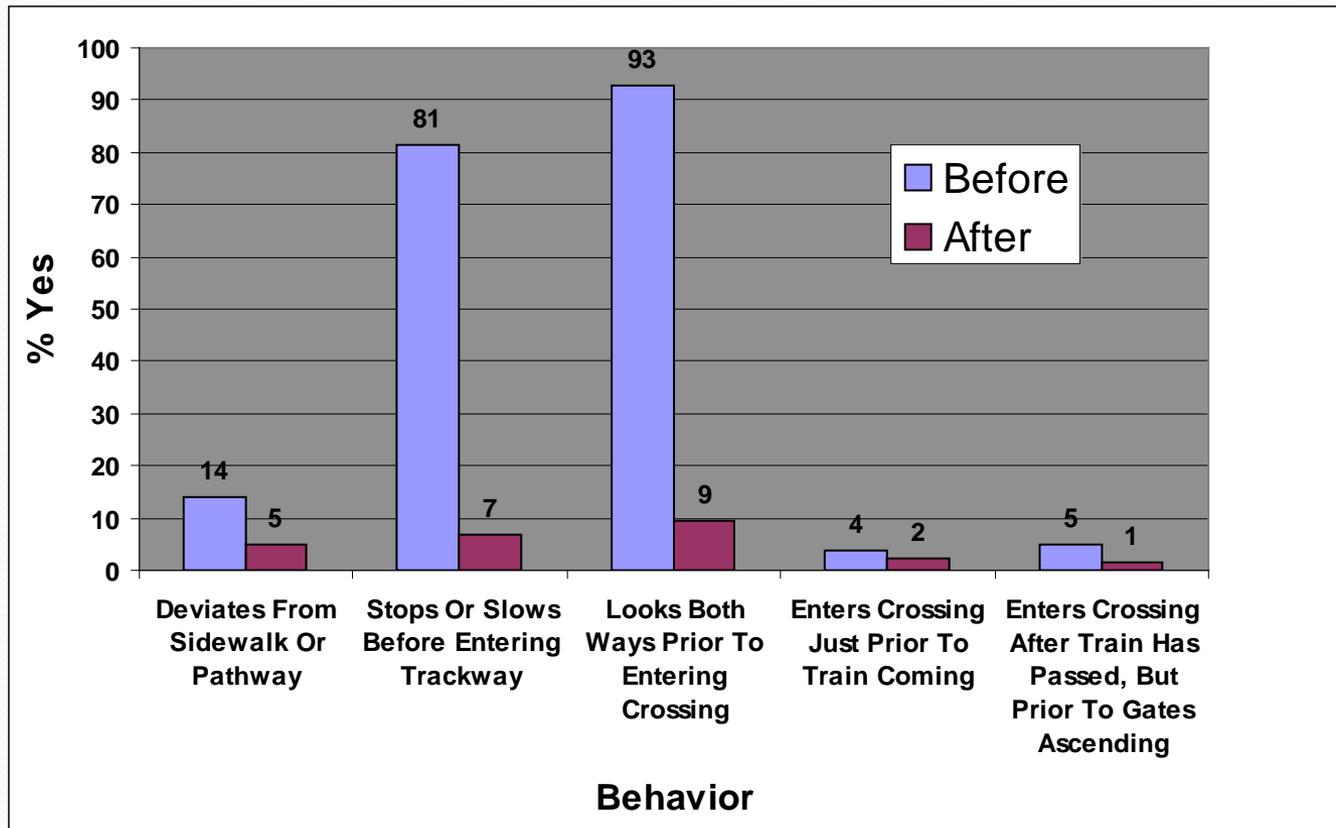
Pedestrian Safety Requirements

- Awareness of Crossing
- Control of Pedestrian Path
- Awareness of Approaching Train; Adequate Sight Distance
- Communicate an Understanding of Potential Hazards

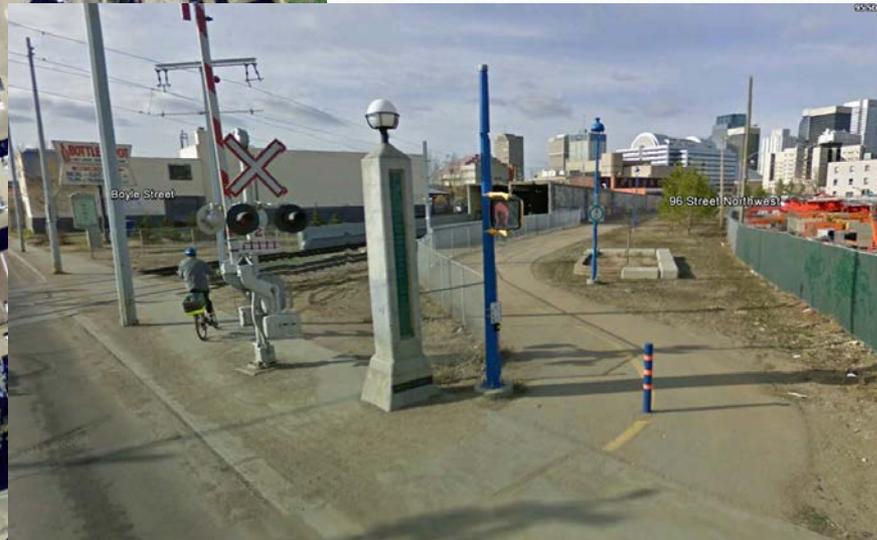
Successful Treatments



Demonstrated Results



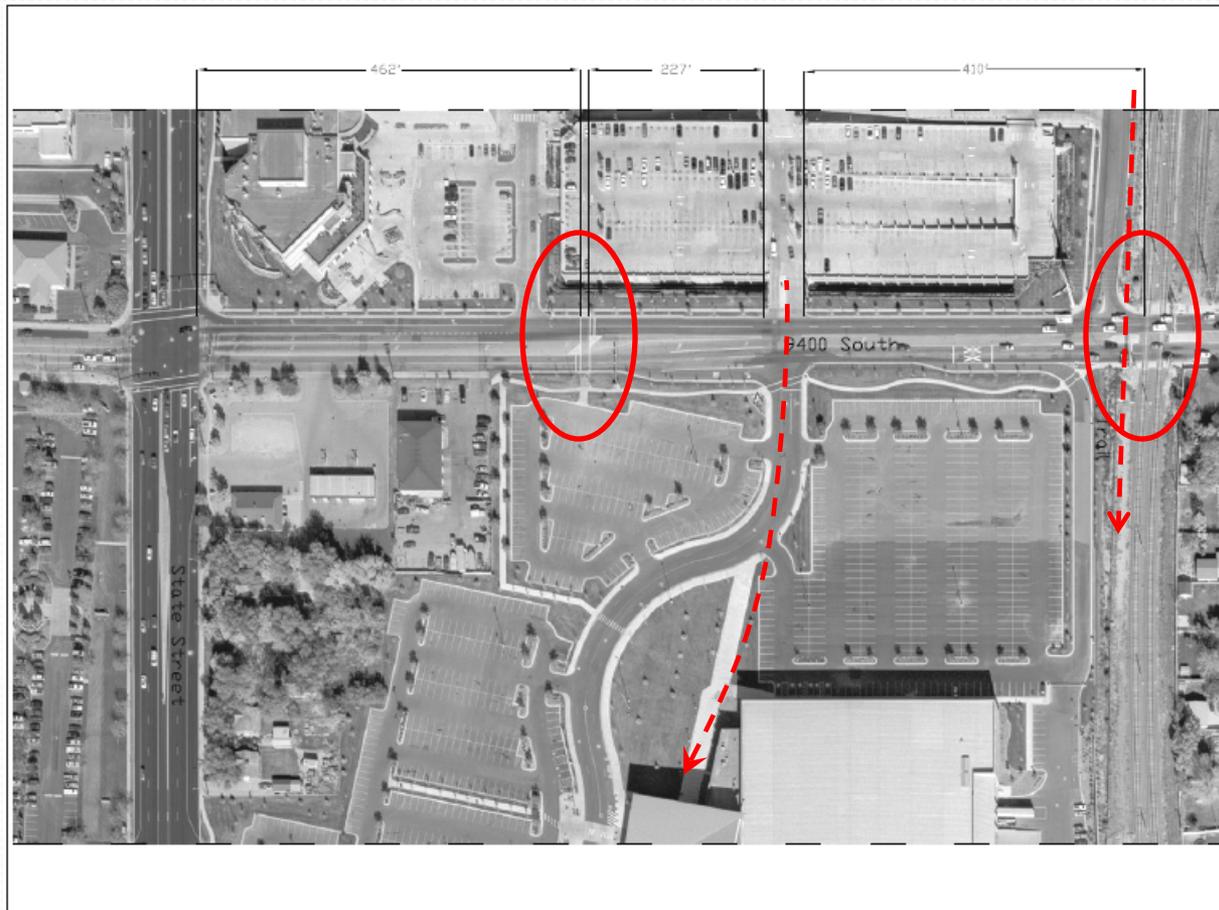
Edmonton Rail with Trail



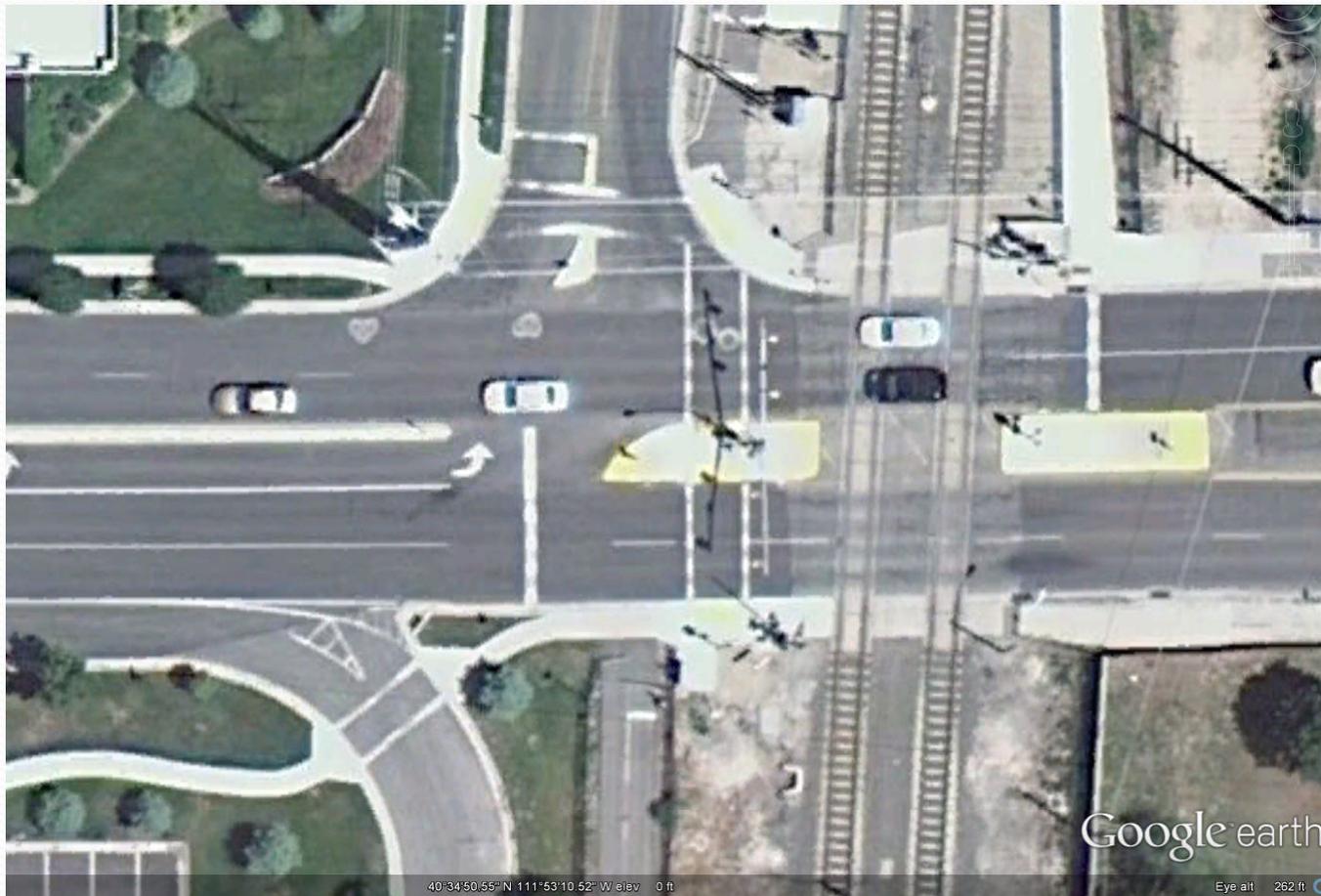
Edmonton Crossing Operation



Salt Lake City Context



Salt Lake City as Built



40°34'50.55"N 111°53'10.52"W elev 0 ft

Google earth

U.S. Department
of Transportation

Eye alt 262 ft

AECOM

Edmonton Underpass



Questions?

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