

Arizona Department of Transportation

Steel Girders repair by flame straightening

Present by
Navaphan Viboolmate, PE



Presentation Overview

- Basic damage and heat pattern categories
- ADOT Project 2007 under developing
- Previous ADOT 2001 Project

Background

- Repair steel girder damage caused by vehicle impact

Basic Damage Patterns and Zones

- Category S damage
- Category W damage
- Category T damage
- Category L damage

Basic Heating Patterns

- Vee/strip heat layout
- Plate vee heat layout
- Wide flanges and channels (major axis)
- Wide flanges channels (minor axis)
- Wide flanges channels (twisting)
- Local damage
- Angle

Process

- Accident reports
- Inspection reports
- Assessment
 - Causes
 - Measurement
 - Analysis
 - Recommendation to repair
- Project development

2007 Project Locations



Hunt RD TI

Pinnacal Peak TI

40th ST. TI

Val Vista Blvd UP

Palo Verde TI

Vail Rd TI

Mescal TI

Projects list 2007

- 40th ST. TI UNDERPASS on I-10 MP 152.08

Photo#9 Shows scratch marks and damage at the affected west exterior girder



40th ST. TI UNDERPASS



40th ST. TI UNDERPASS

Projects list 2007

- 40th ST. TI UNDERPASS on I-10 MP 152.08
- VAL VISTA BLVD UNDERPASS on I-10MP
188.20

A wide-angle photograph of a concrete overpass structure supported by several pillars. The ground below is a dry, desert-like area with sparse, low-lying vegetation. In the distance, under the bridge, several vehicles are visible. The sky is clear and blue. The text 'VAL VISTA BLVD UNDERPASS' is overlaid at the bottom right of the image.

VAL VISTA BLVD UNDERPASS



VAL VISTA BLVD UNDERPASS

Projects list 2007

- 40th ST. TI UNDERPASS on I-10 MP 152.08
- VAL VISTA BLVD UNDERPASS on I-10MP
188.20
- PALO VERDE RD TI OVERPASS EB on I-10MP
264.37



PALO VERDE RD TI OVERPASS EB



PALO VERDE RD TI OVERPASS EB

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188.20
- PALO VERDE RD TI OVERPASS EB on I-10MP
264.37
- VAIL RD TI UNDERPASS WB on I-10 MP
279.37



VAIL RD TI UNDERPASS WB



VAIL RD TI UNDERPASS WB

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188.20
- PALO VERDE RD TI OVERPASS EB on I-10MP
264.37
- VAIL RD TI UNDERPASS WB on I-10 MP
279.37
- MESCAL TI UNDERPASS on I-10MP 297.17

15FT - 9IN

MESCAL TI UNDERPASS





MESCAL TI UNDERPASS

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- 40th ST. TI UNDERPASS on I-10 MP 152.08
- VAL VISTA BLVD UNDERPASS on I-10MP
188.20
- PALO VERDE RD TI OVERPASS EB on I-10MP
264.37
- VAIL RD TI UNDERPASS WB on I-10 MP
279.37
- MESCAL TI UNDERPASS on I-10MP 297.17
- PINNACLE PEAK TI UNDERPASS on I-17 MP
217.10



PINNACLE PEAK TI UNDERPASS



PINNACLE PEAK TI UNDERPASS

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- PALO VERDE RD TI OVERPASS EB on I-10MP
264.37
- VAIL RD TI UNDERPASS WB on I-10 MP
279.37
- MESCAL TI UNDERPASS on I-10MP 297.17
- PINNACLE PEAK TI UNDERPASS on I-17 MP
217.10
- HUNT RD TI UNDERPASS on I-40MP 280.64



HUNT RD TI UNDERPASS



HUNT RD TI UNDERPASS

Repair Project 2001

- POSTON RD. TI. UNDERPASS



Project Location

Poston RD. TI.

POSTON RD TI UNDERPASS

- Category T and L damage



POSTON RD. TI. UNDERPASS



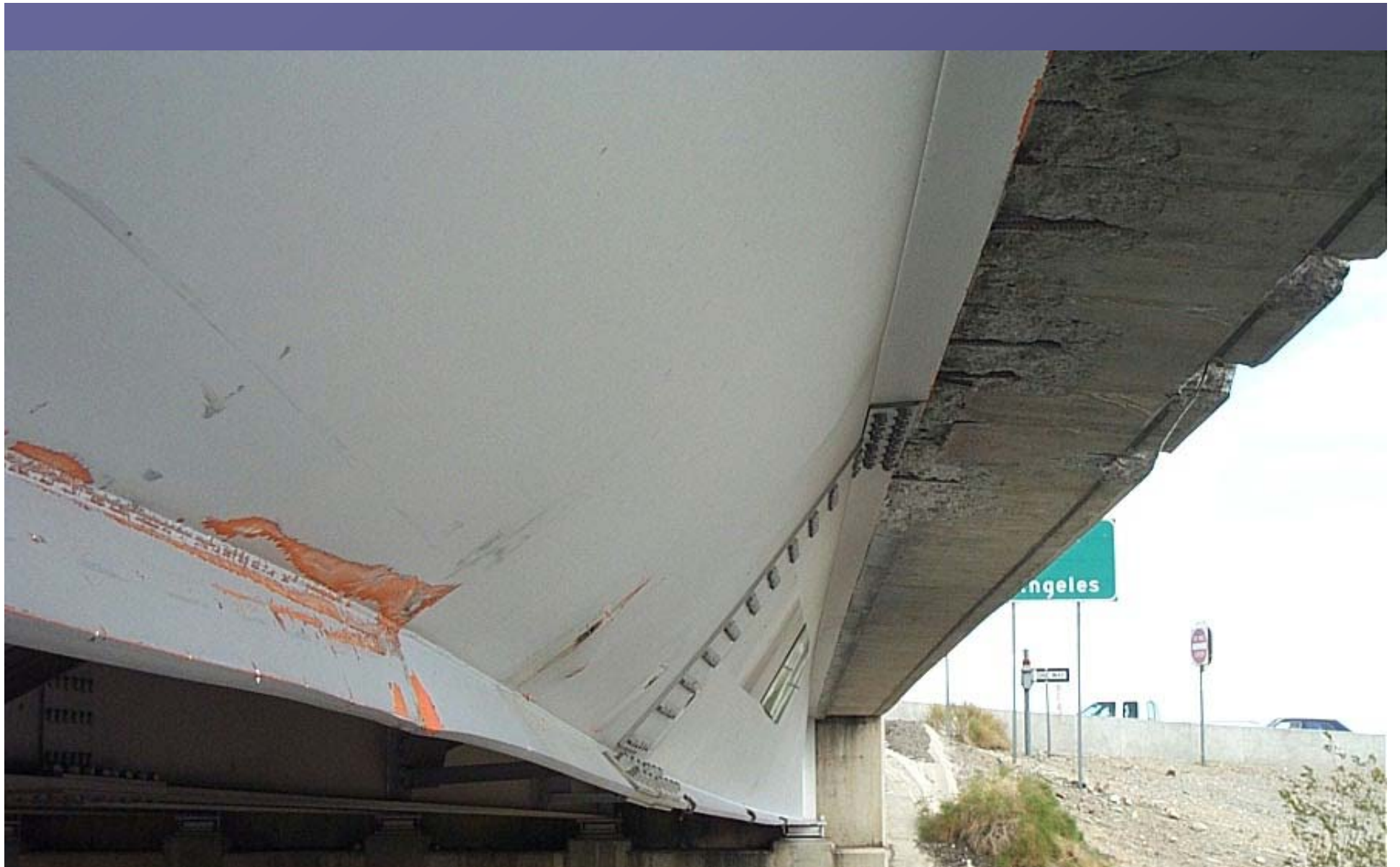
POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS – REPAIRED



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS



POSTON RD. TI. UNDERPASS - TODAY



End

Question?