Wyoming Department of Transportation

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11 October 2016

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Pathway Services Inc.

INNOVATIVE PRODUCTS

Data Collection

Automated Crack Detection added 2016!!

Data Archives

- Pavement data used for section ratings:
  - Pavement smoothness: International Roughness Index (IRI)
  - Rutting: inches
  - Pavement cracking and distresses: Pavement Condition Index (PCI)
  - Composite: Present Serviceability Rating (PSR)

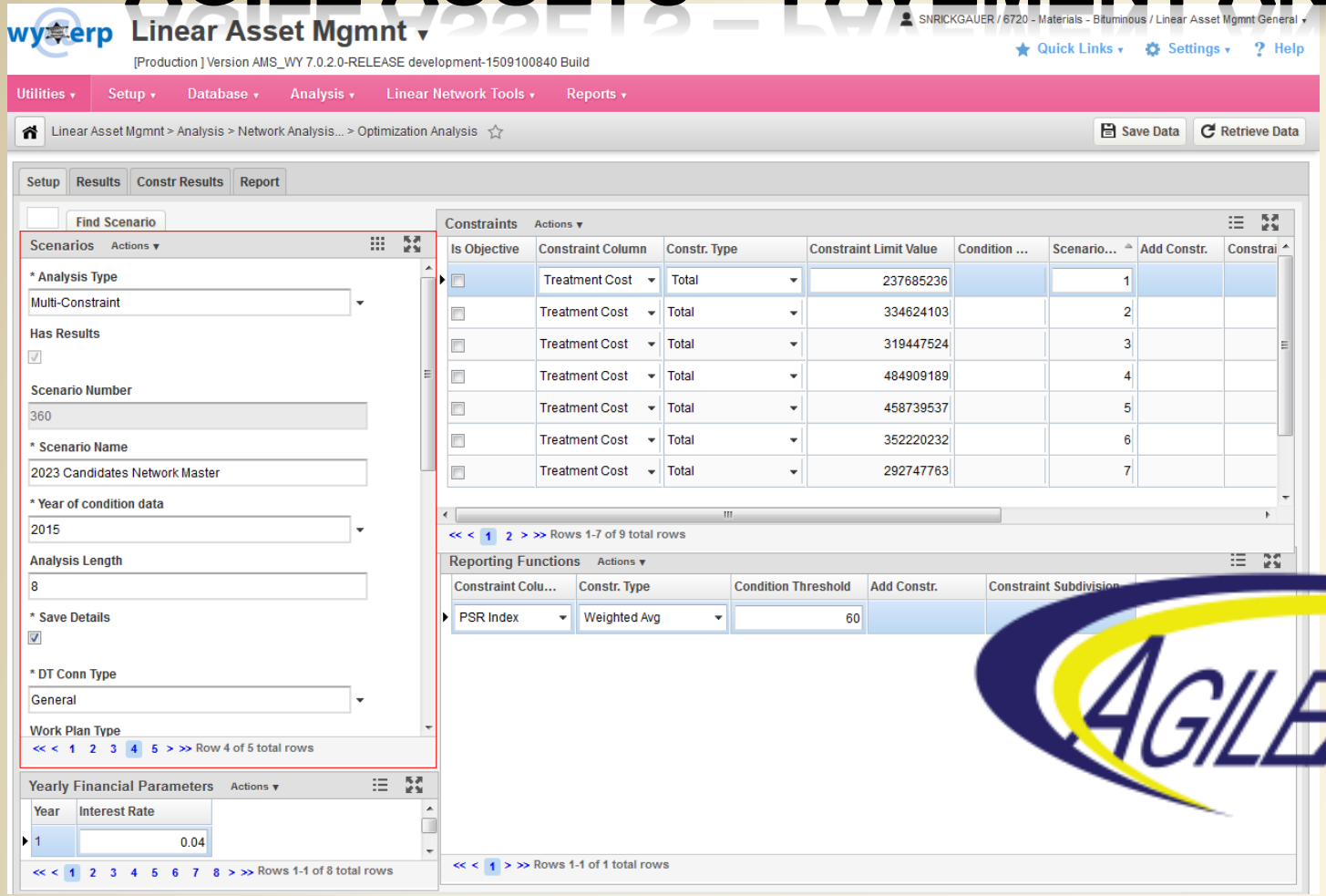
    Asphalt: $PSR = PSI - 4*Rut^2 - 3*(1 - 0.01*PCI)$

    $PSI = 5.35 * \exp(-0.0058*IRI_HCS)$

    Concrete: $PSR = PSI - 5*(1 - 0.01*PCI)$

    $PSI = 5.0 * \exp(-0.0038*IRI_HCS)$

AGILE ASSETS – PAVEMENT ANALYST



-Optimize our system by Treatment Cost
-Broken out in 10 different “buckets”
-By system and by treatment

AGILE ASSETS

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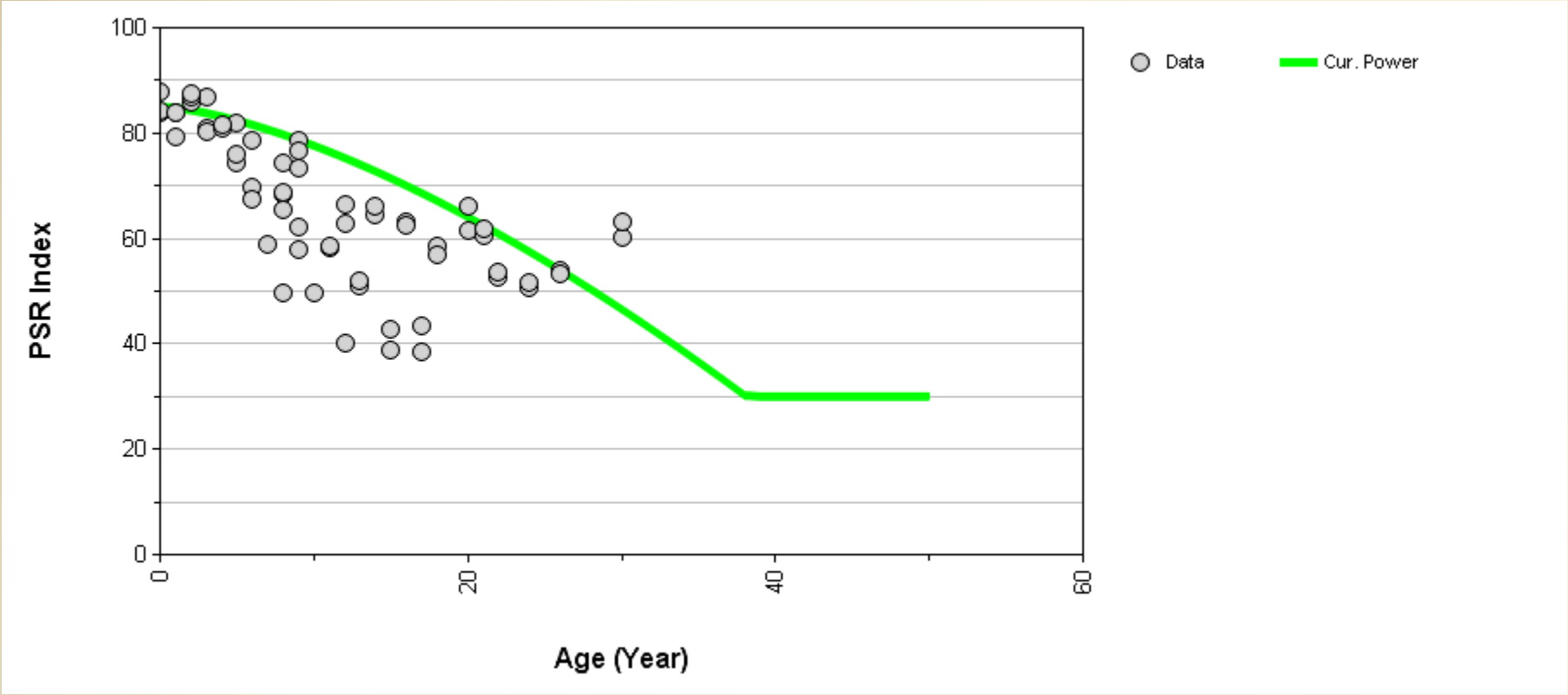
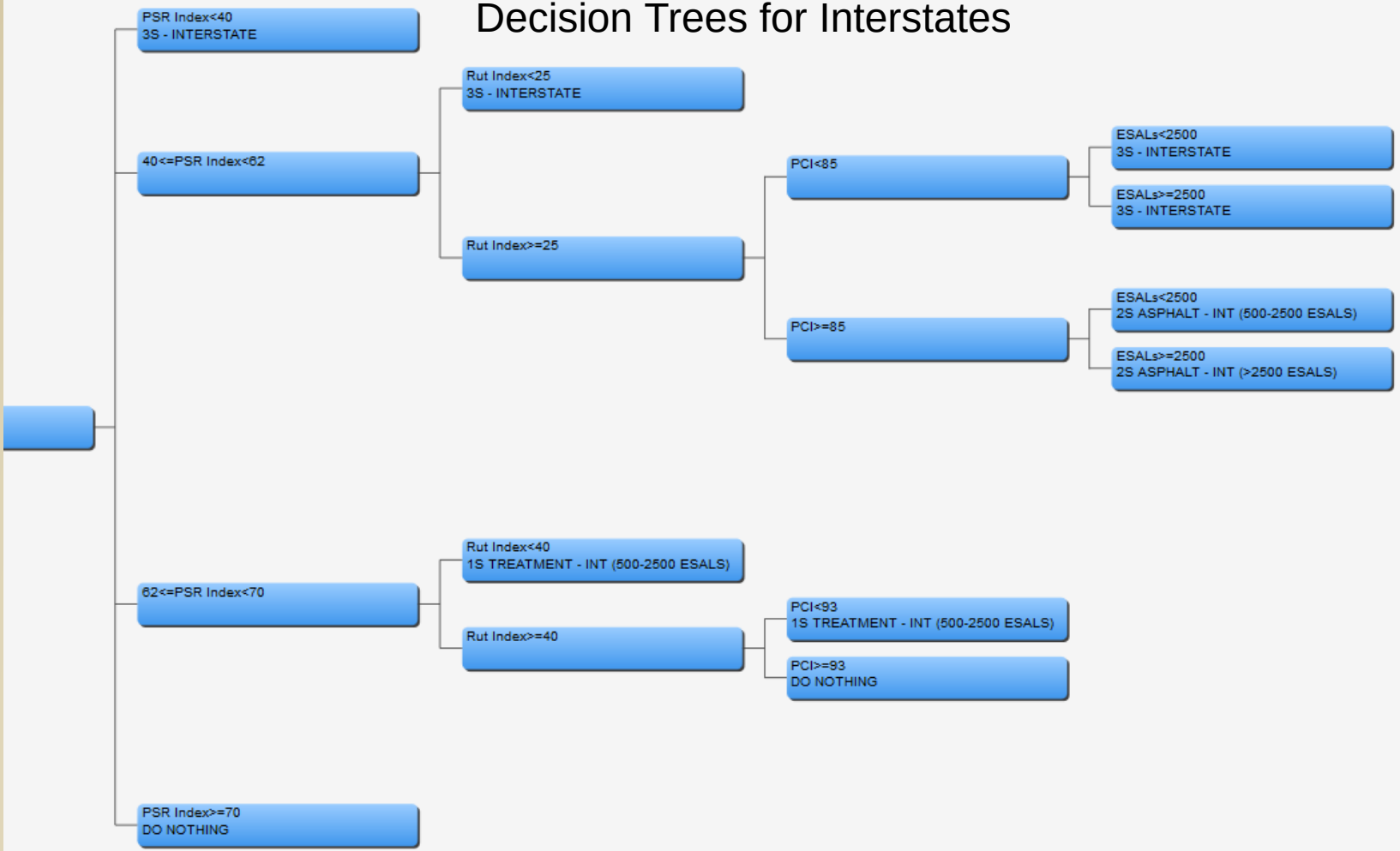
I-25 & I-90, ESALs>=200, HPM over Base, AG Base



Decision Trees for Interstates



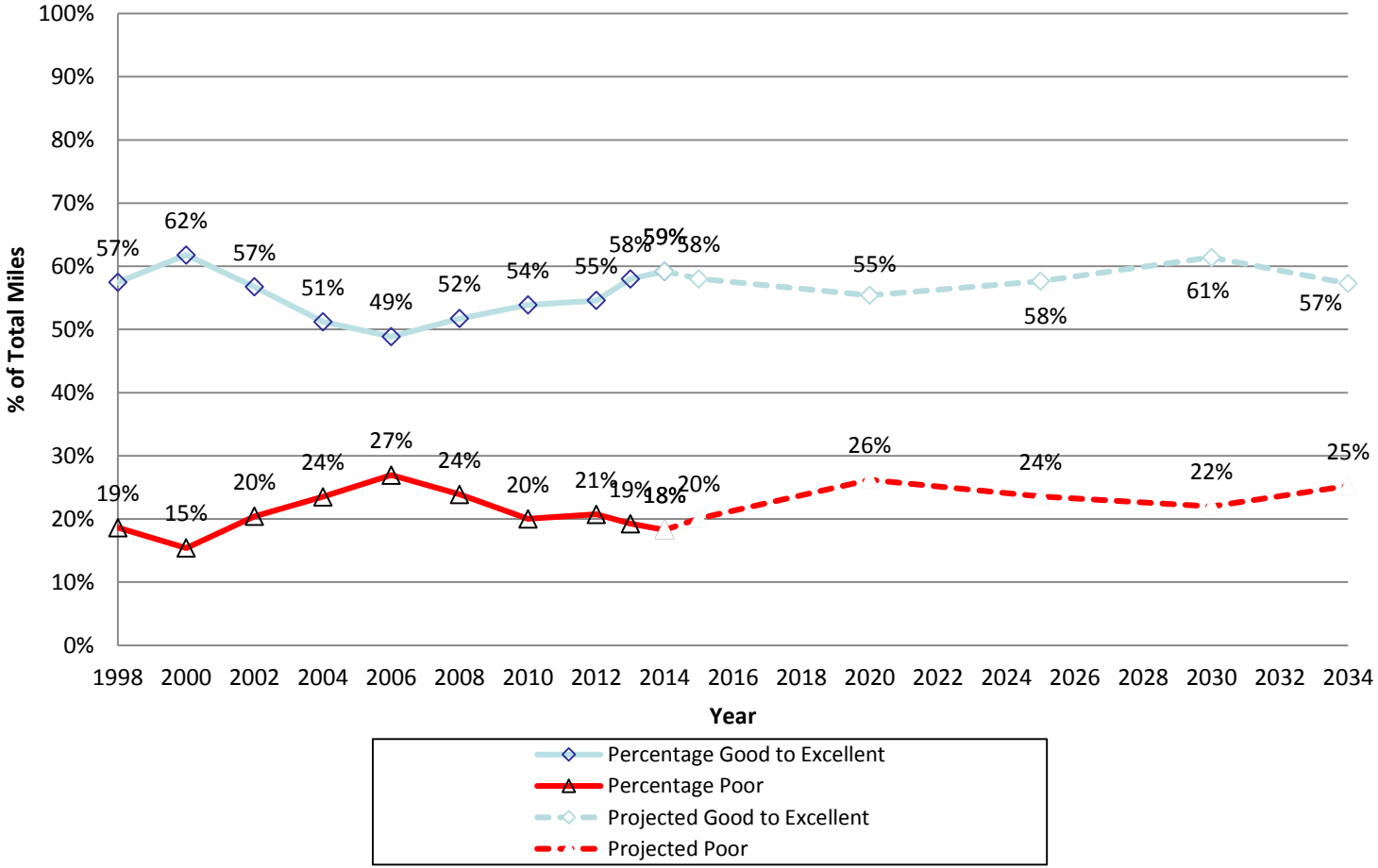
Budget Categories

- 10 Pavement Funding “Buckets”
  - Interstate
    - 1S, 2S, 3S
  - Non-Interstate NHS
    - 1S, 2S, 3S
  - Non-NHS
    - 1S, 2S, 3S
  - Urban

Pavement Treatment Types

- 1S – Preventative
  - Maintenance: Chip Seals, Patching, Slabs
  - Microsurface
  - Thin overlay (< 2”)
  - Grind Concrete
- 2S – Rehabilitation
  - Asphalt Placed thickness 2” – 3”
  - Dowel Bar Retrofit (concrete)
- 3S – Structural Rehabilitation
  - Asphalt Thickness Placed > 3”
  - Crack/Seat & Overlay Concrete
- 4S – Full Reconstruction

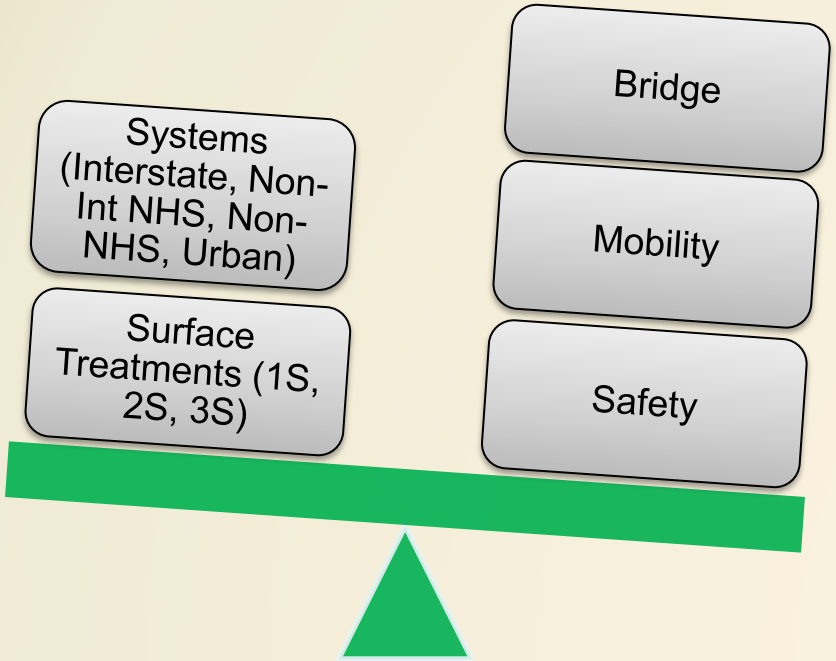
Statewide 20 Year Pavement Condition Trends
Current Funding



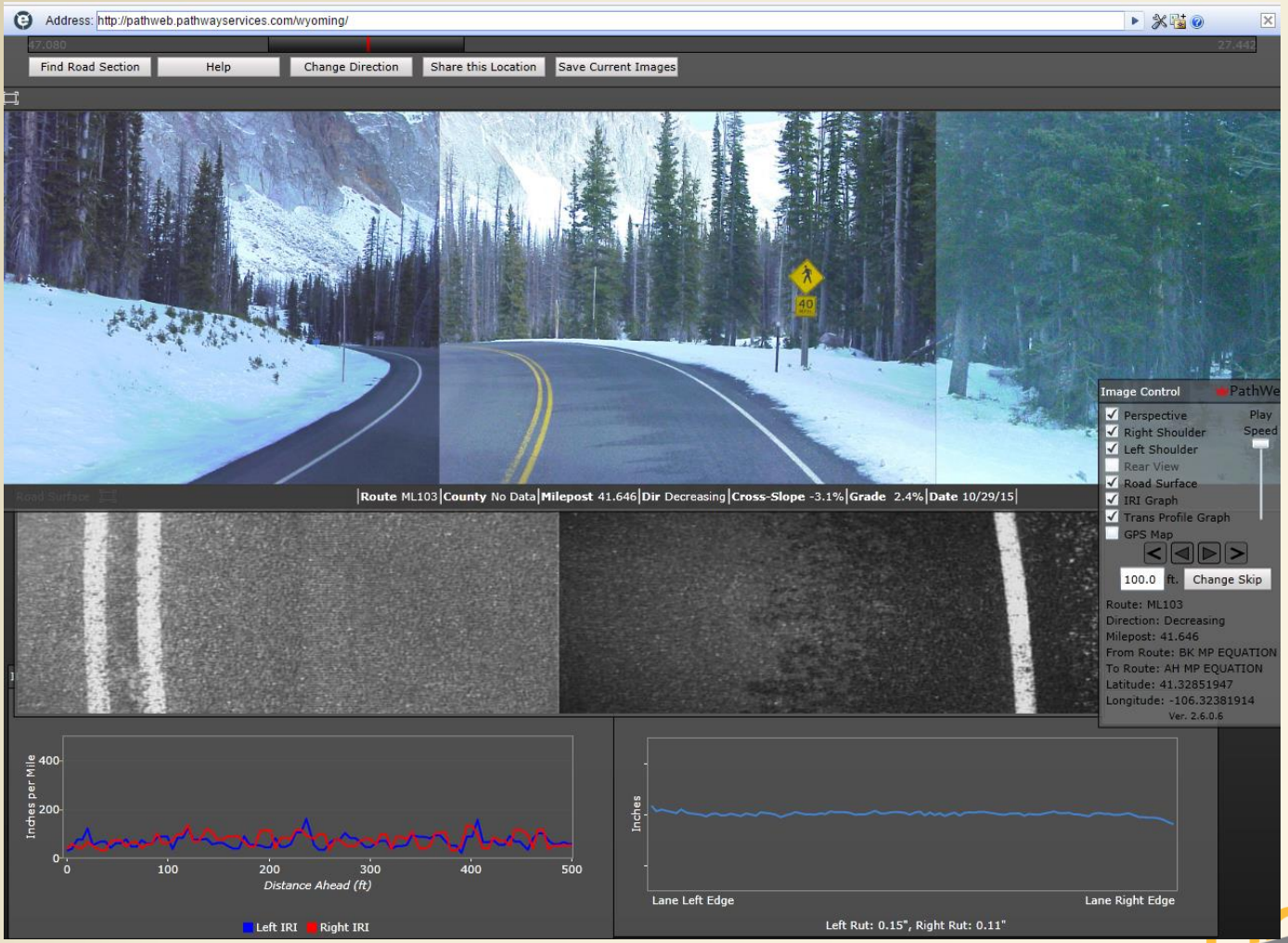
Balancing System Needs

Pavement Funding Buckets

"Other" Funding Buckets



Pathweb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Find Road Section
Help
Change Direction
Share this Location
Save Current Images
Route ML103 County No Data Milepost 41.646 Dir Decreasing Cross-Slope -3.1% Grade 2.4% Date 10/29/15
Image Control
Perspective
Right Shoulder
Left Shoulder
Rear View
Road Surface
IRI Graph
Trans Profile Graph
GPS Map
Play Speed
100.0 ft.
Change Skip
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Direction: Decreasing
Milepost: 41.646
From Route: BK MP EQUATION
To Route: AH MP EQUATION
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Longitude: -106.32381914
Ver. 2.6.0.6
Inches per Mile
Distance Ahead (ft)
Left IRI
Right IRI
Inches
Lane Left Edge
Lane Right Edge
Left Rut: 0.15", Right Rut: 0.11"

Stress Reduction Kit

Bang Head Here

Directions:
1. Place kit on FIRM surface.
2. Follow directions in circle of kit.
3. Repeat step 2 as necessary, or until unconscious.
4. If unconscious, cease stress reduction activity.

Questions??

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