



**Safer roads and communities  
through real-time signal optimization**



*InSync is protected by U.S. Patent Nos. 8,050,854 and 8,103,436, and other patents-pending.*



< **Injuries**



< **Fatalities**

**GDP of Houston**



**< Cost  
of crashes**



Intersection-related crashes  
are an urgent crisis

**Every minute = 5 crashes**

**Every hour = 1 fatality**



## Crash reduction results

**27%**

*Source:* Topeka, KS  
City Traffic Engineer

**17%**

*Source:* Lee's Summit, MO  
Police Department

**30%**

*Source:* Springdale, AR  
Police Department

**26%**

*Source:* Columbia County, GA  
County Traffic Engineer



**Empower communities  
with innovative and affordable traffic  
solutions to save time and money,  
save the environment and save lives.**

# In|Sync<sup>®</sup>



Understand  
how it works

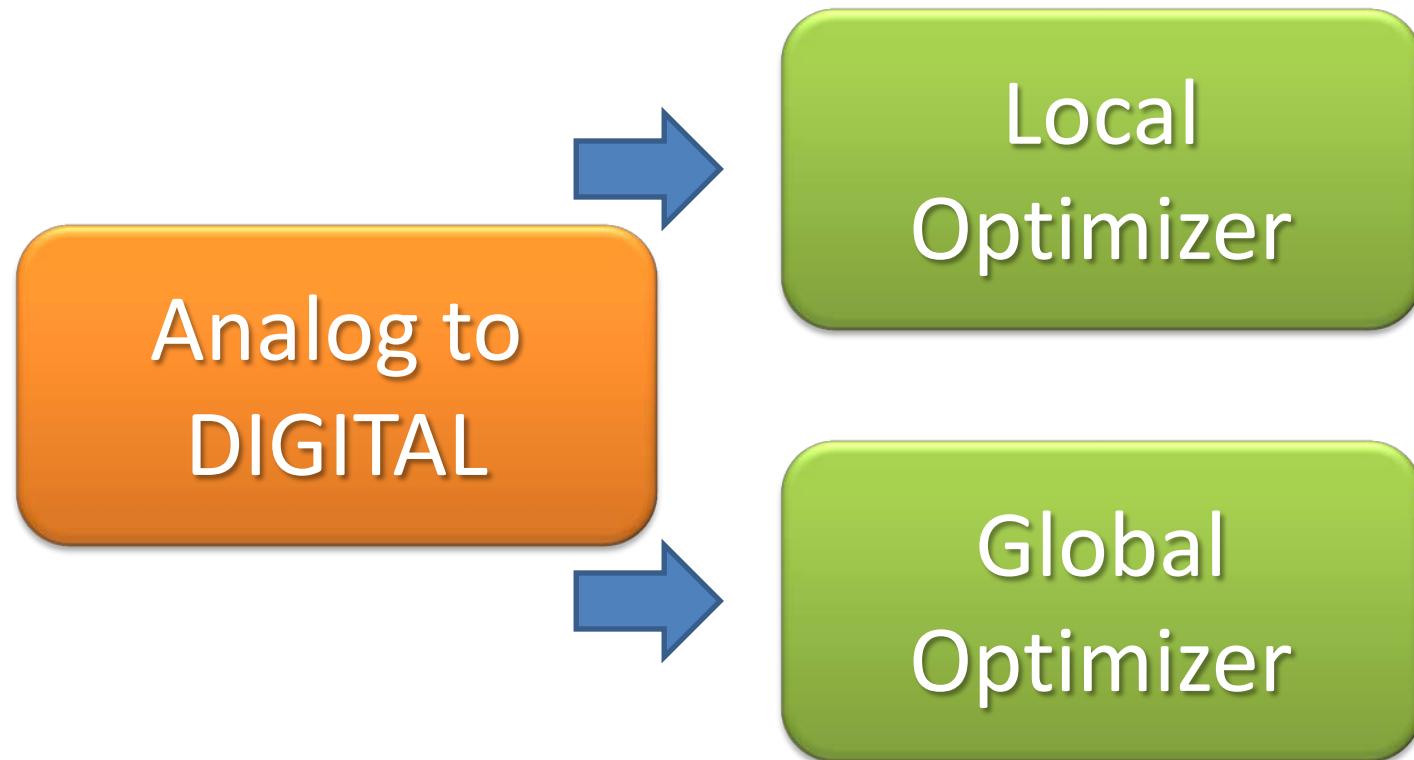


Safety and  
operational results



See the financial  
investment

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## State machine

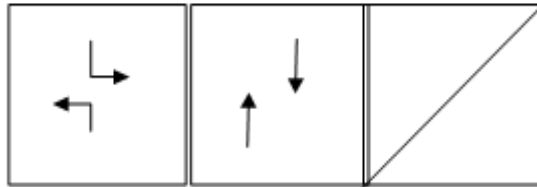
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Intersection: RT 29\_Cedar Run

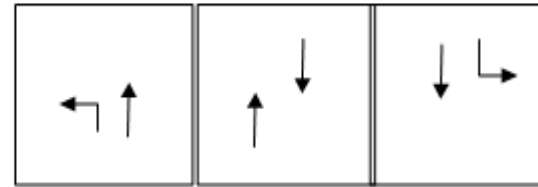
Camera: South Bound

version 1.33

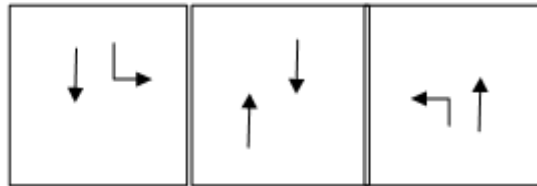




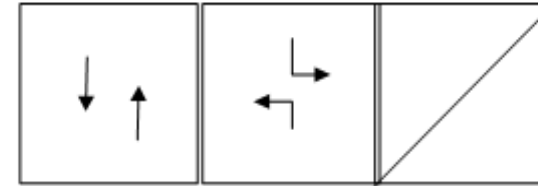
Leading Lefts



Lead-Lag



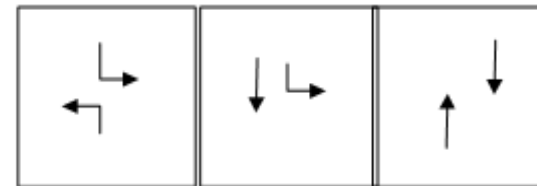
Lead-Lag



Lagging Lefts



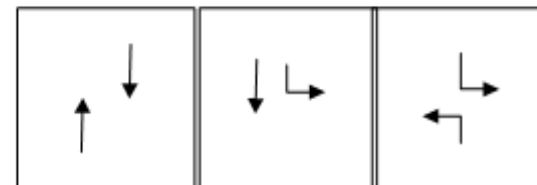
Leading Left with Overlap



Leading Left with Overlap



Lagging Left with Overlap



Lagging Left with Overlap



This Monday  
@ 7:43:15

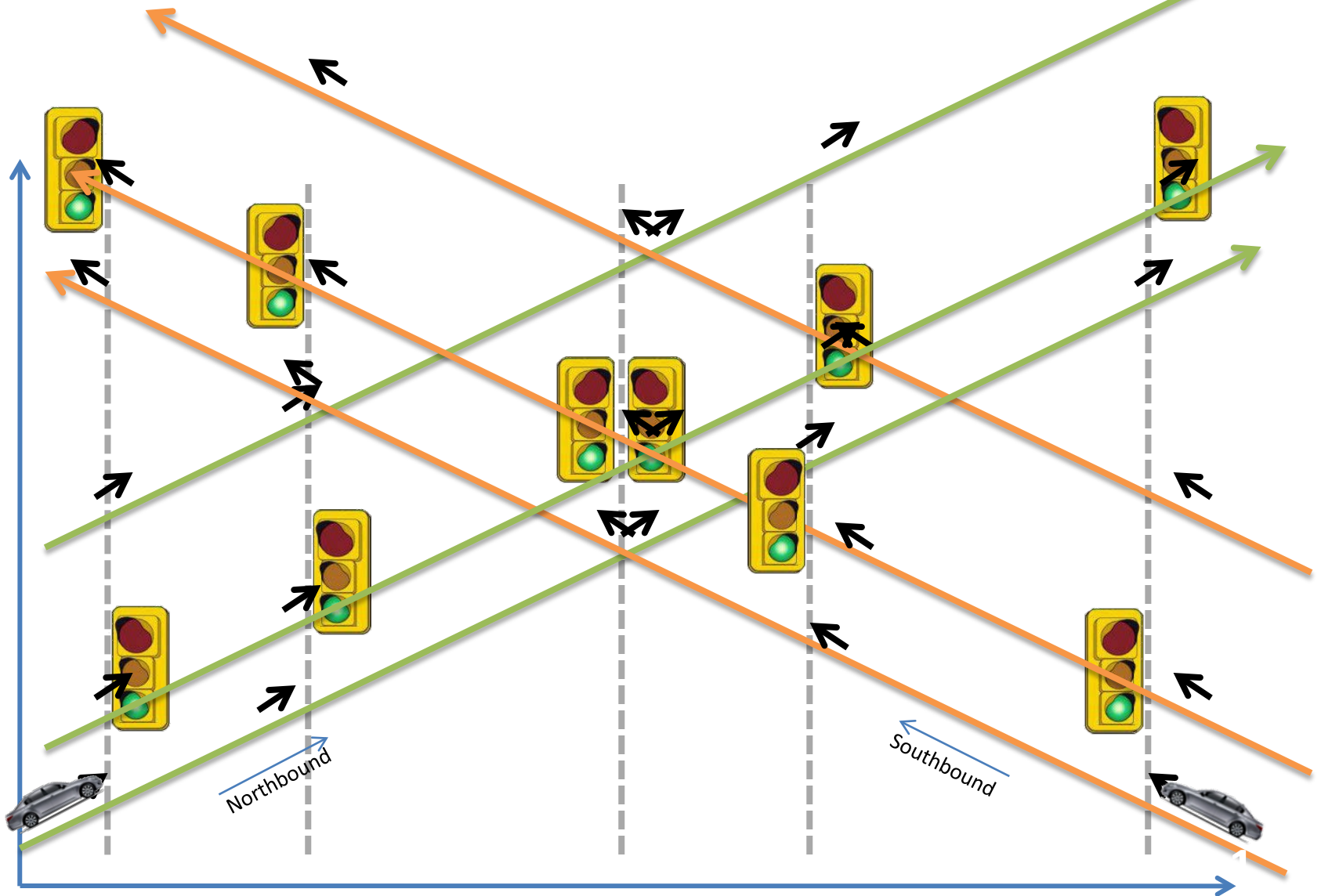


Next Monday  
@ 7:43:15

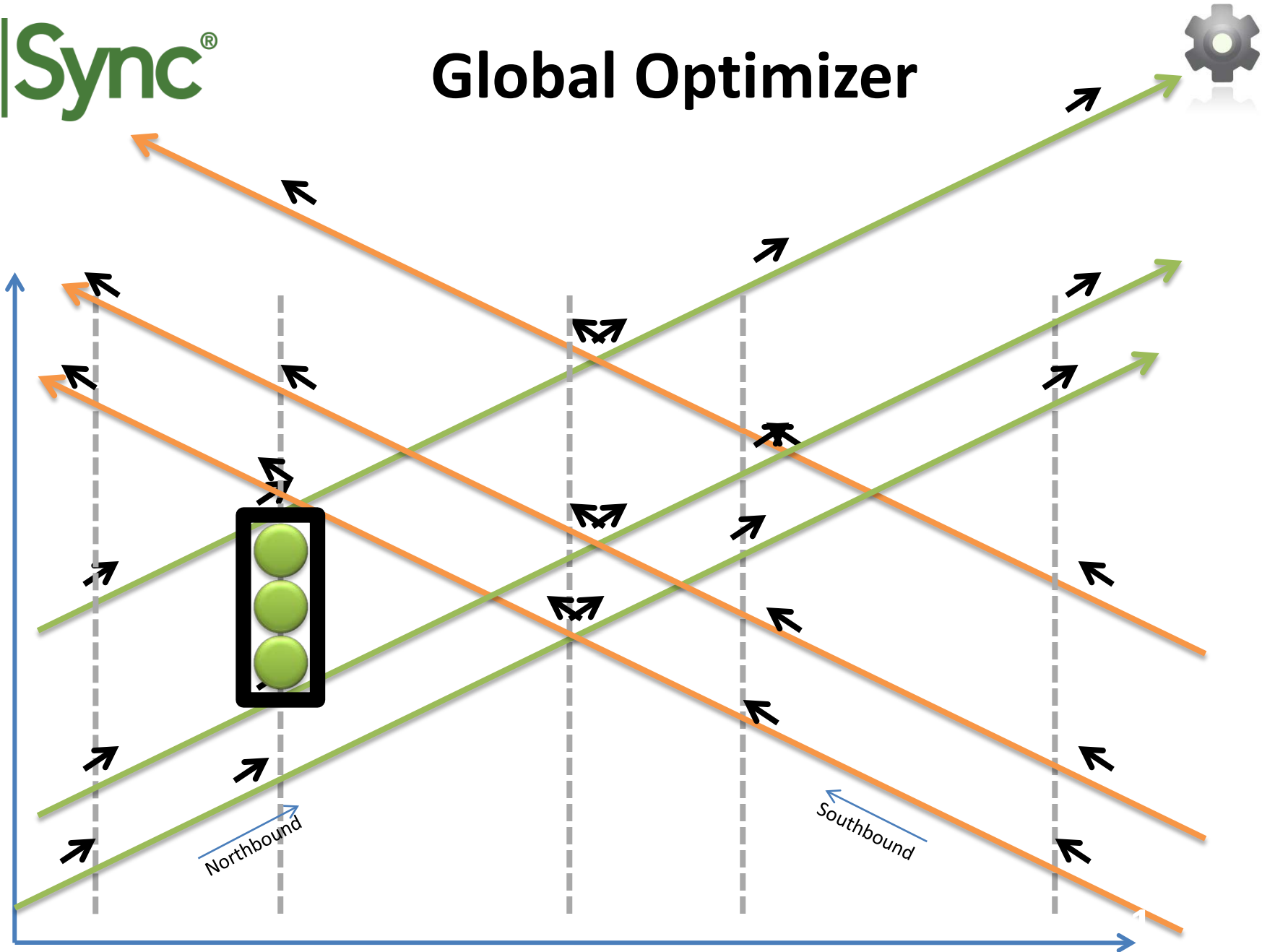


In|Sync<sup>®</sup>

# Global Optimizer



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## Adaptability:

- Phasing
- Green time
- Sequencing
- Period length
- Tunnel duration

} Local

} Global



Intelligently fully-actuated intersections  
to optimize all approaches

*and*

Coordinated progression

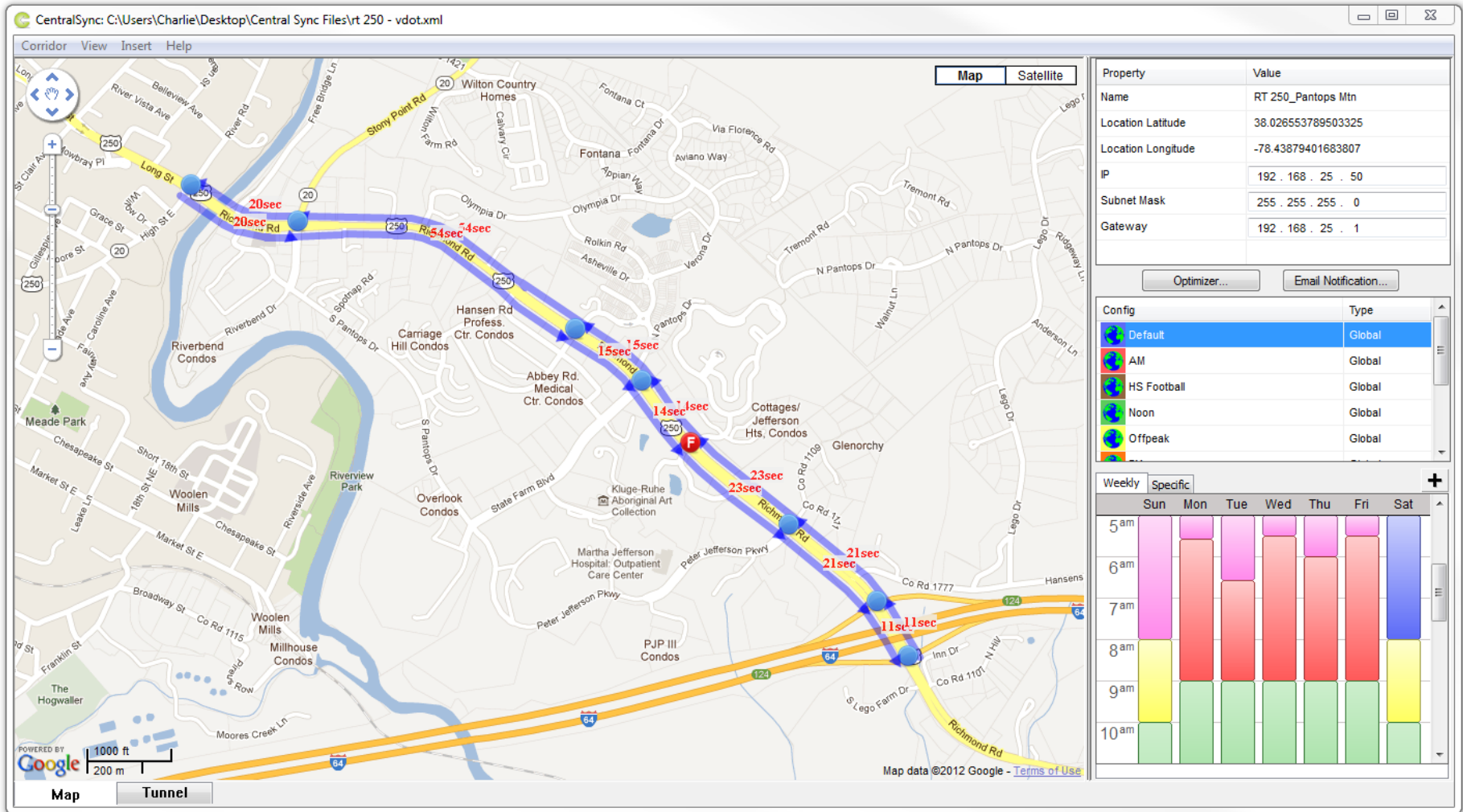




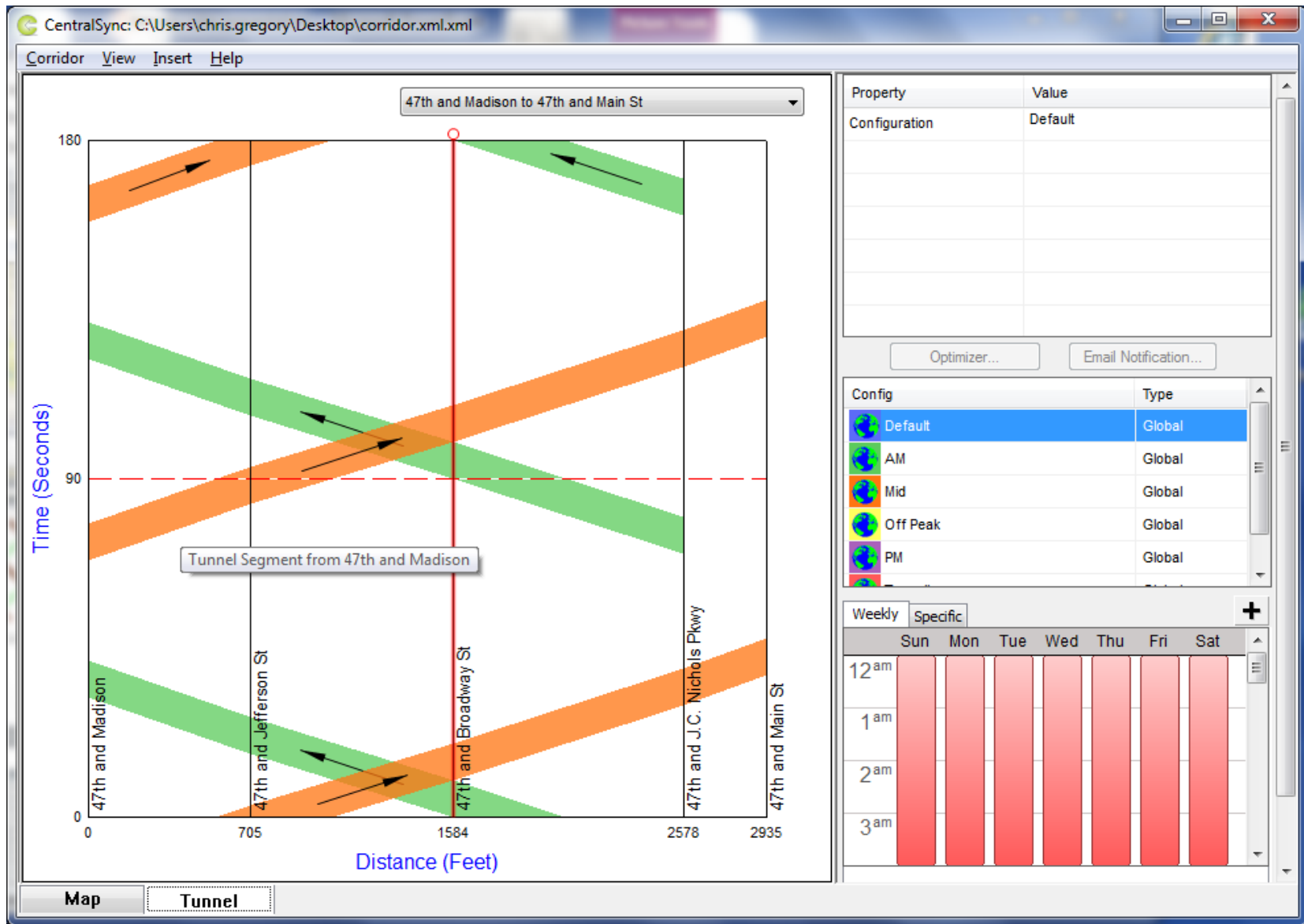


# CentralSync<sup>®</sup>

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Configure

Cameras

Statistics

Log Off

Help

Standard View

2 FPS

Pause



Enable Manual Controls

# In|Sync<sup>®</sup>



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how it works



Safety and  
operational results



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**“Adaptive Traffic Control  
Systems deployment  
improves the safety  
of traffic operations...”**

*Source: NCHRP 403*



**“...through reductions  
of efficiency-related  
performance measures,  
which correlate with some  
safety metrics”**

*Source: NCHRP 403*



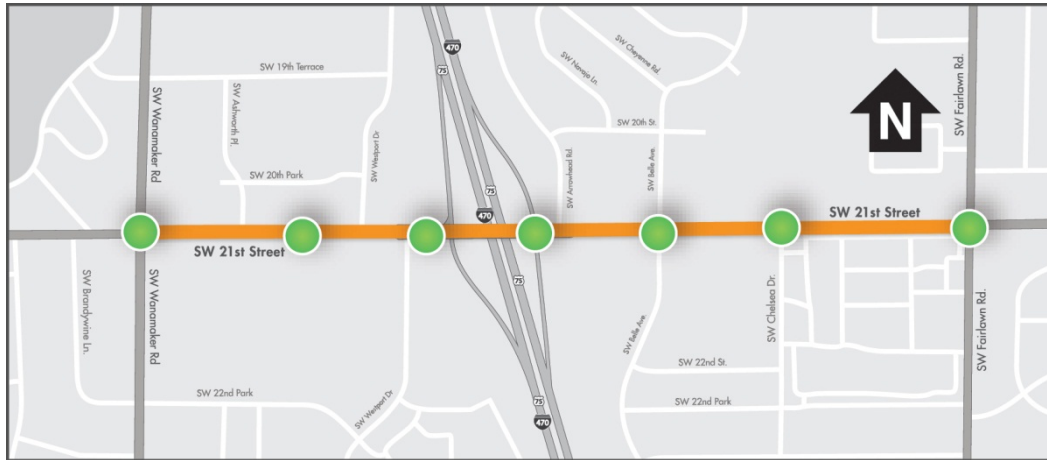


# Better operations = safer

|                         |                                                          |
|-------------------------|----------------------------------------------------------|
| Fewer stops             | Less disparity in speed                                  |
| Less queuing            | Less opportunity for crash                               |
| Less travel time        | Less opportunity for crash,<br>safer motorist behaviors  |
| Better level of service | Less red light running,<br>safer motorist behaviors      |
| Dynamic phasing         | Better driver attentiveness,<br>safer motorist behaviors |

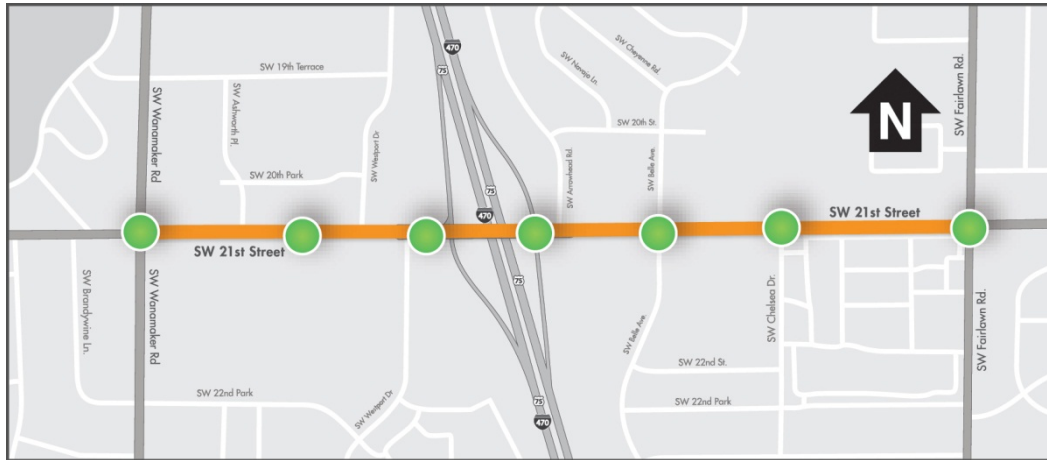


# 21<sup>st</sup> Street, Topeka, Kansas



- Freeway interchange
- 7 signals on one mile
- AADT of 25,311
- Previously controlled by coordinated TOD plans

# 21<sup>st</sup> Street, Topeka, Kansas



## Overall operational improvements

- Stops reduced 90%
- Delay reduced 71%
- Travel time reduced 49%
- Operational benefit = \$2,087,501/yr

Source: Linda Voss, Traffic Engineer for City of Topeka

# 21<sup>st</sup> Street, Topeka, Kansas



| Collision Type | Before |      |         | After | Change |               |
|----------------|--------|------|---------|-------|--------|---------------|
|                | 2009   | 2010 | Average | 2011  | #      | %             |
| Rear-end       | 86     | 91   | 88.5    | 62    | -26.5  | -29.9%        |
| All others     | 55     | 52   | 53.5    | 42    | -11.5  | -21.5%        |
| Total          | 141    | 143  | 142     | 104   | -38.0  | <b>-26.8%</b> |

Crash reductions =  
**\$1,053,796/yr**

Operations and safety =  
**\$3,141,297/yr**

Source: Linda Voss, Traffic Engineer for City of Topeka

# Hwy 71, Springdale, Arkansas



- Major arterial
- 8 signals on three miles
- AADT of 30,000
- Previously controlled by uncoordinated signal plans

# Hwy 71, Springdale, Arkansas



## Overall operational improvements

- Stops reduced 86%
- Delay reduced 80%
- Travel time reduced 35%
- Operational benefit = \$5,083,254/yr

Source: City of Springdale, Arkansas

# Hwy 71, Springdale, Arkansas



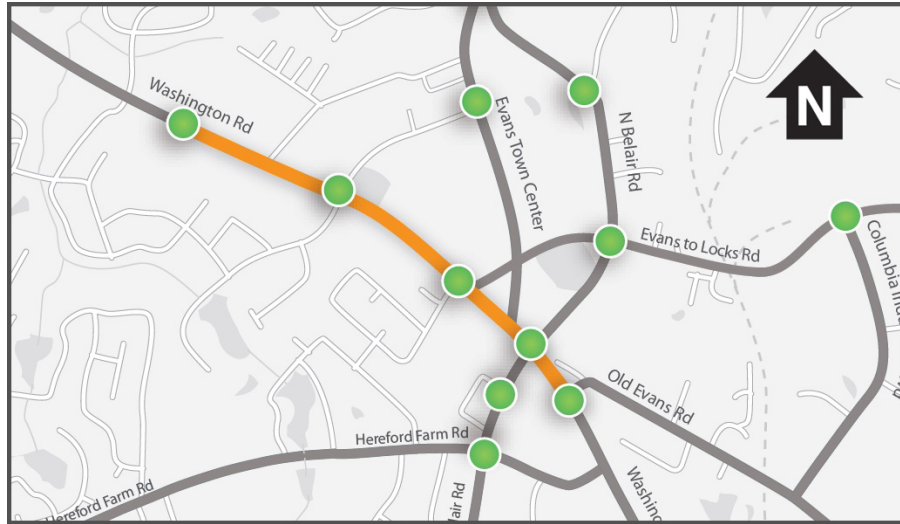
|               | Before                   | After                    | Change   |               |
|---------------|--------------------------|--------------------------|----------|---------------|
|               | May 2009 -<br>April 2010 | May 2010 -<br>April 2011 | Quantity | Percentage    |
| Total crashes | 63                       | 44                       | -19      | <b>-30.2%</b> |

Crash reductions =  
**\$526,898/yr**

Operations and safety =  
**\$5,610,152/yr**

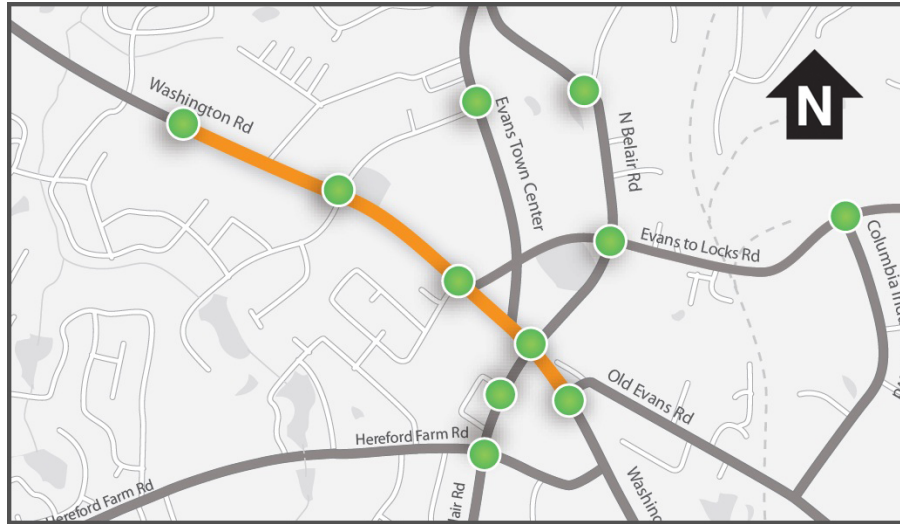
Source: Springdale Arkansas Police Department

# Washington Rd, Columbia County, GA



- Intersecting arterial
- 5 signals on one mile
- AADT of 40,000
- Previously controlled by coordinated TOD plans

# Washington Rd, Columbia County, GA



## Overall operational improvements

- Stops reduced 80%
- Delay reduced 81%
- Travel time reduced 27%
- Operational benefit = \$2,624,802/yr

Source: Columbia County Traffic Engineer



# Washington Rd, Columbia County, GA

| Collision Location                | 2009 | 2010 | Quantity Change | Percentage Change |
|-----------------------------------|------|------|-----------------|-------------------|
| Mid Block and Driveway Collisions | 48   | 41   | -7              | -14.6%            |
| Intersection Collisions           | 114  | 79   | -35             | -30.7%            |
| Total                             | 162  | 120  | -42             | <b>-25.9%</b>     |

Crash reductions =  
**\$1,164,702/yr**

Operations and safety =  
**\$3,789,504/yr**

Source: Columbia County Traffic Engineer



## Crash reduction results

**27%**

*Source:* Topeka, KS  
City Traffic Engineer

**17%**

*Source:* Lee's Summit, MO  
Police Department

**30%**

*Source:* Springdale, AR  
Police Department

**26%**

*Source:* Columbia County, GA  
County Traffic Engineer

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| Product and Options  | Price per Intersection | Detection                                                   |
|----------------------|------------------------|-------------------------------------------------------------|
| <b>InSync</b>        | \$25,000               | Up to four cameras included                                 |
| <b>InSync:Tesla</b>  | \$25,000               | Uses your preferred detectors                               |
| <b>InSync:Fusion</b> | \$30,000               | Up to four cameras included & integrates existing detectors |
| Pedestrian Module    | +\$5,000               |                                                             |
| Project Management   | +\$1,000 or less       |                                                             |

Prices do not include communications, installation, mounting hardware, 14-3 and Cat5e wires, shipping, taxes, spare systems, and peripherals such as in-cabinet monitors and keyboards.



# In|Sync<sup>®</sup> Promise





# In|Sync<sup>®</sup> Promise

**“If after three months of adaptive operation you do not feel our partnership has had a positive impact in terms of reduced travel times, emissions, fuel consumption and improved safety, we will issue you a full refund”**



Understand  
how it works



Field results from  
agencies nationwide



See the financial  
investment

**Save time**  
**Save fuel**  
**Save money**  
**Save the environment**  
**Save lives**

**COLUMBIA COUNTY, GA**

**WASHINGTON ROAD**

**JANUARY, 2010**





Contact info here

**Download online:**

InSync White Paper: [rhythmtraffic.com/paper](http://rhythmtraffic.com/paper)

ATCS Grant Funding Playbook: [rhythmtraffic.com/grants](http://rhythmtraffic.com/grants)

2012 Corridor Management Report: [rhythmtraffic.com/survey](http://rhythmtraffic.com/survey)





End of presentation





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