



# Operating Signals IS Important!

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# Poor Operations

- Increased Crash Frequency
- Increased Travel Times....
- Economic Impacts
- Traffic Diversion to Side Streets
- Citizen Complaints
- Non-Compliance
- Viscous Circle of Congestion



# Better Operations

- Delay would decrease by 15 to 40%
- Travel time would reduce up to 25%
- Emissions would reduce up to 22%
- Fuel use would reduce up to 10%
- B/C ratios up to 40:1

**Your Mileage May Vary !**



# What does this all mean?

- How do these numbers relate?
  - 30 minute travel time => 7 min saved
  - 20 MPG => 22 MPG
- Do you individually measure these?
- Can drivers recognize these savings?

Public perception is key!



## However.....

- We can't make cars disappear
- Traffic volumes will still increase
- We can't fix poor land use decisions
- Our duty to achieve maximum benefit?

**No Silver Bullet!**  
**Not a one shot deal!**



# So what do we do?

- National Transportation Operations Coalition Traffic Signal Self Assessment
- Leads to others looking for help
- <http://www.ite.org/selfassessment>
- <http://www.ite.org/reportcard/>
- Updated survey next month.



# National Traffic Signal Report Card

- Overall score is low (D-)
- Management & detection scored lowest
- Individual intersections scored highest
- Large systems scored higher than national average



# National Traffic Signal Report Card

- **Why such a low score?**
  - Signals turn green, yellow and red
  - BUT,
  - Not operating as an efficient, well-integrated system
  - Proactive management is limited
  - Limited resources spent *fighting fires*



# Assessment of the Wisconsin DOT Traffic Signal Operations

Interviews March 15 & 16 2005

**Here is how it went!**



# Starting the Discussion

- What bugs you about Signal Opps?
- Do you feel you could do better?
- What are your weak points?
- What's your funding situation?
- Where is your program going?
- Political climate/support?
- Is everything you do perfect?
- How do you tell?



# Topics for Discussion

- Agency Management & Operations
- Signal Timing Updates
- Coordinated Systems
- Detection Systems
- Maintenance
- Signal Partnerships
- Wrap Up



# Top Issues

1. Good Foundation
2. Organizational Issues are Fragmenting Service
3. Staff Qualification Standards
4. Resource Model Gaps
5. Important Documentation Not Available
6. No Process to Measure Success
7. Inadequate Funding



# Good Foundation

- Staff is committed to improvement
- Many program improvements being pursued
  - State Traffic Operations Business Plan
  - Service Call Response Guidelines
  - TE Certification Programs
  - Updated Manuals
  - Resource Model
  - COMPASS quality program



# Organizational Issues

- Decentralization is a problem
- Single line/points of responsibility don't exist
- Problems with communications between disparate groups
- No good link between design and operations



# Staff Qualifications

- Minimal requirements for Signal Techs
- Few requirements for Engineers
- No qualification requirements for contract operations
- No training or formal skills development
- Training is difficult to obtain.



# Minimal Documentation

- WisDOT does not have guidance manuals for traffic signal operations.
- There is no uniform guidance on traffic signal timing
- No guidance on systems procurement
- However, they are starting work on these documents.



# Resource Model Gaps

- WisDOT has not been able to staff or link staff size to system size
- Can't staff to fulfill need projected by their formal resource model
- Also facing staff cuts.
- Turn over issues



# No Measures of Success

- Who to call to report signal problems?
- No data collection
- Regulatory problems
- No regular performance reporting

**SIGNAL PROBLEM?**

**CALL:  
(206)**

**440-4490**



# Funding

- Ss.20.395 (3)(cq) ITS/Operations not funded statewide.
- No increase for operations since 1990
- No funding for improvements needed system wide
- Not sustainable
- No funding for planned upgrades
- Can't meet basic needs



# Keys to Success

- Uniform guidance/resource documents
- Increase importance of staff training and certification
- Tie funding to system size and complexity
- Performance measurement reporting
- Adequate sustainable funding



# Questions?

- What will WisDOT do with the review?
- How can it be leveraged?
- How might it apply to others?
- More?

