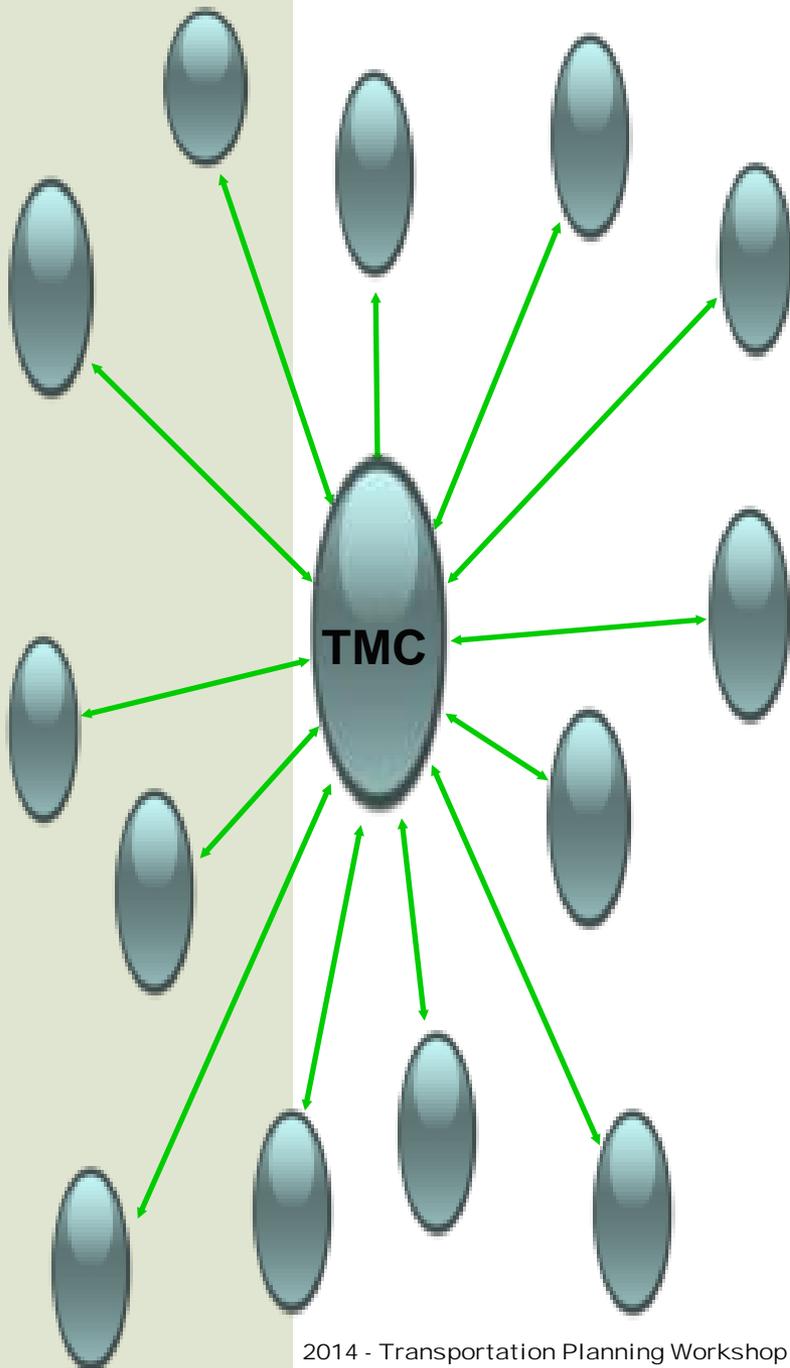


Transportation Management Center

Sergio Venegas
D6 TMC Lead

What you will learn today about TMC's

- Mission/Configuration/Locations
- What Do TMC's Do?
- Incident Management 101
- Benefits of a TMC's



The collage includes the following slides:

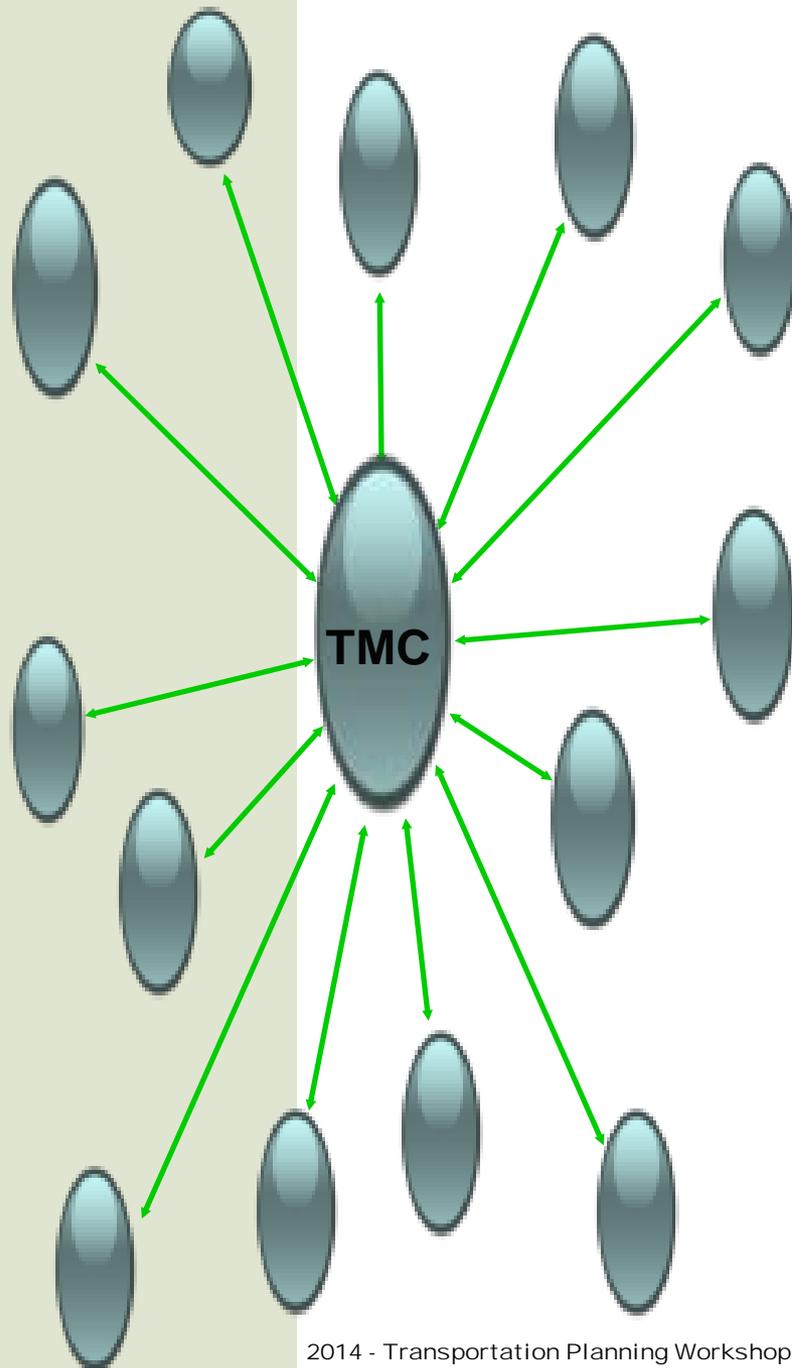
- Transportation Management Centers - Locations**: Shows photos of TMC facilities in District 3, District 7, and District 1, along with a 2011 Traffic map.
- What Does a TMC Do?**: A diagram showing a central TMC hub connected to various external entities.
- Incident Management 101**: A slide with a green sigma symbol.
- Benefits of a TMC - Nonrecurring Congestion Analysis (example)**:
 - Example Incident**
 - Southbound US-101 – 5 lane section
 - Weekday morning commute period
 - Vehicle demand exceeds capacity from 7 A.M. to 8:30 A.M.
 - Rear-end collision occurs at 7:30 A.M. that causes a lane closure
 - Incident is cleared at 8:30 A.M.

At the bottom of the collage is a slide titled "Traffic Mobility Workshop" showing a road with traffic lights and a TMC hub diagram.

Mission of the TMC

To efficiently **manage** a District's transportation system, to reduce congestion and provide the safe and efficient movement of people, goods, services, and information, by coordinating with partners to cooperatively manage the system in response to:

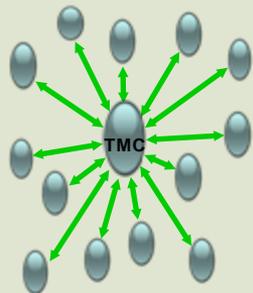
- Incidents
- Daily Commutes
- Special Events
- Work Zones



Configuration



- **Regional**
 - Sacramento, Oakland, LA
- **Urban**
 - San Diego, Orange Co., San Bernardino, Fresno, Stockton
- **Satellites**
 - Redding, Eureka, Bishop,
 - San Luis Obispo, Kingvale
- **24/7 Co-located w/CHP Call Centers**
 - D-3 Sacramento
 - D-7 Los Angeles
 - D-11 San Diego
 - D-12 Orange County
 - D-8 San Bernardino (2011)
- **24/7**
 - D-4 Oakland
 - D-6 Fresno
 - D-10 Stockton
- **Weekday**
 - D-1 Eureka
 - D-2 Redding
 - D-5 San Luis Obispo
 - D-9 Bishop
 - Kingvale - Seasonal



Transportation Management Centers - Locations



District 3



District 4



District 11



District 6



District 08



District 7

Regional



Urban



District 10

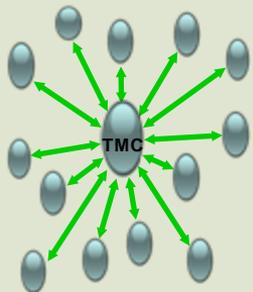
Satellites



District 1



District 12



District 9



District 2



District 5

What Does a TMC Do?

Prevent
Assist
Inform
Document



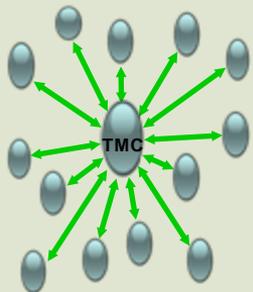
Congestion

Recurrent

- Daily Commuter Traffic

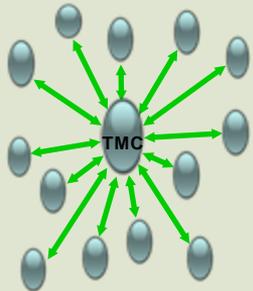
Non-Recurrent

- Un-Planned
 - Incidents
- Planned
 - Events
 - Lane Closures



What are the Benefits of a TMC?

- Reduce Traffic Delays
- Reduce Traffic Incidents
- Save Fuel
- Improve Air Quality
- 8:1 Benefit/Cost Ratio

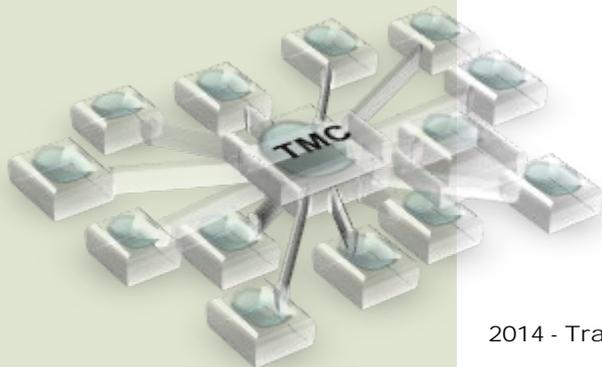
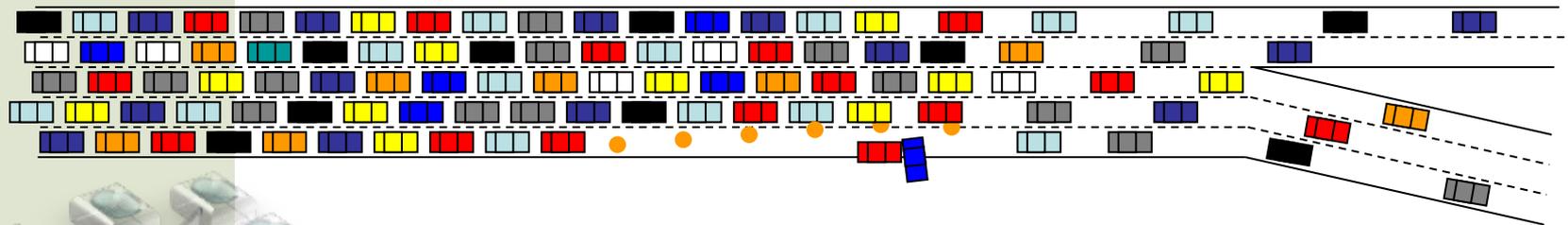


Benefits of a TMC - Nonrecurring Congestion Analysis (example)



Example Incident

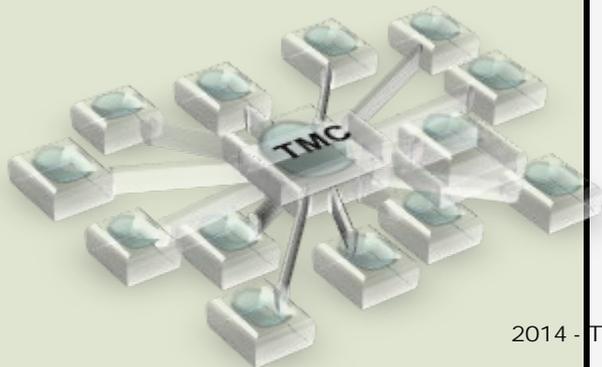
- Southbound US-101 – 5 lane section
- Weekday morning commute period
- Vehicle demand exceeds capacity from 7 A.M. to 8:30 A.M.
- Rear-end collision occurs at 7:30 A.M. that causes a lane closure
- Incident is cleared at 8:30 A.M.



Total vehicle-hours of delay = 9,250
 @ \$15.60 per vehicle-hour
 Total cost of delay = \$144,300

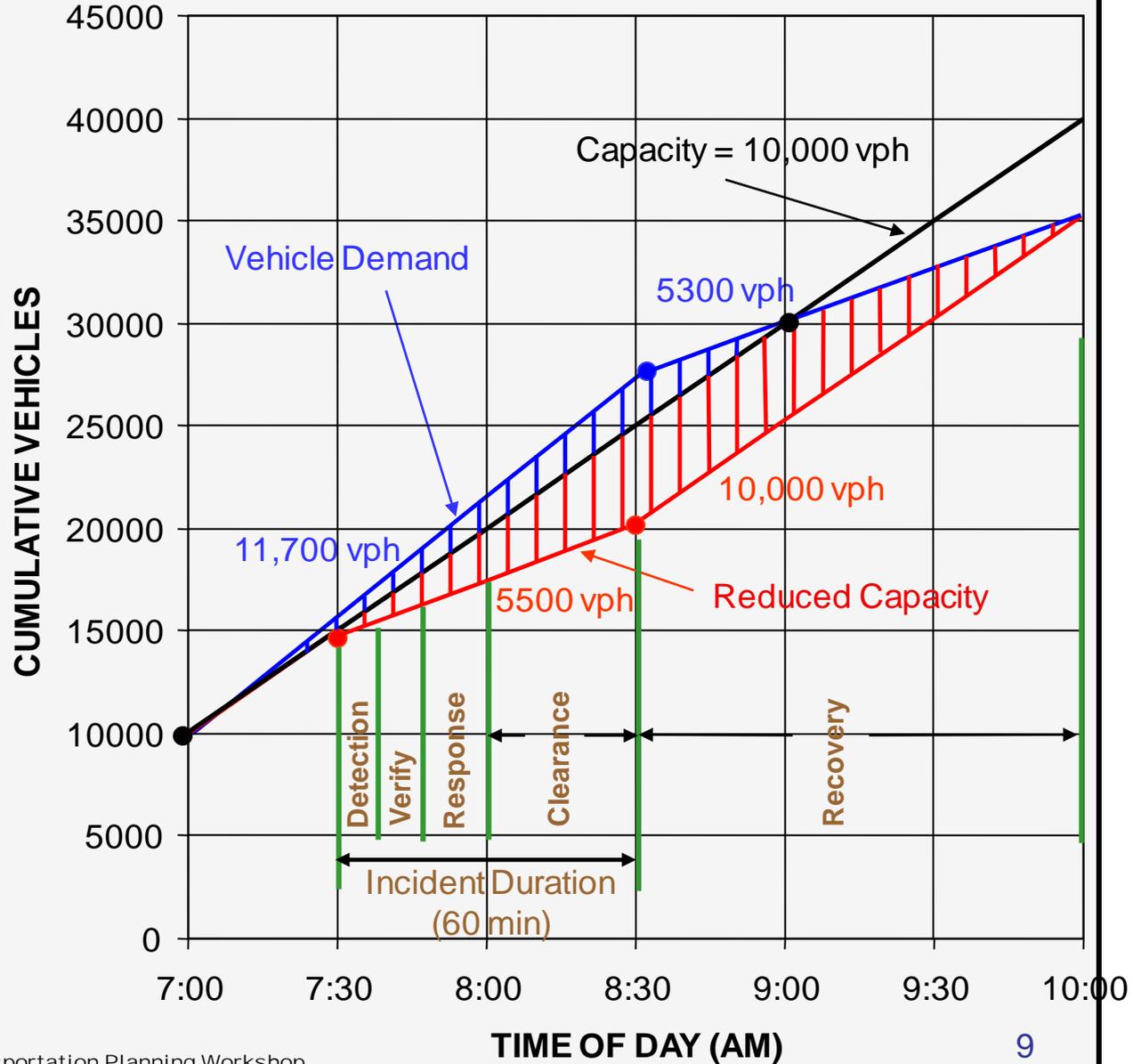
How can we Reduce Delay?

- Reduce Incident Duration
- Reduce Demand



VEHICLE DEMAND VS CAPACITY

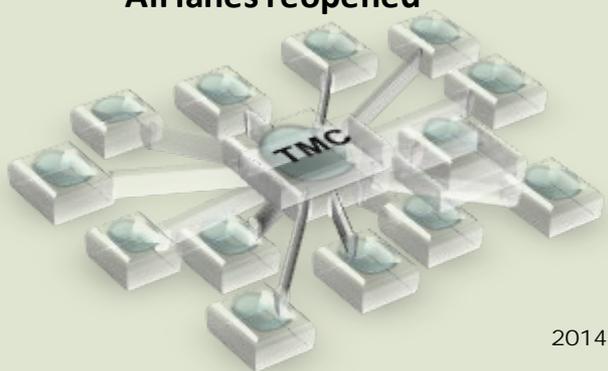
Benefits of a TMC - Nonrecurring Congestion Analysis (example)



Reduced vehicle-hours of delay = 1,690
 @ \$15.60 per vehicle-hour
 Total cost of reduction = \$26,360
A 18% Savings

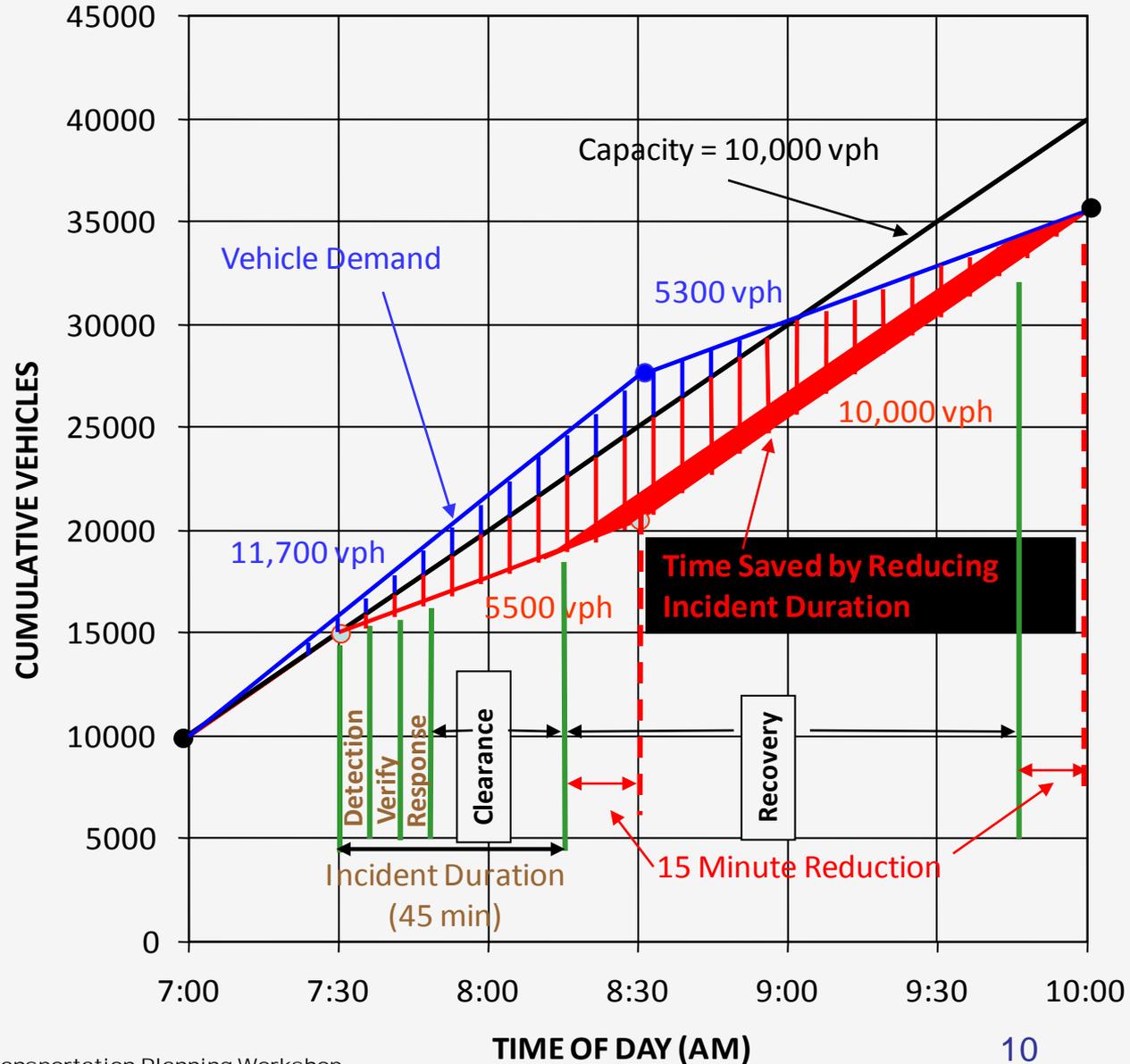
Reduce Incident Duration

- **Detection**
 CAD
 Loop detectors
 Field units
- **Verification**
 CCTV
 CAD
 Field units
- **Response**
 CHP
 Maintenance
 TMT
 Tow service / FSP
 Hazmat contractor
 others
- **Clearance**
 All lanes reopened



VEHICLE DEMAND VS CAPACITY

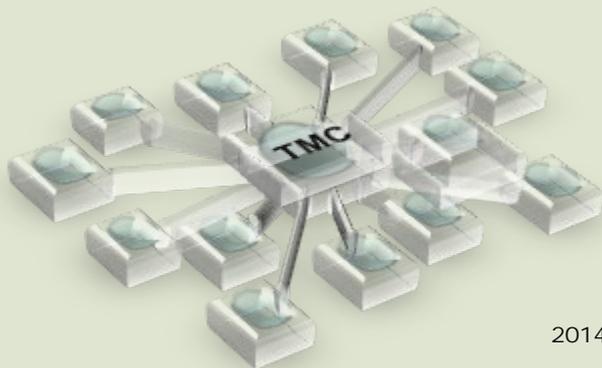
Benefits of a TMC - Nonrecurring Congestion Analysis (example)



Additional Reduction = 2,060 veh-hrs
 Total Reduced = 3,750 veh-hrs
 @ \$15.60 per veh-hrs
 Total cost of reduction = \$58,500
A 41% Savings

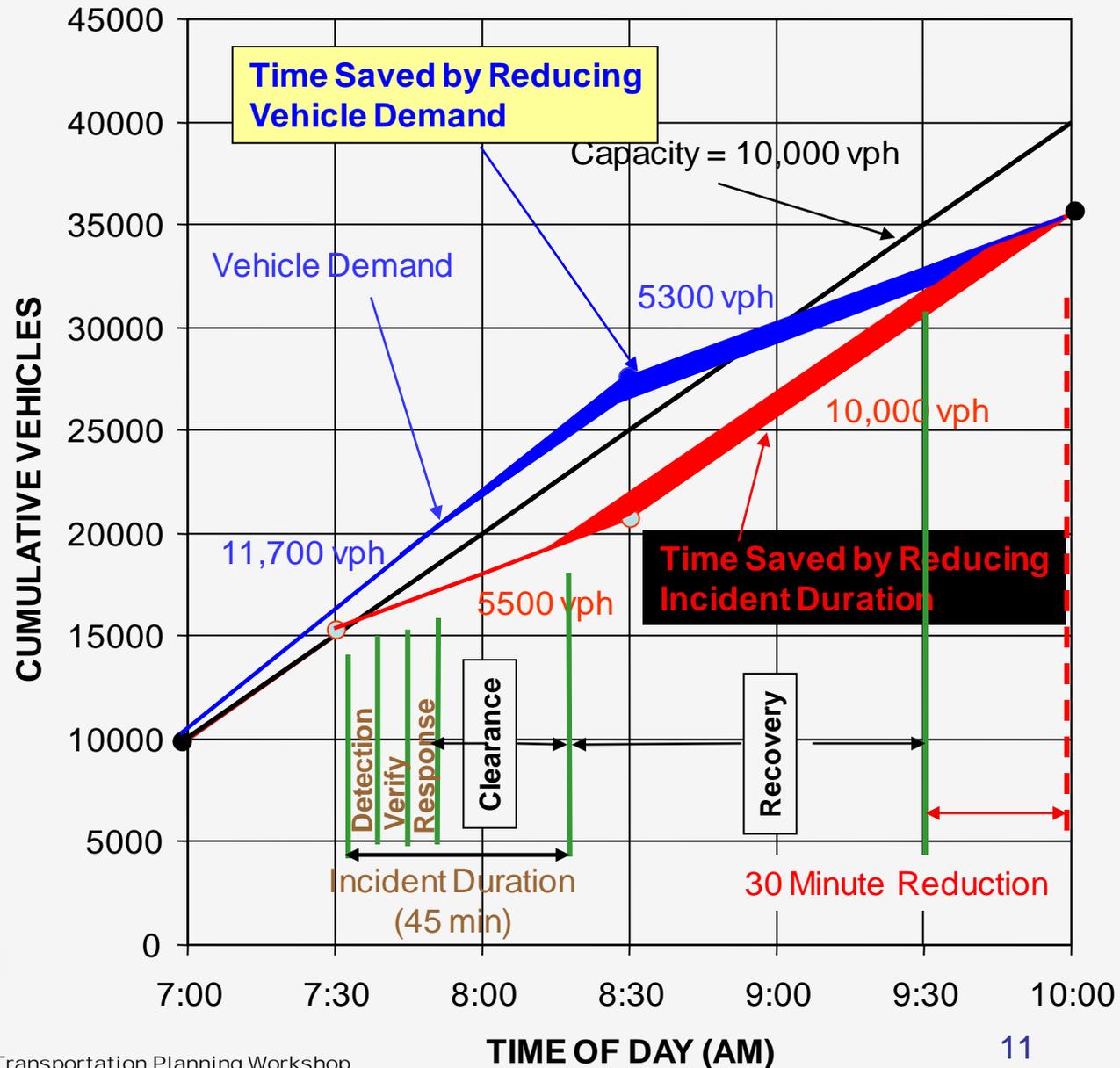
Reduce Demand

- **Motorist information**
 CMS
 TMT
 HAR
 Radio / Television
 Internet
- **Volume control**
 Ramp metering
 Connector metering
- **Detours**
 TMT
 CHP
 Maintenance



VEHICLE DEMAND VS CAPACITY

Benefits of a TMC - Nonrecurring Congestion Analysis (example)



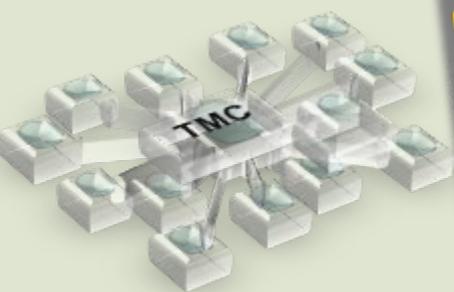
How Much Does A Collision Like This Cost?

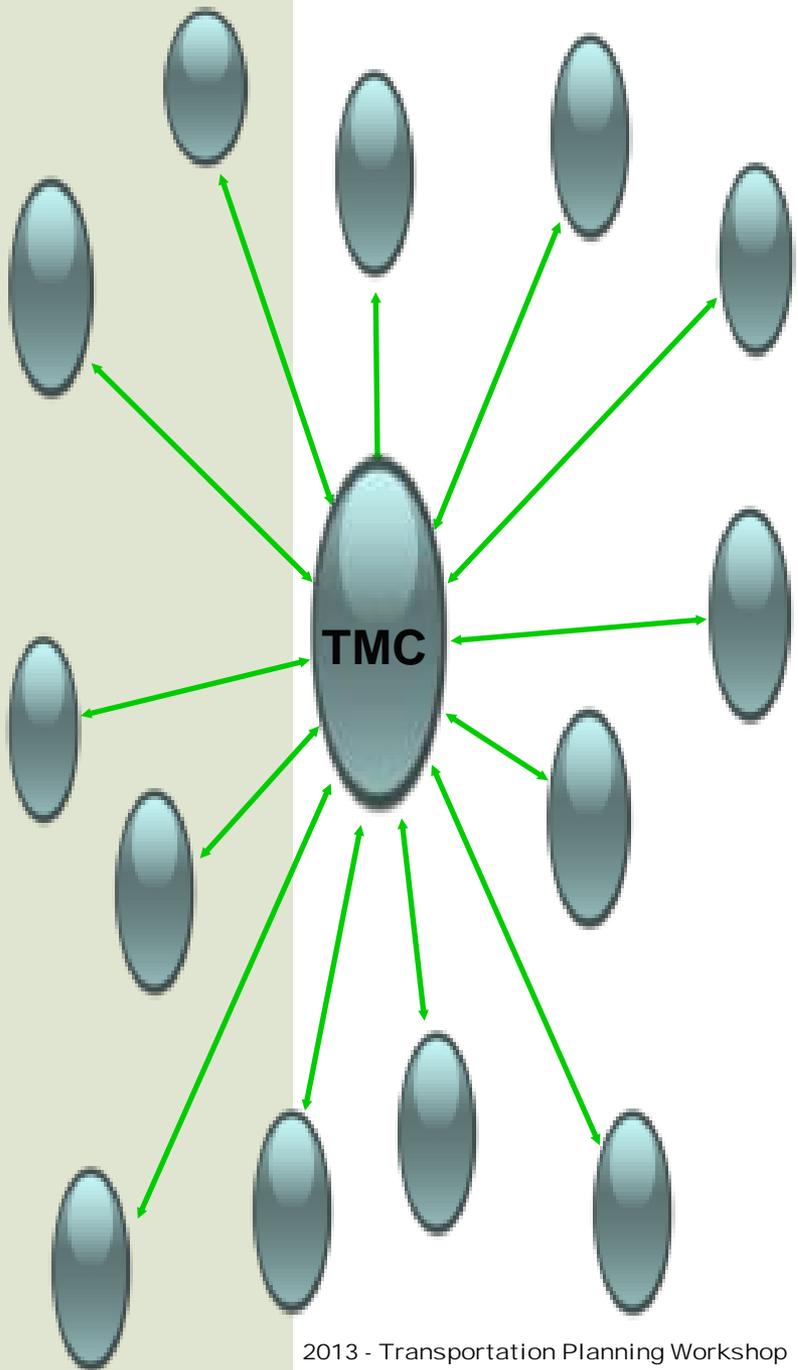


Costs not included:
Hospital / Medical
Court / Fines
Increased Insurance
Societal Costs (lost time and revenue due to delay)

Total Cost = \$155,070.00 (Estimated Minimum)

Source: Philips R., D. MacDonald, and P. Hammond. 2006. Traffic Incident Management in Washington State.





Questions!

