

ICMA Benchmarking Project FY 2007 Data Report

Highways & Roadway Maintenance Traffic Signals

Public Works and Transportation
September, 2008



Definition of Comparisons

- **Signal Repairs**

- Any repair that can be completed without a construction crew
- Typically includes:
 - Replacement of electronic parts and components
 - Adjustments to controller settings

- **Signal Replacements**

- Any repair that requires a construction crew
- Typically includes:
 - Knocked-down or damaged poles, foundations, signal heads and cabinets (due to vehicle crashes, turning trucks or severe storms)
 - Underground cable replacement due to construction or aging wires



Comparison to Prior Year

Signal Repairs

• Comparison

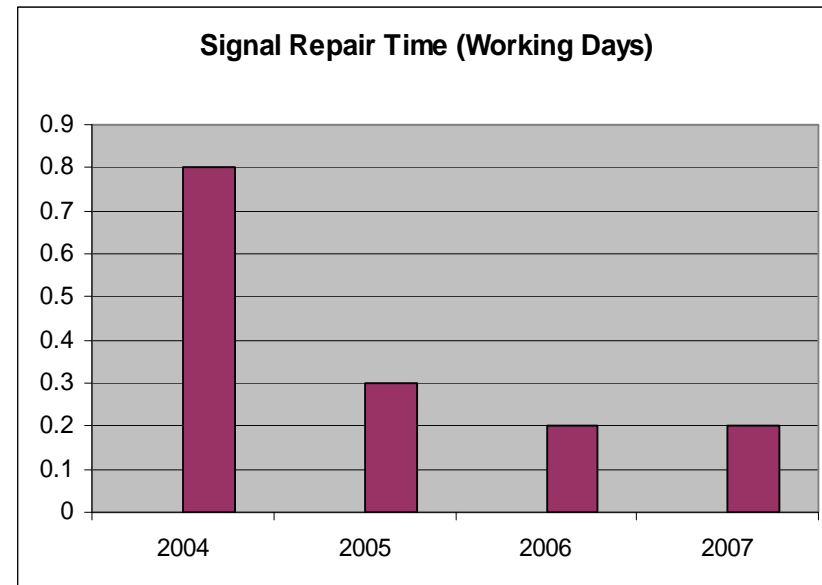
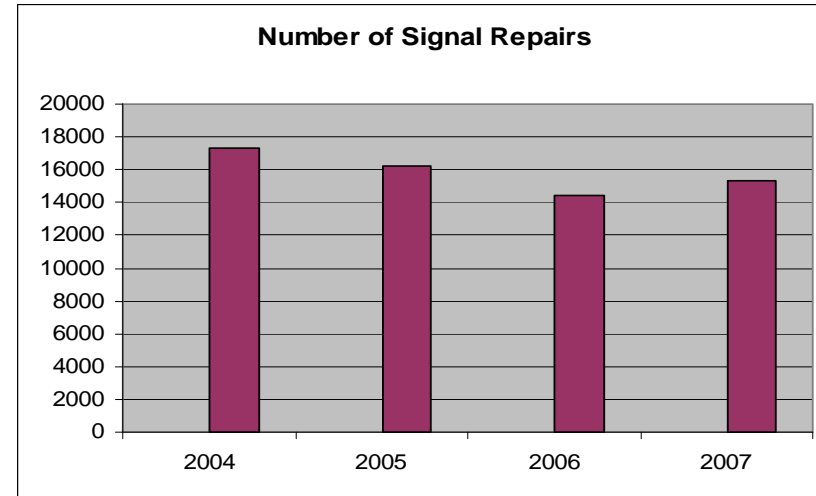
- Number of repairs increased 6%
 - Changed policy to log all internally generated field visits resulting in a higher annual total
- No change in average repair time

• Areas of Concern

- Backlog of damaged vehicle sensors
- Power outages

• Recent Actions

- Dedicated a crew to repair vehicle sensors and eliminate backlog
- 2006 bond program includes replacement of 5% of controllers and pilot installations of battery back-up systems



Comparison to Prior Year

Signal Replacements

• Areas of Strength

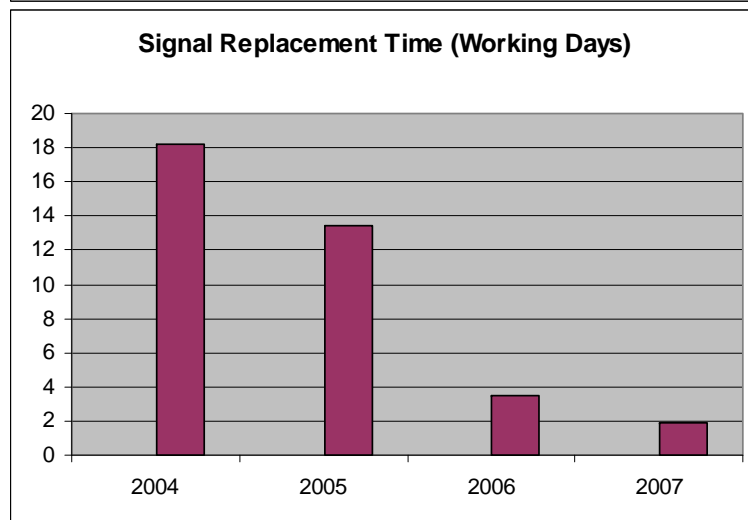
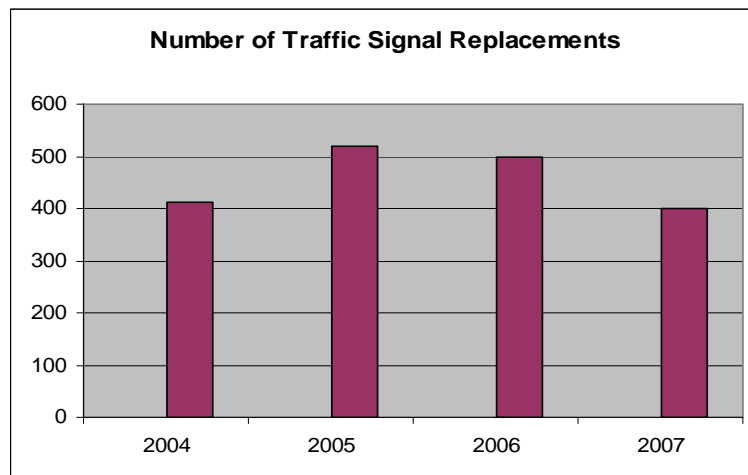
- 19.5% decrease in signal replacements
- Average replacement time dropped from 3.5 days to 1.9 days

• Areas of Concern

- Downtime due to aging equipment (trucks, trailers, backhoes)
- Striking underground utilities and polluting storm water during excavation

• Recent Actions

- Feasibility of replacing older equipment verses leasing equipment
- Rented water jet excavation/vacuum truck from DWU to eliminate hand digging in areas with utility issues



Comparison to Other Jurisdictions

Signal Repairs

• Areas of Strength

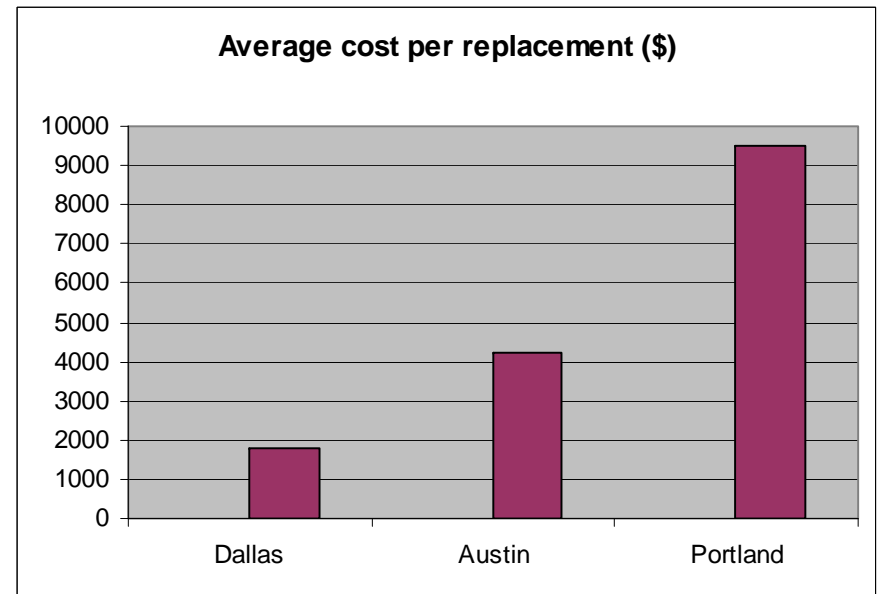
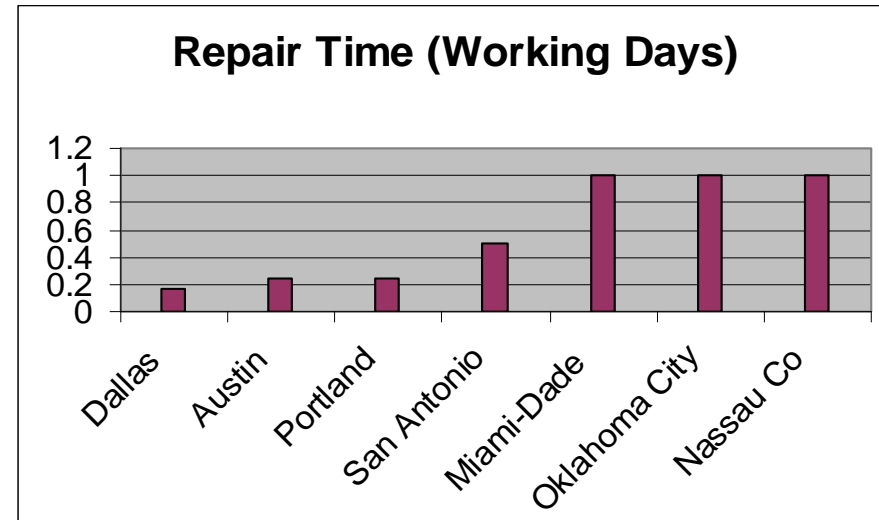
- Best in average repair time
- Lowest average cost per repair
- All traffic signals are connected to a centralized computer system
- Keep detailed log of maintenance history for trend analysis

• Areas of Concern

- Signal failures experienced due to storms affect response time and distort comparisons

• Proposed Actions

- Implement battery backup systems to demonstrate costs and performance



Comparison to Other Jurisdictions

Signal Replacements

- **Areas of Strength**

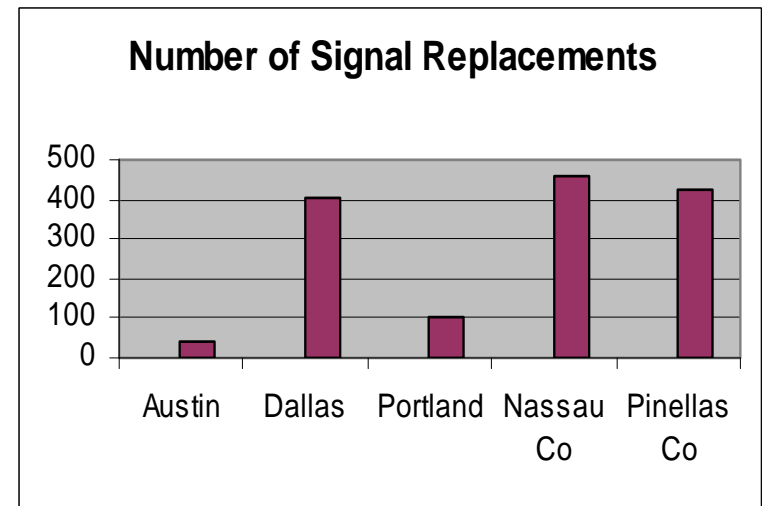
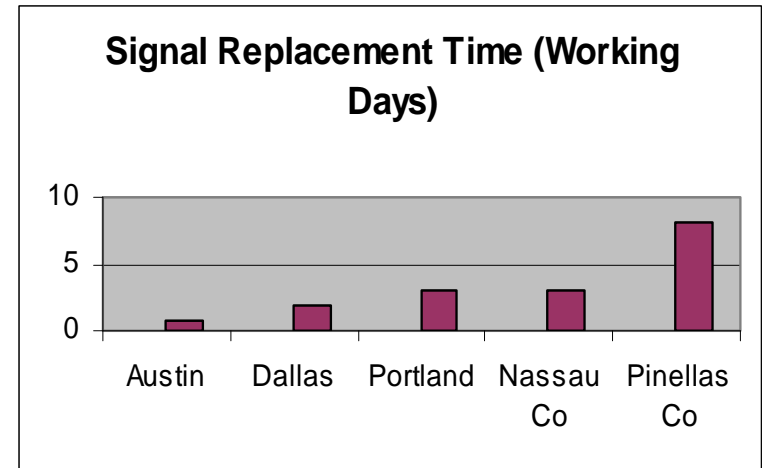
- 2nd lowest average cost per traffic signal replacement

- **Areas of Concern**

- Dallas has more traffic poles, signal heads and constraints in pole placement resulting in more knocked-down equipment

- **Proposed Actions**

- Pursue funding to expedite removal of median signal poles
- Pursue property easements to allow new poles to be installed at a greater offset from street



Additional Benchmarking Activities

- Continue to work with ICMA to develop data comparisons related to:
 - street light
 - traffic signs
 - pavement markings

