TRAFFIC MANAGEMENT in OAKLAND COUNTY

Gary Piotrowicz, PE, PTOE
Director of Traffic-Safety

ROAD COMMISSION for OAKLAND COUNTY
AGENDA

- Background on Oakland County
- Signal Ownership
- Need for Improved Signal Operations
- Signal Management in Oakland County
- Funding
Signal Ownership/Maintenance

- Road approach jurisdiction determines who owns a traffic signal.
- Signal costs split by approach ownership (capital and maintenance).
- In urban areas most Road Commissions maintain traffic signals for MDOT and other locals.
- By default, most operational issues are also taken on by Road Commissions.
RCOC Signal Maintenance

- Maintain about 1300 traffic signals and another 300 electrical devices

- Distribution:
  - MDOT 350
  - Locals 275
  - RCOC 675

- There are another 200 signals in the County that are not maintained by RCOC
COMPELLING NEED

- Accommodate Population and Economic Growth
- To Offset $1.9 Billion in Unmet Road Improvement Requirements
- Widening Difficult and Costly
  - ROW costs
  - Environmental issues
- Lack of Advanced Signal Systems
GOALS

- Safety, Reduce Accidents
- Improve Traffic Flow
  - Limited geometric improvements
- Respond Quicker to Motorist Concerns
- Work with Locals to Improve Event Management
  - Sports
  - Malls
  - Freeway incident spillover
TRAFFIC SYSTEM NEEDS

- Reduce Accidents
- Adjust to Changing Volumes
- Special Events
- Expandable
- Versatile
  - Corridors/grids/isolated
  - Volumes
  - Geometrics
  - Operations
SCATS TRAFFIC SIGNALS

- Adaptive
  - Adjust signal timings in real-time based on actual volumes
- Continuous Signal Timing Updates
- Central Monitoring
- Un-usual Congestion Management
- Special Event Management
SCATS EVENT MANAGER
CLEAR PROJECT NEEDS

- Nearly 900 non-SCATS signals
- No comprehensive re-timing ever done
  - Cycle lengths, splits, and offsets
  - Peak periods
  - Clearance intervals
- Dramatic volume changes
- Pattern shifts
- Many new signals along corridors
- Minimal resources to maintain timings
COUNTY-WIDE SIGNAL RETIMING PROJECT

- Included all non-SCATS traffic signals (including ones not maintained by RCOC)
- Further reduced boundary issues
- Standardized clearance intervals
- Greatly Improved overall traffic flow county-wide
- Done with 100% CMAQ funds
FUNDING

Capital
  - Earmarks
  - CMAQ
  - Safety
  - Construction Projects
  - RCOC Signal Program
  - MDOT/Locals/Private

Operations and Maintenance
  - CMAQ (SCATS components)
  - RCOC funds
  - MDOT/Locals/Private