Charleston County, South Carolina
Richard Turner
Pavement Manager

Welcome to beautiful Charleston, SC
- Growing pavement system of approx. 1700 centerline miles
- Nearly 100 miles of coastline
- 16 municipalities

- 300 year old historical city
- *Conde Nast Traveler* No. 1 City
- Nearly 4.51 million visitors each year
- Rapidly growing seaport & aeronautical industry
- US Air Force Base
Pavement Management History

- Early 1990’s
  - Charleston County Implemented the first Pavement Management System

- 1995
  - Began use of Pavement Management Software to manage road system and maintenance plans

- 2005
  - Began use of our current PMS software, CarteGraph.

- 2009
  - Switched from manual to automated data collection and completed a full survey by use of a consultant.

- 2014
  - Completed a new Pavement Condition Survey to update the system.
Program Strengths & Accomplishments

• History
• Funding Sources
• Support from County Council & 16 municipalities
• Website devoted to Pavement Management
• Strong partnership with SCDOT
• In-house management & inspection staff
Pavement Condition

- All segments are surveyed with an automated data collection vehicle and analyzed per ASTM Standard D6433-03.
- Right of Way and pavement images are taken every 20 feet.
- Pavement Condition Index (PCI) is calculated based upon distresses found during the survey.
- The PCI is used to estimate the treatment necessary to rehabilitate the roadway.
- Segments are ranked based on:
  - Overall Condition Index (OCI) 70%
  - Functional Classification 30%
Annual Process

1. Update Pavement Condition
   - Nov - Dec

2. Analyze System
   - Dec - Jan

3. Optimize Funding
   - Jan - Feb

4. Develop Maintenance Plans
   - Feb - Mar

5. Complete Projects
   - Mar - Nov
Update & Analyze System

- All completed and ongoing contracts are logged into the PMS.
- The condition indices are recalculated based upon the impact of completed projects.
- The system is then analyzed to produce a report of prioritized projects for the upcoming year.
Optimize Funding

• The maintenance plan analysis is used to project the Overall Condition Index for the entire road system.

• Multiple plans are produced to determine what combination of projects and funding will provide the most benefit for the entire system.
Develop Maintenance Plans

• Develop maintenance plans for each of the three treatment categories (Preservation, Rehab & Recon)

• Produce preliminary road lists with roads prioritized by OCI and Functional Classification of the road segments.

• Review field conditions to confirm the system projections and add or defer routes.

• Group roads by area to minimize mobilization costs and provide better production for contractors.

• Collect data to produce cost estimates and plans for bidding.
Projects

• Projects Funded through two sources.
  • County Transportations Committee (CTC)
    » $3 million
  • Transportation Sales Tax (TST)
    » $4 million

• Currently have two projects underway and plans are being developed for two projects to be advertised in February.
FY 2014 CTC Resurfacing Project

- Planned resurfacing of 15.40 miles of roadway.
- Bid Amount = $3,154,320
- Estimated Cost Lane/Mile = $94,616
FY 2014 TST Resurfacing Project

• Planned resurfacing of 16.72 miles of roadway.
• Bid Amount = $2,591,057
• Estimated Cost Lane/Mile = $77,483
Opportunities for Advancement

- Social Media
- Door to door flyers
- Reverse 911 system
- Publish articles
- Partner with SCDOT & local municipalities on match programs
- Partner with SCDOT, MWV & local contractors to develop new specs, products and demo projects
Program Threats

- Politics of dealing with 17 sets of Council members & state government
- Growing system vs. stagnant funding source
- Unsuccessful projects
- Bad customer service
Questions?

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Or visit our website at:

www.charlestonctc.org/pavementmanagement.htm