Performance and Cost Data

ASPHALT MAINTENANCE AND REPAIR

PERFORMANCE MEASURES FOR ASPHALT MAINTENANCE AND REPAIR

SERVICE DEFINITION

Asphalt Maintenance and Repair includes the activities of pothole repair, repaving, surface treatment, structure adjustments, milling, and utility cuts. It does not include reconstruction, handicap ramps, storm drainage, sidewalks, curb and gutter, row maintenance, street cleaning and sweeping, pavement marking, lane widening, unpaved street maintenance, or snow and ice removal.

NOTES ON PERFORMANCE MEASURES

1. Lane Miles Maintained

This measure refers to total lane miles that a municipality maintains, including state streets and municipal streets. The standard lane mile is 12 feet in width and 5,280 feet in length. Some jurisdictions do not track lane miles. Therefore, a methodology must be employed to calculate lane miles for participation.

2. Tons of Asphalt Applied

This is the number of tons of asphalt used by contractors and by municipal crews for the purpose of resurfacing streets. Jurisdictions will not report tons of asphalt applied by municipal crews if all street resurfacing is under contract.

3. Full-Time Equivalent (FTE) Positions

Full-time equivalent (FTE) positions for asphalt maintenance and repair are calculated in the same way as those for the solid waste services studied in the project.

4. Percentage of Street Segments Rated 85 Percent or Better

Many municipalities use standard rating systems for assessing street pavement condition. These systems apply professionally determined criteria and embody scales that provide relatively objective ratings. The measure provides the proportion of street segments that are rated 85 percent or better on the most recent street pavement assessment.

5. Cost of Asphalt Maintenance and Repair

Total cost of asphalt maintenance and repair represents the total direct, indirect, and capital costs taken from the accounting form. “Cost of repaving—contract” represents the annual cost of the contract plus any indirect costs associated with contract administration. “Cost of repaving—city crews” represents direct, indirect, and capital costs associated with an in-house repaving function. “Cost of maintenance” represents total cost from the accounting form minus cost of repaving by contract and municipal crews.

Asphalt Maintenance and Repair

Summary of Key Dimensions of Service

City or Town	Lane Miles Maintained	Number of Registered Motor Vehicles	Total Lane Miles Resurfaced	Total Asphalt Tonnage for Resurfacing	Depth of Resurfacing (in Inches)	Resurfacing Cycle	FTE Positions for City Staff
Asheville	702.2	65,737	8.8	7,550	2.5	79	17.4
Burlington	534.0	54,837	36.1	21,270	1.5	15	16.0
Cary	929.9	104,596	23.0	15,000	1.25	15	13.0
Charlotte	5140.0	526,314	414.7	221,815	2.0 (City) 1.0 (Contractor)	12	123.0
Concord	662.8	63,052	19.7	11,322	1.5	30	11.0
Durham	1808.5	174,045	38.3	23,960	1.5	33	63.3
Greensboro	3624.0	196,249	16.5	8,100	1.25	35	51.0
Greenville	535.3	56,051	0.0	0	1.00	45	6.0
Hickory	719.2	30,352	8.5	4,938	1.5	67	6.1
High Point	1471.0	59,548	11.0	6,352	1.50	133	16.3
Salisbury	343.9	24,354	4.8	3,399	1.5	20	10.0
Wilmington	789.3	116,069	4.5	2,670	1.5 to 2.0	20	17.0
Wilson	682.0	39,560	7.8	3,275	1.5	35	5.5
Winston-Salem	2190.9	172,563	66.0	42,356	1.5	34	41.8

EXPLANATORY FACTORS

These are factors that the project found to affect asphalt maintenance and repair performance and cost in one or more of the municipalities:

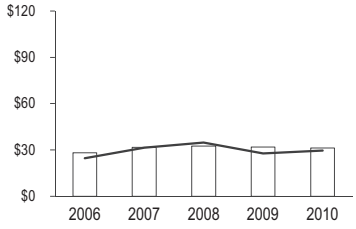
Costs of materials in different cities
Weather conditions and terrain
Vehicle burden placed on streets
Age of street infrastructure
Depth of materials applied in repaving
Extent of contracting

Asheville — Asphalt Maintenance and Repair

Key: Asheville ■ Benchmarking Average — Fiscal Years 2006 through 2010

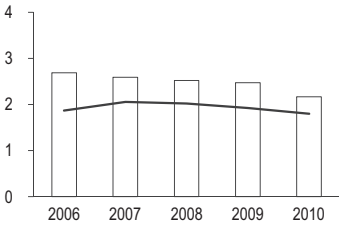
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



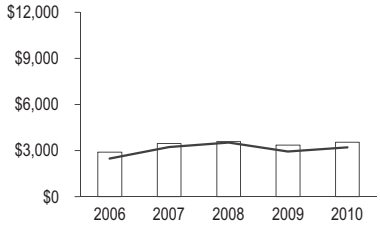
	2006	2007	2008	2009	2010
Asheville	$28.18	$31.68	$32.48	$31.82	$31.22
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Asheville	2.69	2.59	2.53	2.48	2.17
Average	1.87	2.06	2.03	1.92	1.80

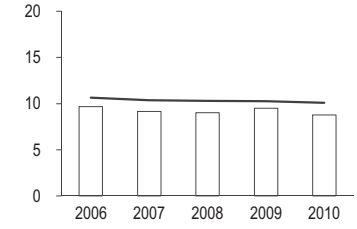
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Asheville	$2,910	$3,465	$3,600	$3,354	$3,556
Average	$2,478	$3,243	$3,536	$2,941	$3,208

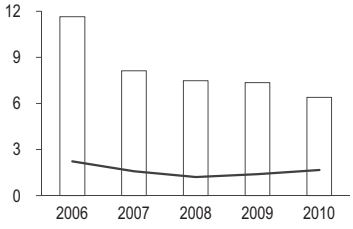
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Asheville	9.7	9.1	9.0	9.5	8.8
Average	10.7	10.3	10.3	10.3	10.1

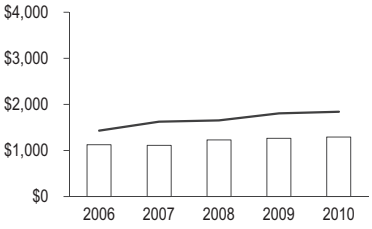
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Asheville	11.66	8.12	7.48	7.36	6.41
Average	2.23	1.58	1.21	1.41	1.67

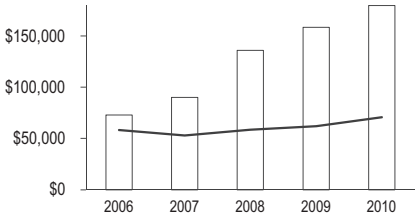
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



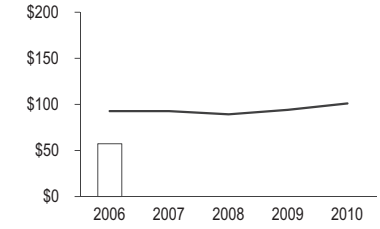
	2006	2007	2008	2009	2010
Asheville	$1,130	$1,112	$1,235	$1,268	$1,295
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Asheville	$72,848	$90,259	$136,074	$158,504	$179,738
Average	$58,305	$53,074	$58,636	$62,174	$70,623

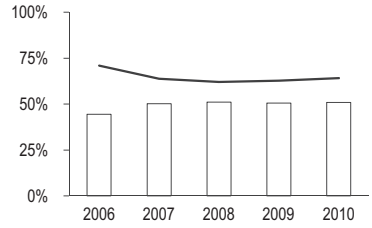
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Asheville	$57				
Average	$93	$93	$89	$94	$101

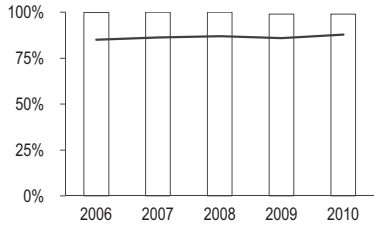
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Asheville	44%	50%	51%	51%	51%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Asheville	100%	100%	100%	99%	99%
Average	85%	86%	87%	86%	88%

Asheville

MUNICIPAL PROFILE

Population (OSBM 2009)	79,973
Land Area (Square Miles)	44.99
Persons per Square Mile	1,778
Topography	Hills, mountains
County	Buncombe
Climate	Moderate; ice and snow
Median Family Income (US Census 2000)	$44,029

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		33.4%
Operating Costs		54.1%
Capital Costs		12.5%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	833,660
Operating Costs	$	1,350,342
Capital Costs	$	312,733
TOTAL	$	2,496,735

SERVICE PROFILE

FTE Positions—Crews	16.28
FTE Positions—Other	1.09
Lane Miles Maintained	702.2
Lane Miles Resurfaced—Contract	0.00
Lane Miles Resurfaced—City	8.83
TOTAL	8.83
Tons of Asphalt Used—Resurfacing	
Contractor	0
City Crews	7,550
Cost of Repaving—Contract	$0
Cost of Repaving—City Crews	$1,587,090
Cost of Maintenance	$909,645
Registered Vehicles	65,737
Registered Vehicles/Square Mile	1,461

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Asheville was responsible for maintaining 702 lane miles during FY 2009–10. The city resurfaced 8.83 lane miles, equating to approximately 1.3 percent of total lane miles. This resurfacing work was done by city crews.

A total of 7,550 tons of asphalt was used. The average resurfacing depth used was 2.5 inches by city crews.

The city reported that 51 percent of its street segments rated 85 percent or above on its most recent rating. The most recent study was conducted by in-house staff using ITRE in 2009.

The number of potholes reported for FY 2009–10 was 4,500. The percentage of potholes repaired within twenty-four hours was approximately 99 percent. The city reported a resurfacing cycle of approximately seventy-nine years.

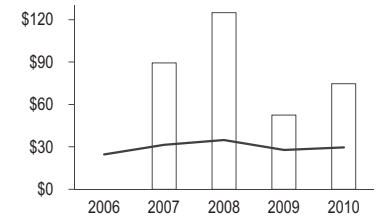
Conditions Affecting Service, Performance, and Costs
Due to the somewhat harsher mountain weather in Asheville compared to the other benchmarking partners, problems with pavement such as potholes tend to be more common.

Burlington — Asphalt Maintenance and Repair

Key: Burlington ■ Benchmarking Average — Fiscal Years 2006 through 2010

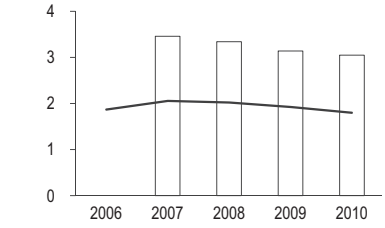
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



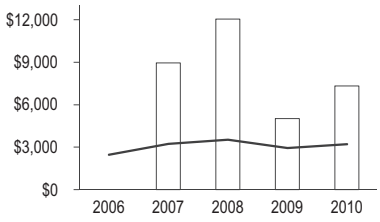
	2006	2007	2008	2009	2010
Burlington		$89.25	$124.96	$52.51	$74.57
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Burlington		3.46	3.34	3.14	3.05
Average	1.87	2.06	2.03	1.92	1.80

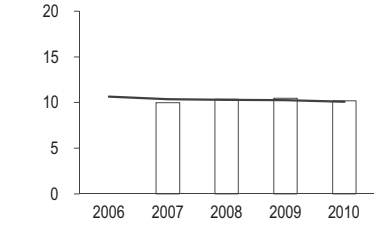
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Burlington		$8,946	$12,045	$5,008	$7,325
Average	$2,478	$3,243	$3,536	$2,941	$3,208

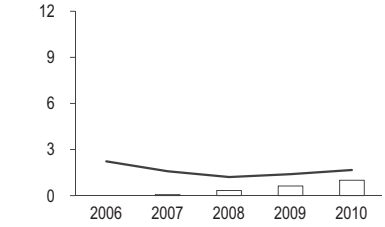
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Burlington		10.0	10.4	10.5	10.2
Average	10.7	10.3	10.3	10.3	10.1

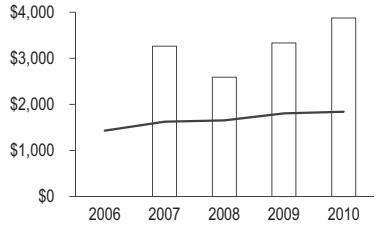
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Burlington		0.08	0.34	0.63	1.01
Average	2.23	1.58	1.21	1.41	1.67

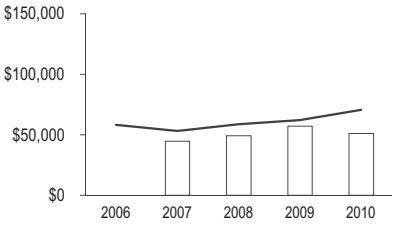
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



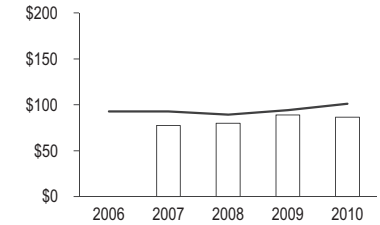
	2006	2007	2008	2009	2010
Burlington		$3,263	$2,590	$3,338	$3,881
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Burlington		$44,842	$49,336	$57,249	$50,942
Average	$58,305	$53,074	$58,636	$62,174	$70,623

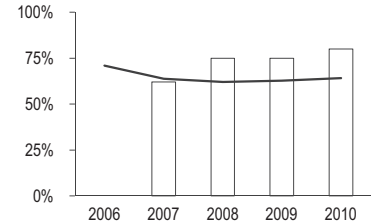
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Burlington		$77	$80	$89	$86
Average	$93	$93	$89	$94	$101

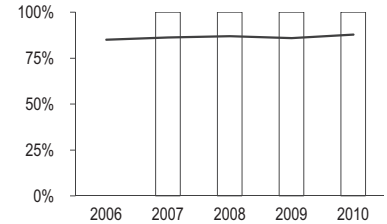
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Burlington		62%	75%	75%	80%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Burlington		100%	100%	100%	100%
Average	85%	86%	87%	86%	88%

Burlington

MUNICIPAL PROFILE

Population (OSBM 2009)	52,457
Land Area (Square Miles)	25.14
Persons per Square Mile	2,087
Topography	Flat; gently rolling
County	Alamance
Climate	Mild; little ice and snow
Median Family Income (US Census 2000)	$45,441

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		18.3%
Operating Costs		70.2%
Capital Costs		11.5%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	717,164
Operating Costs	$	2,745,433
Capital Costs	$	448,990
TOTAL	$	3,911,587

SERVICE PROFILE

FTE Positions—Crews	14.00
FTE Positions—Other	2.00
Lane Miles Maintained	534.0
Lane Miles Resurfaced—Contract	36.11
Lane Miles Resurfaced—City	0.00
TOTAL	36.11
Tons of Asphalt Used—Resurfacing	
Contractor	21,270
City Crews	0
Cost of Repaving—Contract	$1,839,397
Cost of Repaving—City Crews	$0
Cost of Maintenance	$2,072,190
Registered Vehicles	54,837
Registered Vehicles/Square Mile	2,181

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Burlington was responsible for maintaining 534 lane miles during FY 2009–10. The city resurfaced a total of 36.1 lanes miles, equating to approximately 6.8 percent of total lane miles.

All of the lane miles resurfaced were done by contractors. A total of 15,000 tons of asphalt was used during the fiscal year for resurfacing projects. The average resurfacing depth used by contractors was 1.50 inches.

The city reported that 80 percent of its street segments rated 85 percent or above on its most recent rating. The most recent study relied on USI-ITRE and was conducted in 2009.

The city reported a resurfacing cycle of fifteen years.

The city reported a total of 542 potholes with 100 percent repaired within twenty-four hours. The city takes a proactive approach and eliminates many potential potholes before they form. The city covers one-sixth of the city each month looking for potential problems.

Conditions Affecting Service, Performance, and Costs
The City of Burlington began participation in the benchmarking project in 2007 with its first reporting data for FY 2006–07.

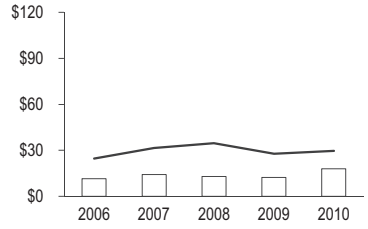
Cary

Asphalt Maintenance and Repair

Key: Cary ■ Benchmarking Average — Fiscal Years 2006 through 2010

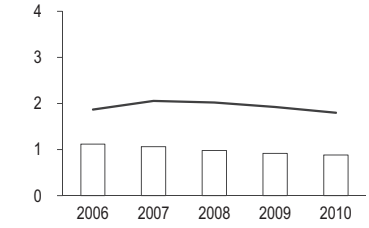
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



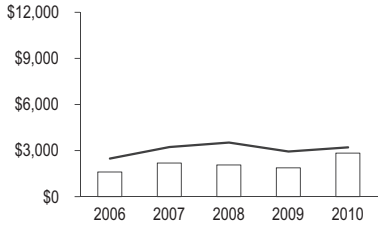
	2006	2007	2008	2009	2010
Cary	$11.37	$14.15	$12.88	$12.24	$17.99
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Cary	1.12	1.06	0.98	0.92	0.88
Average	1.87	2.06	2.03	1.92	1.80

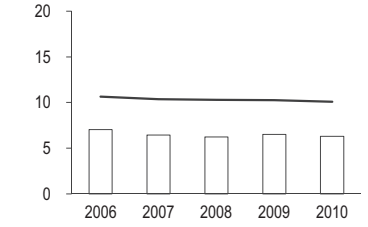
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Cary	$1,618	$2,192	$2,065	$1,875	$2,848
Average	$2,478	$3,243	$3,536	$2,941	$3,208

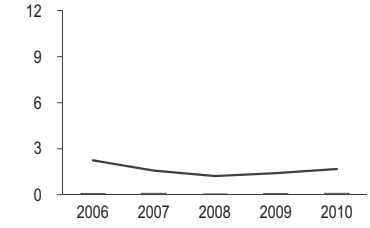
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Cary	7.0	6.5	6.2	6.5	6.3
Average	10.7	10.3	10.3	10.3	10.1

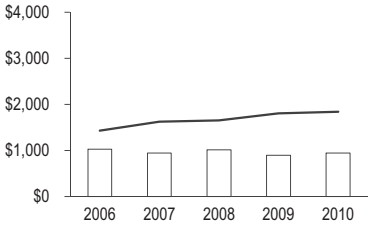
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Cary	0.08	0.08	0.06	0.07	0.09
Average	2.23	1.58	1.21	1.41	1.67

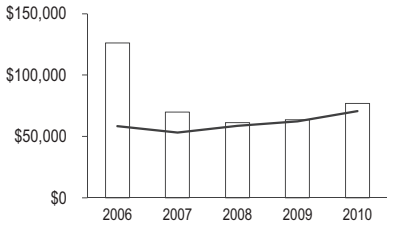
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



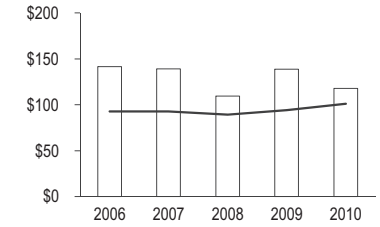
	2006	2007	2008	2009	2010
Cary	$1,029	$945	$1,013	$897	$947
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Cary	$126,20	$69,819	$61,268	$63,530	$76,887
Average	$58,305	$53,074	$58,636	$62,174	$70,623

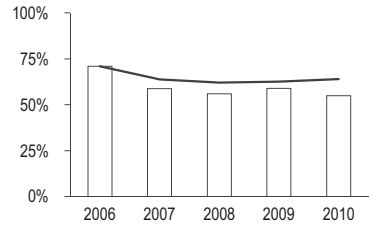
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Cary	$142	$139	$109	$139	$118
Average	$93	$93	$89	$94	$101

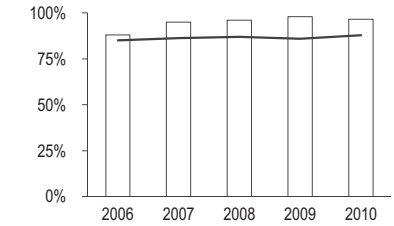
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Cary	71%	59%	56%	59%	55%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Cary	88%	95%	96%	98%	97%
Average	85%	86%	87%	86%	88%

Cary

MUNICIPAL PROFILE

Population (OSBM 2009)	147,282
Land Area (Square Miles)	54.01
Persons per Square Mile	2,727
Topography	Flat; gently rolling
County	Wake
Climate	Mild; little ice and snow
Median Family Income (US Census 2000)	$88,074

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		10.2%
Operating Costs		84.3%
Capital Costs		5.5%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	269,151
Operating Costs	$	2,232,966
Capital Costs	$	146,803
TOTAL	$	2,648,920

SERVICE PROFILE

FTE Positions—Crews	10.25
FTE Positions—Other	2.75
Lane Miles Maintained	929.9
Lane Miles Resurfaced—Contract	23.00
Lane Miles Resurfaced—City	0.00
TOTAL	23.00
Tons of Asphalt Used—Resurfacing	
Contractor	15,000
City Crews	0
Cost of Repaving—Contract	$1,768,397
Cost of Repaving—City Crews	$0
Cost of Maintenance	$880,523
Registered Vehicles	104,596
Registered Vehicles/Square Mile	1,937

EXPLANATORY INFORMATION

Service Level and Delivery
The Town of Cary was responsible for maintaining 929.94 lane miles during FY 2009–10. Contractors resurfaced 23.0 lane miles, equating to approximately 2.5 percent of total lane miles.

A total of 15,000 tons of asphalt was used during the fiscal year by contractors for resurfacing projects. The average resurfacing depth used was 1.25 inches by contractor crews.

The town reported that 55 percent of its street segments rated 85 or above on its most recent rating. The most recent study relied on ITRE and was conducted in March 2009.

The number of potholes reported for FY 2009–10 was eighty-eight. The percentage of potholes repaired within twenty-four hours was 97 percent.

The town reported a resurfacing cycle of fifteen years.

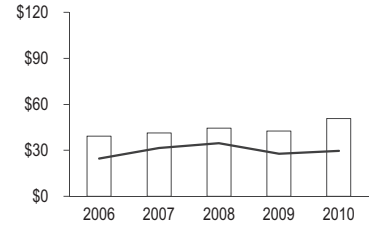
Conditions Affecting Service, Performance, and Costs
Due to the economy, the bidding competition was very aggressive for asphalt repaving during the fiscal year. This aggressive competition allowed the Town to resurface 123 street blocks with the available budget.

Charlotte — Asphalt Maintenance and Repair

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2006 through 2010

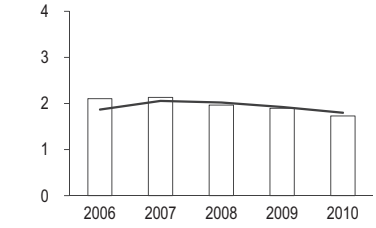
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



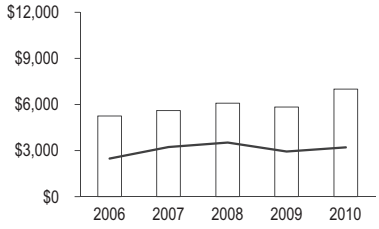
	2006	2007	2008	2009	2010
Charlotte	$39.17	$41.38	$44.37	$42.51	$50.63
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Charlotte	2.11	2.13	1.97	1.90	1.73
Average	1.87	2.06	2.03	1.92	1.80

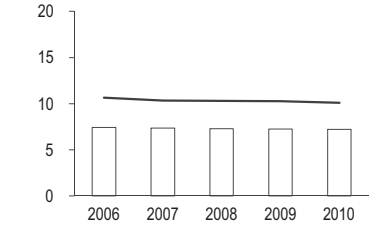
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Charlotte	$5,262	$5,618	$6,097	$5,848	$7,007
Average	$2,478	$3,243	$3,536	$2,941	$3,208

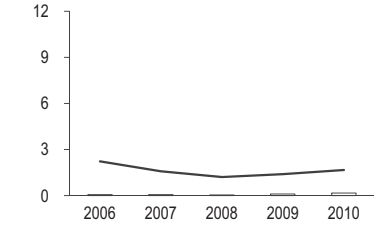
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Charlotte	7.4	7.4	7.3	7.3	7.2
Average	10.7	10.3	10.3	10.3	10.1

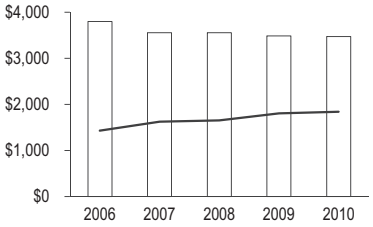
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Charlotte	0.08	0.07	0.06	0.11	0.17
Average	2.23	1.58	1.21	1.41	1.67

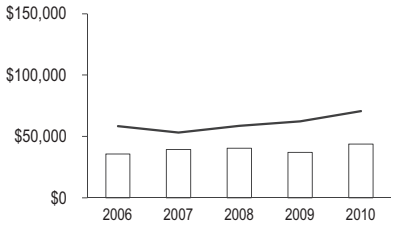
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



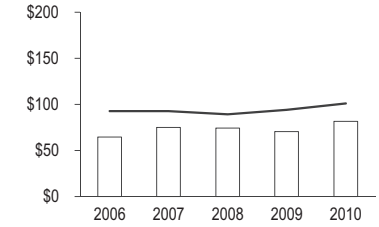
	2006	2007	2008	2009	2010
Charlotte	$3,803	$3,560	$3,555	$3,492	$3,477
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Charlotte	$35,722	$39,401	$40,495	$37,031	$43,756
Average	$58,305	$53,074	$58,636	$62,174	$70,623

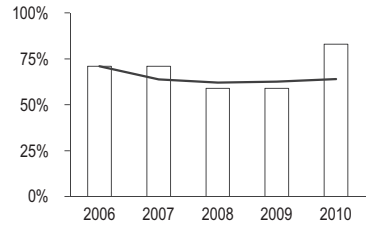
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Charlotte	$65	$75	$74	$71	$82
Average	$93	$93	$89	$94	$101

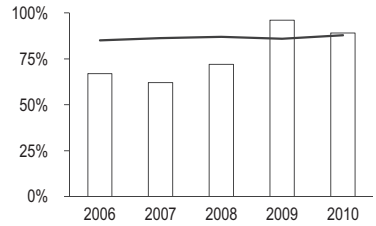
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Charlotte	71%	71%	59%	59%	83%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Charlotte	67%	62%	72%	96%	89%
Average	85%	86%	87%	86%	88%

Charlotte

MUNICIPAL PROFILE

Population (OSBM 2009)	711,349
Land Area (Square Miles)	298.97
Persons per Square Mile	2,379
Topography	Flat; gently rolling
County	Mecklenburg
Climate	Mild; some ice
Median Family Income (US Census 2000)	$56,517

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		16.5%
Operating Costs		73.6%
Capital Costs		9.9%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	5,950,277
Operating Costs	$	26,510,670
Capital Costs	$	3,554,842
TOTAL	$	36,015,789

SERVICE PROFILE

FTE Positions—Crews	105.0
FTE Positions—Other	18.0
Lane Miles Maintained	5,140.0
Lane Miles Resurfaced—Contract	414.7
Lane Miles Resurfaced—City	0.0
TOTAL	414.7
Tons of Asphalt Used—Resurfacing	
Contractor	221,815
City Crews	0
Cost of Repaving—Contract	$18,145,761
Cost of Repaving—City Crews	$0
Cost of Maintenance	$17,870,028
Registered Vehicles	526,314
Registered Vehicles/Square Mile	1,760

EXPLANATORY INFORMATION

Service Level and Delivery

The City of Charlotte was responsible for maintaining 5,140 lane miles during FY 2009–10. The city resurfaced 414.7 lane miles, equating to approximately 8.1 percent of total lane miles.

A total of 221,815 tons of asphalt was used during the fiscal year for resurfacing by contractors. The average resurfacing depth used was one inch by contractors.

The city reported that 83 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2008. The roads were independently rated by U.S. Infrastructure of Carolina.

The number of potholes reported for FY 2009–10 was 895. The percentage of potholes repaired within twenty-four hours was 89 percent. The city reported a resurfacing cycle of twelve years.

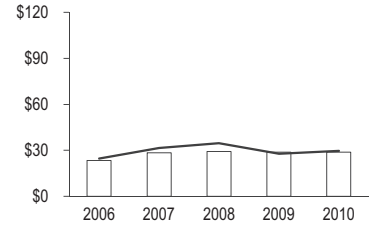
Conditions Affecting Service, Performance, and Costs

Concord — Asphalt Maintenance and Repair

Key: Concord ■ Benchmarking Average — Fiscal Years 2006 through 2010

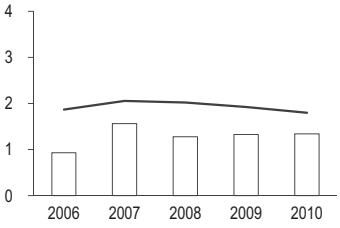
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



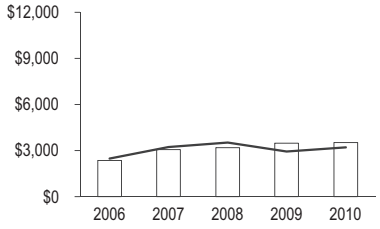
	2006	2007	2008	2009	2010
Concord	$23.39	$28.48	$29.21	$28.83	$28.75
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Concord	0.93	1.57	1.28	1.33	1.35
Average	1.87	2.06	2.03	1.92	1.80

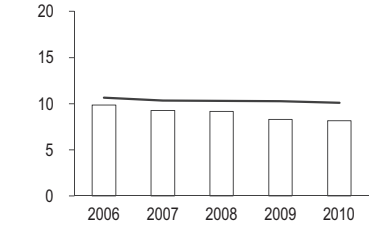
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Concord	$2,370	$3,073	$3,188	$3,478	$3,529
Average	$2,478	$3,243	$3,536	$2,941	$3,208

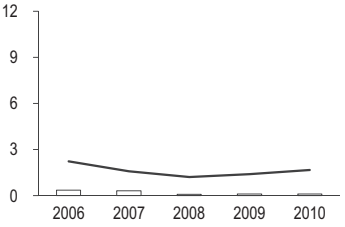
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Concord	9.9	9.3	9.2	8.3	8.1
Average	10.7	10.3	10.3	10.3	10.1

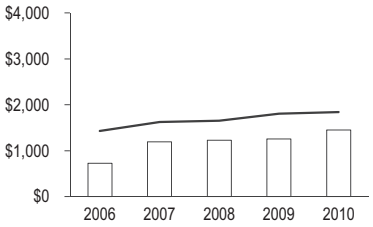
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Concord	0.36	0.31	0.09	0.12	0.11
Average	2.23	1.58	1.21	1.41	1.67

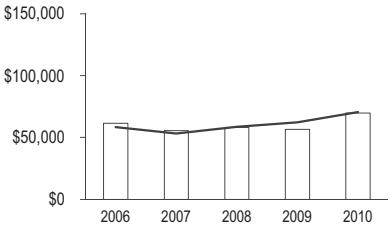
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



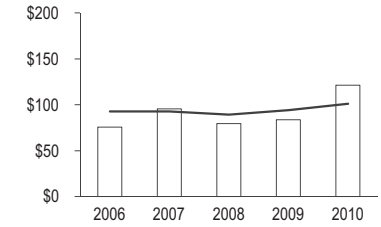
	2006	2007	2008	2009	2010
Concord	$725	$1,195	$1,226	$1,259	$1,453
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Concord	$61,428	$55,550	$58,029	$56,636	$69,801
Average	$58,305	$53,074	$58,636	$62,174	$70,623

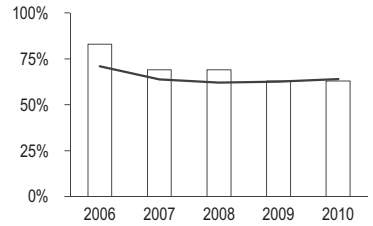
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Concord	$76	$96	$80	$84	$122
Average	$93	$93	$89	$94	$101

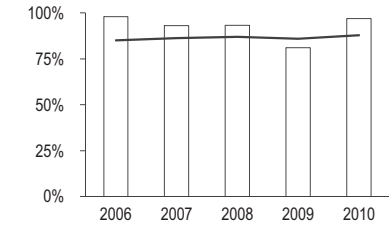
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Concord	83%	69%	69%	63%	63%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Concord	98%	93%	93%	81%	97%
Average	85%	86%	87%	86%	88%

Concord

MUNICIPAL PROFILE

Population (OSBM 2009)	81,370
Land Area (Square Miles)	59.59
Persons per Square Mile	1,365
Topography	Flat; gently rolling
County	Cabarrus
Climate	Mild; some ice
Median Family Income (US Census 2000)	$53,571

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		23.0%
Operating Costs		71.2%
Capital Costs		5.8%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	538,994
Operating Costs	$	1,665,163
Capital Costs	$	134,950
TOTAL	$	2,339,107

SERVICE PROFILE

FTE Positions—Crews	8.00
FTE Positions—Other	2.95
Lane Miles Maintained	662.8
Lane Miles Resurfaced—Contract	19.71
Lane Miles Resurfaced—City	0.00
TOTAL	19.71
Tons of Asphalt Used—Resurfacing	
Contractor	11,322
City Crews	0
Cost of Repaving—Contract	$1,375,782
Cost of Repaving—City Crews	$0
Cost of Maintenance	$963,325
Registered Vehicles	63,052
Registered Vehicles/Square Mile	1,058

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Concord was responsible for maintaining 662.83 lane miles during FY 2009–10. The city resurfaced 19.71 lane miles, equating to 3.0 percent of total lane miles.

A total of 11,322 tons of asphalt was used during the fiscal year for resurfacing projects completed by contractors. The average resurfacing depth used was 1.5 inches. In addition, city crews did some of the repaving work by performing the "out ahead" work for the resurfacing operations. In the past, this was included as an item in the city repaving contract and performed by the contractor as part of the contract. Concord has found recently that it can perform this operation cheaper and faster with city crews than contracting it.

The city reported that 63 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2008. The street rating was conducted in-house using the Cartagraph Pavement View software system. This ranking system uses a 0 to 100 point (at 10-point intervals) scale based on a number of physical factors including ride, geometrics, rutting, and distress. Once the physical factors are entered for each street segment, the software automatically ranks all street segments according to pavement quality.

The number of potholes reported for FY 2009–10 was seventy-two, including those reported by citizens and the city. The percentage of potholes repaired within twenty-four hours was 97 percent. The city reported a resurfacing cycle of approximately thirty years.

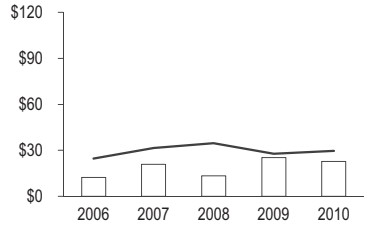
Conditions Affecting Service, Performance, and Costs
The costs associated with the maintenance and resurfacing are influenced by competition due to the location of three asphalt plants within the city limits.

Durham — Asphalt Maintenance and Repair

Key: Durham ■ Benchmarking Average — Fiscal Years 2006 through 2010

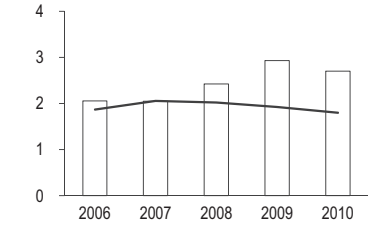
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



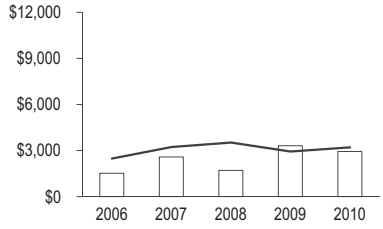
	2006	2007	2008	2009	2010
Durham	$12.20	$20.86	$13.44	$25.28	$22.79
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Durham	2.06	2.05	2.43	2.93	2.70
Average	1.87	2.06	2.03	1.92	1.80

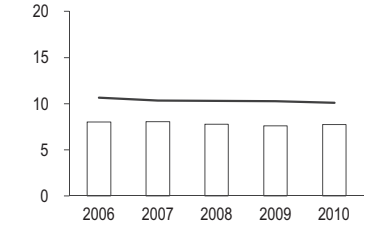
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Durham	$1,523	$2,590	$1,726	$3,327	$2,951
Average	$2,478	$3,243	$3,536	$2,941	$3,208

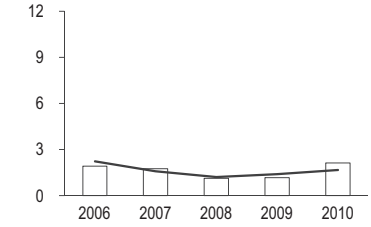
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Durham	8.0	8.1	7.8	7.6	7.7
Average	10.7	10.3	10.3	10.3	10.1

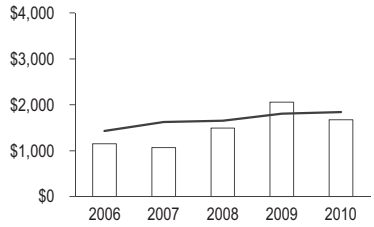
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Durham	1.91	1.75	1.14	1.17	2.14
Average	2.23	1.58	1.21	1.41	1.67

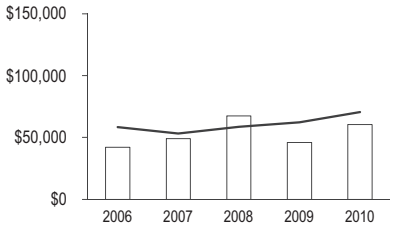
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



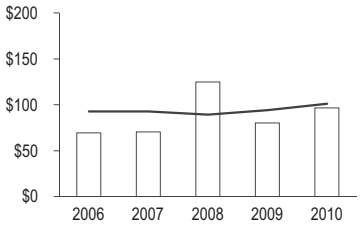
	2006	2007	2008	2009	2010
Durham	$1,154	$1,070	$1,497	$2,055	$1,672
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Durham	$42,125	$49,085	$67,376	$45,813	$60,375
Average	$58,305	$53,074	$58,636	$62,174	$70,623

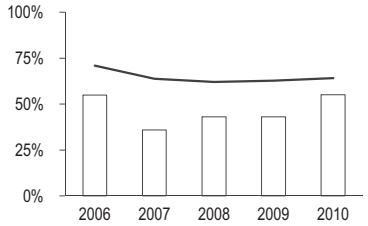
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Durham	$70	$71	$125	$80	$97
Average	$93	$93	$89	$94	$101

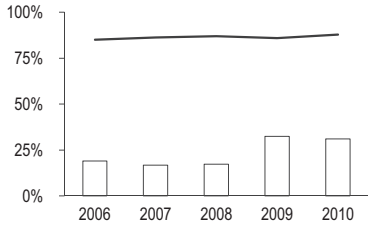
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Durham	55%	36%	43%	43%	55%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Durham	19%	17%	17%	33%	31%
Average	85%	86%	87%	86%	88%

Durham

MUNICIPAL PROFILE

Population (OSBM 2009)	234,140
Land Area (Square Miles)	105.59
Persons per Square Mile	2,217
Topography	Flat; gently rolling
County	Durham
Climate	Temperate; little ice and snow
Median Family Income (US Census 2000)	$51,162

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		16.6%
Operating Costs		70.9%
Capital Costs		12.6%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	884,814
Operating Costs	$	3,781,110
Capital Costs	$	670,714
TOTAL	$	5,336,638

SERVICE PROFILE

FTE Positions—Crews	59.0
FTE Positions—Other	4.3
Lane Miles Maintained	1,808.5
Lane Miles Resurfaced—Contract	38.30
Lane Miles Resurfaced—City	0.00
TOTAL	38.30
Tons of Asphalt Used—Resurfacing	
Contractor	23,960
City Crews	0
Cost of Repaving—Contract	$2,312,363
Cost of Repaving—City Crews	$0
Cost of Maintenance	$3,024,275
Registered Vehicles	174,045
Registered Vehicles/Square Mile	1,648

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Durham was responsible for maintaining 1,808.47 lane miles during FY 2009–10, including 401.57 lane miles of state roads.

The city obtained authority through a bond authorization for a significant increase in street repaving. This project will spend these additional funds over several years. The city resurfaced 38.3 miles, equating to 2.1 percent of total lane miles. A total of 23,960 tons of asphalt was used during the fiscal year for resurfacing projects completed by contractors. The average resurfacing depth in the city was 1.5 inches.

The city reported that 55 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2007. The city used ITRE as its rating system.

The number of potholes reported for FY 2009–10 was 3,870 including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 31.0 percent. Durham reported a resurfacing cycle of thirty-three years.

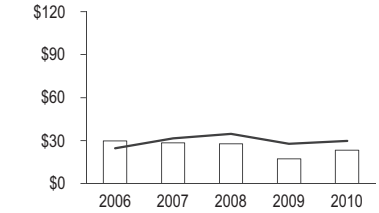
Conditions Affecting Service, Performance, and Costs
Ten new personnel were hired during FY 2008–09 to expand the work the city was able to do.

Greensboro — Asphalt Maintenance and Repair

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2006 through 2010

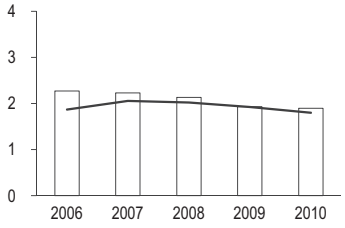
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



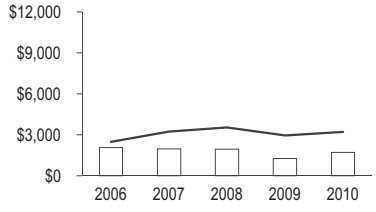
	2006	2007	2008	2009	2010
Greensboro	$29.71	$28.48	$27.82	$17.29	$23.22
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Greensboro	2.28	2.23	2.14	1.93	1.90
Average	1.87	2.06	2.03	1.92	1.80

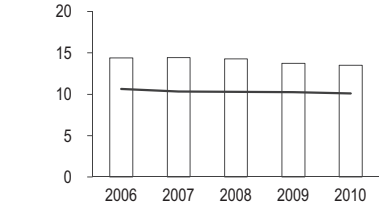
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Greensboro	$2,062	$1,972	$1,948	$1,259	$1,719
Average	$2,478	$3,243	$3,536	$2,941	$3,208

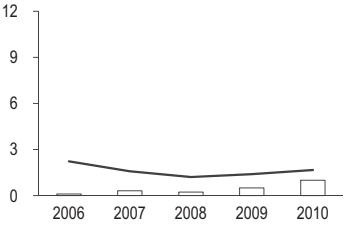
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Greensboro	14.4	14.4	14.3	13.7	13.5
Average	10.7	10.3	10.3	10.3	10.1

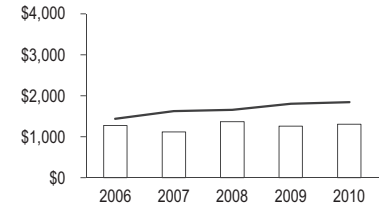
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Greensboro	0.12	0.33	0.23	0.50	1.02
Average	2.23	1.58	1.21	1.41	1.67

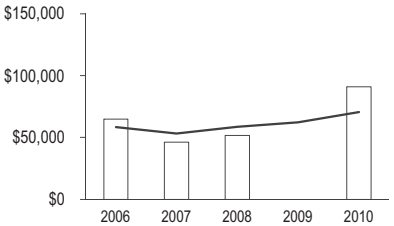
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



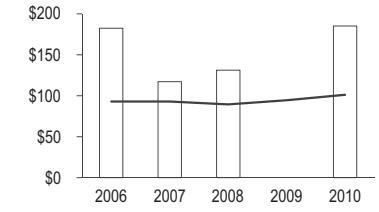
	2006	2007	2008	2009	2010
Greensboro	$1,272	$1,113	$1,365	$1,259	$1,305
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Greensboro	$64,904	$46,225	$51,754		$90,909
Average	$58,305	$53,074	$58,636	$62,174	$70,623

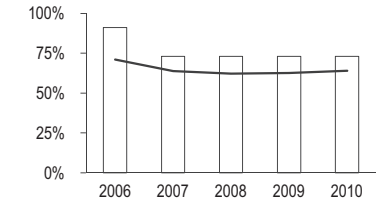
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Greensboro	$182	$117	$131		$185
Average	$93	$93	$89	$94	$101

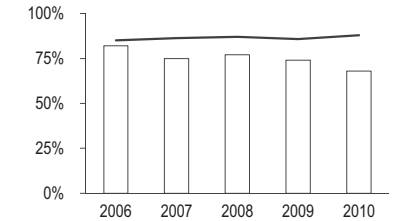
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Greensboro	91%	73%	73%	73%	73%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Greensboro	82%	75%	77%	74%	68%
Average	85%	86%	87%	86%	88%

Greensboro

MUNICIPAL PROFILE

Population (OSBM 2009)	268,283
Land Area (Square Miles)	127.75
Persons per Square Mile	2,100
Topography	Flat; gently rolling
County	Guilford
Climate	Temperate; some ice and snow
Median Family Income (US Census 2000)	$50,192

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		32.1%
Operating Costs		67.9%
Capital Costs		0.0%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	1,999,179
Operating Costs	$	4,229,300
Capital Costs	$	-
TOTAL	$	6,228,479

SERVICE PROFILE

FTE Positions—Crews	45.0
FTE Positions—Other	6.0
Lane Miles Maintained	3,624.0
Lane Miles Resurfaced—Contract	16.50
Lane Miles Resurfaced—City	0.00
TOTAL	16.50
Tons of Asphalt Used—Resurfacing	
Contractor	8,100
City Crews	0
Cost of Repaving—Contract	$1,500,000
Cost of Repaving—City Crews	$0
Cost of Maintenance	$4,728,479
Registered Vehicles	196,249
Registered Vehicles/Square Mile	1,536

EXPLANATORY INFORMATION

Service Level and Delivery
The city of Greensboro was responsible for maintaining 3,624 lane miles during FY 2009–10. This includes 925 lane miles of state roads.

Greensbor resurfaced 16.5 lane miles during FY 2009–10, equal to about 0.5 percent of total lane miles.

The city reported that 73 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2007. The pavement rating was done by a contractor.

The number of potholes reported for FY 2009–10 was 3,685. The percentage of potholes repaired within twenty-four hours was 68 percent. The city reported a resurfacing cycle of thirty-five years.

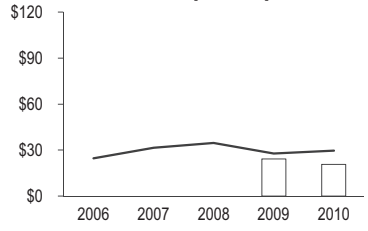
Conditions Affecting Service, Performance, and Costs
Changes in tracking software have improved the accuracy of potholes reported and asphalt used.

Greenville — Asphalt Maintenance and Repair

Key: Greenville ■ Benchmarking Average — Fiscal Years 2006 through 2010

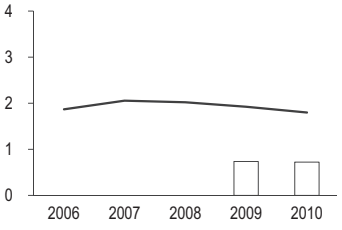
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



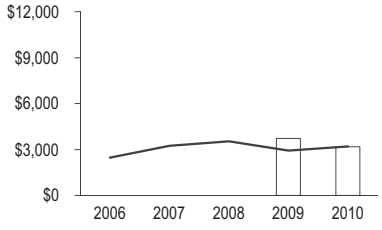
	2006	2007	2008	2009	2010
Greenville				$24.15	$20.61
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Greenville				0.74	0.73
Average	1.87	2.06	2.03	1.92	1.80

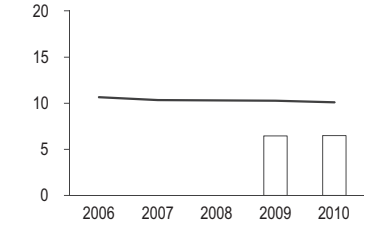
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Greenville				$3,731	$3,179
Average	$2,478	$3,243	$3,536	$2,941	$3,208

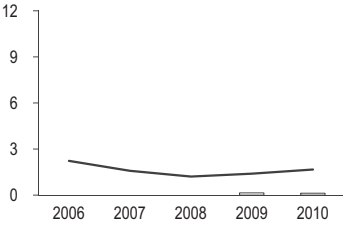
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Greenville				6.5	6.5
Average	10.7	10.3	10.3	10.3	10.1

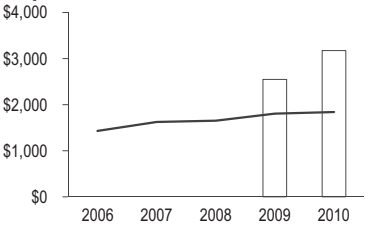
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Greenville				0.14	0.14
Average	2.23	1.58	1.21	1.41	1.67

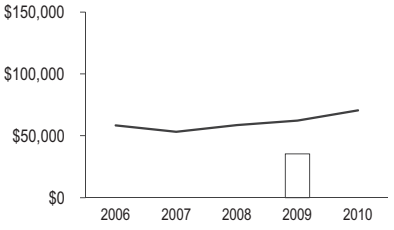
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



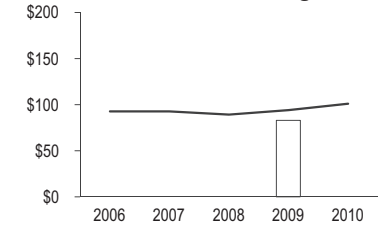
	2006	2007	2008	2009	2010
Greenville				$2,551	$3,179
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Greenville				$35,377	
Average	$58,305	$53,074	$58,636	$62,174	$70,623

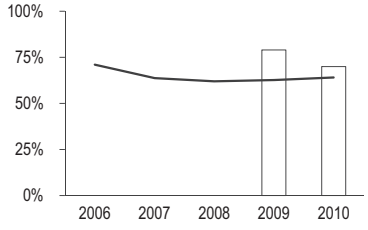
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Greenville				$83	
Average	$93	$93	$89	$94	$101

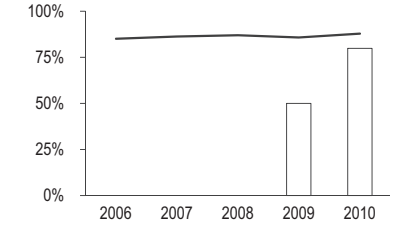
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Greenville				79%	70%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Greenville				50%	80%
Average	85%	86%	87%	86%	88%

Greenville

MUNICIPAL PROFILE

Population (OSBM 2009)	82,571
Land Area (Square Miles)	35.01
Persons per Square Mile	2,358
Topography	Flat
County	Pitt
Climate	Mild; little ice and snow
Median Family Income (US Census 2000)	$44,491

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		36.8%
Operating Costs		47.0%
Capital Costs		16.3%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	625,561
Operating Costs	$	799,153
Capital Costs	$	277,099
TOTAL	$	1,701,813

SERVICE PROFILE

FTE Positions—Crews	5.0
FTE Positions—Other	1.0
Lane Miles Maintained	535.3
Lane Miles Resurfaced—Contract	0.00
Lane Miles Resurfaced—City	0.00
TOTAL	0.00
Tons of Asphalt Used—Resurfacing	
Contractor	0
City Crews	0
Cost of Repaving—Contract	$0
Cost of Repaving—City Crews	$0
Cost of Maintenance	$1,701,813
Registered Vehicles	56,051
Registered Vehicles/Square Mile	1,601

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Greenville was responsible for maintaining 535.34 lane miles during FY 2009–10, all city streets.

the city did no resurfacing projects during the fiscal year.

The city reported that 70 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2007. The city used USI to conduct its rating system.

The number of potholes reported for FY 2009–10 was 75, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 80 percent. The city reported a resurfacing cycle of forty-five years.

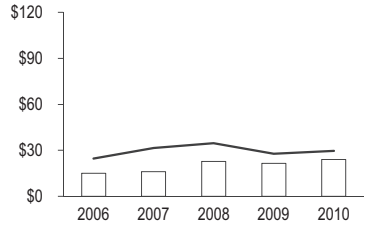
Conditions Affecting Service, Performance, and Costs
Greenville joined the project with the first year of reporting for FY 2008–09.

Hickory — Asphalt Maintenance and Repair

Key: Hickory ■ Benchmarking Average — Fiscal Years 2006 through 2010

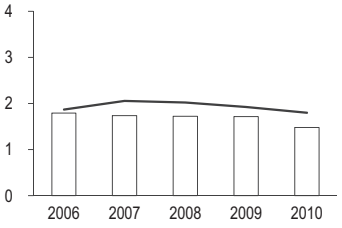
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



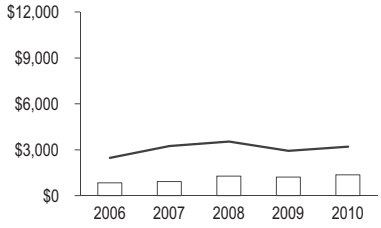
	2006	2007	2008	2009	2010
Hickory	$15.05	$16.16	$22.71	$21.47	$24.03
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Hickory	1.79	1.74	1.73	1.72	1.48
Average	1.87	2.06	2.03	1.92	1.80

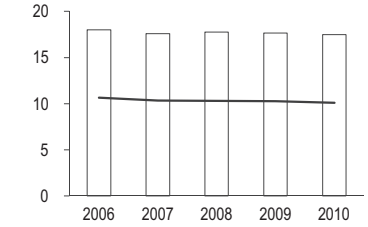
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Hickory	$836	$919	$1,280	$1,217	$1,375
Average	$2,478	$3,243	$3,536	$2,941	$3,208

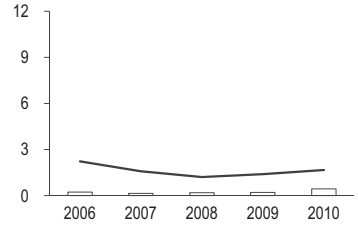
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Hickory	18.0	17.6	17.7	17.6	17.5
Average	10.7	10.3	10.3	10.3	10.1

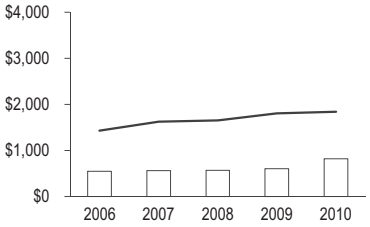
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Hickory	0.24	0.15	0.19	0.23	0.44
Average	2.23	1.58	1.21	1.41	1.67

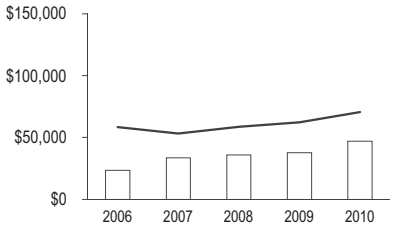
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



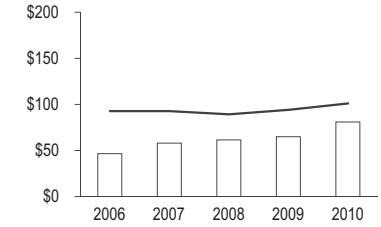
	2006	2007	2008	2009	2010
Hickory	$551	$565	$575	$610	$819
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Hickory	$23,529	$33,647	$35,948	$37,699	$46,948
Average	$58,305	$53,074	$58,636	$62,174	$70,623

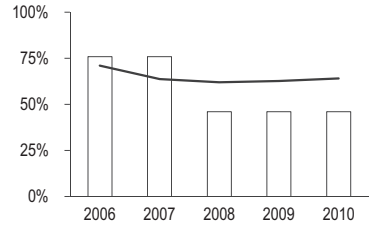
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Hickory	$47	$58	$62	$65	$81
Average	$93	$93	$89	$94	$101

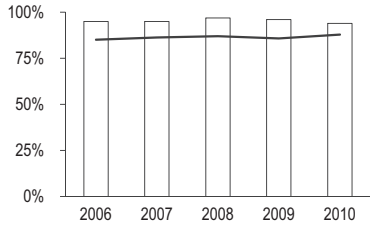
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Hickory	76%	76%	46%	46%	46%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Hickory	95%	95%	97%	96%	94%
Average	85%	86%	87%	86%	88%

Hickory

MUNICIPAL PROFILE

Population (OSBM 2009)	41,151
Land Area (Square Miles)	29.28
Persons per Square Mile	1,405
Topography	Gently rolling
County	Catawba
Climate	Moderate; some ice and snow
Median Family Income (US Census 2000)	$47,522

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		28.1%
Operating Costs		55.0%
Capital Costs		16.9%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	277,926
Operating Costs	$	543,512
Capital Costs	$	167,528
TOTAL	$	988,966

SERVICE PROFILE

FTE Positions—Crews	6.0
FTE Positions—Other	0.1
Lane Miles Maintained	719.2
Lane Miles Resurfaced—Contract	8.52
Lane Miles Resurfaced—City	0.00
TOTAL	8.52
Tons of Asphalt Used—Resurfacing	
Contractor	4,938
City Crews	0
Cost of Repaving—Contract	$400,000
Cost of Repaving—City Crews	$0
Cost of Maintenance	$588,966
Registered Vehicles	30,352
Registered Vehicles/Square Mile	1,037

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Hickory was responsible for maintaining 719.2 lane miles during FY 2009–10 including 238.8 lane miles of state roads.

The city resurfaced 8.52 lane miles under contract, equating to 1.2 percent of total lane miles. A total of 4,938 tons of asphalt was used by the contractor during the fiscal year for resurfacing projects. The average resurfacing depth used by the city was 1.5 inches.

The city reported that 48 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2007. The city used ITRE to conduct its rating system.

The number of potholes reported for FY 2009–10 was 315, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 94 percent. The city reported a resurfacing cycle of sixty-seven years.

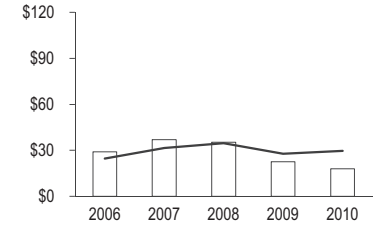
Conditions Affecting Service, Performance, and Costs
Hickory experienced one of its hardest winters in the last two decades. This combination of cold and wet weather led to increases in potholes and reduced ability to seal cracks.

High Point — Asphalt Maintenance and Repair

Key: High Point ■ Benchmarking Average — Fiscal Years 2006 through 2010

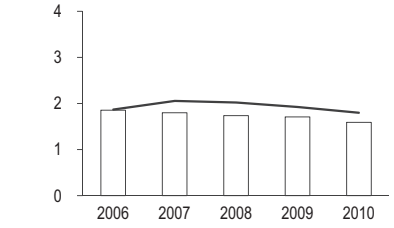
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



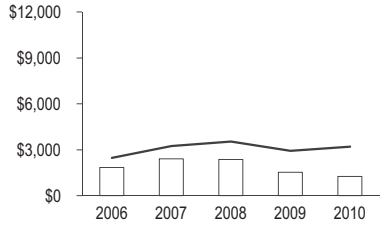
	2006	2007	2008	2009	2010
High Point	$28.91	$36.86	$35.32	$22.47	$18.03
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
High Point	1.86	1.80	1.74	1.71	1.59
Average	1.87	2.06	2.03	1.92	1.80

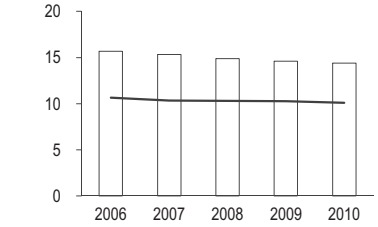
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
High Point	$1,845	$2,403	$2,372	$1,537	$1,253
Average	$2,478	$3,243	$3,536	$2,941	$3,208

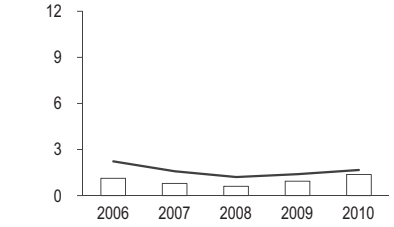
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
High Point	15.7	15.3	14.9	14.6	14.4
Average	10.7	10.3	10.3	10.3	10.1

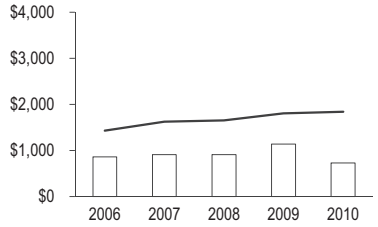
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
High Point	1.13	0.81	0.62	0.95	1.38
Average	2.23	1.58	1.21	1.41	1.67

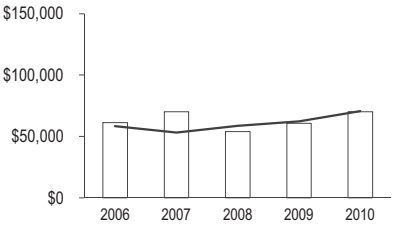
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



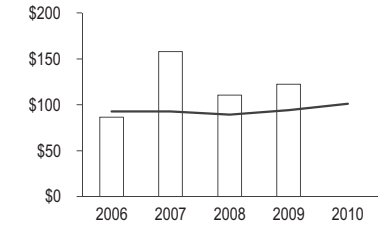
	2006	2007	2008	2009	2010
High Point	$867	$910	$911	$1,140	$729
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
High Point	$61,127	$70,174	$53,872	$60,711	$70,189
Average	$58,305	$53,074	$58,636	$62,174	$70,623

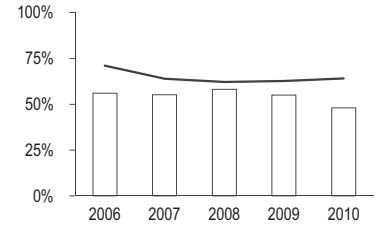
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
High Point	$87	$158	$110	$122	
Average	$93	$93	$89	$94	$101

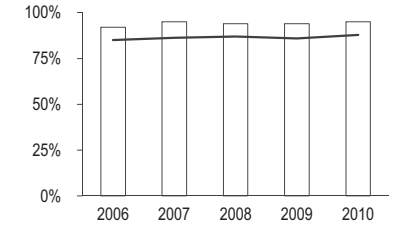
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
High Point	56%	55%	58%	55%	48%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
High Point	92%	95%	94%	94%	95%
Average	85%	86%	87%	86%	88%

High Point

MUNICIPAL PROFILE

Population (OSBM 2009)	102,216
Land Area (Square Miles)	54.05
Persons per Square Mile	1,891
Topography	Flat; gently rolling
County	Guilford
Climate	Temperate; some ice and snow
Median Family Income (US Census 2000)	$48,057

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		37.0%
Operating Costs		53.0%
Capital Costs		10.0%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	682,353
Operating Costs	$	975,854
Capital Costs	$	184,722
TOTAL		1,842,929

SERVICE PROFILE

FTE Positions—Crews	15.0
FTE Positions—Other	1.3
Lane Miles Maintained	1,471.0
Lane Miles Resurfaced—Contract	0.00
Lane Miles Resurfaced—City	10.98
TOTAL	10.98
Tons of Asphalt Used—Resurfacing	
Contractor	0
City Crews	6,352
Cost of Repaving—Contract	$0
Cost of Repaving—City Crews	$770,676
Cost of Maintenance	$1,072,253
Registered Vehicles	59,548
Registered Vehicles/Square Mile	1,102

EXPLANATORY INFORMATION

Service Level and Delivery
The City of High Point was responsible for maintaining 1,471 lane miles during FY 2009–10. This includes 340 lane miles of state roads.

The city resurfaced a total of 10.98 lane miles with city crews during FY 2009–10, equal to approximately 0.7 percent of total lane miles. A total of 6,352 tons of asphalt was used for resurfacing projects. The average resurfacing depth was 1.50 inches by city crews.

The city reported that 48 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2007. The city used the ITRE rating system.

The number of potholes reported for FY 2009–10 was 2,028, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 95 percent.

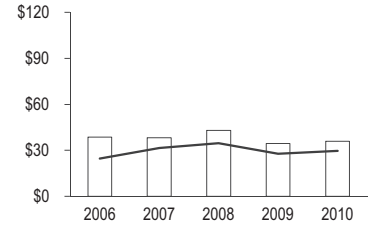
Conditions Affecting Service, Performance, and Costs
Because of a reduction in funds for resurfacing projects, no contract resurfacing was done during the year. High Point did more work on patching and pothole repair to address some of the problems not fixed by the cut in contract resurfacing.

Salisbury — Asphalt Maintenance and Repair

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2006 through 2010

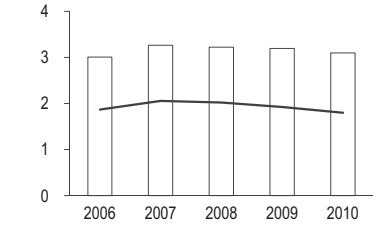
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



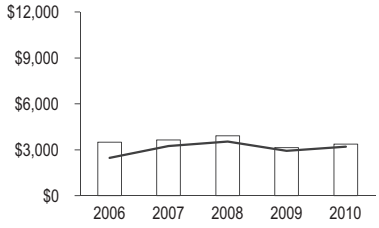
	2006	2007	2008	2009	2010
Salisbury	$38.71	$38.23	$42.94	$34.45	$36.00
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Salisbury	3.01	3.26	3.22	3.19	3.10
Average	1.87	2.06	2.03	1.92	1.80

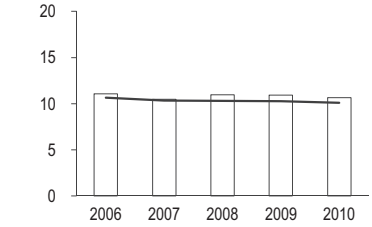
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Salisbury	$3,502	$3,646	$3,922	$3,154	$3,378
Average	$2,478	$3,243	$3,536	$2,941	$3,208

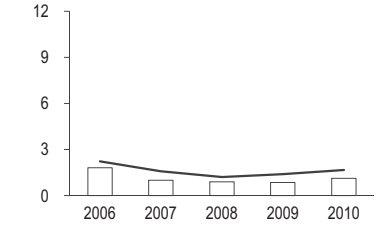
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Salisbury	11.1	10.5	10.9	10.9	10.7
Average	10.7	10.3	10.3	10.3	10.1

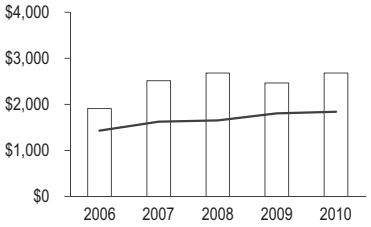
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Salisbury	1.83	1.00	0.91	0.87	1.14
Average	2.23	1.58	1.21	1.41	1.67

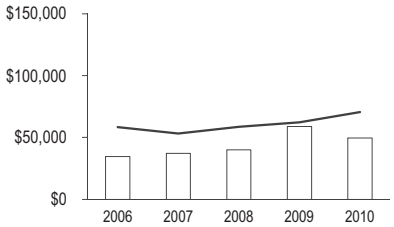
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



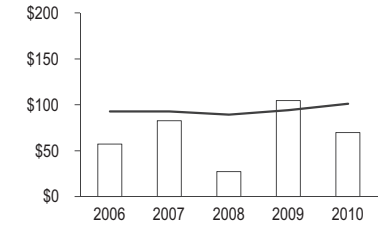
	2006	2007	2008	2009	2010
Salisbury	$1,913	$2,514	$2,685	$2,466	$2,686
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Salisbury	$34,511	$37,107	$40,002	$58,837	$49,559
Average	$58,305	$53,074	$58,636	$62,174	$70,623

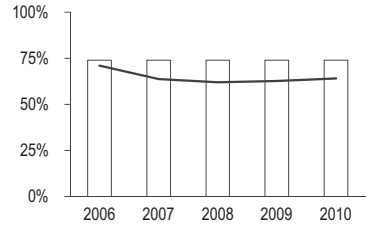
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Salisbury	$57	$83	$27	$105	$70
Average	$93	$93	$89	$94	$101

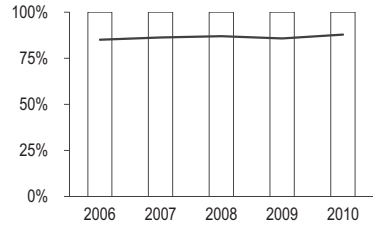
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Salisbury	74%	74%	74%	74%	74%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Salisbury	100%	100%	100%	100%	100%
Average	85%	86%	87%	86%	88%

Salisbury

MUNICIPAL PROFILE

Population (OSBM 2009)	32,263
Land Area (Square Miles)	21.93
Persons per Square Mile	1,471
Topography	Gently rolling
County	Rowan
Climate	Moderate; some ice and snow
Median Family Income (US Census 2000)	$41,108

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		30.4%
Operating Costs		46.7%
Capital Costs		22.9%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	352,771
Operating Costs	$	542,830
Capital Costs	$	265,880
TOTAL	$	1,161,481

SERVICE PROFILE

FTE Positions—Crews	9.00
FTE Positions—Other	1.00
Lane Miles Maintained	343.9
Lane Miles Resurfaced—Contract	4.80
Lane Miles Resurfaced—City	0.00
TOTAL	4.80
Tons of Asphalt Used—Resurfacing	
Contractor	3,399
City Crews	0
Cost of Repaving—Contract	$237,885
Cost of Repaving—City Crews	$0
Cost of Maintenance	$923,596
Registered Vehicles	24,354
Registered Vehicles/Square Mile	1,111

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Salisbury was responsible for maintaining 343.86 lane miles during FY 2009–10.

The city resurfaced 4.8 lane miles, equating to approximately 1.4 percent of total lane miles. A total of 3,339 tons of asphalt was used during the fiscal year by contractors for resurfacing projects. The average resurfacing depth used by the contractor was 1.5 inches.

The city reported that 74 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2005. The city used ITRE as its rating system.

The number of potholes reported for FY 2009–10 was 392. The percentage of potholes repaired within twenty-four hours was 100 percent. The city reported a resurfacing cycle of twenty years.

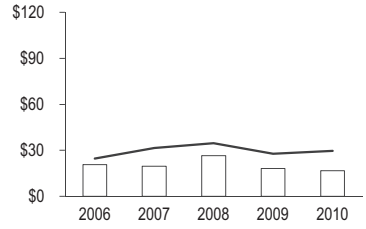
Conditions Affecting Service, Performance, and Costs
The high price of oil significantly increased the cost of asphalt used for resurfacing and repair work.

Wilmington — Asphalt Maintenance and Repair

Key: Wilmington ■ Benchmarking Average — Fiscal Years 2006 through 2010

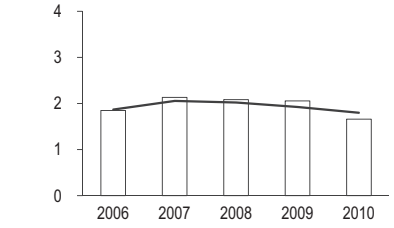
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



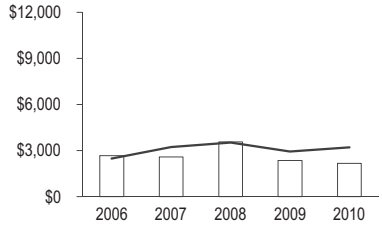
	2006	2007	2008	2009	2010
Wilmington	$20.59	$19.60	$26.43	$18.07	$16.72
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Wilmington	1.85	2.13	2.08	2.06	1.66
Average	1.87	2.06	2.03	1.92	1.80

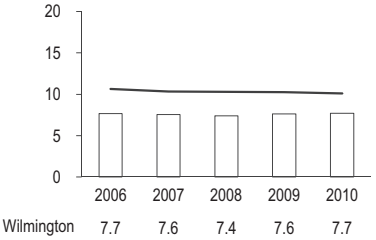
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Wilmington	$2,681	$2,589	$3,569	$2,369	$2,165
Average	$2,478	$3,243	$3,536	$2,941	$3,208

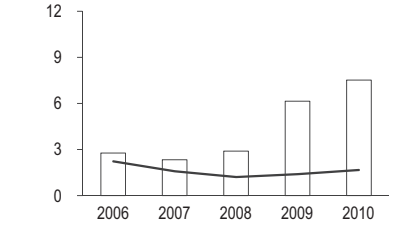
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Wilmington	7.7	7.6	7.4	7.6	7.7
Average	10.7	10.3	10.3	10.3	10.1

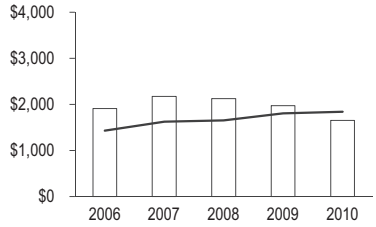
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Wilmington	2.77	2.34	2.91	6.16	7.53
Average	2.23	1.58	1.21	1.41	1.67

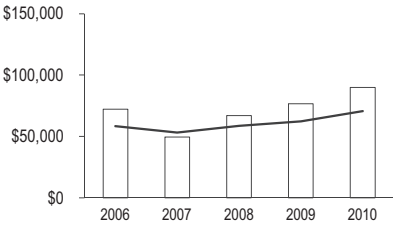
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



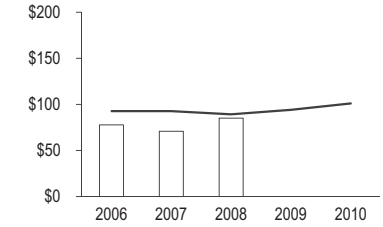
	2006	2007	2008	2009	2010
Wilmington	$1,912	$2,174	$2,128	$1,977	$1,653
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Wilmington	$72,292	$49,479	$66,908	$76,727	$90,023
Average	$58,305	$53,074	$58,636	$62,174	$70,623

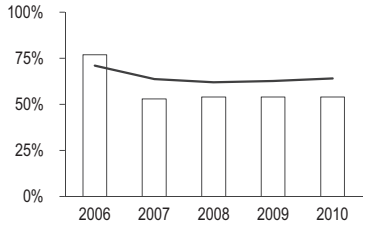
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Wilmington	$78	$71	$85		
Average	$93	$93	$89	$94	$101

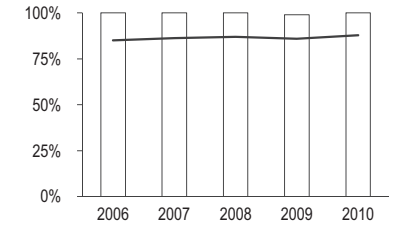
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Wilmington	77%	53%	54%	54%	54%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Wilmington	100%	100%	100%	99%	100%
Average	85%	86%	87%	86%	88%

Wilmington

MUNICIPAL PROFILE

Population (OSBM 2009)	102,207
Land Area (Square Miles)	51.55
Persons per Square Mile	1,983
Topography	Flat; coastal plain
County	New Hanover
Climate	Mild
Median Family Income (US Census 2000)	$41,891

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		46.2%
Operating Costs		35.5%
Capital Costs		18.2%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	790,395
Operating Costs	$	607,453
Capital Costs	$	311,176
TOTAL	$	1,709,024

SERVICE PROFILE

FTE Positions—Crews	15.0
FTE Positions—Other	2.0
Lane Miles Maintained	789.3
Lane Miles Resurfaced—Contract	0.00
Lane Miles Resurfaced—City	4.49
TOTAL	4.49
Tons of Asphalt Used—Resurfacing	
Contractor	0
City Crews	2,670
Cost of Repaving—Contract	$0
Cost of Repaving—City Crews	$404,205
Cost of Maintenance	$1,304,819
Registered Vehicles	116,069
Registered Vehicles/Square Mile	2,252

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Wilmington was responsible for maintaining 789.26 lane miles during FY 2009–10.

The city resurfaced 4.49 lane miles, equating to approximately 0.6 percent of total lane miles. A total of 2,670 tons of asphalt was used for resurfacing projects done by city crews during the fiscal year. The average resurfacing depth used was 1.5 to 2.0 inches.

The city reported that 54 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2006. The street rating was conducted using MicroPaver.

The number of potholes reported for FY 2009–10 was 5,941. The percentage of potholes repaired within twenty-four hours was one hundred percent. The city reported a resurfacing cycle of twenty years.

Conditions Affecting Service, Performance, and Costs
The high price of oil significantly increased the cost of asphalt used for resurfacing and repair work.

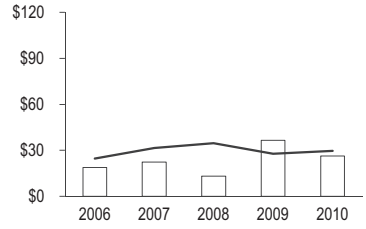
Maintenance costs for FY 2006–07 included money for repair work in preparation for pavement rehabilitation activities for the next year.

Wilson — Asphalt Maintenance and Repair

Key: Wilson ■ Benchmarking Average — Fiscal Years 2006 through 2010

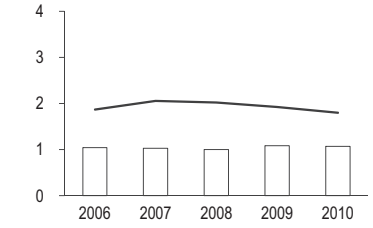
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



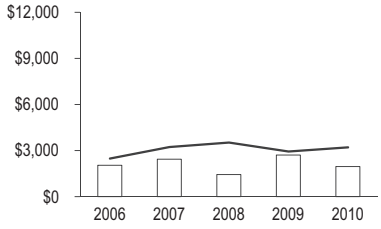
	2006	2007	2008	2009	2010
Wilson	$18.81	$22.25	$13.10	$36.44	$26.28
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Wilson	1.05	1.03	1.00	1.09	1.07
Average	1.87	2.06	2.03	1.92	1.80

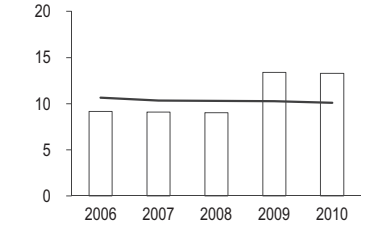
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Wilson	$2,054	$2,445	$1,455	$2,721	$1,976
Average	$2,478	$3,243	$3,536	$2,941	$3,208

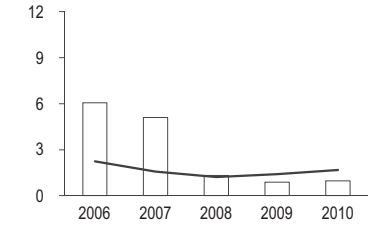
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Wilson	9.2	9.1	9.0	13.4	13.3
Average	10.7	10.3	10.3	10.3	10.1

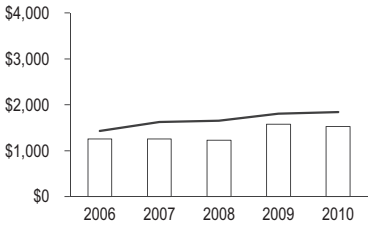
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Wilson	6.05	5.09	1.33	0.88	0.96
Average	2.23	1.58	1.21	1.41	1.67

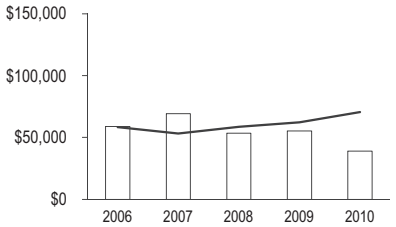
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



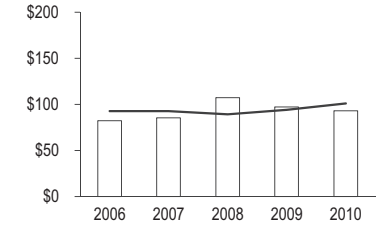
	2006	2007	2008	2009	2010
Wilson	$1,255	$1,255	$1,230	$1,576	$1,529
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Wilson	$58,923	$69,215	$53,330	$55,346	$38,943
Average	$58,305	$53,074	$58,636	$62,174	$70,623

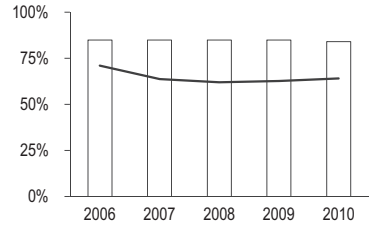
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Wilson	$82	$85	$107	$97	$93
Average	$93	$93	$89	$94	$101

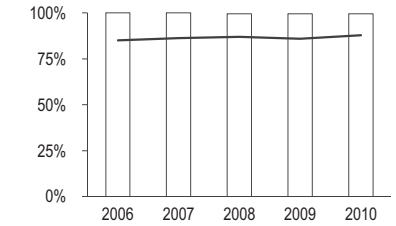
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Wilson	85%	85%	85%	85%	84%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Wilson	100%	100%	100%	100%	100%
Average	85%	86%	87%	86%	88%

Wilson

MUNICIPAL PROFILE

Population (OSBM 2009)	51,274
Land Area (Square Miles)	29.02
Persons per Square Mile	1,767
Topography	Flat
County	Wilson
Climate	Mild; little ice and snow
Median Family Income (US Census 2000)	$41,041

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		24.1%
Operating Costs		69.8%
Capital Costs		6.1%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	325,262
Operating Costs	$	940,107
Capital Costs	$	82,017
TOTAL	$	1,347,386

SERVICE PROFILE

FTE Positions—Crews	5.0
FTE Positions—Other	0.5
Lane Miles Maintained	682.0
Lane Miles Resurfaced—Contract	7.83
Lane Miles Resurfaced—City	0.00
TOTAL	7.83
Tons of Asphalt Used—Resurfacing	
Contractor	3,275
City Crews	0
Cost of Repaving—Contract	$304,920
Cost of Repaving—City Crews	$0
Cost of Maintenance	$1,042,466
Registered Vehicles	39,560
Registered Vehicles/Square Mile	1,363

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Wilson was responsible for maintaining 681.96 lane miles of city streets during FY 2009–10.

The city resurfaced 7.83 lane miles, equating to approximately 1.1 percent of total lane miles. A total of 3,275 tons of asphalt was used during the fiscal year for resurfacing projects by the contractor. The average resurfacing depth used by the contractor was 1.5 inch.

The city reported that 84 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2009. The city used a customized rating based on ITRE as its rating system.

The number of potholes reported for FY 2009–10 was 658. The percentage of potholes repaired within twenty-four hours was 99.5 percent. The city reported a resurfacing cycle of thirty-five years.

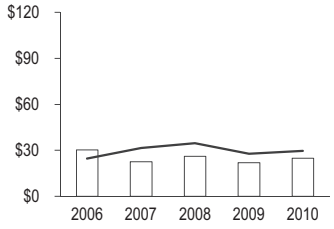
Conditions Affecting Service, Performance and Costs
The cost of asphalt and maintenance materials is directly related to fluctuations in the price of petroleum prices.

Winston-Salem — Asphalt Maintenance and Repair

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2006 through 2010

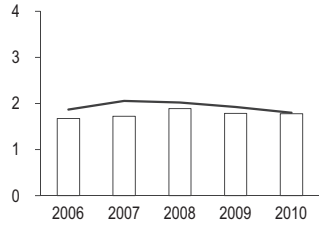
RESOURCE Measures

Asphalt Maintenance and Repair Services Costs per Capita



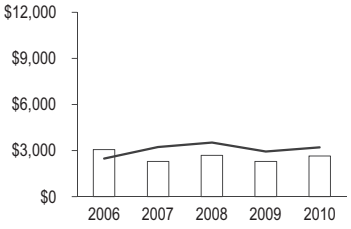
	2006	2007	2008	2009	2010
Winston-Salem	$30.30	$22.47	$26.10	$22.00	$24.76
Average	$24.70	$31.53	$34.75	$27.82	$29.69

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2006	2007	2008	2009	2010
Winston-Salem	1.67	1.72	1.89	1.79	1.78
Average	1.87	2.06	2.03	1.92	1.80

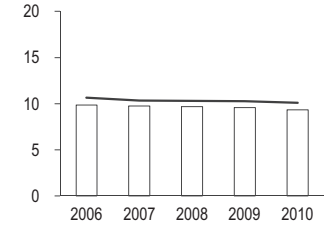
Service Costs per Lane Mile of Road Maintained



	2006	2007	2008	2009	2010
Winston-Salem	$3,072	$2,301	$2,695	$2,295	$2,657
Average	$2,478	$3,243	$3,536	$2,941	$3,208

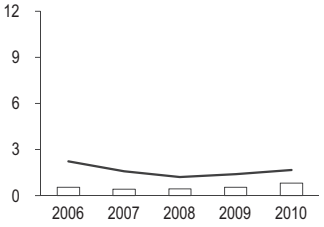
WORKLOAD Measures

Number of Lane Miles Maintained per 1,000 Population



	2006	2007	2008	2009	2010
Winston-Salem	9.9	9.8	9.7	9.6	9.3
Average	10.7	10.3	10.3	10.3	10.1

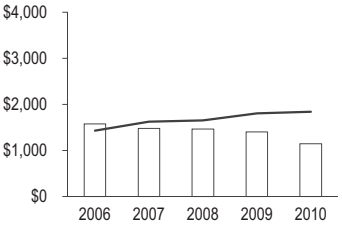
Reported Potholes per Lane Mile Maintained



	2006	2007	2008	2009	2010
Winston-Salem	0.55	0.43	0.44	0.54	0.82
Average	2.23	1.58	1.21	1.41	1.67

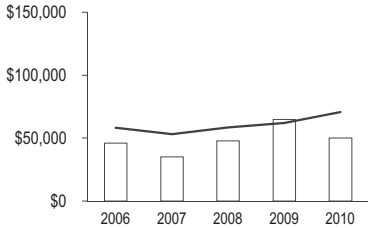
EFFICIENCY Measures

Cost of Maintenance per Lane Mile Maintained



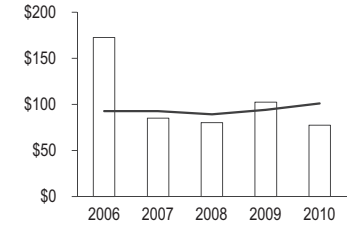
	2006	2007	2008	2009	2010
Winston-Salem	$1,581	$1,480	$1,468	$1,403	$1,150
Average	$1,433	$1,628	$1,652	$1,807	$1,841

Resurfacing Cost per Lane Mile Resurfaced



	2006	2007	2008	2009	2010
Winston-Salem	$46,049	$35,164	$47,873	$64,808	$50,030
Average	$58,305	$53,074	$58,636	$62,174	$70,623

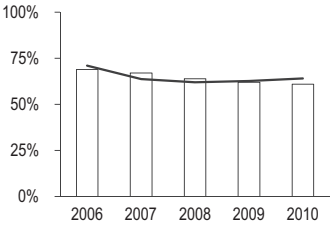
Cost per Ton for Contract Resurfacing



	2006	2007	2008	2009	2010
Winston-Salem	$173	$85	$80	$103	$78
Average	$93	$93	$89	$94	$101

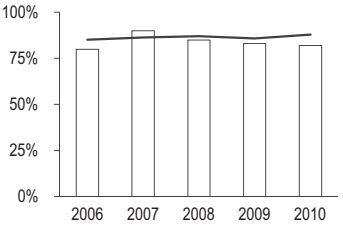
EFFECTIVENESS Measures

Street Segments Rated 85 Percent or Better



	2006	2007	2008	2009	2010
Winston-Salem	69%	67%	64%	62%	61%
Average	71%	64%	62%	63%	64%

Percentage of Potholes Repaired within 24 hours



	2006	2007	2008	2009	2010
Winston-Salem	80%	90%	85%	83%	82%
Average	85%	86%	87%	86%	88%

Winston-Salem

MUNICIPAL PROFILE

Population (OSBM 2009)	235,075
Land Area (Square Miles)	133.2
Persons per Square Mile	1,765
Topography	Gently rolling
County	Forsyth
Climate	Moderate; some ice and snow
Median Family Income (US Census 2000)	$46,595

FULL COST PROFILE

Cost Breakdown by Percentage		
Personal Services		20.2%
Operating Costs		74.4%
Capital Costs		5.4%
TOTAL		100.0%
Cost Breakdown in Dollars		
Personal Services	$	1,173,434
Operating Costs	$	4,333,074
Capital Costs	$	314,289
TOTAL	$	5,820,797

SERVICE PROFILE

FTE Positions—Crews	38.0
FTE Positions—Other	3.8
Lane Miles Maintained	2,190.9
Lane Miles Resurfaced—Contract	64.30
Lane Miles Resurfaced—City	1.67
TOTAL	65.97
Tons of Asphalt Used—Resurfacing	
Contractor	40,514
City Crews	1,842
Cost of Repaving—Contract	$3,141,211
Cost of Repaving—City Crews	$159,251
Cost of Maintenance	$2,520,335
Registered Vehicles	172,563
Registered Vehicles/Square Mile	1,296

EXPLANATORY INFORMATION

Service Level and Delivery
The City of Winston-Salem was responsible for maintaining 2,190.89 lane miles of city streets during FY 2009–10.

The city resurfaced 65.97 lane miles, equating to approximately 3.0 percent of total lane miles. A total of 42,356 tons of asphalt was used during the fiscal year for resurfacing projects including 1,842 tons used by city crews and 40,514 tons used by contractors. The average resurfacing depth used by city and contract crews was was 1.5 inches.

The city reported that 61 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2010. The city used Pavement Tracking System (PTS) as its rating system.

The city reported 1,786 potholes in FY 2009–10. The percentage of potholes repaired within twenty-four hours was estimated at 82 percent. Policy is to repair within twenty-four hours, but the lower level is a result of weekends and sick or vacation time of repair crews.

Conditions Affecting Service, Performance, and Costs
The hard winter conditions lead to an increase in potholes. Snow, ice, and rain combined with the cold weather created more stress on the street paving and led to more failures.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