

Department of Engineering Program Summary

Appropriation Summary

	FY 2002-03 Actual	FY 2003-04 Amended	FY 2004-05 Proposed	FY 2004-05 Adopted	% Change
Expenditures	\$5,119,588	5,618,923	5,201,957	5,186,747	(7.70)%
FTE	44	40	40	39	(2.50)%

Department Mission

In a timely and courteous manner, the Department of Engineering provides to customers and citizens competent and comprehensive technical support and review services. The department provides technical oversight of City construction projects by adding value to the project utilizing industry knowledge and by providing the project team clear and visionary leadership.

Through the use of signage, systems, and infrastructure, the Traffic Engineering Division supports and proactively enhances vehicle and pedestrian movement along the City of Portsmouth's street and highway system.

Through the Parking Authority, for long-term, short-term, and special event parking, the department provides safe, efficient, and attractive parking at reasonable Downtown Business District rates.

Department Budget in Brief

Engineering:

- Compared to last year's funding, the FY04-05 budget reflects a slight decrease (7.7%). The necessary reductions have been accommodated within the *Contractual Services* line item. This budget item pertains to necessary outsourced supplies and services and is usually associated with capital projects. For FY04/05, the individual capital projects will have budgets for these items.
- As a result of state erosion control enforcement, site plan, development, and permit workload has increased significantly. The workload concern was magnified by the Assistant City Engineer position reduction, and the subsequent one-year vacancy. The recent Assistant City Engineer hiring will help the Department meet the increased demands. The attached performance measures indicate the positive implications.
- A major accomplishment has been the City Hall renovation. For over two years, this project has been in progress.

Traffic Engineering:

- The FY04-05 budget reflects a 10% decrease from last year's funding levels and has largely been accommodated thru a 20% reduction in the street lighting account. Eliminating a traffic maintenance mechanic position currently vacant absorbed the remaining budget decrease.
- Due to the reduction in the lighting account, streetlights will only be added to existing utility poles, and when no new Dominion Power installation charges will be incurred.
- This Department's hauling permit issuance has increased considerably from a FY '02-03 fee increase collection of \$75,000 to \$142,850 for FY03-04 (July to mid-February). Once the Pinners Point Interchange construction is complete, the department expects a hauling permit issuance reduction.
- A significant accomplishment was the CMAQ signal upgrade project completion; however, the CIP reduction will not allow future traffic signal upgrades within this fiscal year.
- The sign shop has also recently completed the installation of a wayfinding signage system.

Parking Authority

- By eliminating security services provided by a private firm, the Parking Authority budget has been reduced by 12%. For essential security needs and a few routine functions, the parking garages will now have to rely on the police department.

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Department Operational Summary

Engineering Services Provided:

- **Project Management:** This includes all City contracted construction project design to contract administration functions. This encompasses in-house design or consultant selection, establishing budgets, departmental or user coordination, contract document preparation, bidding, awarding, and contract administration. Administration comprises the inspection to payment process, coordination, change orders, dispute resolution, and warranties.
- **Site plan/Subdivision:** For all site plan and subdivision reviews, engineering is the coordinating office. Comments are received from all City offices, and through the engineer for the developer, they are incorporated into submitted development plans. This includes land disturbing permit issuance, erosion control permit issuance, and all associated work inspections. The department also reviews all single family residence site plans. Up to 5 feet from the proposed building, engineering is responsible for the ROW and site improvements. For the last 5 feet and the building, the Building Official is held responsible.
- **Right-of-Way Permits:** Permits are issued for all construction or disturbance occurring within the City's ROW. This includes inspection of all work permits issued.
- **Economic Development and Special Projects:** This includes developing new project costs and options, coordinating infrastructure requirements and impacts, developing necessary plans, coordinating with other projects, providing technical evaluation, and protecting the City's interest.
- **Surveying:** This includes property acquisition Title and Deed research and City project plat and easement preparation. Surveying also includes oversight and coordination of the City's mapping, aerial photography, survey control, and coordination with the GIS system. With respect to design and construction, the department provides needed topographic surveys for the design of projects, construction stake-out, and for quality control during construction, monitoring grades.
- **Contractual Maintenance Operations:** For the completion of any infrastructure repairs not accomplished by City forces, this includes contract document identification, prioritization, and preparation. This includes, but is not limited to, storm drain/cave-in repairs; concrete curb, gutter and sidewalk replacement; and street overlay and reconstruction. This service includes the contract management and inspection of all the associated work.
- **Bridge Inspection:** The annual state mandated bridge inspections, maintenance, and safety repairs are an engineering responsibility. This includes the contracting of all necessary repairs.
- **Technical Services:** Engineering also handles all other technical items, not included above, affecting the city. This includes responding to citizen information requests, concerns, or complaints; providing city infrastructure and mapping request answers; acting as a VDOT liaison, and serving as the city's VDOT representative on regional committees, the Hampton Roads Planning District Commission, Regional transportation committees, Hoffer's Creek Preserve, the Elizabeth River Project, and the Corps of Engineers.

The Department of Traffic Engineering is responsible for:

- **Traffic operations throughout the city.** Major functions include municipal project reviews, subdivision/site plan reviews, traffic control plan reviews, street lighting project layout and design, transportation related project management and design, and the city's representation in regional transportation affairs.
- **Operation and maintenance of 118 traffic signals.** Functions include the City's traffic signal timing and optimization utilizing a central computer system, traffic signal central computer system operation and maintenance, signal facility maintenance, and from Portsmouth, England, the Olde Towne lantern maintenance. For the colonial fixtures in the downtown area, the signal shop is also tasked with keeping a street light pole inventory.
- **Installation and maintenance of approximately 28,000 signs and 873 lane miles of pavement markings.** This unit is responsible for sign fabrication, installation, and maintenance for the City right-of-way; pavement marking installation and maintenance; temporary traffic control maintenance for road closures and work in the City's right-of-way; and the collection of traffic counts.
- **Issuance of overweight and oversized hauling permits.** To protect the City's infrastructure and the motoring public's safety on the City's thoroughfares, this unit regulates overweight and oversized trucks entering the city limits. Following an engineering analysis of routes based on size and weight of the vehicle, the unit levies fees and permits allowing overweight and oversized trucks to enter the city.
- **Operation and maintenance of city parking facilities.** The Portsmouth Parking Authority is responsible for the operation and maintenance of six parking garages, ten surface lots, and 432 parking meters. Major functions include monthly rental agreement administration, hourly parking fee collection, parking meter collections, facility maintenance, and special event parking coordination. For all events at the Harbor Center Pavilion, the Portsmouth Parking Authority is also responsible for controlling parking.

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Departmental Trends

The Engineering Department's service trend depends on a number of functions including City projects contemplated, planned, designed or constructed. Engineering is presently overseeing the design of approximately 52 projects. The size and complexity varies. Another 20 projects are under construction. The sizes and completion stages vary. Due to funding, the trend may be decreasing somewhat, but private sector activity is increasing.

On the private side, due to the New Port project by Victory Crossing and the New Port related industrial development, the department is anticipating some significant increases. From the enforcement side, due to increasingly stringent DEQ requirements with regard to erosion control, wetland protection, and stormwater management, there has also been an activity increase. The increasing trends can be seen in the following table.

Engineering Services	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
Site plans reviewed	29	31	27	43
Site plan fees	\$ 1,450	\$ 1,550	\$ 6,425	\$ 12,225
ROW permits	290	836	563	636
ROW fees	\$ 7,445	\$ 18,083	\$ 75,872	\$ 53,929
Land Disturbance permits			37	152
LDP fees			\$ 4,400	\$ 13,310

Concrete and Cave-in Maintenance Programs

Even though Hurricane Isabel has hampered operations, positive construction pricing and operational trends have evolved. Through continual re-examination of contract specifications and operations, the following trends have developed:

Concrete

Citizen complaints have dropped 5-10%. Modified contracts have allowed staff, along with the contractor, to identify larger needs. Necessary repairs within a 4-5-block vicinity of existing complaints are being rectified. This allows the program to become more proactive versus reactive. Additionally, the juxtapositioning of simultaneously modified repair contracts has created prompter response for citizen concerns. The main schedule is accomplished, and supplemental repairs are quickly completed. Wait time for addressing complaints has dropped an average of two months.

The new contract consistency has stabilized the repair unit pricing.

Average yearly repair for highlighted items:

Concrete sidewalk: 5000+ square yards
 Curb and gutter: 7000+ linear feet
 ADA ramps: 25-35

Cave-Ins

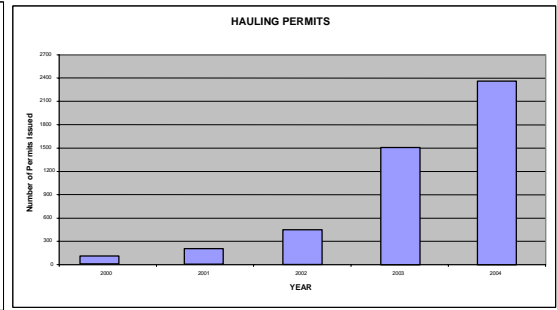
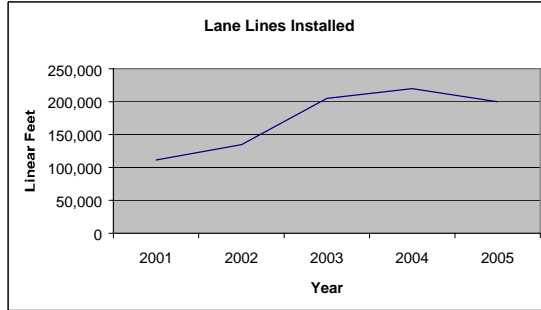
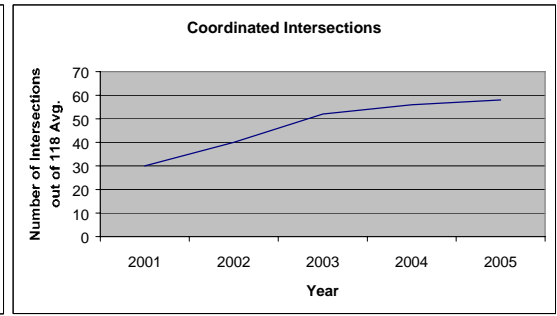
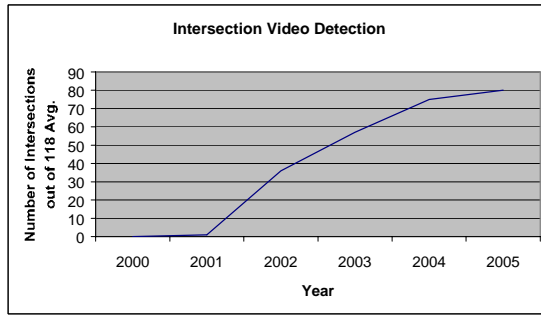
Based on money spent and work done, continued contract specification and operational re-examination has resulted in a continued cost repair decline. In the past 2½ years, the average repair cost has gone from approximately \$2800 to \$1900.

Because costs have declined, operations has been able to address approximately 10% more cave-ins each year. This has created flexibility for two contractors to work in the City simultaneously. The main schedule can be completed and an on-call contractor can be utilized.

This trend has allowed operations to become more proactive versus reactive. Currently, a second contract has been awarded allowing the City to address more severely damaged pipelines. This will also allow the City to clean and inspect various systems utilizing remote video. On a larger scale, it will enable staff to plan repair operations.

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Traffic Engineering



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Departmental Performance Measures

Traffic Engineering	FY 2002-03 Actual	FY 2003-04 Adopted	FY 2004-05 Proposed
Signalized Intersections	118	119	120
Intersection Video Detection	57	75	80
Electronic Repairs in Shop	35	45	45
Street Light Pole Bases	600	600	600
Olde Towne Lights	75	75	75
School Flashers	15	15	15
Intersections on Closed Loop System	69	70	80
Coordinated Intersections	52	56	58
Signs Maintained/Installed	2,033	2,200	2,200
Sign Posts Maintained/Installed	344	380	418
Signs Fabricated	1,533	1,686	1,686
Outside Agency Signs Fabricated	292	300	300
Lane Lines Installed	205,040	220,000	200,000
Stop Bars Installed	1,839	2,200	1,771
Traffic Studies	20	40	50
Planning Signs Installed/Removed	96	100	105
Zoning Signs Installed/Removed	85	90	95

Parking Authority	FY 2002-03 Actual	FY 2003-04 Adopted	FY 2004-05 Proposed
Light Bulbs Replaced	611	600	600
Equipment Repairs	27	25	25
Equipment Installed	2	3	5
Reserved Spaces Maintained	2,234	2,276	2,276
Meters Maintained	457	457	457
Lots Maintained	9	9	9
Garages Maintained	6	6	6
Harbor Center Concerts	50	50	50
Special Events	13	13	13
Visitor Spaces Maintained	1,019	1,019	1,019
Batteries Installed	674	600	600
Meter Domes Replaced	4	10	10
Lens Covers Replaced	450	0	10
Middle Street Garage Flea Markets	12	12	12
Lights Burning on Test Nights	99	99	99
Reserved Parking Spaces Rented	75	85	85
Reserved Parking Spaced Available	25	15	15

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Engineering	FY 2002-03 Actual	FY 2003-04 Amended	FY 2004-05 Proposed	FY 2004-05 Adopted
<i>Expenditures</i>				
Salaries	\$ 834,115	884,016	882,614	882,614
Benefits	195,288	220,276	291,015	281,273
Contractual Services	50,545	46,926	34,388	34,388
Materials and Supplies	7,944	3,500	3,500	3,500
Other Operating Expenses	3,671	5,986	5,720	5,720
Internal Service Charges and Expenses	186,851	244,495	174,228	174,228
Total Expenditures	\$ 1,278,414	1,405,199	1,391,465	1,381,723

<i>Personnel Summary</i>				
Director Of Engineering	1	1	1	1
Assistant City Engineer	1	1	1	1
City Surveyor	1	1	1	1
Administrative Coordinator II (PW)	1	1	1	1
Principal Engineering Inspector	2	1	1	1
Senior Civil Engineer	2	2	2	2
GIS Survey Technician	1	-	-	-
Civil Engineer	1	1	1	1
Engineering Aide (Survey)	1	1	1	1
Engineering Inspector	4	4	4	4
Survey Instrument Technician	2	2	2	2
Survey Party Chief	2	2	2	2
Fiscal Support Specialist II (PW)	2	2	2	2
Total Positions	21	19	19	19

Traffic Engineering	FY 2002-03 Actual	FY 2003-04 Amended	FY 2004-05 Proposed	FY 2004-05 Adopted
<i>Expenditures</i>				
Salaries	\$ 440,622	546,278	507,910	507,910
Benefits	123,188	158,438	178,962	173,494
Contractual Services	9,412	6,150	6,150	6,150
Materials and Supplies	124,553	115,007	117,259	117,259
Other Operating Expenses	1,479,836	1,416,715	1,160,930	1,160,930
Internal Service Charges and Expenses	147,324	153,029	213,564	213,564
Total Expenditures	\$ 2,324,935	2,395,617	2,184,775	2,179,307

<i>Personnel Summary</i>				
City Traffic Engineer	1	-	-	-
Traffic Engineer	-	1	1	1
Traffic Technician	1	-	-	-
Traffic Maintenance Supt	1	1	1	1
Manager Of Signal Operations	1	1	1	1
Traffic Signal Technician	5	5	5	5
Administrative Coordinator I	1	1	1	1
Traffic Maintenance Crew Leader	2	1	1	1
Traffic Sign Fabricator	1	1	1	1
Traffic Maintenance Mechanic	4	4	4	3
Total Positions	17	15	15	14

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Parking Authority Fund	FY 2002-03 Actual	FY 2003-04 Amended	FY 2004-05 Proposed	FY 2004-05 Adopted
<i>Revenues</i>				
Charges For Services	\$ 1,198,964	1,549,803	1,108,874	1,108,874
Interest	6,943	2,366	6,943	6,943
Recovered Costs - Public Safety	257,622	231,020	300,000	300,000
Use Of Property	-	-	9,000	9,000
Miscellaneous Other Revenues	2,705	34,918	200,900	200,900
Total Revenues	1,466,234	1,818,107	1,625,717	1,625,717
<i>Expenditures</i>				
Salaries	245,798	273,029	274,176	274,176
Benefits	53,691	56,926	67,870	67,870
Contractual Services	454,343	371,818	228,799	228,799
Materials and Supplies	33,611	38,075	35,800	35,800
Other Operating Expenses	563,334	111,239	112,736	112,736
Internal Service Charges and Expenses	21,058	41,461	-	-
Debt Service	144,404	925,559	906,336	906,336
Total Expenditures	\$ 1,516,239	1,818,107	1,625,717	1,625,717
<i>Personnel Summary</i>				
Parking Superintendent	1	1	1	1
Fiscal Support Specialist II (Pk Auth)	1	1	1	1
Parking Meter Repairer	1	1	1	1
Parking Operations Supervisor	1	1	1	1
Janitor	2	2	2	2
Total Positions	6	6	6	6