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Quality Physical Environment

Capital projects within the Quality Physical Environment (QPE) business area reflect the City's commitment to promoting a quality physical environment, and include the following types of projects: Roadways, Building infrastructure rehabilitation and renewal, Water, Sanitary Sewer, Storm Water, Coastal resources, and Information Technology projects. This CIP details the City of Virginia Beach's planned QPE construction over the next six years.

Projects in the QPE section promote the following Council goals and are aligned with the Comprehensive Plan:

- Create a Financially Sustainable City Providing Excellent Services by having well-designed and well-maintained streets, water systems, and wastewater systems.
- Grow the Local Economy by implementing an effective transportation plan in the Central Business District.
- Improve Transportation System by allocating funds to advance those projects that will improve traffic flow, reduce congestion, and enhance the safety of our streets.
- Revitalize Neighborhoods and Plan for the Future by ensuring that funding is provided for vital dredging and storm water projects.
- The Roadway projects included in this CIP address goals of the Master Transportation Plan Master, which is part of the Comprehensive Plan, and establishes the functional and physical characteristics of the City's planned transportation network. It also establishes a general transportation policy for decision-making related to the development, design, prioritization and implementation of the transportation system.
- All Water and Sanitary Sewer projects are closely coordinated with the Comprehensive Plan, and are identified using long-range planning tools, as well as coordination with other City departments, neighboring cities, state and federal agencies and their regulations, and the Hampton Roads Sanitation District. According to the Natural Resources Plan, it is the City's policy to connect water and sanitary sewer service, whenever reasonably available, to each lot within subdivisions located within the urban service area north of the Green Line. These projects provide adequate public sanitary sewer collection services and safe potable water, including water for fire protection, to the residents and businesses of Virginia Beach.
- The City's Storm Water Management ordinance, adopted in April 1988, and referenced in the Natural Resources Plan, identified performance standards designed to protect water quality and downstream properties by requiring that post-development flows approximate pre-development conditions. The Ordinance also includes design criteria that encourage the protection of natural watercourses and shorelines, natural drainage ways, and wetlands. In 1996, the City was issued a Virginia Pollutant Discharge Elimination System (VPDES) Permit, under the Clean Water Act, resulting in a more comprehensive approach to storm water management and the protection of surface waters. The storm water projects included in this CIP apply the standards of the Storm Water Management Ordinance and continue the City's implementation of the provisions of the VPDES.
- Coastal projects are designed to preserve and enhance the extensive shorelines and navigable waterways within the City through protection, maintenance, access, and restoration projects. City Council appointed a Beaches and Waterways Advisory Commission in 2000, and approved the Commission's Beach Management Plan in August 2002. The Beach Management Plan addresses such issues as beach ownership, accessibility, uses, nourishment and preservation. The Coastal projects included in this CIP are endorsed by the Beach Management Plan, and are intended to ensure that our coastal resources are adequately protected and preserved.
- The Buildings projects in this section are generally those that are dedicated to the maintenance of the City's existing building infrastructure and support systems. Included are projects to ensure that the physical structure of the buildings is kept in good condition and that the internal systems (e.g., HVAC systems)

continue to provide a good working environment for employees and a comfortable environment for citizens. Building-related projects that address new facilities or replacement of existing facilities are found in other sections of the capital improvement program.

- The use of technology is becoming increasingly important to the success of municipal operations and the services provided to citizens. The Information Technology projects addressed in this section are those that enhance the capabilities of those departments included in the Quality and Physical Environment business area to accomplish their missions. This is achieved through the implementation of new systems or the upgrade of existing systems.

CIP Analysis

The table shown below summarizes the types of projects in the QPE section through the six-year period of the CIP. Of the projects in this business area, almost half are for projects that will renovate/rehabilitate and replace existing facilities and equipment, including traffic signal system projects, major bridge rehabilitation, water and sanitary sewer line and storm water infrastructure rehabilitation, and several dredging projects.

Type of Project	Number of Projects	Total Programmed Funding	Prior Years' Funding	Year 1 FY 2010-11	Years 2-6 FY 2011-12/ FY 2015-16	% of Total
Equipment	2	\$ 9,880,000	\$ 120,000	\$ 747,000	\$ 9,013,000	0.82%
Expansion	34	341,308,360	239,183,463	22,164,801	\$ 79,960,096	28.26%
Maintenance	2	2,176,271	300,000	236,271	\$ 1,640,000	0.18%
New Facility Construction	35	124,391,465	59,835,144	16,106,767	\$ 48,449,554	10.30%
Other*	7	10,458,251	9,464,251	250,000	\$ 744,000	0.87%
Renovation/Rehab	87	625,795,428	340,062,741	45,875,109	\$ 239,857,578	51.80%
Replacement	12	40,090,182	20,475,060	8,392,122	\$ 11,223,000	3.32%
Site Acquisition	2	32,868,700	24,997,150	1,436,000	\$ 6,435,550	2.72%
Study/Design	25	20,853,888	8,868,888	1,250,000	\$ 10,735,000	1.73%
Total	206	\$ 1,207,822,545	\$ 703,306,697	\$ 96,458,070	\$ 408,057,778	100.00%

* Includes projects for wetlands mitigation banking, site acquisition, state mandated landfill closure work, automation of water and sanitary sewer service orders, water and sanitary sewer customer billing software upgrade, and sewer appurtenances evaluation and improvements.

- With the completion of the Norfolk Southern Right-of-Way Survey Project #2-186 and the Norfolk Southern Right-of-Way Acquisition Project #2-301 projects, no other funding for light rail is included in this CIP.
- The State continues to provide no roadway funding under the Urban Construction Initiative Program. To help mitigate the loss of State funding, the Department of Public Works has sought and received funding under the American Recovery and Reinvestment Act (ARRA) in the amount of \$45.4 million. In addition, during FY 2009-10, the Department received \$7.2 million in funding through other non-City sources, including the Congestion Mitigation and Air Quality Program, the Highway Safety Improvement Program, and Revenue Sharing with the State. Projects that have benefited from the ARRA funding include Witchduck Road – Phase I Project #2-931, Princess Anne Road – Phase IV Project #2-305, and I-264 Great Neck Ramps Project #2-074. To ensure that the current schedules of Council-priority projects can continue to be maintained, other projects are being delayed so that funding can be shifted to the higher priority projects. Higher priority projects that will receive additional funding in this CIP are Princess Anne Road/Kempsville Road Intersection Improvements Project #2-048, Nimmo Parkway – Phase V-A Project #2-121, and Laskin Road Gateway – Phase I-A Project #2-143. Projects that are providing funding include Elbow Road Extended – Phase II Project #2-152, Indian River Road – Phase VII Project #2-256, Witchduck Road – Phase II Project #2-025, and First Colonial Road/Virginia Beach Boulevard Intersection Improvements Project #2-072. For those projects designated as “First Cities”, the City receives State funding, when funding is available, and manages those projects. For other projects that are State-managed, the State bills the City for our portion of the cost.

- Beginning in FY 2010-11, the Pavement Maintenance Program has been moved from the capital improvement program to the operating budget, with an additional \$2 million provided to address the pavement maintenance backlog. The operating budget has traditionally funded smaller maintenance needs (e.g., pothole repair), while more extensive maintenance, often via contracts, has been handled through the CIP. Those maintenance operations will be consolidated into the operating budget.
- Street Reconstruction Project #2-031 is receiving an additional \$2,000,000 annually for the next six years. This will allow for approximately eight roadway lanes to be reconstructed each year. The additional funding is provided through a new Water and Sewer Right-of-Way Utility Transfer.
- Two new roadway projects being added to this CIP: I-264 Great Neck Ramps Project #2-074 and Greenwich Road/Cleveland Street Crossover Project #2-401. The Great Neck Ramps project is funded primarily through the Regional Surface Transportation Program and will create a new interchange at Great Neck Road, which is an element in the overall improvement of the Lynnhaven Parkway interchange. The Greenwich Road/Cleveland Street Crossover project will realign Greenwich Road and connect it to Cleveland Street by a bridge structure over I-264. Both of these projects will alleviate traffic congestion and improve traffic safety.
- No additional funding is included in this CIP for the Beach Replenishment Project #8-008. The total cost of the project is split with the federal government, with the City's share being 35%. Although the planned replenishment cycle is three years, an 8-year delay receiving federal funds for the Beach Replenishment project has resulted in not being able to provide the full quantity of sand needed to maintain the resort area beach at the desired level.
- In this CIP, \$2,750,000 of VDOT Maintenance funding has been moved from the Storm Water Utility (SWU) Fund to the General Fund. A corresponding reduction in funding from the SWU Fund to Storm Water capital projects has resulted in three projects being delayed – Cape Henry Beach Drainage Project #7-151, North Lake Holly Watershed Project #7-005, and South Lake Holly Watershed Project #7-016.
- A new project, CIP #3-503, "Lighthouse Multi-Service Center" was funded at \$4,291,000 in the FY 2010-11 CIP. It will relocate the Lighthouse Center, which serves the homeless population from its current location on 18th Street in response to development plans for that area. Funding for this project comes from a proposed Federal loan (\$1,016,000), Community Development Block Grant funds (\$475,000), proposed private donations (\$900,000) and City funds (\$1.9 million).
- This CIP includes the Large Vehicle Repair Shop Project #3-125, which is the fourth priority on the City's Top 13 Building Replacement Priority List. This 10,800 square foot facility will significantly improve the efficiency and safety of large vehicle repair operations at the City Garage, as well as protect the investment in large expensive equipment, such as fire engines and ladder trucks. The 3rd highest priority on the City's replacement list, Beach Maintenance Facility Project #3-504, could not yet be funded and is shown on the Requested But Not Funded List at an estimated cost of \$7,000,465. It will relocate a City maintenance facility from a resort area neighborhood to a more compatible site."
- As the inventory of public buildings continues to age, increasing service demands are placed for routine and major maintenance. The current inventory includes 205 buildings exceeding 4.2 million square feet, with about 29% over twenty years old. Funding of \$619,807 is provided in FY 2010-11 and \$7.2 million over the 6-year CIP period for renovation and rehabilitation of City buildings including replacements of roofs, elevators, and electrical and HVAC systems. This reflects a reduction of \$2.1 million in FY 2010-11 and \$3.7 million throughout the 6-year period compared with the FY 2009-10 CIP because of funding shortages as a result of the economic recession.
- Effective September 26, 2007, the federal Environmental Protection Agency and the State's Department of Environmental Quality issued a consent order for Hampton Roads from FY 2008 to FY 2023 that is estimated to cost the City \$217 million. This involves identification and repair of defects in the system, renewal and rehabilitation of wet wells and other infrastructure components, retrofitting quick connections to prevent overflows in extreme weather conditions all of which benefit all sanitary sewer customers in the city of Virginia

Beach. An increase in the City's sewer rates is included in this Resource Management Plan beginning in FY 2010-11 to support the operating budget and capital improvement components related to compliance with the consent order. The proposed sewer rate increase would support a \$15 million annual increase to the capital improvement program and some additional staffing to support increased inspection requirements, provide engineering oversight and response teams for potential sewer overflows. Phase I of the Consent Order involves analysis of the sanitary sewer system with a deadline of FY 2013. Phase II is from FY 2013 to FY 2023 and involves comprehensive sanitary sewer system rehabilitation. Further discussion of the consent order is included in the Public Utilities Department's section of the operating budget.

- The water and sanitary sewer system is extensive and has an estimated replacement cost exceeding \$3 billion. More than half of the system was constructed by the mid 1980's by private developers and did not have today's materials or standards. Nearly 40% of the sewer system is over 25 years old and will require a substantial financial investment to replace over the next 30 years. Priority funding in this CIP includes projects that address the upgrading or replacement of sewer pump stations; the design, renewal and replacement of sanitary sewer lines in areas experiencing perpetual maintenance problems and where infiltration and inflow are detrimental to the overall operation of the system; continued automation of the mobile water meter reading system, and the water pumping station and tank upgrade program.
- The two technology projects in this section both support the Planning Department. CIT – Planning – Addressing System Integration Project #3-091 will create an efficient addressing process that maintains customer service quality and consistent with the Planning Department's street address guidelines. CIT – Planning – Business System Integration Implementation Project #3-093 will improve the efficiency of the Planning department's customer-direct business systems by integrating the current three systems.

Council Amendment

On May 11, 2010, City Council voted to delay the following projects one year to provide funding for the Operating Budget:

- Project #2-116, Shore Drive Corridor Improvements – Phase II (Partial)
- Project #2-121, Nimmo Parkway – Phase V-A (VDOT) (No scope reduction)
- Project #2-268, Wetlands Mitigation Banking

Type of Project	Number of Projects	Total Programmed Funding	Prior Years' Funding	Year 1 FY 2010-11	Years 2-6 FY 2011-12/ FY 2015-16	% of Total
Equipment	2	\$ 9,880,000	\$ 120,000	\$ 747,000	\$ 9,013,000	0.82%
Expansion	33	340,708,360	239,787,311	20,960,953	\$ 79,960,096	28.29%
Maintenance	2	2,176,271	300,000	236,271	\$ 1,640,000	0.18%
New Facility Construction	35	122,418,965	59,835,144	14,134,267	\$ 48,449,554	10.17%
Other*	7	9,458,251	8,464,251	250,000	\$ 744,000	0.79%
Renovation/Rehab	87	625,795,428	340,162,741	45,775,109	\$ 239,857,578	51.96%
Replacement	12	40,040,182	20,721,212	8,095,970	\$ 11,223,000	3.33%
Site Acquisition	2	32,868,700	24,997,150	1,436,000	\$ 6,435,550	2.73%
Study/Design	25	20,853,888	8,868,888	1,250,000	\$ 10,735,000	1.73%
Total	205	\$ 1,204,200,045	\$ 703,256,697	\$ 92,885,570	\$ 408,057,778	100.00%

* Includes projects for wetlands mitigation banking, site acquisition, state mandated landfill closure work, automation of water and sanitary sewer service orders, water and sanitary sewer customer billing software upgrade, and sewer appurtenances evaluation and improvements.