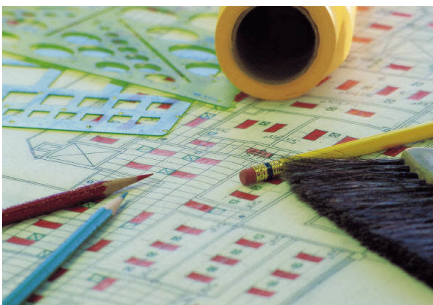


Engineering Division



Mission:

Provide quality and timely engineering services to the public and other City departments. Maintain and enhance the quality of life of the citizens in Richmond by maintaining the City's infrastructure to the highest standards.

Key Objectives for Strategic Goals:

1. Maintain and enhance the physical environment

- Maintain a high-quality network of streets, trails, sidewalks and public access areas that connect Richmond residents to their homes, parks, jobs and commercial areas.

2. Promote a safe and secure community

- Ensure that the quality and quantity of the street lights are adequate to create a safe nighttime atmosphere.
- Provide safe thoroughfares for both pedestrians and cyclists in and around the City.

3. Promote economic vitality

- Improve the aged storm drainage system to help reduce flooding.
- Provide a Capital Improvement Program that revitalizes the City's commercial areas.
- Provide an infrastructure that allows for the latest technology.
- Prioritize permitting for projects that promote economic development and create jobs.

4. Promote sustainable communities

- Use "BidsOnline" to help eliminate excessive printing of Request for Proposals, plans and specifications and to cut down on mailing costs.
- Research opportunities to reduce idling and improve traffic flow in Richmond to reduce transportation related emissions.
- Replace existing light fixtures with LED technology in City-owned street lights to reduce energy consumption.
- Determine opportunities for improving the overall environmental performance of the City-owned wastewater treatment plant.
- Support Health and Wellness Implementation (prioritize improvements adjacent to schools).
- Seeks grants.
- Coordinate with transit agencies to install new bus shelters, benches and trash receptacles (with recycling capacity) where appropriate and feasible throughout the City (in coordination with Public Works).

5. Promote effective government

- Continue to provide friendly and efficient customer service.
- Promote the City in a positive manner.
- Provide more information on the City's website regarding the design, bidding, and construction of City projects.
- Respond to the public's requests in a timely fashion with accurate information.
- Improve traffic engineering and subdivision plan review services by using consultants on an "on-call" basis.
- Improve community engagement and outreach to traditionally underserved communities.

Engineering Services Department

Engineering

Goal

To provide quality and timely engineering services to the public and to maintain the City's infrastructure to the highest standards in order to improve the quality of life of the citizens in Richmond.

Description

Engineering undertakes the planning and design of the City's Capital Improvement Plan and administers public improvement projects to implement the improvements in order to maintain and enhance the infrastructures such as sidewalk, pavement, traffic, street lights, storm drain and sanitary sewer.

2011-2012 Supporting Actions

- 1.22.a** Implement the Annual Pavement Program and resurface 550,000 s.f. of pavement.
- 1.22.b** Implement the Annual Sidewalk Program and repair 12,000 s.f. of sidewalk.
- 1.22.c** Implement the Annual ADA Curb Ramp Program and install 200 ADA curb ramps.
- 1.22.d** Replace all series street light fixtures and wiring by the end of FY2012/13.
- 1.22.e** Replace all City-owned street lights with LED lights by FY2013/14.
- 1.22.f** Increase the overall average PCI to 63 by FY2013/14.
- 1.22.g** Pursue grant funds and submit reimbursements timely.

Success Indicators

	Output	2011 Goal	2011 Mid-Year Actual	2011 Year End Projection	2012 Proposed
1.22.a	Square feet of streets resurfaced	2,500,000	1,736,970	3,600,000	550,000
1.22.b	Square feet of sidewalks repaired	12,000	1,450	10,550	12,000
1.22.c	Number of ADA curb ramps installed	-	-	-	200
1.22.d	Number of series lights replaced	-	-	-	80
1.22.e	Number of LED lights installed	-	-	-	700
1.22.g	Number of reimbursements submitted timely	-	-	-	-

Effectiveness

1.22.f	Overall average PCI	-	-	-	65
1.22.g	Number of new grants awarded	-	-	-	-
	% of quarterly reimbursements submitted timely	-	-	-	-

Efficiency

1.22.f	Change in overall average PCI per \$1,000,000 spent	-	-	-	0.5
1.22.d	Number of series lights replaced per \$10,000 spent	-	-	-	1.0
1.22.e	Number of LED lights installed per \$1,000 spent	-	-	-	1.2

Engineering Services Department

Wastewater

Goal

To provide continuous operation and maintenance of the City of Richmond's wastewater treatment facility and sanitary sewer collection system. To administer the City's National Pollutant Discharge Elimination System Permit as it pertains to the Pretreatment Program. To audit the Fats, Oils & Grease (FOG) program by identifying areas of concern for possible Sanitary Sewer Overflows (SSOs) and rehabilitate and provide preventative maintenance to the subsurface network of pipes and conduits. To inspect all the Industrial user's to ensure compliance with the discharger's permit.

Description

The wastewater treatment facility consists of screening, grit removal, preparation, primary sedimentation, activated sludge, secondary clarification, anaerobic sludge digestion, and de-chlorination. The wastewater program oversees the efficient and effective cleaning, maintenance and repair of the City of Richmond's sanitary sewer collection system. The wastewater treatment plant and sanitary sewer collection system are operated under contract by Veolia Water North America.

2011-12 Supporting Actions

- 1.22.a** Respond to referrals involving potential life-safety issues within 48 hours; respond to referrals involving non-life safety issues with five business days.
- 1.22.b** Meet site inspection requirements for existing development as mandated by state water quality permits.
- 1.22.c** Enhance web application to include current activities (sewer lateral inspection program, public events, proper waste disposal, etc.).
- 1.22.d** Continue the overall maintenance of the wastewater collection system.

Engineering Services Department

Wastewater

Success Indicators

	Output	2011 Goal	2011 Mid-Year Actual	2011 Year End Projection	2012 Proposed
1.22.b	Inspect 100% of the City of Richmond's Industrial User's (IU's) discharging to the Richmond Municipal Sewer District	-	-	-	109
1.22.c	Update web page to address Source Control Issues	100%	55%	100%	100%
1.22.d	Miles of collection system cleaned and inspected	68	33.11	70	68

Effectiveness

1.22.a	% of life/safety referrals responded to within 48 hours	100%	100%	100%	100%
1.22.b	Amount of time taken to inspect Industrial User	30 Minutes	30 Minutes	1.5 hrs	2 hours
1.22.c	Survey 50 industries to determine frequency of use regarding web page	100%	17%	40%	100%

Efficiency

1.22.b	Average cost per inspection of Industrial User facility	\$83/ea	\$28/ea	\$425/ea	\$350/ea
1.22.c	Number of industries using City's web page for Source Control Information	Top 175	Top 175	Top 22	Top 35
1.22.d	Average cost per linear foot (lf) of collection system cleaned and inspected	\$9.72/lf	\$9.72/lf	\$9.72/lf	\$9.72/lf

Engineering Services Department

Stormwater

Goal

Maintain a healthy aquatic environment through source control measures conducted within the City of Richmond. Monitor preventative maintenance of the stormwater collection system. Provide public education and industrial outreach.

Description

The Stormwater program implements the National Pollutant Discharge Elimination System (NPDES) permit #CAS612008 to effectively prohibit discharge of non-stormwater and polluted stormwater into storm drains and watercourses. This includes monitoring best management practices in maintenance activities, industrial and commercial businesses, and construction projects. It requires timely response to illicit discharges throughout the City. In addition, the permit mandates incorporating low-impact development in certain new development and redevelopment projects. It calls for activities in public outreach and trash reduction. The Stormwater program will map and maintain the stormwater collection system and will also make certain that the City's stormwater collection system is cleaned and repaired. Veolia Water North America maintains the stormwater system under contract with the City.

2011-12 Supporting Actions

- 1.13.a** Include appropriate source control, site design and stormwater treatment through low impact development techniques to address pollutant runoff into stormwater in development projects.
- 1.13.b** Ensure illicit discharges are detected and controlled with tracking and follow-up system.
- 1.13.c** Implement construction site control program and inspect for compliance.
- 1.13.d** Participate in public outreach events and efforts designed to improve surface water quality through education.
- 1.13.e** Support citizen involvement events which engage participants in clean-up, monitoring, and restoration activities.
- 1.13.f** Mark storm drain inlets with pollution prevention message; i.e., "no dumping, drains to bay."
- 1.13.g** Outreach to school-age children on water quality issues through classroom and recreation programs.
- 1.13.h** Implement trash control program focused to reduce litter in storm drains and water bodies.
- 1.13.i** Maintain the City's stormwater drainage system and GIS maps of the collection system.
- 1.13.j** Implement an industrial and commercial site control program and inspect for compliance.
- 1.13.k** Monitor municipal maintenance activities for compliance with source control measures.

Engineering Services Department

Stormwater

Success Indicators

	Output	2011 Goal	2011 Mid-Year Actual	2011 Year End Projection	2012 Proposed
1.13.a	# of projects with low-impact development incorporated into development	4	3	4	4
1.13.d	# of public outreach events days	3	3	3	3
1.13.e	# of clean-up, monitoring, and restoration activities with citizen involvement	4	3	7	4
1.13.g	# of schools participating in stormwater and watershed in-classroom teacher training program	1	1	1	1
	# of recreation programs participating in stormwater and pollution education program	Not required	Not required	Not required	3
1.13.h	# of trash hot spots identified for pilot study tracking	9	8	9	Pilot study complete
	# of trash hot spots cleaned up and assessed	3	2	3	3
1.13.j	# of commercial and industrial stormwater inspections performed	50	51	55	50
1.13.k	# of municipal maintenance tasks in compliance with source control measures	5	5	5	5

Effectiveness

1.13.b	% of illicit discharge inspections performed within five days of service call	100%	100%	100%	100%
1.13.c	% of construction permits inspected during dry and wet weather	100%	100%	100%	100%
1.13.d	# of average contacts per hour per staff at outreach events	25	17	25	25
1.13.f	% of storm drain inlets with curb marker	80%	80%	80%	80%
1.13.g	% of classrooms visits, recreation programs and field trips scheduled completed	100%	50%	100%	100%
1.13.i	% of open channels and catch basins cleaned and inspected	100%	75%	100%	100%
1.13.k	% of municipal maintenance tasks in compliance in annual report	100%	100%	100%	100%

ENGINEERING SERVICES DEPARTMENT PROGRAM ORGANIZATIONAL CHART

DESIGN	CONSTRUCTION	TRAFFIC	LAND DEVELOPMENT	WASTEWATER	STORMWATER
<ul style="list-style-type: none"> * <i>Administers</i> Capital Improvement Program Pavement Management Program Sidewalk Program ADA Curb Ramp Upgrade Program Surface Drainage Program Street Light Master Plan 	<ul style="list-style-type: none"> * <i>Inspection Services</i> Capital Improvement Projects Subdivision Improvements Grading Permits Encroachment Permits 	<ul style="list-style-type: none"> * <i>Administers</i> Crosswalk Improvement Program Traffic Safety Improvements Railroad Crossing Improvement Program 	<ul style="list-style-type: none"> * <i>Plan Check Services</i> Entitlements Improvement Plans Improvement Agreements Final Maps Grading Plans Grant of Easements Encroachment Permits Watercourse Permits Capital Projects 	<ul style="list-style-type: none"> * <i>Waste Water Treatment Plant</i> Veolia Contract Administration for Operation/Maintenance Veolia Contract Administration for CIP NPDES Permit Compliance and Reporting Strategic/Master Planning 	<ul style="list-style-type: none"> * <i>Stormwater Collection System</i> Veolia Contract Administration for Operation/Maintenance Other Contract Administration for Operation/Maintenance Veolia Contract Administration for CIP GIS Management Strategic/Master Planning
<ul style="list-style-type: none"> * <i>Design & Construction Management</i> Pavement Miscellaneous Concrete ADA Curb Ramps Streetscape Streetslights Traffic Signals Traffic Safety Improvements Bay Trails Railroad Crossing Improvements Facilities Parks Storm Drains Retaining Walls Sanitary Sewer Emergency Repairs 	<ul style="list-style-type: none"> * <i>Right-of-Way</i> <i>Investigation of Infrastructure issues and claims</i> 	<ul style="list-style-type: none"> * <i>Traffic Reviews</i> New Development Plans Traffic Control Plans Truck Routes Permits Regional Transportation Projects 	<ul style="list-style-type: none"> * <i>Wastewater Collection System Operations</i> Veolia Contract Administration for Operation/Maintenance Veolia Contract Administration for CIP Baykeeper Settlement Compliance and Monitoring SSO Reporting GIS Management Strategic/Master Planning 	<ul style="list-style-type: none"> * <i>Stormwater System Pollutant Reduction</i> NPDES Compliance/Contra Costa Clean Water Program Industrial/Commercial Stormwater Inspection Program Public Outreach Coast/Watershed Clean Up Programs Construction Site Run-off/Erosion & Settlement Control 	
<ul style="list-style-type: none"> * <i>Management</i> Request for Proposal Process Bidding Process On-Call Service Contracts Professional Service Contracts Construction Contracts Master Plan & Studies 	<ul style="list-style-type: none"> * <i>Coordinate Outside Utility Agencies</i> * <i>Material Testing</i> * <i>Land Survey</i> * <i>Improvement Act of 1911</i> 	<ul style="list-style-type: none"> * <i>Review Public Requests</i> Traffic Calming Traffic Signals Curb Painting Traffic Signs & Pavement Markings Collision Data Requests Visibility and Sight Distance Issues Parking Restrictions 	<ul style="list-style-type: none"> * <i>National Flood Insurance Program</i> Flood Maps Letters of Map Revision Letters of Map Amendment Elevation Certificates Grant of Easements 	<ul style="list-style-type: none"> * <i>Source Control Program</i> Administration of Federal Pre-Treatment Program Administration of Fats, Oils, & Grease (FOG) Program SLUG Response and Investigation Management of Non-Residential Annual Sewer Service Fee Revenues Public Outreach Sewer Lateral Grant Program 	
		<ul style="list-style-type: none"> * <i>Conducts</i> Traffic Counts Speed Surveys Engineering Studies and Site Visits and Measurements Work Order Requests to Public Department 	<ul style="list-style-type: none"> * <i>Record Keeping</i> Record Drawings Engineering GIS Mapping Engineering Webpage Geotechnical Investigation Database 		
		<ul style="list-style-type: none"> * <i>Coordinate Federally-Funded Transportation Projects</i> Oversight of Projects Administered by Engineering Services Department Oversight of Projects Administered by Richmond Community and Redevelopment Agency 	<ul style="list-style-type: none"> * <i>Planning Support</i> Lot Line Adjustment Parcel Merge Street Vacation Certificate of Compliance Preliminary Plans Development Plans 		
		<ul style="list-style-type: none"> * <i>Attend Regional Transportation/Traffic Coordination Meetings</i> 			

**City of Richmond
Multi-Year Comparative Position Listing**

Department	Adopted FY2007-2008	Adopted FY2008-2009	Adopted FY2009-2010	Adopted FY2010-2011	Adopted FY2011-2012
ENGINEERING & WASTEWATER					
Assistant Civil Engineer	1.0				
Assistant Engineer	3.0				
Assistant Public Works Inspector	4.0	2.0	2.0		
Associate Civil Engineer	2.0	1.0	2.0	2.0	2.0
Capital Projects Manager	1.0	1.0	1.0	1.0	
City Engineer	1.0	1.0	1.0		1.0
Construction Inspector I				2.0	2.0
Construction Inspector II				1.0	1.0
Engineer I				2.0	2.0
Environmental Manager	1.0			1.0	1.0
GIS Administrator			1.0	1.0	
Industrial Waste Inspector	5.0	4.0	2.0	2.0	2.0
Infrastructure Administrator					1.0
Junior Engineer			2.0		
Management Analyst	1.0	1.0	1.0	1.0	1.0
Office Aide					
Office Assistant I/II	1.0	1.0	1.0	1.0	1.0
Operations Administrator	1.0	1.0	1.0	1.0	1.0
Project Manager II			1.0	1.0	1.0
Public Works Superintendent			1.0	1.0	1.0
Senior Civil Engineer	3.0	2.0	2.0	2.0	2.0
Senior Industrial Waste Inspector	2.0	2.0	2.0	2.0	2.0
Senior Public Works Inspector			1.0		
Total Full-Time Equivalents (FTEs)	26.0	16.0	21.0	21.0	21.0

Engineering Department-22 Summary

TOTAL BUDGET - HISTORICAL COMPARISON

	FY2009-10 Actual	FY2010-11 Adjusted	FY2010-11 Actual	FY2011-12 Adopted	\$ Chg From FY2010-11	% Chg From FY2010-11
Thru March-2011						
SOURCES BY FUND						
State Gas Tax-1002	2,789,284	1,786,940	1,512,169	2,850,649	1,063,709	37%
Cost Recovery-1051	4,635,055	3,512,512	5,345,697	3,403,284	(109,228)	-3%
Engineering Grants-1054	0	6,198,472	552,083	6,652,522	454,050	7%
General Capital-2001	6,136,739	437,221	634,717	0		
Measure J-2002	37,380	1,163,800	926,991	1,210,397	46,597	4%
CIP Lease Revenue Bond-2003	11,131	9,500	490	0	(9,500)	
Civic Center-2004	64,555	0	4,006	0	-	
Transportation-2008	1,603,138	1,506,640	0	26,211	(1,480,429)	-5648%
State Highway-2009	84,314	77,852	26,603	0	(77,852)	
Impact Fee-2111	-31,445	0	32,774	0	-	
Wastewater-4003	15,047,859	16,938,150	9,367,824	17,215,805	277,655	2%
Stormwater-4006	2,736	1,863,896	938,417	1,902,298	38,402	2%
Sources Total	30,380,746	33,494,983	19,341,770	33,261,166	203,404	0
USES BY TYPE						
Salaries	1,620,780	1,896,375	1,857,060	2,136,493	240,118	11%
Benefits	562,824	960,811	843,121	837,859	(122,952)	-15%
Professional Services	6,658,775	9,173,594	8,198,838	8,968,290	(205,304)	-2%
Other Operating Expenses	129,506	299,104	276,702	296,321	(2,783)	-1%
Utilities	796,229	869,212	578,640	884,812	15,600	2%
Equipment & Contract Services	1,623,285	5,954,754	3,744,535	2,968,535	(2,986,219)	-101%
Cost Pool	4,458,505	3,102,760	3,102,759	2,911,392	(191,368)	-7%
Asset/Capital Outlay	16,278,382	28,205,518	21,959,482	24,261,238	(3,944,280)	-16%
Debt Service Expenditure	2,616,535	3,273,178	3,241,576	4,822,761	1,549,583	32%
Grant Expenditures	50,035	0	0	0	-	
Operating Transfer Out	7,202,851	513,863	639,013	504,555	(9,308)	-2%
Uses-Operating Expenditure Total	41,997,706	54,249,169	44,441,726	48,592,256	(5,656,913)	-12%
USES BY ORG CODE						
Gas Tax Admin - 10221131	373031.6	427,863	420,013	3,000	(424,863)	-14162%
Gas Tax Projects - 10221331	637246.86	7,993,198	5,996,814	3,393,698	(4,599,500)	-136%
Administration - 15121131	3,759,396	3,303,010	3,530,126	3,208,284	(94,726)	-3%
General Services - 15121331	5,560,362	1,310,059	1,415,974	195,000	(1,115,059)	-572%
Engineering Grants Admin-15421231	0	7,047,495	5,258,637	6,652,522	(394,973)	-6%
Capital Outlay-20121331	1635200.57	3,966,828	2,901,431	1,922,345	(2,044,483)	-106%
Measure J-20221331	458922.49	969,327	731,007	1,706,763	737,436	43%
Civic Center-20421331	14864686.96	2,094,272	988,246	50,000	(2,044,272)	-4089%
Engineering Projects-20921331	676911.93	2,037,582	765,688	1,397,605	(639,977)	-46%
Wastewater Admin - 40322431	3,253,074	4,173,778	3,240,151	5,723,361	1,549,583	27%
Sanitary Sewer - 40322631	3,180,242	4,434,655	3,938,966	4,382,464	(52,191)	-1%
Treatment Plant - 40322731	6,035,954	6,196,653	5,077,717	5,952,586	(244,067)	-4%
Pre-Treatment - 40322831	1,141,826	772,663	494,734	863,461	90,798	11%
Wastewater Capital-40322931	-	10,478	3,459,197	11,250,000	11,239,522	100%
Stormwater - 40623431	-	2,145,715	2,003,037	1,891,167	(254,548)	-13%
TOTAL BUDGET	41,576,855	46,883,575	40,221,737	48,592,256	1,708,681	4%

Adopted FY2011-12 Budget