

Engineering and Capital Projects



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Engineering and Capital Projects



Engineering & Capital Projects Department

Description

The Engineering & Capital Projects Department (E&CP) strives to provide quality engineering, program and construction management, and inspection services that enhance the safety and the environment of the City of San Diego. The department has approximately 800 engineers, surveyors, and support staff that provide a full range of engineering services for the City's Capital Improvements Program (CIP), such as structural, electrical, and traffic engineering; materials testing, and surveying. E&CP is responsible for: project planning, designing, and construction management of public improvement projects; the quality assurance and inspection of public and private work permitted in rights-of-way; surveying, and materials testing services.

E&CP supports a broad range of projects for various asset types including libraries, fire, lifeguard and police stations, parks and recreation centers; outdoor lighting, streetlights and traffic signals; street and sidewalk improvements, bikeways and other transportation projects; drainage and flood control facilities, water and sewer pipeline, treatment plants and pump stations; and undergrounded utilities. E&CP is also responsible for the asset management of citywide survey monumentation.

The vision is:

To be the innovative Industry leader in developing high quality public infrastructure systems.

The mission is:

To deliver high quality public infrastructure systems by cultivating diverse expertise and leveraging our engineering responsibility in a collaborative and inter-disciplinary environment.

Goals and Objectives

Goal 1: Provide quality, safe, reliable and equitable infrastructure and related services

- Provide high quality customer service
- Produce high quality capital projects
- Conduct community engagement

Engineering and Capital Projects

Goal 2: Provide timely and efficient delivery of projects

- Deliver capital projects on time
- Deliver capital projects within budget

Goal 3: Cultivate a positive departmental culture that prioritizes diversity and inclusion to foster innovation

- Partner with City departments and other government agencies to improve organizational effectiveness
- Actively recruit new City employees and consultants
- Actively retain existing staff

Goal 4: Be the City of choice for private industry that supports the delivery of Capital Projects

- Engage regularly with industries, professional organizations, and government agencies that support City Infrastructure
- Increase the average number of bids and proposals on CIP advertised projects

Budget Equity Impact Statement	
Budget Equity Lens Summary Base Budget	Budget Equity Lens Summary Budget Adjustment
<p><i>Is there an opportunity to adjust the department's ongoing Base Budget to address disparity?</i></p> <p>Yes</p> <p>Yes. The Engineering & Capital Projects (E&CP) Department's operating budget is to ensure that the department's staff have the training resources they need to meet Goal #4 of the Department's Tactical Equity Plan: Increase departmental effectiveness and resiliency and expand individual employee expertise. The department prioritized its Training Program and adjusted its base budget in FY 2024, reallocating \$400,000 for a total training budget of approximately \$810,000. E&CP also prioritized and adjusted its base budget to reallocate an additional \$385,000 to the department IT budget to purchase laptops and associated accessories, allowing a portion of department staff to work effectively remotely. Because not all employees have a city-issued laptop to work remotely, there is a disparity within the department.</p>	<p><i>Do the Budget Adjustments address a disparity?</i></p> <p>No</p> <p>No applicable budget adjustments.</p>

Engineering and Capital Projects

Key Performance Indicators

Performance Indicator	FY2019 Actual	FY2020 Actual	FY2021 Actual	FY2022 Actual	FY2023 Estimate	Goal
Percentage of Capital Improvement Projects delivered on baseline Project Charter schedule ¹	79.0 %	81.9 %	82.0 %	64.9 %	N/A	N/A
Number of information-sharing meetings with industries supporting City infrastructure	13	9	14	13	12	12
Percentage of all Construction Change Orders due to changed/unforeseen conditions and design errors ²	3.0 %	3.0 %	3.5 %	3.2 %	4.0 %	4.0 %
Percentage of Capital Improvement Projects awarded on annual baseline schedule ³	N/A	N/A	N/A	N/A	80.0 %	80.0 %
Percentage of Capital Improvement Projects completed on annual baseline schedule ³	N/A	N/A	N/A	N/A	80.0 %	80.0 %

1. This key performance indicator is being replaced with two new indicators to increase the accuracy of measuring the department's ability to deliver CIP projects and increase transparency. The two new indicators will address two critical milestones in the life of a CIP project: awarding CIP construction contracts and substantial completion of construction.
2. At Notice of Completion.
3. These indicators will address two critical milestones in the life of a CIP project: awarding CIP construction contracts and substantial completion of construction.

Engineering and Capital Projects

Department Summary

	FY2022 Actual	FY2023 Budget	FY2024 Proposed	FY2023-2024 Change
FTE Positions (Budgeted)	825.50	822.50	786.40	(36.10)
Personnel Expenditures	\$ 107,386,049	\$ 114,204,761	\$ 124,385,525	\$ 10,180,764
Non-Personnel Expenditures	18,873,134	27,430,880	21,866,801	(5,564,079)
Total Department Expenditures	\$ 126,259,183	\$ 141,635,641	\$ 146,252,326	\$ 4,616,685
Total Department Revenue	\$ 115,873,536	\$ 136,819,545	\$ 133,858,610	\$ (2,960,935)

Engineering & Capital Projects Fund

Department Expenditures

	FY2022 Actual	FY2023 Budget	FY2024 Proposed	FY2023-2024 Change
Architectural Engineering & Parks	\$ 13,655,175	\$ 15,266,931	\$ 19,344,603	\$ 4,077,672
Business Operations & Employee Services	21,991,336	33,815,338	32,301,326	(1,514,012)
Capital Asset Management	10,717,734	10,710,295	309,448	(10,400,847)
Construction Engineering Support	-	-	21,545,223	21,545,223
Construction Management & Field Engineer	33,456,710	32,300,524	27,817,337	(4,483,187)
Contracting	3,501,477	-	-	-
Engineering & Capital Projects	1,320,750	1,280,126	331,795	(948,331)
Program & Project Development	23,205,240	28,483,575	13,179,387	(15,304,188)
Project Management Office	-	-	10,519,083	10,519,083
Transportation & Utility Engineering	18,410,761	19,778,852	20,904,124	1,125,272
Total	\$ 126,259,183	\$ 141,635,641	\$ 146,252,326	\$ 4,616,685

Department Personnel

	FY2022 Budget	FY2023 Budget	FY2024 Proposed	FY2023-2024 Change
Architectural Engineering & Parks	88.00	92.00	104.80	12.80
Business Operations & Employee Services	76.50	91.50	67.00	(24.50)
Capital Asset Management	80.00	79.00	1.00	(78.00)
Construction Engineering Support	0.00	0.00	143.00	143.00
Construction Management & Field Engineer	190.00	212.00	162.00	(50.00)
Contracting	49.00	0.00	0.00	0.00
Engineering & Capital Projects	3.00	4.00	3.00	(1.00)
Program & Project Development	182.00	188.00	93.80	(94.20)
Project Management Office	0.00	0.00	72.00	72.00
Transportation & Utility Engineering	157.00	156.00	139.80	(16.20)
Total	825.50	822.50	786.40	(36.10)

Engineering and Capital Projects

Significant Budget Adjustments

	FTE	Expenditures	Revenue
Salary and Benefit Adjustments Adjustments to reflect savings resulting from vacant positions for any period of the fiscal year, retirement contributions, retiree health contributions, and labor negotiations.	0.00 \$	15,949,278 \$	-
Non-Discretionary Adjustment Adjustment to expenditure allocations that are determined outside of the department's direct control. These allocations are generally based on prior year expenditure trends and examples of these include utilities, insurance, and rent.	0.00	306,381	-
AutoCADD Software Licenses Addition of non-personnel expenditures associated with the maintenance / renewal of AutoCADD licenses.	0.00	40,000	-
Power BI Software Licenses Addition of software licenses to aggregate, analyze, visualize, and share capital improvements program data through dashboards and reports.	0.00	16,544	-
Bluebeam Software Licenses Addition of software licenses to support engineers working on CIP projects.	0.00	900	-
Non-Standard Hour Personnel Funding Funding allocated according to a zero-based annual review of hourly funding requirements.	(0.60)	(23,620)	-
Reduction of Auto Messenger 2 Position Removal of 0.50 FTE Auto Messenger 2 position in the Business Operations and Employees Services Division.	(0.50)	(36,215)	-
Support for Information Technology Adjustment to expenditure allocations according to an annual review of information technology funding requirements.	0.00	(90,128)	-
Reduction of Planet Bids Software Budget Reduction of total annualized non-personnel budget due to absorption of remaining Planet Bids Software Platform expenses by Purchasing and Contracting in line with the Fiscal Year 2023 restructure.	0.00	(250,000)	-
One-Time Additions and Annualizations Adjustment to reflect one-time revenues and expenditures, and the annualization of revenues and expenditures, implemented in Fiscal Year 2023.	0.00	(5,530,516)	(643,932)
Transfer to Strategic Capital Projects Department Transfer of 35.00 FTE positions, non-personnel expenditures, and associated revenue from the Engineering and Capital Project Department to the newly created Strategic Capital Projects Department.	(35.00)	(5,765,939)	(5,814,266)
Revised Reimbursements for Services Adjustment to reflect revised reimbursement projections for services provided to the Capital Improvements Project and other funds.	0.00	-	2,348,840

Engineering and Capital Projects

Significant Budget Adjustments

	FTE	Expenditures	Revenue
Right-of-Way Permit Reimbursements	0.00	-	1,148,423
Revenue adjustment associated with reimbursements from the General Fund for Fiscal Year 2022 right-of-way utility permits.			
Total	(36.10) \$	4,616,685 \$	(2,960,935)

Expenditures by Category

	FY2022 Actual	FY2023 Budget	FY2024 Proposed	FY2023-2024 Change
PERSONNEL				
Personnel Cost	\$ 64,002,912	\$ 72,444,423	\$ 79,011,850	\$ 6,567,427
Fringe Benefits	43,383,137	41,760,338	45,373,675	3,613,337
PERSONNEL SUBTOTAL	107,386,049	114,204,761	124,385,525	10,180,764
NON-PERSONNEL				
Supplies	\$ 409,281	\$ 1,011,130	\$ 473,557	\$ (537,573)
Contracts & Services	8,755,537	15,040,285	10,548,866	(4,491,419)
<i>External Contracts & Services</i>	<i>6,150,315</i>	<i>12,283,221</i>	<i>7,649,232</i>	<i>(4,633,989)</i>
<i>Internal Contracts & Services</i>	<i>2,605,222</i>	<i>2,757,064</i>	<i>2,899,634</i>	<i>142,570</i>
Information Technology	8,624,568	9,518,523	9,560,289	41,766
Energy and Utilities	322,873	398,075	417,536	19,461
Other	742,884	866,553	866,553	-
Transfers Out	-	596,314	-	(596,314)
Capital Expenditures	17,992	-	-	-
NON-PERSONNEL SUBTOTAL	18,873,134	27,430,880	21,866,801	(5,564,079)
Total	\$ 126,259,183	\$ 141,635,641	\$ 146,252,326	\$ 4,616,685

Revenues by Category

	FY2022 Actual	FY2023 Budget	FY2024 Proposed	FY2023-2024 Change
Charges for Services	\$ 115,684,495	\$ 136,819,545	\$ 133,858,610	\$ (2,960,935)
Fines Forfeitures and Penalties	17,222	-	-	-
Other Revenue	191,241	-	-	-
Rev from Money and Prop	(19,422)	-	-	-
Total	\$ 115,873,536	\$ 136,819,545	\$ 133,858,610	\$ (2,960,935)

Personnel Expenditures

Job Number	Job Title / Wages	FY2022 Budget	FY2023 Budget	FY2024 Proposed	Salary Range	Total
FTE, Salaries, and Wages						
20000011	Account Clerk	2.00	2.00	2.00	\$ 42,394 - 51,026	\$ 107,154
20000012	Administrative Aide 1	18.00	17.00	15.00	47,504 - 57,220	832,698
20000024	Administrative Aide 2	10.00	12.00	12.00	54,716 - 65,935	765,341
20000058	Assistant Customer Services Supervisor	0.00	1.00	0.00	64,457 - 77,679	-
20001140	Assistant Department Director	1.00	4.00	3.00	83,242 - 315,328	629,678
20001202	Assistant Deputy Director	7.00	8.00	7.00	62,941 - 231,483	1,269,896
20000070	Assistant Engineer-Civil	238.00	244.00	234.00	81,598 - 98,308	23,206,148
20000071	Assistant Engineer-Civil	23.00	9.00	3.00	81,598 - 98,308	257,034
20000077	Assistant Engineer-Electrical	9.00	9.00	9.00	81,598 - 98,308	899,372

Engineering and Capital Projects

Personnel Expenditures

Job Number	Job Title / Wages	FY2022 Budget	FY2023 Budget	FY2024 Proposed	Salary Range	Total
20000116	Assistant Engineer-Traffic	4.00	4.00	5.00	81,598 - 98,308	512,974
20000143	Associate Engineer-Civil	131.00	136.00	128.00	93,938 - 113,452	15,131,950
20000145	Associate Engineer-Civil	7.00	0.00	0.00	93,938 - 113,452	-
20000150	Associate Engineer-Electrical	5.00	5.00	4.00	93,938 - 113,452	476,496
20000167	Associate Engineer-Traffic	5.00	5.00	5.00	93,938 - 113,452	575,131
20000119	Associate Management Analyst	21.00	18.00	17.00	69,466 - 83,940	1,315,244
20000162	Associate Planner	9.00	10.00	10.00	76,386 - 92,308	915,901
20000110	Auto Messenger 2	0.50	1.50	1.00	34,865 - 42,020	43,459
20000539	Clerical Assistant 2	5.00	5.00	5.00	38,439 - 46,327	234,207
20000545	Contracts Processing Clerk	3.00	3.00	3.00	38,409 - 46,381	137,673
20000366	Customer Services Supervisor	0.00	1.00	2.00	74,249 - 89,649	163,758
20001101	Department Director	1.00	2.00	1.00	83,242 - 315,328	235,937
20001168	Deputy Director	7.00	8.00	7.00	62,941 - 231,483	1,337,897
21000451	Environmental Biologist 3	2.00	2.00	3.00	83,472 - 101,098	299,158
20000924	Executive Assistant	1.00	1.00	1.00	54,883 - 66,380	69,699
20000178	Information Systems Administrator	1.00	1.00	1.00	94,382 - 114,316	120,031
20000290	Information Systems Analyst 2	3.00	3.00	3.00	70,795 - 85,546	266,592
20000293	Information Systems Analyst 3	2.00	4.00	3.00	77,711 - 93,968	287,158
20000998	Information Systems Analyst 4	2.00	2.00	2.00	87,409 - 105,912	222,416
20000377	Information Systems Technician	2.00	1.00	1.00	55,763 - 67,197	58,552
20001018	Land Surveying Assistant	35.00	35.00	34.00	81,786 - 98,539	3,284,326
20001019	Land Surveying Associate	9.00	9.00	10.00	94,157 - 113,715	1,155,689
90001073	Management Intern - Hourly	4.00	4.00	3.40	33,904 - 34,029	115,273
20000756	Office Support Specialist	6.00	4.00	4.00	39,700 - 47,783	166,740
20000634	Organization Effectiveness Specialist 2	1.00	1.00	0.00	63,008 - 76,136	-
20000639	Organization Effectiveness Supervisor	1.00	1.00	1.00	77,794 - 94,261	98,975
20000669	Park Designer	4.00	4.00	4.00	89,770 - 108,406	449,180
20000680	Payroll Specialist 2	4.00	4.00	4.00	46,697 - 56,380	220,050
20000740	Principal Drafting Aide	9.00	9.00	9.00	58,260 - 70,548	598,836
20000743	Principal Engineering Aide	62.00	61.00	58.00	70,495 - 85,364	4,945,650
20000518	Principal Survey Aide	20.00	20.00	20.00	70,668 - 85,568	1,646,725
20001234	Program Coordinator	1.00	1.00	0.00	33,904 - 184,808	-
20001222	Program Manager	3.00	3.00	3.00	62,941 - 231,483	446,407
20000760	Project Assistant	34.00	32.00	32.00	72,933 - 87,868	2,686,270
20000761	Project Officer 1	11.00	11.00	13.00	83,962 - 101,403	1,288,497
20000763	Project Officer 2	7.00	6.00	6.00	96,785 - 117,002	706,544
20001042	Safety and Training Manager	1.00	1.00	1.00	77,794 - 94,261	96,995
20000847	Safety Officer	1.00	1.00	0.00	67,482 - 81,496	-
20000854	Safety Representative 2	0.00	0.00	1.00	58,806 - 71,116	61,746
20000885	Senior Civil Engineer	35.00	40.00	38.00	108,285 - 130,904	5,092,306

Engineering and Capital Projects

Personnel Expenditures

Job Number	Job Title / Wages	FY2022 Budget	FY2023 Budget	FY2024 Proposed	Salary Range	Total
20000890	Senior Civil Engineer	4.00	1.00	0.00	108,285 - 130,904	-
20000904	Senior Electrical Engineer	1.00	1.00	1.00	108,285 - 130,904	137,449
20000900	Senior Engineering Aide	11.00	11.00	11.00	62,635 - 75,717	791,386
20001014	Senior Land Surveyor	2.00	2.00	2.00	108,531 - 131,194	275,506
20000015	Senior Management Analyst	14.00	15.00	16.00	76,252 - 92,204	1,453,143
20000918	Senior Planner	5.00	5.00	6.00	87,992 - 106,391	647,928
20000929	Senior Survey Aide	4.00	4.00	4.00	62,780 - 75,902	272,475
20000926	Senior Traffic Engineer	2.00	1.00	1.00	108,285 - 130,904	137,449
90000964	Student Engineer - Hourly	4.00	4.00	4.00	33,904 - 37,294	136,116
20000970	Supervising Management Analyst	8.00	9.00	9.00	81,732 - 99,033	917,699
21000177	Trainer	2.00	2.00	2.00	63,008 - 76,136	126,244
20001041	Training Supervisor	1.00	2.00	2.00	69,163 - 83,631	163,712
	Architect License Pay					17,869
	Bilingual - Regular					1,456
	Budgeted Personnel Expenditure Savings					(8,928,852)
	Infrastructure In-Training Pay					1,204,609
	Infrastructure Registration Pay					2,843,503
	Landscape Architect Lic					50,559
	Overtime Budgeted					1,400,000
	Reg Pay For Engineers					2,681,178
	Sick Leave - Hourly					6,273
	Termination Pay Annual Leave					56,760
	Vacation Pay In Lieu					1,187,625
FTE, Salaries, and Wages Subtotal		825.50	822.50	786.40		\$ 79,011,850

	FY2022 Actual	FY2023 Budget	FY2024 Proposed	FY2023-2024 Change
Fringe Benefits				
Employee Offset Savings	\$ 252,898	\$ 254,836	\$ 264,757	\$ 9,921
Flexible Benefits	9,014,658	9,024,378	8,966,100	(58,278)
Long-Term Disability	245,315	227,261	278,346	51,085
Medicare	971,540	1,031,346	1,105,790	74,444
Other	-	(483,923)	-	483,923
Other Post-Employment Benefits	4,378,626	3,866,624	3,811,905	(54,719)
Retiree Medical Trust	95,406	110,217	123,932	13,715
Retirement 401 Plan	68,854	104,762	437,477	332,715
Retirement ADC	22,609,374	21,680,730	26,780,444	5,099,714
Retirement DROP	110,967	123,939	102,766	(21,173)
Risk Management Administration	781,352	792,006	862,108	70,102
Supplemental Pension Savings Plan	4,271,732	4,654,223	2,076,981	(2,577,242)
Unemployment Insurance	83,584	82,479	81,379	(1,100)
Workers' Compensation	498,832	291,460	481,690	190,230
Fringe Benefits Subtotal	\$ 43,383,137	\$ 41,760,338	\$ 45,373,675	\$ 3,613,337
Total Personnel Expenditures			\$ 124,385,525	

Engineering and Capital Projects

Revenue and Expense Statement (Non-General Fund)

Engineering & Capital Projects Fund	FY2022 Actual	FY2023* Budget	FY2024** Proposed
BEGINNING BALANCE AND RESERVES			
Balance from Prior Year	\$ (1,382,877)	\$ (11,768,514)	\$ (23,743,458)
TOTAL BALANCE AND RESERVES	\$ (1,382,877)	\$ (11,768,514)	\$ (23,743,458)
REVENUE			
Charges for Services	\$ 115,684,495	\$ 136,819,545	\$ 139,672,876
Fines Forfeitures and Penalties	17,222	-	-
Other Revenue	191,241	-	-
Revenue from Use of Money and Property	(19,422)	-	-
TOTAL REVENUE	\$ 115,873,536	\$ 136,819,545	\$ 139,672,876
TOTAL BALANCE, RESERVES, AND REVENUE	\$ 114,490,658	\$ 125,051,031	\$ 115,929,418
OPERATING EXPENSE			
Personnel Expenses	\$ 64,002,912	\$ 72,444,423	\$ 82,906,848
Fringe Benefits	43,383,137	41,760,338	47,284,237
Supplies	409,270	1,011,130	479,802
Contracts & Services	8,755,537	15,040,285	10,562,646
Information Technology	8,624,568	9,518,523	9,650,798
Energy and Utilities	322,873	398,075	419,771
Other Expenses	742,884	866,553	866,553
Transfers Out	-	596,314	-
Capital Expenditures	17,992	-	-
TOTAL OPERATING EXPENSE	\$ 126,259,172	\$ 141,635,641	\$ 152,170,655
TOTAL EXPENSE	\$ 126,259,172	\$ 141,635,641	\$ 152,170,655
BALANCE	\$ (11,768,514)	\$ (16,584,610)	\$ (36,241,237)
TOTAL BALANCE, RESERVES, AND EXPENSE	\$ 114,490,658	\$ 125,051,031	\$ 115,929,418

* At the time of publication, audited financial statements for Fiscal Year 2023 were not available. Therefore, the Fiscal Year 2023 column reflects final budgeted revenue and expense amounts from the Fiscal Year 2023 Adopted Budget, while the beginning Fiscal Year 2023 balance amount reflects the audited Fiscal Year 2022 ending balance.

** Fiscal Year 2024 Beginning Fund Balance reflect the projected Fiscal Year 2023 Ending Fund Balance based on updated Revenue and Expenditures projections for Fiscal Year 2023.

***The Engineering & Capital Projects Fund reflects a negative beginning balance/ending balance and will be monitored throughout Fiscal Year 2024 to address negative balances.