

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.

Engineering and Capital Projects

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

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>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 Actual	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	14	12
Percentage of all Construction Change Orders due to changed/unforeseen conditions and design errors	3.0%	3.0%	3.5%	3.2%	3.7%	4.0%
Percentage of Capital Improvement Projects awarded on annual baseline schedule ²	N/A	N/A	N/A	N/A	94.7%	80.0%
Percentage of Capital Improvement Projects completed on annual baseline schedule ²	N/A	N/A	N/A	N/A	50.0%	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. 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 Adopted	FY2023-2024 Change
FTE Positions (Budgeted)	825.50	822.50	787.40	(35.10)
Personnel Expenditures	\$ 107,386,049	\$ 114,204,761	\$ 126,350,672	\$ 12,145,911
Non-Personnel Expenditures	18,873,134	27,430,880	21,873,867	(5,557,013)
Total Department Expenditures	\$ 126,259,183	\$ 141,635,641	\$ 148,224,539	\$ 6,588,898
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 Adopted	FY2023-2024 Change
Architectural Engineering & Parks	\$ 13,655,175	\$ 15,266,931	\$ 19,649,060	\$ 4,382,129
Business Operations & Employee Services	21,991,336	33,815,338	32,146,553	(1,668,785)
Capital Asset Management	10,717,734	10,710,295	311,029	(10,399,266)
Construction Engineering Support	-	-	21,865,519	21,865,519
Construction Management & Field Engineer	33,456,710	32,300,524	28,246,220	(4,054,304)
Contracting	3,501,477	-	-	-
Engineering & Capital Projects	1,320,750	1,280,126	588,005	(692,121)
Program & Project Development	23,205,240	28,483,575	13,512,747	(14,970,828)
Project Management Office	-	-	10,658,159	10,658,159
Transportation & Utility Engineering	18,410,761	19,778,852	21,247,247	1,468,395
Total	\$ 126,259,183	\$ 141,635,641	\$ 148,224,539	\$ 6,588,898

Department Personnel

	FY2022 Budget	FY2023 Budget	FY2024 Adopted	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	94.80	(93.20)
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	787.40	(35.10)

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 \$	17,855,034 \$	-
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	308,811	-
Environmental and Permitting Support Section Addition of 1.00 Program Manager and associated non-personnel expenditures to oversee the Environmental and Permitting Support Section.	1.00	137,079	-
AutoCADD Software Licenses Addition of non-personnel expenditures associated with the maintenance and 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)	(2,995)	-
Auto Messenger 2 Reduction Reduction of 0.50 Auto Messenger 2 in the Business Operations and Employees Services Division.	(0.50)	(36,664)	-
Support for Information Technology Adjustment to expenditure allocations according to an annual review of information technology funding requirements.	0.00	(90,128)	-
Planet Bids Software Reduction of non-personnel expenditures due to the transfer of the Planet Bids Software Platform to the Purchasing and Contracting Department.	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 Projects Department to the newly created Strategic Capital Projects Department.	(35.00)	(5,859,167)	(5,814,266)

Engineering and Capital Projects

Significant Budget Adjustments

	FTE	Expenditures	Revenue
Revised Reimbursements for Services	0.00	-	2,348,840
Adjustment to reflect revised reimbursement projections for services provided to the Capital Improvements Program and other funds.			
Right-of-Way Permit Reimbursements	0.00	-	1,148,423
Revenue adjustment associated with reimbursements from the General Fund for Fiscal Year 2022 inspections for right-of-way utility permits.			
Total	(35.10)	\$ 6,588,898	\$ (2,960,935)

Expenditures by Category

	FY2022 Actual	FY2023 Budget	FY2024 Adopted	FY2023-2024 Change
PERSONNEL				
Personnel Cost	\$ 64,002,912	\$ 72,444,423	\$ 81,033,690	\$ 8,589,267
Fringe Benefits	43,383,137	41,760,338	45,316,982	3,556,644
PERSONNEL SUBTOTAL	107,386,049	114,204,761	126,350,672	12,145,911
NON-PERSONNEL				
Supplies	\$ 409,281	\$ 1,011,130	\$ 478,193	\$ (532,937)
Contracts & Services	8,755,537	15,040,285	10,548,866	(4,491,419)
<i>External Contracts & Services</i>	6,150,315	12,283,221	7,649,232	(4,633,989)
<i>Internal Contracts & Services</i>	2,605,222	2,757,064	2,899,634	142,570
Information Technology	8,624,568	9,518,523	9,560,289	41,766
Energy and Utilities	322,873	398,075	419,966	21,891
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	21,873,867	(5,557,013)
Total	\$ 126,259,183	\$ 141,635,641	\$ 148,224,539	\$ 6,588,898

Revenues by Category

	FY2022 Actual	FY2023 Budget	FY2024 Adopted	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 Adopted	Salary Range	Total
FTE, Salaries, and Wages						
20000011	Account Clerk	2.00	2.00	2.00	\$ 45,627 - 54,916	\$ 109,832
20000012	Administrative Aide 1	18.00	17.00	15.00	51,126 - 61,583	853,575
20000024	Administrative Aide 2	10.00	12.00	12.00	58,888 - 70,962	784,537
20000058	Assistant Customer Services Supervisor	0.00	1.00	0.00	69,372 - 83,603	-
20001140	Assistant Department Director	1.00	4.00	3.00	89,589 - 339,372	645,420

Engineering and Capital Projects

Personnel Expenditures

Job Number	Job Title / Wages	FY2022 Budget	FY2023 Budget	FY2024 Adopted	Salary Range	Total
20001202	Assistant Deputy Director	7.00	8.00	7.00	67,740 - 249,134	1,301,644
20000070	Assistant Engineer-Civil	238.00	244.00	234.00	87,820 - 105,804	23,787,716
20000071	Assistant Engineer-Civil	23.00	9.00	3.00	87,820 - 105,804	263,460
20000077	Assistant Engineer-Electrical	9.00	9.00	9.00	87,820 - 105,804	921,907
20000116	Assistant Engineer-Traffic	4.00	4.00	5.00	87,820 - 105,804	525,833
20000143	Associate Engineer-Civil	131.00	136.00	128.00	101,101 - 122,102	15,510,715
20000145	Associate Engineer-Civil	7.00	0.00	0.00	101,101 - 122,102	-
20000150	Associate Engineer-Electrical	5.00	5.00	4.00	101,101 - 122,102	488,408
20000167	Associate Engineer-Traffic	5.00	5.00	5.00	101,101 - 122,102	589,509
20000119	Associate Management Analyst	21.00	18.00	17.00	74,763 - 90,340	1,348,206
20000162	Associate Planner	9.00	10.00	10.00	82,210 - 99,347	938,823
20000110	Auto Messenger 2	0.50	1.50	1.00	37,524 - 45,224	44,546
20000539	Clerical Assistant 2	5.00	5.00	5.00	41,370 - 49,860	240,062
20000545	Contracts Processing Clerk	3.00	3.00	3.00	41,337 - 49,918	141,115
20000366	Customer Services Supervisor	0.00	1.00	2.00	79,910 - 96,485	167,852
20001101	Department Director	1.00	2.00	1.00	89,589 - 339,372	241,836
20001168	Deputy Director	7.00	8.00	7.00	67,740 - 249,134	1,371,343
21000451	Environmental Biologist 3	2.00	2.00	3.00	89,837 - 108,807	306,729
20000924	Executive Assistant	1.00	1.00	1.00	59,068 - 71,442	71,442
20000178	Information Systems Administrator	1.00	1.00	1.00	101,579 - 123,032	123,032
20000290	Information Systems Analyst 2	3.00	3.00	3.00	76,193 - 92,069	273,290
20000293	Information Systems Analyst 3	2.00	4.00	3.00	83,637 - 101,133	294,335
20000998	Information Systems Analyst 4	2.00	2.00	2.00	94,074 - 113,988	227,976
20000377	Information Systems Technician	2.00	1.00	1.00	60,015 - 72,321	60,015
20001018	Land Surveying Assistant	35.00	35.00	34.00	88,023 - 106,053	3,366,543
20001019	Land Surveying Associate	9.00	9.00	10.00	101,336 - 122,385	1,184,621
90001073	Management Intern - Hourly	4.00	4.00	3.40	36,489 - 36,624	124,062
20000756	Office Support Specialist	6.00	4.00	4.00	42,727 - 51,426	170,908
20000634	Organization Effectiveness Specialist 2	1.00	1.00	0.00	67,812 - 81,941	-
20000639	Organization Effectiveness Supervisor	1.00	1.00	1.00	83,726 - 101,449	101,449
20000669	Park Designer	4.00	4.00	4.00	96,614 - 116,672	460,427
20000680	Payroll Specialist 2	4.00	4.00	4.00	50,258 - 60,679	225,567
20000740	Principal Drafting Aide	9.00	9.00	9.00	62,703 - 75,928	613,810
20000743	Principal Engineering Aide	62.00	61.00	58.00	75,870 - 91,873	5,069,646
20000518	Principal Survey Aide	20.00	20.00	20.00	76,056 - 92,092	1,687,994
20001234	Program Coordinator	1.00	1.00	0.00	36,489 - 198,900	-
20001222	Program Manager	3.00	3.00	4.00	67,740 - 249,134	596,536
20000760	Project Assistant	34.00	32.00	32.00	78,494 - 94,568	2,753,563
20000761	Project Officer 1	11.00	11.00	13.00	90,364 - 109,135	1,320,767
20000763	Project Officer 2	7.00	6.00	6.00	104,165 - 125,923	724,256

Engineering and Capital Projects

Personnel Expenditures

Job Number	Job Title / Wages	FY2022 Budget	FY2023 Budget	FY2024 Adopted	Salary Range	Total
20001042	Safety and Training Manager	1.00	1.00	1.00	83,726 - 101,449	99,420
20000847	Safety Officer	1.00	1.00	0.00	72,628 - 87,711	-
20000854	Safety Representative 2	0.00	0.00	1.00	63,289 - 76,539	63,289
20000885	Senior Civil Engineer	35.00	40.00	38.00	116,542 - 140,885	5,219,815
20000890	Senior Civil Engineer	4.00	1.00	0.00	116,542 - 140,885	-
20000904	Senior Electrical Engineer	1.00	1.00	1.00	116,542 - 140,885	140,885
20000900	Senior Engineering Aide	11.00	11.00	11.00	67,411 - 81,490	811,340
20001014	Senior Land Surveyor	2.00	2.00	2.00	116,806 - 141,197	282,394
20000015	Senior Management Analyst	14.00	15.00	16.00	82,066 - 99,234	1,489,584
20000918	Senior Planner	5.00	5.00	6.00	94,702 - 114,503	664,161
20000929	Senior Survey Aide	4.00	4.00	4.00	67,567 - 81,689	279,287
20000926	Senior Traffic Engineer	2.00	1.00	1.00	116,542 - 140,885	140,885
90000964	Student Engineer - Hourly	4.00	4.00	4.00	36,489 - 40,138	146,496
20000970	Supervising Management Analyst	8.00	9.00	9.00	87,965 - 106,585	940,645
21000177	Trainer	2.00	2.00	2.00	67,812 - 81,941	129,400
20001041	Training Supervisor	1.00	2.00	2.00	74,437 - 90,008	167,810
	Architect License Pay					18,315
	Bilingual - Regular					1,456
	Budgeted Personnel Expenditure Savings					(9,431,143)
	Infrastructure In-Training Pay					1,234,754
	Infrastructure Registration Pay					2,914,634
	Landscape Architect Lic					51,826
	Overtime Budgeted					1,400,000
	Reg Pay For Engineers					2,748,243
	Sick Leave - Hourly					6,273
	Termination Pay Annual Leave					292,989
	Vacation Pay In Lieu					1,187,625
FTE, Salaries, and Wages Subtotal		825.50	822.50	787.40		\$ 81,033,690

Engineering and Capital Projects

	FY2022 Actual	FY2023 Budget	FY2024 Adopted	FY2023-2024 Change
Fringe Benefits				
Employee Offset Savings	\$ 252,898	\$ 254,836	\$ 271,406	\$ 16,570
Flexible Benefits	9,014,658	9,024,378	8,973,700	(50,678)
Long-Term Disability	245,315	227,261	251,642	24,381
Medicare	971,540	1,031,346	1,134,369	103,023
Other	-	(483,923)	-	483,923
Other Post-Employment Benefits	4,378,626	3,866,624	3,800,252	(66,372)
Retiree Medical Trust	95,406	110,217	127,351	17,134
Retirement 401 Plan	68,854	104,762	448,668	343,906
Retirement ADC	22,609,374	21,680,730	26,628,203	4,947,473
Retirement DROP	110,967	123,939	105,333	(18,606)
Risk Management Administration	781,352	792,006	859,716	67,710
Supplemental Pension Savings Plan	4,271,732	4,654,223	2,130,443	(2,523,780)
Unemployment Insurance	83,584	82,479	81,456	(1,023)
Workers' Compensation	498,832	291,460	504,443	212,983
Fringe Benefits Subtotal	\$ 43,383,137	\$ 41,760,338	\$ 45,316,982	\$ 3,556,644
Total Personnel Expenditures			\$ 126,350,672	

Engineering and Capital Projects

Revenue and Expense Statement (Non-General Fund)

Engineering & Capital Projects Fund ¹	FY2022 Actual	FY2023* Budget	FY2024** Adopted
BEGINNING BALANCE AND RESERVES			
Balance from Prior Year	\$ (1,382,877)	\$ (11,768,514)	\$ (19,891,189)
TOTAL BALANCE AND RESERVES	\$ (1,382,877)	\$ (11,768,514)	\$ (19,891,189)
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	\$ 119,781,687
OPERATING EXPENSE			
Personnel Expenses	\$ 64,002,912	\$ 72,444,423	\$ 85,023,762
Fringe Benefits	43,383,137	41,760,338	47,225,698
Supplies	409,270	1,011,130	484,438
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	422,201
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	\$ 154,236,096
TOTAL EXPENSE	\$ 126,259,172	\$ 141,635,641	\$ 154,236,096
BALANCE***	\$ (11,768,514)	\$ (16,584,610)	\$ (34,454,409)
TOTAL BALANCE, RESERVES, AND EXPENSE	\$ 114,490,658	\$ 125,051,031	\$ 119,781,687

1. The Engineering and Capital Projects Fund is comprised of both the Engineering and Capital Projects Department and the Strategic Capital Projects Department.

* 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 reflects 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; however, based on revised overhead rates and salary increases, actual revenues will likely be higher in Fiscal Year 2024 than budgeted. Total revenue will depend on actual billable work charged to the Capital Improvements Program (CIP). The Department of Finance will work with the Engineering and Capital Projects and Strategic Capital Projects Departments to monitor this fund throughout Fiscal Year 2024 and will revise revenue estimates accordingly.