

Engineering Division

Agency Overview

Agency Mission

The mission of the Engineering Division is to provide Public Works services to the City's residents and visitors in a fair and consistent manner that encourages public input.

Agency Overview

The Agency is responsible for: (1) the design, supervision, inspection, and construction of the City's transportation system infrastructure; (2) the construction, maintenance, repair, and energy efficient retrofits to City-owned facilities; and (3) the City surveying and mapping operations.

2019 Budget Highlights

The 2019 Executive Budget includes funding for:

- Decreased facility lease costs and increased inter-agency maintenance costs billings due to the reopening of the Madison Municipal Building offices (\$40,000).
- Decreased City County Building (CCB) facility maintenance and custodial charges (\$50,000).
- Software maintenance costs for CAD licensing upgrades to ensure the existing service level for Engineering design work is maintained (\$62,000).
- Increased charges from Fleet for in-house vehicle maintenance instead of contracted maintenance for assets owned by the Engineering Division because it is more cost effective. An existing Fleet service technician will be stationed at the Engineering facility on Emil Street to provide service on the vehicles (\$2,700).
- Reclassification of position #4100 from a Custodial Worker 3 to a Program Assistant 1 (\$0).
- Creating two new positions in 2019. Newly created positions include:
 - Public Information Officer for communication and education to the public regarding public works construction projects. The position will be split funded between the Engineering Division, Stormwater Utility, Sewer Utility, and Capital Projects fund (Total cost \$67,200, General Fund \$4,700).
 - Surveyor to improve turnaround time and quality of project site surveying for public works projects. The position will be split funded between the Engineering Division, Stormwater Utility, Sewer Utility, and Capital Projects fund (Total cost \$62,000, General Fund \$4,400).
- Reflects the City's cost allocation model that was developed in 2018. The goal of this methodology is to accurately and consistently allocate central service costs to enterprise agencies receiving services. Charges associated with cost allocation are reflected in the inter-departmental charges & billing major expenditure categories shown in the Line Item Detail section of the agency's budget. Reference the Executive Summary for a full explanation of the methodology, the allocation basis, and summary of allocated costs.

Engineering Division**Function: Public Works & Transportation****Budget by Service (All Funds)**

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Revenue					
Engineering & Administration	(132,309)	(130,530)	(130,530)	(151,870)	(151,870)
Facilities Management	(18)	-	-	-	-
Facilities Operations & Maintenance	(304,264)	(252,000)	(152,000)	(252,000)	(252,000)
Total Revenue	\$ (436,591)	\$ (382,530)	\$ (282,530)	\$ (403,870)	\$ (403,870)
Expense					
Engineering & Administration	3,125,654	3,181,550	3,161,066	3,170,216	2,993,508
Mapping & Records	447,987	457,174	465,954	440,801	447,132
Facilities Management	593,647	632,886	462,005	576,618	586,863
Facilities Operations & Maintenance	870,813	1,030,911	756,156	698,538	730,827
Total Expense	\$ 5,038,101	\$ 5,302,521	\$ 4,845,181	\$ 4,886,173	\$ 4,758,330
Net General Fund	\$ 4,601,510	\$ 4,919,991	\$ 4,562,651	\$ 4,482,303	\$ 4,354,460

Budget by Fund & Major

Fund: General

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Revenue					
Charges for Services	(307,883)	(252,000)	(152,000)	(252,000)	(252,000)
Misc Revenue	(124,732)	(130,530)	(130,530)	(151,870)	(151,870)
Other Finance Source	(1,785)	-	-	-	-
Transfer In	(2,192)	-	-	-	-
Total Revenue	\$ (436,591)	\$ (382,530)	\$ (282,530)	\$ (403,870)	\$ (403,870)
Expense					
Salaries	3,758,136	3,750,052	3,677,048	3,907,214	4,034,004
Benefits	1,306,284	1,584,848	1,235,414	1,341,217	1,314,429
Supplies	302,129	321,480	298,981	346,580	346,580
Purchased Services	775,984	875,726	863,323	709,899	773,073
Inter Departmental Charges	410,539	369,169	369,169	387,495	392,263
Inter Departmental Billing	(1,514,971)	(1,598,754)	(1,598,754)	(1,806,232)	(2,102,019)
Total Expense	\$ 5,038,101	\$ 5,302,521	\$ 4,845,181	\$ 4,886,173	\$ 4,758,330
Net General Fund	\$ 4,601,510	\$ 4,919,991	\$ 4,562,651	\$ 4,482,303	\$ 4,354,460

Engineering Division

Function: Public Works & Transportation

Service Overview

Service: Engineering & Administration

Service Description

This service is responsible for design, management, contract administration, and administrative support to the Engineering Division's transportation and pedestrian infrastructure projects. This service oversees projects pertaining to: 1) Streets and Bridges, 2) Sidewalks, 3) Bike Paths, and 4) Environmental improvements for remediating soil and groundwater contamination.

2019 Planned Activities

- Continue to plan, design, construct and inspect transportation infrastructure to support future project prioritization.

Service Budget by Account Type

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Revenue	(132,309)	(130,530)	(130,530)	(151,870)	(151,870)
Expense	3,125,654	3,181,550	3,161,066	3,170,216	2,993,508
Net Service Budget	\$ 2,993,345	\$ 3,051,020	\$ 3,030,536	\$ 3,018,346	\$ 2,841,638

Service: Mapping & Records

Service Description

This service provides oversight for new subdivisions, land divisions, conditional use permits, parking lot plans, applications for building permits, legal land descriptions, mapping and surveying services for land acquisitions, land disposals, street rights-of-way issues, street vacations, and other requested land record services required to support the maintenance, acquisition or disposal of City of Madison real estate. The service also maintains the City's Official Map, Assessors' Parcel Maps, Fire Department Run Maps, Police Sector Maps, storm sewer records, storm water utility records and billings, sanitary sewer records, public land survey monument records and assigns street names and addresses, and conducts aerial imagery projects to provide digital imagery and electronic mapping to both internal and external customers. The goal of this service is to protect the land interests of the City of Madison and to accurately maintain the City's official maps.

2019 Planned Activities

- Complete a full conversion to AutoCAD/ArcGIS software.
- Develop a GIS framework in cooperation with Information Technology and the Assessor's Office for the future Town of Madison annexation.
- Implement an automated process for creating GIS features from CAD data.

Service Budget by Account Type

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Revenue	-	-	-	-	-
Expense	447,987	457,174	465,954	440,801	447,132
Net Service Budget	\$ 447,987	\$ 457,174	\$ 465,954	\$ 440,801	\$ 447,132

Engineering Division

Function: Public Works & Transportation

Service Overview

Service: Facilities Operations & Maintenance

Service Description

This service is responsible for the maintenance and operational oversight of City-owned facilities including: the Madison Municipal Building (MMB), the Fairchild Building, 6 district police stations, the police training center, 14 fire stations, 7 Public Works facilities, the Madison Senior Center, 6 parking ramps, 3 leased facilities, and various storage buildings. The goals of this service are to: 1) improve the operational efficiency of the facilities by implementing energy savings components to the scheduled facility improvements, and 2) optimize municipal investment by increasing the useful life of the City's facilities.

2019 Planned Activities

- Continue the Green Power program to achieve the goal of self-generating 1 Megawatt of energy by 2020.
- Continue preventative maintenance practices and in-house installation of mechanical systems in City facilities.
- Enhance the reporting functionality of the Computerized Maintenance Management System (CMMS).
- Continue the mentorship program for a youth apprentice and HVAC/R Technician trainee.

Service Budget by Account Type

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Revenue	(304,264)	(252,000)	(152,000)	(252,000)	(252,000)
Expense	870,813	1,030,911	756,156	698,538	730,827
Net Service Budget	\$ 566,548	\$ 778,911	\$ 604,156	\$ 446,538	\$ 478,827

Service: Facilities Management

Service Description

This service is responsible for the design, project management, and construction supervision of remodeling and construction projects for City-owned facilities. The goal of this service is to implement projects that decrease energy use, conserve water, use renewable sources of energy, and provide high quality facilities.

2019 Planned Activities

- Maintain the existing level of service to provide for the development of 25 capital budget facilities projects and programs.
- Implement the 100% Renewable/Zero Net Carbon plan.
- Evaluate facility projects to accurately identify scope and cost estimates for out-year capital projects in the CIP.

Service Budget by Account Type

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Revenue	(18)	-	-	-	-
Expense	593,647	632,886	462,005	576,618	586,863
Net Service Budget	\$ 593,629	\$ 632,886	\$ 462,005	\$ 576,618	\$ 586,863

Engineering Division**Function: Public Works & Transportation***Line Item Detail***Agency Primary Fund: General****Charges for Service**

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Sale Of Recyclables	(3,867)	(2,000)	(2,000)	(2,000)	(2,000)
Facility Rental	(4,965)	-	-	-	-
Reimbursement Of Expense	(299,050)	(250,000)	(150,000)	(250,000)	(250,000)
TOTAL	\$ (307,883)	\$ (252,000)	\$ (152,000)	\$ (252,000)	\$ (252,000)

Misc Revenue

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Miscellaneous Revenue	(124,732)	(130,530)	(130,530)	(151,870)	(151,870)
TOTAL	\$ (124,732)	\$ (130,530)	\$ (130,530)	\$ (151,870)	\$ (151,870)

Other Finance Sources

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Sale Of Assets	(1,785)	-	-	-	-
TOTAL	\$ (1,785)	\$ -	\$ -	\$ -	\$ -

Transfer In

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Transfer In From Insurance	(2,192)	-	-	-	-
TOTAL	\$ (2,192)	\$ -	\$ -	\$ -	\$ -

Salaries

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Permanent Wages	3,288,431	3,580,452	3,243,510	3,623,261	3,750,051
Salary Savings	-	(200,000)	-	(50,000)	(50,000)
Pending Personnel	-	13,335	-	(22,312)	(22,312)
Premium Pay	15,009	15,500	17,447	15,500	15,500
Workers Compensation Wages	350	-	-	-	-
Compensated Absence	73,562	45,000	66,586	45,000	45,000
Hourly Wages	236,521	144,865	208,192	144,865	144,865
Overtime Wages Permanent	136,313	143,200	136,036	143,200	143,200
Overtime Wages Hourly	7,609	7,700	5,277	7,700	7,700
Election Officials Wages	341	-	-	-	-
TOTAL	\$ 3,758,136	\$ 3,750,052	\$ 3,677,048	\$ 3,907,214	\$ 4,034,004

Benefits

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Comp Absence Escrow	121,768	65,000	103,928	65,000	65,000
Health Insurance Benefit	611,393	682,511	591,913	675,496	637,654
Wage Insurance Benefit	13,490	19,918	13,301	20,606	20,606
WRS	240,932	366,215	226,524	248,859	251,720
FICA Medicare Benefits	279,161	411,096	260,130	291,148	298,070
Licenses & Certifications	240	1,000	240	1,000	1,000
Post Employment Health Plans	39,300	39,108	39,378	39,108	40,379
TOTAL	\$ 1,306,284	\$ 1,584,848	\$ 1,235,414	\$ 1,341,217	\$ 1,314,429

Engineering Division

Function:

Public Works & Transportation*Line Item Detail*Agency Primary Fund: **General****Supplies**

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Office Supplies	6,556	8,000	7,000	7,000	7,000
Copy Printing Supplies	7,423	8,800	8,000	8,500	8,500
Furniture	3,612	2,500	2,482	2,500	2,500
Hardware Supplies	10,641	15,000	20,000	10,000	10,000
Software Lic & Supplies	17,179	19,220	19,000	12,670	12,670
Postage	14,905	15,000	15,000	15,000	15,000
Books & Subscriptions	1,071	1,500	1,400	1,500	1,500
Work Supplies	31,847	52,100	39,041	53,500	53,500
Janitorial Supplies	58,969	30,000	30,000	40,000	40,000
Safety Supplies	4,082	8,000	5,417	8,000	8,000
Snow Removal Supplies	1,679	-	1,000	1,500	1,500
Uniform Clothing Supplies	1,922	750	1,741	2,000	2,000
Food And Beverage	234	-	223	-	-
Building	408	-	-	-	-
Building Supplies	13,002	25,000	16,907	20,000	20,000
Electrical Supplies	32,036	25,000	27,515	35,000	35,000
HVAC Supplies	30,734	50,000	48,800	55,000	55,000
Plumbing Supplies	23,058	25,000	27,538	35,000	35,000
Landscaping Supplies	7,433	12,000	9,249	10,000	10,000
Machinery And Equipment	24,702	7,110	3,683	17,410	17,410
Equipment Supplies	10,635	16,500	14,986	12,000	12,000
TOTAL	\$ 302,129	\$ 321,480	\$ 298,981	\$ 346,580	\$ 346,580

Engineering Division

Function:

Public Works & Transportation*Line Item Detail*Agency Primary Fund: **General****Purchased Services**

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
Natural Gas	10,768	21,730	16,410	19,800	19,800
Electricity	9,880	30,050	30,056	128,370	128,370
Water	5,621	12,150	10,363	11,110	11,110
Sewer	969	390	956	1,470	1,470
Stormwater	17,662	19,590	16,937	19,910	19,910
Telephone	5,054	5,412	4,251	2,340	8,266
Cellular Telephone	9,647	10,270	10,722	10,274	10,274
Building Improv Repair Maint	15,793	25,000	27,454	27,500	27,500
Waste Disposal	794	-	-	8,500	8,500
Pest Control	4,469	6,500	6,569	8,825	8,825
Elevator Repair	2,632	1,550	3,710	7,500	7,500
Facility Rental	291,444	242,870	242,870	-	-
Custodial Bldg Use Charges	35,827	97,307	97,307	43,483	44,494
Process Fees Recyclables	426	750	346	750	750
Grounds Improv Repair Maint	9,780	6,500	5,880	6,500	6,500
Landscaping	128,704	145,000	140,000	145,000	145,000
Office Equipment Repair	-	200	-	200	200
Equipment Mntc	24,821	8,000	14,537	15,000	15,000
System & Software Mntc	42,375	43,275	46,874	52,208	108,445
Vehicle Repair & Mntc	2,997	7,500	4,000	4,800	4,800
Rental Of Equipment	8,507	3,350	6,203	3,350	3,350
Street Mntc	(116)	-	-	-	-
Plant In Service Mntc	2	-	-	-	-
Recruitment	977	1,000	1,874	1,000	1,000
Mileage	22,529	18,000	20,298	22,000	22,000
Conferences & Training	9,945	15,000	14,641	10,000	10,000
Memberships	9,110	10,911	5,309	11,539	11,539
Medical Services	59	850	236	500	500
Delivery Freight Charges	902	750	1,005	1,000	1,000
Storage Services	860	891	798	890	890
Mortgage & Title Services	1,500	-	-	-	-
Consulting Services	59,453	64,040	61,238	64,040	64,040
Advertising Services	2,649	2,500	2,774	2,700	2,700
Inspection Services	2,130	5,000	2,200	5,000	5,000
Parking Towing Services	10	-	152	100	100
Security Services	1,531	1,750	1,600	6,500	6,500
Other Services & Expenses	15,556	45,700	47,828	45,800	45,800
Taxes & Special Assessments	19,450	20,450	16,645	20,450	20,450
Permits & Licenses	1,269	1,490	1,279	1,490	1,490
TOTAL	\$ 775,984	\$ 875,726	\$ 863,323	\$ 709,899	\$ 773,073

Inter-Departmental Charges

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
ID Charge From Engineering	13,080	13,080	13,080	18,865	18,865
ID Charge From Fleet Services	37,597	31,299	31,299	34,325	34,325
ID Charge From Landfill	5,923	8,400	8,400	8,400	8,400
ID Charge From Traffic Eng	4,003	4,698	4,698	4,698	9,466
ID Charge From Insurance	38,999	54,002	54,002	63,130	63,130
ID Charge From Workers Comp	156,659	102,690	102,690	103,077	103,077
ID Charge From Sewer	88,826	75,000	75,000	85,000	85,000
ID Charge From Stormwater	65,451	80,000	80,000	70,000	70,000
TOTAL	\$ 410,539	\$ 369,169	\$ 369,169	\$ 387,495	\$ 392,263

Engineering Division**Function: Public Works & Transportation***Line Item Detail***Agency Primary Fund: General****Inter-Departmental Billings**

	2017 Actual	2018 Adopted	2018 Projected	2019 Request	2019 Executive
ID Billing To Human Resources	(33,767)	(33,767)	(33,767)	(66,104)	(66,104)
ID Billing To Information Tec	(969)	(969)	(969)	(969)	(969)
ID Billing To Fire	(278,163)	(278,163)	(278,163)	(290,883)	(290,883)
ID Billing To Police	(536,303)	(611,303)	(611,303)	(644,424)	(644,424)
ID Billing To Public Health	(13,130)	(13,130)	(13,130)	(13,130)	(13,130)
ID Billing To Engineering	(13,080)	(13,080)	(13,080)	(18,865)	(18,865)
ID Billing To Fleet Services	(27,065)	(27,065)	(27,065)	(27,065)	(27,065)
ID Billing To Landfill	(11,889)	(12,468)	(12,468)	(14,686)	(28,562)
ID Billing To Streets	(55,152)	(55,152)	(55,152)	(55,153)	(55,153)
ID Billing To Traffic Eng	(54,539)	(54,539)	(54,539)	(62,060)	(62,060)
ID Billing To Library	(3,537)	(3,537)	(3,537)	(3,537)	(3,537)
ID Billing To Parks	(14,111)	(14,111)	(14,111)	(14,111)	(14,111)
ID Billing To Bldg Inspection	(62,598)	(62,598)	(62,598)	(113,620)	(113,620)
ID Billing To CDBG	(41,703)	(41,703)	(41,703)	-	-
ID Billing To Community Dev	(38,090)	(38,090)	(38,090)	(97,677)	(97,677)
ID Billing To Economic Dev	(59,539)	(59,539)	(59,539)	(55,395)	(55,395)
ID Billing To Office Of Dir Pl	(16,245)	(16,245)	(16,245)	(15,388)	(15,388)
ID Billing To Planning	(79,364)	(79,364)	(79,364)	(80,304)	(80,304)
ID Billing To Monona Terrace	-	-	-	-	(690)
ID Billing To Parking	(37,269)	(37,269)	(37,269)	(41,970)	(64,127)
ID Billing To Sewer	(53,506)	(56,917)	(56,917)	(66,249)	(187,062)
ID Billing To Stormwater	(33,742)	(38,536)	(38,536)	(44,212)	(172,665)
ID Billing To Transit	-	-	-	-	(3,888)
ID Billing To Water	-	-	-	-	(5,910)
ID Billing To CDA	(51,209)	(51,209)	(51,209)	(80,430)	(80,430)
TOTAL	\$ (1,514,971)	\$ (1,598,754)	\$ (1,598,754)	\$ (1,806,232)	\$ (2,102,019)

Engineering Division

Function: Public Works & Transportation

Position Summary

	CG	2018 Budget		2019 Request		Executive	
		FTEs	Amount	FTEs	Amount	FTEs	Amount
ACCOUNTANT	18	2.00	119,511	2.00	148,898	2.00	153,737
ADMIN ASST	20	1.00	55,530	1.00	55,743	1.00	57,555
ARCHITECT	18	4.00	354,262	4.00	360,108	4.00	371,811
ARCHITECT AIDE	16	1.00	50,000	1.00	51,509	1.00	53,183
ASST CITY ENGINEER	18	2.00	238,364	2.00	249,291	2.00	257,392
CCTV INSPEC TECH	15	3.00	189,511	3.00	190,848	3.00	197,051
CIVIL TECH	16	1.00	62,743	1.00	62,985	1.00	65,032
COMP MAP/GIS COORD	18	1.00	103,886	1.00	104,285	1.00	107,674
CONSTRUCT INSP	15	12.00	805,749	12.00	801,525	12.00	827,575
CONSTRUCTION MGR	18	3.00	239,441	3.00	241,279	3.00	249,120
CUSTODIAL SERV COORD	16	1.00	49,912	1.00	50,104	1.00	51,733
CUSTODIAL WKR	16	12.50	609,518	12.50	595,661	12.50	615,020
ELECTRICIAN	71	2.00	140,411	2.00	143,172	2.00	147,825
ELECTRICIAN FOREPERS	71	1.00	75,297	1.00	76,018	1.00	78,488
ENGINEER	18	20.00	1,632,529	20.00	1,691,138	20.00	1,746,100
ENGINEERING FINANCIAL MAN	18	1.00	105,078	1.00	105,395	1.00	108,821
ENGR CITY	21	1.00	146,585	1.00	165,150	1.00	170,517
ENGR FIELD AIDE	15	2.00	118,805	2.00	120,672	2.00	124,594
ENGR OPER LDWKR	15	2.00	127,846	2.00	123,737	2.00	127,759
ENGR PROG SPEC	16	3.00	208,855	3.00	210,111	3.00	216,939
SUSTAIN PROG COORD	18	1.00	66,527	1.00	67,450	1.00	69,643
FAC/SUS MGR	18	1.00	116,583	1.00	116,933	1.00	120,733
HYDROGEOLOGIST	18	0.60	51,081	0.60	51,556	0.60	53,232
IT SPEC	18	1.00	83,175	1.00	83,495	1.00	86,209
LANDSCAPE ARCHITECT	18	1.00	63,193	1.00	66,679	1.00	68,846
MAINT MECH	15	1.00	64,758	1.00	65,007	1.00	67,119
MAINT MECH	16	4.00	255,352	4.00	258,488	4.00	266,889
PLUMBER	71	1.00	70,428	1.00	71,386	1.00	73,706
PRINCIPAL ARCHITECT	18	1.00	91,338	1.00	105,590	1.00	109,022
PRINCIPAL ENGR	18	2.00	216,987	2.00	224,856	2.00	232,163
PRINICPAL ENGR	18	3.00	344,929	3.00	322,897	3.00	333,391
PROG ASST	17	1.00	49,644	1.00	48,739	1.00	50,323
PROG ASST	20	4.00	217,272	4.00	219,261	4.00	226,387
PUBLIC INFO OFFICER	18	-	-	-	-	1.00	67,192
PW DEV MGR	18	2.00	160,520	2.00	177,045	2.00	182,799
S/D MAINT TECH	15	2.00	121,895	2.00	122,364	2.00	126,340
SIDEWALK PROG SUPERV	18	1.00	80,960	1.00	82,316	1.00	84,991
SSMO	15	11.00	544,766	11.00	529,820	11.00	547,039
SURVEYOR	18	2.00	155,606	2.00	157,439	3.00	224,456
TOTAL		115.10	\$ 8,188,848	115.10	\$ 8,318,948	117.10	\$ 8,718,405