

## Engineering

Agency Number: **53**  
 Budget Function: **Public Works and Transportation**

The Engineering Division is responsible for the contract design for all public works construction; the supervision and inspection of all street, highway, sidewalk and bike path construction; all City surveying and mapping operations including maintenance of the City's Official Map, street and utility records; management of the Madison Sewer Utility plus the design, operation and maintenance of sanitary sewer facilities and storm sewer systems; the review of land use changes for public works feasibility; the research and development services supporting the solid waste management program; and the preparation of various studies relating to Public Works. The City Engineer serves as Team Leader of the Department of Public Works and Transportation.

<u>Major Service</u>	<u>1999 Actual</u>	<u>2000 Budget</u>	<u>2000 Projected</u>	<u>2001 Request</u>	<u>2001 Executive</u>	<u>2001 Adopted</u>
Sanitary Sewers	\$ (23,482)	\$ 71,546	\$ 71,546	\$ 0	\$ 0	\$ 147,526
Storm Water Management	1,150,924	1,093,983	1,093,983	1,187,691	1,171,126	1,231,303
Mapping & Records	303,641	423,658	423,658	305,882	304,415	319,586
Streets & Highways	1,050,575	810,373	810,373	941,556	935,837	996,105
Sidewalks	216,805	179,884	179,884	166,600	165,446	177,265
Environmental Engineering	112,982	495,345	495,345	438,661	435,392	475,115
<b>Agency Total</b>	<u>\$ 2,811,446</u>	<u>\$ 3,074,789</u>	<u>\$ 3,074,789</u>	<u>\$ 3,040,390</u>	<u>\$ 3,012,216</u>	<u>\$ 3,346,900</u>

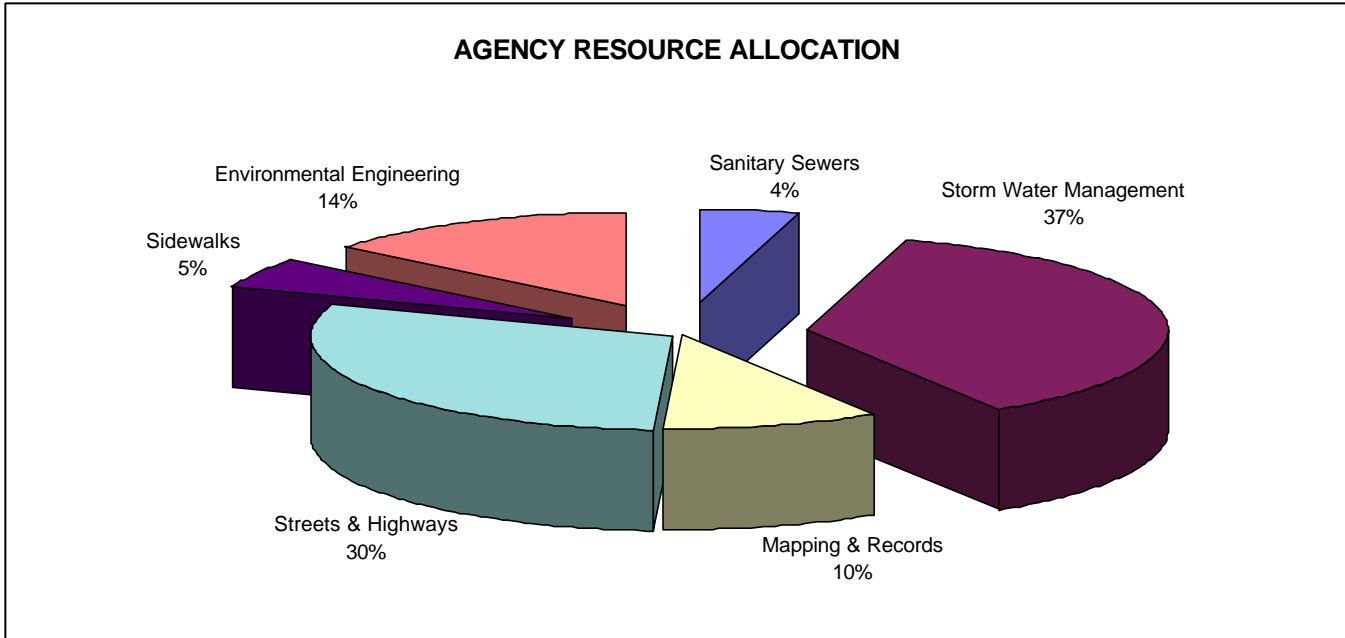
### Adopted Budget Highlights

The Budget includes:

1. Continuation of the present level of service.
2. The assignment of one Principal Engineer to coordinate the city's energy sustainability plans on a one-half time basis. This assignment is made possible as the initial capital improvements for the city's landfill remediation program are nearing completion with the proposed construction at Olin Landfill/Quann Park, and routine maintenance responsibilities are being turned over to the Engineering Division's Operations Section.
3. Appointment of a staff team from Engineering, the Water Utility, and Traffic Engineering to explore cost-sharing for the location and marking of electrical and utility conduits in response to Diggers' Hotline requests.

In addition to the Requested Budget amount shown above, the agency submitted a supplemental budget request with no net fiscal impact.

## Engineering



### **Budget Service Descriptions:**

#### **Sanitary Sewers**

Sanitary Sewer service manages, operates, constructs and maintains the Madison Sewer Utility. The Sewer Utility directs the planning, design, construction and repair of public sanitary sewer facilities. All proposed land use changes are reviewed for sanitary sewer impact prior to approval. Extensions to the public sewerage system are financed by the owners of lands directly benefiting from the improvements, or through construction by private developers. Developers construct sewers at their own expense in accordance with City design standards and specifications. The Sewer Utility assumes ownership and responsibility for maintenance and operation of these sewers upon acceptance of the improvements by the Common Council. Maintenance efforts include the repair, cleaning, televising and removal of blockages in over 673 miles of sewer main managed by the Sewer Utility.

<b>Service Summary</b>			
	<b>1999 Actual</b>	<b>2000 Budget</b>	<b>2001 Adopted</b>
Total Expenditures	\$ 2,576,137	\$ 2,703,921	\$ 3,053,436
Less Inter-Agency Billings	<u>2,599,619</u>	<u>2,632,375</u>	<u>2,905,910</u>
Net Total	<u><u>\$ (23,482)</u></u>	<u><u>\$ 71,546</u></u>	<u><u>\$ 147,526</u></u>

## Storm Water Management

The Storm Water Management function provides services for design, review, construction and maintenance of a storm system consisting of about 275 miles of pipe and open channel systems for flood control and runoff water quality improvement. The City's WPDES discharge permit requires the system to reduce non-point source pollution to area lakes and streams. This is done using an expanding system of more than 30 wet ponds and other best management practices. Maintenance of this system is an increasingly important and costly component of this service as the average age of the system increases and rehabilitation of parts of the system becomes necessary. This function also provides City residents access to professional review of drainage problems which occur on or adjacent to their property. Engineering staff review the existing conditions, act as a mediator for multiple party problems, and provide possible solutions.

<b>Service Summary</b>			
	<b>1999 Actual</b>	<b>2000 Budget</b>	<b>2001 Adopted</b>
Total Expenditures	\$ 1,249,951	\$ 1,165,483	\$ 1,426,983
Less Inter-Agency Billings	<u>99,026</u>	<u>71,500</u>	<u>195,680</u>
Net Total	<u>\$ 1,150,924</u>	<u>\$ 1,093,983</u>	<u>\$ 1,231,303</u>

## Mapping & Records

Mapping and Records service reviews new subdivisions, land divisions, conditional use permits, parking lot plans, applications for building permits and applications for new public land in general. This service also prepares legal descriptions for acquisition, street rights-of-way and street vacations. It also maintains the City's Official Maps, Assessors' Parcel Maps, Fire Department Run Maps, Police Sector Maps, storm sewer records, sanitary sewer records, and assigns street names and addresses. The map records are in digital form and are available from the Mapping/GIS system. This service also administers the street opening permit ordinance which coordinates City and private utility work. Clerical services for the division are also provided by this service. This service also provides all hardware and software support for the Mapping/GIS system network.

<b>Service Summary</b>			
	<b>1999 Actual</b>	<b>2000 Budget</b>	<b>2001 Adopted</b>
Total Expenditures	\$ 303,641	\$ 469,658	\$ 368,986
Less Inter-Agency Billings	<u>0</u>	<u>46,000</u>	<u>49,400</u>
Net Total	<u>\$ 303,641</u>	<u>\$ 423,658</u>	<u>\$ 319,586</u>

## Streets & Highways

Streets and Highways service provides for the review and design of streets and bridges and the review of design work by consultants. Citizen involvement in projects undertaken is a high priority as is quality design of Streets and Highways. Maintaining the safety of the City's bridges through biannual inspections, routine maintenance and scheduled rehabilitation and replacement is part of this program. This program involves local streets, collector streets and arterial streets. Other services provided include review of Plats and Certified Survey Maps, conditional use applications, and planned unit developments to ensure that they are compatible with future transportation needs. The City now maintains approximately 655 miles of streets and 47 bridges greater than 20 feet in length.

<b>Service Summary</b>			
	<b>1999 Actual</b>	<b>2000 Budget</b>	<b>2001 Adopted</b>
Total Expenditures	\$ 1,237,958	\$ 1,358,400	\$ 1,465,675
Less Inter-Agency Billings	<u>187,383</u>	<u>548,027</u>	<u>469,570</u>
Net Total	<u>\$ 1,050,575</u>	<u>\$ 810,373</u>	<u>\$ 996,105</u>

## Sidewalks

The responsibility of this service is to maintain sidewalks through the general sidewalk repair and rehabilitation program; construct accessible ramps in the designated repair areas or in specific locations as requested; inspect sidewalk and drive apron construction by private contractors who must be licensed by the City and must obtain permits before doing the work; inform the public and other governmental agencies about sidewalks damaged by private contractors, illegal street encroachments, underground vaults in the streets, injury claims resulting from unsafe sidewalks, and legislation for accessible facilities on construction projects; administer a rebate program where the City will reimburse a property owner \$2.00/ sq. ft. of sidewalk repaired; and repair sidewalk, curb and gutter as requested by property owners.

<b>Service Summary</b>			
	<b>1999 Actual</b>	<b>2000 Budget</b>	<b>2001 Adopted</b>
Total Expenditures	\$ 238,483	\$ 301,884	\$ 282,265
Less Inter-Agency Billings	<u>21,678</u>	<u>122,000</u>	<u>105,000</u>
Net Total	<u>\$ 216,805</u>	<u>\$ 179,884</u>	<u>\$ 177,265</u>

## Environmental Engineering

This service provides all of the environmental engineering, research, legislative analysis and planning for the City except for storm water management. Responsibilities include management of closed landfills and fuel tanks, environmental audits, siting of new landfills and long range waste management plans. Most work is required by State law. Operation and maintenance of large landfill gas and leachate collection systems are significant tasks and require engineers to be available 24 hours per day.

	<u>1999 Actual</u>	<u>2000 Budget</u>	<u>2001 Adopted</u>
Total Expenditures	\$ 689,235	\$ 845,345	\$ 817,915
Less Inter-Agency Billings	<u>576,253</u>	<u>350,000</u>	<u>342,800</u>
Net Total	<u>\$ 112,982</u>	<u>\$ 495,345</u>	<u>\$ 475,115</u>

### Engineering Summary by Major Object of Expenditure

	<u>1999 Actual</u>	<u>2000 Budget</u>	<u>2000 Projected</u>	<u>2001 Request</u>	<u>2001 Executive</u>	<u>2001 Adopted</u>
Permanent Salaries	\$ 3,792,023	\$ 4,108,867	\$ 4,108,867	\$ 4,199,282	\$ 4,177,857	\$ 4,324,084
Hourly Employee Pay	196,320	200,608	200,608	208,100	208,100	215,383
Overtime Pay	101,446	112,751	112,751	107,540	107,540	111,305
Fringe Benefits	1,239,236	1,336,215	1,336,215	1,364,518	1,357,769	1,488,178
Purchased Services	183,409	341,800	341,800	343,130	343,130	343,130
Supplies	230,493	192,000	192,000	250,000	250,000	250,000
Inter-Departmental Charges	540,635	508,370	508,370	589,530	589,530	636,530
Debt/Other Financing Uses	0	0	0	0	0	0
Fixed Assets	<u>11,843</u>	<u>44,080</u>	<u>44,080</u>	<u>46,650</u>	<u>46,650</u>	<u>46,650</u>
Total Expenditures	\$ 6,295,405	\$ 6,844,691	\$ 6,844,691	\$ 7,108,750	\$ 7,080,576	\$ 7,415,260
Inter-Agency Billings	<u>3,483,959</u>	<u>3,769,902</u>	<u>3,769,902</u>	<u>4,068,360</u>	<u>4,068,360</u>	<u>4,068,360</u>
Net Budget	<u>\$ 2,811,446</u>	<u>\$ 3,074,789</u>	<u>\$ 3,074,789</u>	<u>\$ 3,040,390</u>	<u>\$ 3,012,216</u>	<u>\$ 3,346,900</u>