



# Public Works Annual Report FY2017

## Public Works Department *By The Numbers:*



## Divisions & Funding Sources

### Revenue Funds

Central Maintenance Garage  
 Gas Tax Fund  
 Public Parking/Public Works  
 Solid Waste Division  
 Stormwater

### General Fund

Airport  
 Building Maintenance  
 Engineering  
 Fiber Backbone  
 Health Department  
 Levee  
 Street Lights  
 Street Maintenance  
 Traffic Engineering

## Message from the Director



The divisions of Public Works provide core services vital to the growth, health, safety, comfort and quality of life for our community. The annual report highlights Public Works, by the numbers. It is just one snapshot to capture the meaningful contributions made by the employees and divisions of the Public Works Department to achieve the overall mission and strategic plan of the City of Lawrence.

We are committed to providing excellent City services that enhance the quality of life for the Lawrence Community -- supporting an unmistakably vibrant community with innovative, equitable, transparent and responsible local government.

We look forward to continuing to provide exceptional services for the Lawrence community.

***Charles F. Soules, P.E.***  
***Director of Public Works***

## 2017 Feature

### ***Facilities Conservation Improvement Program***

The Facilities Conservation Improvement Program (FCIP) is a state program that assists local government in implementing energy-saving projects. The goals of the project are to reduce energy costs, upgrades facilities and equipment, improve energy efficiency, and support sustainability and greenhouse gas reduction goals. The City hired an energy service company to do a complete energy audit of all city facilities. This audit helped us identify the cost-effective energy saving measures the City should pursue.

In 2017, the City Commission approved \$11.3 million in energy saving upgrades to City facilities. The annual energy and maintenance savings from the projects will completely pay off the debt, making this a smart investment for the City. The City issued "green bonds" due to the environmental benefits of the project.

The projects will impact facilities managed by Public Works & Parks and Recreation. The projects include:

- LED lighting retrofit in City buildings, parking garages, sports fields, and parks
- Upgrades to the heating and cooling equipment in many buildings
- Upgrades to thermostats and heating/cooling controls
- Weatherization projects in many buildings
- New roofs at the Community Health Building, Fire Med Station #3, and the Community Building
- New windows at City Hall

<b>SOLID WASTE SERVICES</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Tons collected</b>			
Trash collected for landfill disposal	64,096	66,500	69,282
Recyclable material collected for recycling	8,198	8,134	8,140
Yard waste collected for composting	13,236	13,928	15,489
<b>Recycling programs</b>			
Single-stream recyclable material (tons)	5,317	5,428	5,477
Source-separated recyclable material (tons)	2,840	2,657	2,618
Metal scrap & freon containing items (tons)	41	49	45
<b>Yard waste and organics programs</b>			
Grass, leaves, and brush collected (tons)	13,236	13,928	15,489
Avoided landfill disposal costs	\$369,814	\$389,148	\$447,942
Christmas trees collected (tons)	13	15	15
Compost and woodchips distributed (tons)	2,073	7,414	7,419
<b>Hazardous Waste programs</b>			
Household hazardous waste participants	3,188	3,747	3,028
Household hazardous waste collected (tons)	77	88	83
Business hazardous waste participants	108	104	103
Business hazardous waste collected (tons)	7	9	18
Product reuse participants	618	557	574
Product reuse distributed (tons)	25	19	21
<b>Other collection programs</b>			
Bulk items collected	3,288	2,358	2,871
Tires collected	1,812	1,588	2,378
<b>Commercial Solid Waste Services</b>			
Roll-off service calls	7,652	8,438	8,193
Permanent accounts	52%	49%	54%
Revenue from roll-off service	\$1,279,058	\$1,415,496	\$1,451,062
Tons of solid waste from roll-offs	22,856	24,886	26,299



**1,102,952 pounds**  
**OF ELECTRONIC WASTE RECYCLED!**  
 via collection events 2008-2017



**Service Reminders:**

- ✓ **NEW Mobile App**
- ✓ **NEW Phone Call**
- ✓ **Text Message**
- ✓ **Email**

INFRASTRUCTURE MANAGEMENT	2015	2016	2017
<b>Contract work by type</b>			
Mill & Overlay (lane miles)	17.01	13.3	13.94
Microsurfacing/ Patching (lane miles)	14.05	12.4	4.94
Concrete Pavement Patching (sq yds)	3,314	1,359	2,711
Curb & Gutter (linear feet)	20,775	4,224	13,845
ADA Access Ramps (each)	36	19	36
<b>Ratings and conditions</b>			
Average PCI rating (overall, end of year)	75.52	73.97	74.3
% of pavement w/ PCI rating of acceptable or above			
Arterial	71.64%	66.75%	66.72%
Collector	80.92%	79.40%	78.69%
Residential	88.14%	88.14%	88.59%
% of curb and gutter rated as			
Good	64.77%	65.47%	65.70%
Fair	27.05%	26.35%	26.37%
Poor	8.17%	8.19%	7.93%
<b>Ped and Bicycle improvements</b>			
Sidewalk (new) -- linear feet	7,407	20,129	6,639
Sidewalk (repairs) -- linear feet	6,484	9,185	2,572
Ramps (new)	26	120	35
Ramps (repairs)	100	73	133
Bike Lanes -- linear feet	18,120	200	1,408
Shared Use Path -- linear feet	25,443	9,241	347
<b>Right of way management</b>			
ROW permits issued	381	396	391
Street event permits issued	54	64	53
Meter bags and no parking signs			1533



<b>STREET MAINTENANCE STATISTICS</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Paving projects</b>			
Tons of asphalt placed	3,977	3,439	3,151
Cubic yards of concrete placed	1,709	1,507	1,056
<b>Patching pot holes / pavement</b>			
Reports to Pot Hole Hot Line / On-line form	213	548	692
Tons of patch material placed	336	497	38
Number of potholes/locations patched	8,891	10,126	11,456
<b>Concrete work</b>			
Concrete pavement (square feet)	48,991	26,211	20,674
Lineal feet of curb replaced	4,110	8,423	3,773
<b>Street Sweeping</b>			
Lane miles completed	8,398	7,729	8,329
Tons of debris collected	7,888	6,763	7,124
<b>Crack sealing</b>			
Pounds of material used (by street division)	82,551	74,591	68,876
<b>Mowing activities</b>			
Right of way and drainage area acres	4,086	3,582	1,751
Levee acres mowed	2,600	2,600	2,600
<b>Snow removal</b>			
Number of storms (winter season, e.g., 13-14)	12	9	6
Inches of snowfall for season	9.4	5.5	4.0
Tons of material spread			
Salt tons	4,741	3,249	1,563
Sand tons	1,922	730	2,364
Liquid Brine gallons	78,873	46,492	48,763
<b>STORMWATER MAINTENANCE</b>			
Ditches cleaned (feet)	2,619	2,203	3,046
Stormsewer pipe installed (feet)	2,666	1,982	1,079
Curb inlets (throat) cleaned	1,859	3,638	1,609
Curb inlets rebuilt	47	43	23
Stormsewer pipe rodded / cleaned (ft)	1,125	3,101	16,433
Stormwater pipe videoed (ft)			15,548
Catch basins vacuumed	23	103	381



<b>TRAFFIC MAINTENANCE OPERATIONS</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Number of Traffic Signals Maintained	99	102	106
Number of Mid-Block Pedestrian Signals Maintained	2	4	4
Number of Pedestrian Hybrid Beacons Maintained	12	12	15
Number of School Beacons Maintained	43	43	43
Number of Traffic Signal Service Calls	582	658	712
Number of Traffic Signal Preventive Maintenance Inspections	68	89	49
Number of Electronic Traffic Counts	187	178	177
Number of Manual Traffic Counts	62	67	50
Number of New Signs Installed	258	224	247
Number of Signs Upgraded	61	77	85
Number of Signs Repaired	1582	1469	1523
Lineal Feet of Pavement Markings Painted	280,198	276,734	282,274
Number of School Crosswalks & Stop Lines Painted	1	0	11
Number of Pedestrian Crosswalks & Stop Lines Painted	19	21	18
Number of Pavement Marking Arrows Painted	20	16	10
Square Feet of Pavement Marking Material Installed	5693	1814	7850
Total miles of Fiber Optic Maintained			57

<b>FLEET STATISTICS</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Average operational fleet readiness			
fire department	98.7%	95.20%	96.40%
police department	96.4%	96.50%	96.70%
all other heavy duty equipment	94.3%	93.40%	94.60%
all other light duty equipment	98.5%	98.00%	98.20%
Average days to complete work order			
heavy duty preventive maintenance	6.14	5.36	4.80
heavy duty repair	2.38	2.74	1.83
light duty preventive maintenance	2.42	2.61	2.45
light duty repair	1.85	3.09	2.34
Avg percent mechanics hours billed			
Average fuel cost per 1000 miles driven			
heavy equipment / vehicle	598.45	536.18	644.22
light equipment / vehicle	219.95	181.69	203.94
Number of repeat repair orders	31	43	37
Fuel storage system tests completed	252	254	250
<b>Miles driven</b>			
Police Department	1,003,254	1,017,641	1,046,695
Public Works	929,858	968,957	896,951
Fire Medical	341,712	334,852	345,652
Utilities Department	313,160	300,375	340,345
Parks and Recreation	237,528	251,439	248,950
Miscellaneous (admin., BI, plan, etc.)	152,036	112,545	94,322
<b>Total miles</b>	<b>2,977,548</b>	<b>2,985,806</b>	<b>2,972,915</b>
Off road equipment usage (hours)	29,808	33,507	30,059
<b>Operations</b>			
Repair orders completed	2,988	2,470	2,983
Preventive maintenance orders completed	911	816	883
<b>Billing</b>			
Total number of hours billed	12,981	14,762	15,787
Total labor (in \$\$)	\$649,091	\$741,403	\$826,769
Total parts (in \$\$)	\$1,110,685	\$1,194,723	\$1,267,368
Commercial (sublet) (in \$\$)	\$163,979	\$201,057	\$172,496
Miscellaneous	\$21,288	\$29,064	\$30,316
Total dollars billed for repairs	\$1,987,837	\$2,166,249	\$2,296,950
<b>Fuel system</b>			
Total fuel sold for year (gallons)	497,401	509,476	519,907
Total diesel fuel sold (in dollars)	\$684,580	\$601,883	\$724,545
Total unleaded gasoline sold (in dollars)	\$435,595	\$378,168	\$408,240
Total fuel sales (in dollars)	\$1,120,176	\$980,051	\$1,132,786
<b>Total Operational Billing</b>	<b>\$3,108,013</b>	<b>\$3,146,300</b>	<b>\$3,468,780</b>

<b>FACILITY MANAGEMENT</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<i>Work order system reporting</i>			
<b>Priority / Response Goal</b>			
0: 2 hours	75%	86%	100%
1: 24 hours	86%	81%	51%
2: 2-3 days	85%	85%	82%
3: one week	70%	77%	61%
4: one month	89%	90%	91%
5: on list	57%	63%	68%
<b>Total work Orders</b>			
0: 2 hours	8	7	12
1: 24 hours	155	170	157
2: 2-3 days	1,377	1,194	1,099
3: one week	206	302	338
4: one month	373	279	346
5: on list	321	243	185
<b>Total work Orders</b>	<b>2,440</b>	<b>2,267</b>	<b>2,137</b>

<b>ENERGY CONSUMPTION</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<i>Key buildings</i>			
<b>City Hall</b>			
Electricity (kilowats)	878,805	824,793	737,876
Electricity usage per sq. ft.	24.4	22.9	20.5
Natural gas (thermos)	1,110	1,090	958
Natural gas usage per sq. ft.	0.03	0.03	0.03
<b>Community Health facility</b>			
Electricity (kilowats)	927,368	1,001,685	828,875
Electricity usage per sq. ft.	10.72	11.58	9.58
Natural gas (thermos)	16,273	18,654	19,530
Natural gas usage per sq. ft.	0.18	0.21	
<b>Arts Center</b>			
Electricity (kilowats)	681,095	739,081	609,145
Electricity usage per sq. ft.	17.02	18.47	15.22
Natural gas (thermos)	19,974	18,433	18,151
Natural gas usage per sq. ft.	0.50	0.46	0.45