

City of Monroe Street Program History - 1997 to 2006

Year	Project	Type	Curbs	Distance	Width	Constr. \$	Cost / Foot	Cost / ft ²
1997	Smith - Third to Eighth	1-1/2" mill / resurface	All	1932	26	\$188,296	\$97.46	\$3.75
1997	Custer - Jones to Eighth	6" concrete rebuild	Integral	445	26	\$85,586	\$192.33	\$7.40
1997	Winchester - 4th to 120' N of Front	1-1/2" mill / resurface	Spot only	1960	36	\$61,673	\$31.47	\$0.87
1997	N. Macomb - Vine to Grove	1-1/2" mill / resurface	Spot only	1640	26	\$53,707	\$32.75	\$1.26
1997	Village Green - Noble to Lorain	1-1/2" mill / resurface	Spot only	854	28	\$40,737	\$47.70	\$1.70
1997	Rose - east of Detroit	1-1/2" mill / resurface	Spot only	519	28	\$20,840	\$40.15	\$1.43
1997	N. Macomb - N of Maywood	1-1/2" mill / resurface	Spot only	993	36	\$14,645	\$14.75	\$0.41
1998	E. Elm - Dixie to end	1-1/2" mill / resurface	Spot only	7758	48	\$403,981	\$52.07	\$1.08
1998	Arbor - Orchard to Cole	1-1/2" mill / resurface	All	2048	26	\$162,820	\$79.50	\$3.06
1998	Smith - Third to Front	1-1/2" mill / resurface	All	626	29	\$55,730	\$89.03	\$3.07
1998	Scott - Sixth to Seventh	1-1/2" mill / resurface	All	474	26	\$42,547	\$89.76	\$3.45
1998	Erie - Western to concrete	1-1/2" mill / resurface	Spot only	583	26	\$30,254	\$51.89	\$2.00
1999	E. Front - I-75 to end	1-1/2" mill / resurface	Spot only	7179	48	\$417,021	\$58.09	\$1.21
1999	Riverview - Elm to Scottwood	1-1/2" mill / resurface	Spot only	3147	26	\$61,113	\$19.42	\$0.75
1999	Richards - N. Custer to Riverside	1-1/2" mill / resurface	All	362	40	\$38,295	\$105.79	\$2.64
1999	Orchard - Riverview to Maple	5" bit. Rebuild	Spot only	601	26	\$29,797	\$49.58	\$1.91
1999	Hendricks - Telegraph to Huber	5" bit. Rebuild	Spot only	656	26	\$27,545	\$41.99	\$1.61
2000	Front - Macomb to Kentucky	1-1/2" mill / resurface	Spot only	2938	32	\$129,717	\$44.15	\$1.38
2000	Wadsworth - Second to Front	1-1/2" mill / resurface	All	1089	26	\$74,698	\$68.59	\$2.64
2001	N. Macomb - Grove to Maywood	6" bit. / 8" stone rebuild	All	1545	36	\$419,769	\$271.70	\$7.55
2001	Custer - 7th to 8th	1-1/2" mill / resurface	All	458	32	\$63,554	\$138.76	\$4.34
2001	Second - Monroe to Smith	1-1/2" mill / resurface	Spot only	1165	36	\$39,041	\$33.51	\$0.93
2001	Washington / Front - downtown	1-1/2" mill / resurface	None	1309	47	\$36,393	\$27.80	\$0.59
2001	Borgess - Vine to Noble	1-1/2" mill / resurface	New curb	410	24	\$32,945	\$80.35	\$3.35
2001	Theodore - Richards to Noble	1-1/2" mill / resurface	Spot only	1110	26	\$22,042	\$19.86	\$0.76
2001	Half - First to Fourth	1-1/2" overlay	Spot only	1100	16	\$19,022	\$17.29	\$1.08
2002	Riverview - Maywood to concrete	1-1/2" mill / resurface	Spot only	3492	32	\$185,850	\$53.22	\$1.66
2002	Payson - W end to plat line	6" concrete rebuild	Integral	971	26	\$143,838	\$148.13	\$5.70
2002	S. Roessler - Fifth to Front	1-1/2" mill / resurface	All	663	32	\$69,412	\$104.69	\$3.27
2002	Maywood - Macomb to Riverview	1-1/2" overlay	Spot only	1143	32	\$30,115	\$26.35	\$0.82
2003	W. Elm - Lavender to Monroe	6" bit. / 10" stone rebuild	Spot only	3164	30	\$477,059	\$150.78	\$5.03
2003	Peters - Conant to Norwood	1-1/2" overlay of concrete*	Spot only	1855	28	\$102,569	\$55.29	\$1.97
2003	Winchester - 8th to 4th	1-1/2" mill / resurface	Spot only	1678	36	\$46,260	\$27.57	\$0.77
2003	College - end to Godfroy	1-1/2" mill / resurface	All	299	24	\$29,327	\$98.08	\$4.09
2003	Stedman - Borgess to Monroe	1-1/2" mill / resurface	All	289	24	\$23,257	\$80.47	\$3.35
2003	E. Third - Railroad to Conant	1-1/2" mill / resurface	Spot only	738	36	\$23,052	\$31.24	\$0.87
2003	W. Elm - CSX to Lavender	1-1/2" mill / resurface	Spot only	881	30	\$16,940	\$19.23	\$0.64
2004	Roessler - Front to Elm	8" concrete rebuild	Integral	1527	52	\$563,893	\$369.28	\$7.10
2004	Michigan - Elm to Noble	6" concrete rebuild	Integral	1252	24	\$164,904	\$131.71	\$5.49

City of Monroe Street Program History - 1997 to 2006

Year	Project	Type	Curbs	Distance	Width	Constr. \$	Cost / Foot	Cost / ft ²
2004	Toll - Elm to Lorain	1-1/2" overlay with mat	Spot only	1857	28	\$135,682	\$73.07	\$2.61
2004	Conant - First to Third	1-1/2" mill / resurface	All	730	36	\$91,238	\$124.98	\$3.47
2004	Navarre - Second to Fourth	6" concrete rebuild	Integral	734	24	\$76,956	\$104.84	\$4.37
2004	Oakwood - Macomb to Riverview	1-1/2" overlay	Spot only	1141	26	\$67,319	\$59.00	\$2.27
2004	Adams - Seventh to City line	1-1/2" mill / resurface	Nearly all	760	24	\$58,532	\$77.02	\$3.21
2004	Humphrey - Winchester to Eastchester	1-1/2" mill / resurface	Spot only	377	26	\$12,524	\$33.22	\$1.28
2005	E. Maple - Elm to Scottwood	1-1/2" overlay/spot mill	Spot only	3140	20	\$213,497	\$67.99	\$3.40
2005	Jerome - Plum Creek to Seventh	1-1/2" overlay w/ mat*	Spot only	1242	26	\$174,660	\$140.63	\$5.41
2005	Rosewood - Hollywood to Maple	5" bit. Rebuild	All	1053	26	\$170,772	\$162.18	\$6.24
2005	N. Roessler - Hendr. To N of John L	1-1/2" mill / resurface	All	1110	26	\$137,821	\$124.16	\$4.78
2005	Maywood - Riverview to Maple	1-1/2" overlay/spot mill	Spot only	721	26	\$68,753	\$95.36	\$3.67
2005	W. Elm - Bentley to CSX Railroad	3" mill / resurface	Spot only	802	30	\$50,698	\$63.21	\$2.11
2005	Harrison - Third to First	1-1/2" mill / resurface	All	739	36	\$43,263	\$58.54	\$1.63
2006	W. 8th / Roessler / Union	3" mill / resurface	All	3881	24	\$560,928	\$144.53	\$6.02
2006	N. Custer - City line to Bentley	3" mill / resurface	Spot only	5580	36	\$315,927	\$56.62	\$1.57
2006	Wood - Almyra to Conant	8" concrete rebuild	Integral	386	26	\$67,592	\$175.11	\$6.73
2006	Crampton - Payson 500' S	8" concrete rebuild	Integral	400	26	\$57,238	\$143.10	\$5.50
2006	Calkins - Lavender 200' west	8" concrete rebuild	Integral	212	26	\$26,060	\$122.92	\$4.73

*Includes intersection rebuilds in 6" concrete

Year	Project	Type	Distance	Miles	Constr. \$	Cost / Foot	Cost / ft ²
1997	All projects	All types	8343	1.58	\$465,484	\$55.79	
1998	All projects	All types	11489	2.18	\$695,332	\$60.52	
1999	All projects	All types	11945	2.26	\$573,771	\$48.03	
2000	All projects	All types	4027	0.76	\$204,415	\$50.76	
2001	All projects	All types	7097	1.34	\$632,766	\$89.16	
2002	All projects	All types	6269	1.19	\$429,215	\$68.47	
2003	All projects	All types	8904	1.69	\$718,464	\$80.69	
2004	All projects	All types	8378	1.59	\$1,171,048	\$139.78	
2005	All projects	All types	8807	1.67	\$859,464	\$97.59	
2006	All projects	All types	10459	1.98	\$1,027,745	\$98.26	
1997-2006	All projects	All types	85718	16.23	\$6,777,704	\$79.07	
Average			8571.8	1.62	\$677,770		

City of Monroe Street Program History - 1997 to 2006 - Sorted by Per Foot Costs

Note: Includes only actual construction costs, Engineering and Testing Costs not included

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1997	N. Macomb - N of Maywood	1-1/2" mill / resurface	Spot only	993	36	\$14,645	\$14.75	\$0.41
2001	Half - First to Fourth	1-1/2" overlay	Spot only	1100	16	\$19,022	\$17.29	\$1.08
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2004	Roessler - Front to Elm	8" concrete rebuild	Integral	1527	52	\$563,893	\$369.28	\$7.10
1997-2006	All projects	All types		85718		\$6,777,704		

*Includes intersection rebuilds in 6" concrete

City of Monroe Construction Unit Price History - 1997 to 2006

Note: Where multiple projects bid in same year, low bid price of project with largest quantity used.

Note: Increase column indicates the straight-line increase over 10 years only (or 9 years for items not in 2006)

Item	Unit	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Increase
Remove & Dispose Curb & Gutter	LFT	\$6.40	\$8.50	\$8.00	\$8.25	\$8.00	\$9.60	\$6.25	\$6.40	\$8.00	\$10.00	56.3%
Remove & Dispose Pavement & Approach	SYD	\$7.50	\$8.50	\$9.00	\$8.25	\$15.00	\$13.15	\$13.50	\$13.50	\$8.00	\$12.00	60.0%
Remove & Dispose Sidewalk	SYD	\$5.50	\$8.50	\$7.00	\$8.00	\$9.00	\$27.25	\$11.25	\$11.25	\$10.00	\$8.00	45.5%
Adjust Structure	EA	\$335.00	\$300.00	\$265.00	\$275.00	\$450.00	\$265.35	\$275.00	\$325.00	\$550.00	\$600.00	79.1%
Cold Mill Pavement	SYD	\$2.30	\$3.25	\$2.07	\$1.70	\$2.00	\$1.65	\$2.35	\$4.00	\$2.35	\$2.50	8.7%
Furnish & Install 21A Stone Base	TON	\$22.20	\$31.00	\$25.00	\$25.00		\$21.60	\$30.00	\$45.00	\$30.00		35.1%
Furnish & install MDOT F4 Curb & Gutter	LFT	\$11.35	\$9.20	\$9.50	\$8.95	\$9.50	\$9.80	\$9.50	\$14.00	\$10.00	\$9.50	-16.3%
Furnish & Install 6" Concrete Approach	SYD	\$28.90	\$27.00	\$30.00	\$31.50	\$30.00	\$29.00	\$30.00	\$34.50	\$26.10	\$25.00	-13.5%
Furnish & Install 4" Concrete Sidewalk	SFT	\$2.80	\$2.60	\$3.00	\$2.65	\$3.00	\$4.80	\$2.75	\$3.25	\$2.40	\$3.50	25.0%
Furnish & Install 4" ADA Sidewalk Ramp	SFT								\$8.50	\$3.50	\$3.50	N/A
Furnish & Install Paving Mat	SYD								\$5.00	\$2.25		N/A
Bituminous Hand Patching	TON	\$75.80	\$225.00	\$300.00		\$225.00	\$186.00	\$135.00	\$105.00	\$80.00	\$100.00	31.9%
Furnish & Install 13A Bituminous Levelling	TON	\$35.20				\$36.00	\$36.45	\$42.50	\$42.70	\$48.00	\$49.00	39.2%
Furnish & Install 13A Bituminous Wearing	TON	\$35.40	\$35.46	\$41.37	\$37.00	\$37.50	\$37.30	\$38.60	\$47.00	\$48.00	\$54.10	52.8%
Furnish & Install 36A Bituminous Wearing	TON	\$40.90	\$38.02	\$38.07	\$45.00				\$59.70	\$50.22		22.8%
Furnish & Install 6" Concrete Pavement*	SYD	\$26.00			\$36.50		\$26.00		\$29.00		\$29.00	N/A
Furnish & Install 8" Concrete Pavement*	SYD								\$40.00		\$32.00	N/A

*Includes integral curb and gutter for concrete streets.

City of Monroe Street Program - Engineering Time Percentages by Project - 2003 to 2006

Note: Costs prior to 2003 were tracked through older financial software, difficult and time-consuming to obtain.

Year	Project	Type	Curbs	Constr. \$	Eng. \$	Total \$	Eng. % of con.	Eng. % of total
2003	College - end to Godfroy	1-1/2" mill / resurface	All	\$29,327	\$9,217	\$38,544	31.4%	23.9%
2003	E. Third - Railroad to Conant	1-1/2" mill / resurface	Spot only	\$23,052	\$6,809	\$29,861	29.5%	22.8%
2003	Peters - Conant to Norwood	1-1/2" overlay of conc.*	Spot only	\$102,569	\$17,000	\$119,569	16.6%	14.2%
2003	Stedman - Borgess to Monroe	1-1/2" mill / resurface	All	\$23,257	\$8,510	\$31,767	36.6%	26.8%
2003	W. Elm - CSX to Virginia	1-1/2" mill / resurface	Spot only	\$16,940	\$2,000	\$18,940	11.8%	10.6%
2003	W. Elm - Virginia to Monroe	1-1/2" mill / resurface	Spot only	\$477,059	\$69,800	\$546,859	14.6%	12.8%
2003	Winchester - 8th to 4th	1-1/2" mill / resurface	Spot only	\$46,260	\$10,477	\$56,737	22.6%	18.5%
2004	Adams - Seventh to City line	1-1/2" mill / resurface	Spot only	\$58,532	\$11,681	\$70,213	20.0%	16.6%
2004	Conant - First to Third	1-1/2" mill / resurface	All	\$91,238	\$14,324	\$105,562	15.7%	13.6%
2004	Humphrey - Winchester to Eastchest.	1-1/2" mill / resurface	Spot only	\$12,524	\$2,000	\$14,524	16.0%	13.8%
2004	Michigan - Elm to Noble	6" concrete rebuild	Integral	\$164,904	\$20,921	\$185,825	12.7%	11.3%
2004	Navarre - Second to Fourth	6" concrete rebuild	Integral	\$76,956	\$10,529	\$87,485	13.7%	12.0%
2004	Oakwood - Macomb to Riverview	1-1/2" overlay	Spot only	\$67,319	\$9,484	\$76,803	14.1%	12.3%
2004	Roessler - Front to Elm	8" concrete w/stone base	Integral	\$563,893	\$53,632	\$617,525	9.5%	8.7%
2004	Toll - Elm to Lorain	1-1/2" overlay w/ mat	Spot only	\$135,682	\$25,100	\$160,782	18.5%	15.6%
2005	E. Maple - Elm to Scottwood	1-1/2" overlay / spot mill	Spot only	\$213,497	\$24,300	\$237,797	11.4%	10.2%
2005	Harrison - Third to First	1-1/2" mill / resurface	All	\$43,263	\$4,000	\$47,263	9.2%	8.5%
2005	Jerome - Plum Creek to Seventh	1-1/2" overlay w/ mat*	Spot only	\$174,660	\$20,669	\$195,329	11.8%	10.6%
2005	Maywood - Riverview to Maple	1-1/2" overlay / spot mill	Spot only	\$68,753	\$5,933	\$74,686	8.6%	7.9%
2005	N. Roessler - Hendricks to S of John	1-1/2" mill / resurface	All	\$137,821	\$19,336	\$157,157	14.0%	12.3%
2005	Rosewood - Hollywood to Maple	5" bit. Rebuild	All	\$170,772	\$7,011	\$177,783	4.1%	3.9%
2005	W. Elm - Bentley to CSX Railroad	3" mill / resurface	Spot only	\$50,698	\$6,703	\$57,401	13.2%	11.7%
2006	Calkins - Lavender - 200' east	8" concrete rebuild	Integral	\$26,060	\$3,477	\$29,537	13.3%	11.8%
2006	Crampton - Payson - 500' south	8" concrete rebuild	Integral	\$57,238	\$11,945	\$69,183	20.9%	17.3%
2006	N. Custer - City line to Bentley	3" mill / resurface	Spot only	\$315,927	\$63,000	\$378,927	19.9%	16.6%
2006	W. 8th / Roessler / Union	3" mill / resurface	All	\$560,928	\$72,000	\$632,928	12.8%	11.4%
2006	Wood - Almyra to Conant	8" concrete rebuild	Integral	\$67,592	\$11,145	\$78,737	16.5%	14.2%

Note: Engineering costs for both 2003 Elm Avenue projects not broken down separately, \$2000 assumed here for smaller project.

Note: Humphrey Street project in 2004 was charged to Local Street Maintenance, Engineering time not tracked, \$2000 estimated here.

Note: Harrison Street project in 2005 was estimated, much time charged to water project instead, \$4000 estimated here.

Note: North Custer Resurfacing in 2006 - Engineering Costs \$60,730 through 9/22/06, estimate \$63,000 to finish.

Note: West Eighth Street Resurfacing in 2006 - Engineering Costs \$63,120 through 9/15/06, estimate \$72,000 to finish.

Year	Project	Type	Curbs	Constr. \$	Eng. \$	Total \$	Eng. % of con	Eng. % of total
2003	All projects	All types	All types	\$718,464	\$123,813	\$842,277	17.2%	14.7%
2004	All projects	All types	All types	\$1,171,048	\$147,671	\$1,318,719	12.6%	11.2%
2005	All projects	All types	All types	\$859,464	\$87,952	\$947,416	10.2%	9.3%
2006	All projects	All types	All types	\$1,027,745	\$161,567	\$1,189,312	15.7%	13.6%
2003-06	All projects	All types	All types	\$3,776,721	\$521,003	\$4,297,724	13.8%	12.1%

Appendix E

BY: ENGINEERING DEPT.
11/29/2006

MVHF STREET INVENTORY-MAJOR

1 OF 10

<u>STREET</u>	<u>BLOCK NO.</u>	<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIDTH</u>	<u>SURFACE</u>	<u>R/W</u>	<u>PAVT COND</u>	<u>BASE COND</u>	<u>CURB COND</u>	<u>COMB COND</u>	<u>AVG INDEX</u>	<u>*A/</u>	<u>PARK</u>	<u>COMMENTS</u>
BORGESS AVE	1	ELM W	WILLOW	627.50	24	MIXED BIT ON CONC	60	4.0	0.0	2.0	7.0		A	W	
	2	WILLOW	VINE	294.00	24	MIXED BIT ON CONC	60	4.0	0.0	2.0	7.0	7.0	A	W	
	3	VINE	NOBLE	409.77	24	MIXED BIT ON GRAVEL	60	2.0	0.0	0.0	3.0	3.0	A	W	
CASS ST	1	FRONT	FIRST	170.38	40	MIXED BIT ON BRICK	66	3.0	0.0	0.0	4.0		A	W	
	2	FIRST	SECOND	366.00	36	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	EW	
	3	SECOND	THIRD	366.00	36	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	EW	
	4	THIRD	FOURTH	366.00	32	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	EW	
	5	FOURTH	FIFTH	366.00	26	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	W	
	6	FIFTH	SIXTH	366.00	26	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	W	
	7	SIXTH	SEVENTH	366.00	26	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	W	
	8	SEVENTH	EIGHTH	466.00	26	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	W	
	9	EIGHTH	CITY LIMIT	294.00	26	MIXED BIT ON GRAVEL	66	5.0	0.0	1.0	7.0	6.0	6.0	A	W
CONANT AVE	2	FIRST	THIRD	729.60	36	MIXED BIT ON GRAVEL	60	1.0	0.0	0.0	2.0	2.0	A	EW	
	3	THIRD	OAK	538.00	36	MIXED BIT ON GRAVEL	60	6.0	0.0	1.0	8.0		A	EW	
	4	OAK	FIFTH	193.00	36	MIXED BIT ON GRAVEL	60	6.0	0.0	1.0	8.0		A	EW	
	5	FIFTH	PETERS	193.00	36	MIXED BIT ON GRAVEL	60	6.0	0.0	1.0	8.0		A	EW	
	6	PETERS	HAGANS	340.00	36	MIXED BIT ON GRAVEL	60	6.0	0.0	1.0	8.0		A	EW	
	7	HAGANS	WOOD	200.00	36	MIXED BIT ON GRAVEL	60	4.0	0.0	1.0	6.0	7.7	A	EW	
	1	FRONT	SEVENTH	1324.71	32	CONCRETE	60	8.0	0.0	1.0	10.0	10.0	A	W	
CUSTER DR	1	ELM	TELEGRAPH	594.50	36	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0	8.0	A		
	2	TELEGRAPH	CUSTER N	662.00	36	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0	7.0	A		
CUSTER N RD	1	CUSTER DR	TELEGRAPH	287.01	40	MIXED BIT ON CONC	100	1.0	0.0	1.0	3.0		A		
	2	CUSTER DR	RICHARDS	1218.00	36	MIXED BIT ON CONC	100	1.0	0.0	1.0	3.0		A		
	3	RICHARDS	AVE DELAFAYETTE	2627.16	36	MIXED BIT ON CONC	100	1.0	0.0	1.0	3.0		A		
	4	AVE DELAFAYETTE	ANN MARIE	479.41	36	MIXED BIT ON CONC	100	1.0	0.0	1.0	3.0		A		
	5	ANN MARIE	CRANBROOK	222.43	36	MIXED BIT ON CONC	100	1.0	0.0	1.0	3.0		A		
	6	CRANBROOK	W CITY LINE	407.13	36	MIXED BIT ON CONC	100	1.0	0.0	1.0	3.0	3.0	A		
DETROIT AVE	1	ELM E	MILL ST	1991.01	36	CONCRETE	60	3.0	0.0	1.0	5.0	5.0	A	E	
	2	MILL	TELB	1008.50	32	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A	E	
	3	TELB	ROSE	1458.50	32	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A	E	
	4	ROSE	DIXIE DR	1648.39	32	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A	E	

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MVHF STREET INVENTORY-MAJOR

<u>STREET</u>	<u>BLOCK NO.</u>	<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIDTH</u>	<u>SURFACE</u>	<u>R/W</u>	<u>PAVT COND</u>	<u>BASE COND</u>	<u>CURB COND</u>	<u>COMB COND</u>	<u>AVG INDEX</u>	<u>*A/</u>	<u>PARK</u>	<u>COMMENTS</u>
	5	DIXIE DR	DIXIE HWY	89.22	32	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0	6.0	A	E	
DIXIE HY N	1	ELM	NOBLE	1249.40	46	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0		A		
	2	NOBLE	CHANGE	2806.09	46	MIXED BIT ON CONC	66/80	5.0	0.0	2.0	8.0	8.0	A		
	3	CHANGE	SPAULDING	61.50	46	MIXED BIT ON CONC	66/80	2.0	0.0	0.0	3.0	3.0	A		
	4	SPAULDING	CHANGE	1572.97	63	CONCRETE	110/120	2.0	0.0	0.0	3.0		A		
	5	CHANGE	DETROIT	254.80	64	MIXED BIT ON AGG	120	2.0	0.0	0.0	3.0	3.0	A		
	6	DETROIT	TERNES	959.85	84	MIXED BIT ON AGG	120	4.0	0.0	1.0	6.0	5.4	A		
	7	TERNES	CITY LINE	251.32	84	MIXED BIT ON AGG	150	5.0	0.0	1.0	7.0	6.2	A		
EIGHTH W ST	1	MONROE S	CHANGE	200.00	35	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A		
	2	CHANGE	CASS	199.00	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A		
	3	CASS	HARRISON	382.00	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	S	
	4	HARRISON	SMITH	382.00	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	S	
	5	SMITH	HUBBLE	340.50	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	S	
	6	HUBBLE	ADAMS	316.00	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	S	
	7	ADAMS	BACON	261.00	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	S	
	8	BACON	UNION	678.00	24	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	S	
	9	UNION	ROESSLER	362.00	32	DEEP STRENGTH ASPHALT	66	1.0	0.0	1.0	3.0	2.1	A	N	
ELM E AVE	1	MONROE	TREMONT	623.83	33	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0		A		
	2	TREMONT	MACOMB	249.00	33	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0		A		
	3	MACOMB	LINCOLN	386.01	33	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	4	LINCOLN	HOLLYWOOD	420.32	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	5	HOLLYWOOD	RIVERVIEW	349.00	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	6	RIVERVIEW	ARBOR	316.00	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	7	ARBOR	MAPLE	349.66	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	8	MAPLE	MICHIGAN	298.35	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	9	MICHIGAN	BAPTISTE	335.00	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	10	BAPTISTE	MASON RUN	437.64	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0		A		
	11	MASON RUN	DIXIE N	956.85	30	MIXED BIT ON CONC	60	6.0	0.0	1.0	8.0	7.6	A		
	12	DIXIE HWY	CHANGE	1506.98	36	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0		A	NS	
	13	CHANGE	DETROIT	501.17	48	MIXED BIT ON GRAVEL	100	3.0	0.0	2.0	6.0		A		
	14	DETROIT	I-75	2401.62	48	MIXED BIT ON GRAVEL	100	3.0	0.0	2.0	6.0		A		

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	15	I-75	CHANGE	1464.29	48	MIXED BIT ON GRAVEL	100	3.0	0.0	2.0	6.0		A		
	16	CHANGE	MASON RUN	1811.99	48	MIXED BIT ON GRAVEL	100	3.0	0.0	2.0	6.0		A		
	17	MASON RUN	FORD MOTOR	72.16	52	MIXED BIT ON GRAVEL	100	3.0	0.0	2.0	6.0	6.0	A		
ELM W AVE	1	MONROE N	BORGESS	806.86	30	MIXED BIT ON CONC	60	2.0	0.0	1.0	4.0		A		
	2	BORGESS	GODFROY	324.13	30	MIXED BIT ON CONC	60	2.0	0.0	1.0	4.0		A	S	
	3	GODFROY	LAVENDER	2032.57	30	MIXED BIT ON CONC	60	2.0	0.0	1.0	4.0		A	S	
	4	LAVENDER	ROESSLER	373.72	30	MIXED BIT ON CONC	60	1.0	0.0	1.0	3.0		A		
	5	ROESSLER	TOLL	306.90	30	MIXED BIT ON CONC	60	1.0	0.0	1.0	3.0	3.8	A		
	6	TOLL	HUBER	935.45	30	MIXED BIT ON CONC	60	1.0	0.0	1.0	3.0		A		
	7	HUBER	BENTLEY	302.40	30	MIXED BIT ON CONC	66	1.0	0.0	1.0	3.0		A		
	8	BENTLEY	TELEGRAPH	340.00	40	MIXED BIT ON CONC	66	1.0	0.0	1.0	3.0	3.0	A		
FIFTH E ST	1	MONROE	WASHINGTON	405.90	32	MIXED BIT ON GRAVEL	66	4.0	0.0	1.0	6.0		A	NS	CRACK SEAL / SLURRY SEAL
	2	WASHINGTON	MACOMB	389.60	32	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	NS	CRACK SEAL / SLURRY SEAL
	3	MACOMB	SCOTT	326.40	32	MIXED BIT ON GRAVEL	66	5.0	0.0	2.0	8.0	6.9	A	NS	CRACK SEAL / SLURRY SEAL
FIFTH W ST	7	UNION	ROESSLER	362.91	28	CONCRETE	66	3.0	0.0	1.0	5.0	5.0	A	S	
	8	ROESSLER	KAY LANI	349.00	32	CONCRETE	60	1.0	0.0	1.0	2.0	2.0	A	S	
FIRST E ST	1	MONROE S	WASHINGTON	405.90	41	MIXED BIT ON BRICK	66	4.0	0.0	1.0	6.0		A	NS	
	2	WASHINGTON	MACOMB	389.60	41	MIXED BIT ON BRICK	66	4.0	0.0	1.0	6.0	6.0	A	NS	BRICK NEEDS REPAIR
	3	MACOMB	SCOTT	339.00	41	MIXED BIT ON BRICK	66	5.0	0.0	1.0	7.0		A	NS	
	4	SCOTT	WADSWORTH	373.55	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0		A	S	
	5	WADSWORTH	MURRAY	365.70	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0		A	S	
	6	MURRAY	NAVARRE	374.78	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0		A	S	
	7	NAVARRE	JEROME	383.57	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0		A	S	
	8	JEROME	HALF	375.40	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0		A	S	
	9	HALF	KENTUCKY	791.00	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0		A	S	
	10	KENTUCKY	WINCHESTER	402.20	36	MIXED BIT ON BRICK	80	7.0	0.0	1.0	9.0	8.8	A	S	
	11	WINCHESTER	EASTCHESTER	387.80	36	MIXED BIT ON BRICK	80	5.0	0.0	2.0	8.0		A	NS	RR CROSS BAD
	12	EASTCHESTER	ALMYRA	762.35	28	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	S	
	13	ALMYRA	CONANT	385.90	28	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	S	
	14	CONANT	E TERMINUS	573.75	28	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0	7.0	A	S	

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FRONT E ST	1	MONROE	WASHINGTON	415.50	64	MIXED BIT ON BRICK	88	2.0	0.0	1.0	4.0		A	NS	
	2	WASHINGTON	MACOMB	426.93	47	MIXED BIT ON BRICK	68	3.0	0.0	1.0	5.0	4.5	A	NS	
	3	MACOMB	SCOTT	333.05	42	MIXED BIT ON CONC	68	3.0	0.0	2.0	6.0		A	S	
	4	SCOTT	WADSWORTH	377.37	40	MIXED BIT ON CONC	68	3.0	0.0	2.0	6.0		A	NS	
	5	WADSWORTH	MURRAY	370.47	40	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0		A	NS	
	6	MURRAY	NAVARRE	374.02	28	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	S	
	7	NAVARRE	JEROME	390.87	28	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	S	
	8	JEROME	KENTUCKY	1092.95	28	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0	5.4	A	S	
	9	KENTUCKY	WINCHESTER	468.35	26	CONCRETE	66	3.0	0.0	1.0	5.0		A	S	
	10	WINCHESTER	EASTCHESTER	395.28	26	CONCRETE	66	3.0	0.0	1.0	5.0	5.0	A	S	
	11	EASTCHESTER	CONRAIL	51.92	26	CONCRETE	60	3.0	0.0	1.0	5.0	5.0	A		
	12	CONRAIL	GRAND TRUNK RR	233.20	26	CONCRETE	60	3.0	0.0	1.0	5.0	5.0	A		
	13	GRAND TRUNK RR	CONANT	1011.40	20	MIXED BIT ON GRAVEL	60	6.0	0.0	4.0	11.0		A		
	14	CONANT	LINK	174.92	20	MIXED BIT ON GRAVEL	66	6.0	0.0	4.0	11.0		A	NS	
	15	LINK	FRONT	564.98	20	MIXED BIT ON GRAVEL	66	6.0	0.0	4.0	11.0	11.0	A	NS	
	16	FIRST	LINK	375.00	48	CONCRETE	0	7.0	0.0	1.0	9.0		A		SOUTH LANE FAILURE
	17	LINK	CHANGE	2279.10	48	CONCRETE	66	6.0	0.0	1.0	8.0	8.1	A		SOUTH LANE FAILURE
	18	CHANGE	I-75	542.55	48	MIXED BIT ON GRAVEL	66	3.0	0.0	1.0	5.0		A		
	19	I-75	BORCHERT PK	2298.94	48	MIXED BIT ON GRAVEL	100	3.0	0.0	1.0	5.0		A		
	20	BORCHERT PK	PORT	1349.46	48	MIXED BIT ON GRAVEL	100	3.0	0.0	1.0	5.0		A		CRACK SEAL
	21	PORT	MCMILLAN	2800.89	48	MIXED BIT ON GRAVEL	100	3.0	0.0	1.0	5.0		A		
	22	MCMILLAN	END	187.18	48	MIXED BIT ON GRAVEL	100	3.0	0.0	1.0	5.0	5.0	A		
GODFROY AVE	1	ELM W	WILLOW	632.80	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A	E	
	2	WILLOW	NOBLE	669.30	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0	5.0	A	E	
HARRISON ST	1	FIRST W	SECOND W	373.00	36	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0		A	EW	
	2	SECOND	THIRD	366.00	36	MIXED BIT ON CONC	66	1.0	0.0	0.0	2.0	2.0	A	EW	
	3	THIRD	FOURTH	366.00	26	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0	5.0	A	EW	
	4	FOURTH	FIFTH	367.00	28	CONCRETE	66	6.0	0.0	1.0	8.0		A	EW	
	5	FIFTH	SIXTH	367.00	28	CONCRETE	66	6.0	0.0	1.0	8.0		A	EW	UTILITY PATCH SE FIFTH
	6	SIXTH	SEVENTH	367.00	28	CONCRETE	66	6.0	1.0	0.0	8.0		A	EW	PATCH

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	7	SEVENTH	EIGHTH	466.00	28	CONCRETE	66	6.0	0.0	1.0	8.0	8.0	A	EW	
	8	EIGHTH	S CITY LINE	294.00	28	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0	6.0	A	W	
JONES AVE	1	MONROE S	WASHINGTON	407.55	36	CONCRETE	66	3.0	0.0	0.0	4.0		A		GAS CO. CURB PATCH
	2	WASHINGTON	CUSTER	391.34	36	CONCRETE	66	3.0	0.0	0.0	4.0	4.0	A		
	3	CUSTER	CHANGE	137.61	36	CONCRETE	66	3.0	0.0	0.0	4.0	4.0	A		
	4	CHANGE	LAPLAISANCE	1484.83	22	MIXED BIT ON GRAVEL	66	4.0	0.0	4.0	9.0	9.0	A		
KAYE LANI AVE	1	FRONT	FIFTH	388.00	32	CONCRETE	63	2.0	0.0	0.0	3.0	3.0	A		
	2	FIFTH	SEVENTH	870.08	32	CONCRETE	63	3.0	0.0	1.0	5.0	5.0	A		
KENTUCKY AVE	1	FRONT E	HUMPHREY	270.23	32	CONCRETE	63	3.0	0.0	1.0	5.0		A	W	
	2	HUMPHREY	FRANKLIN	246.30	28	CONCRETE	66	3.0	0.0	1.0	5.0		A	W	
	3	FRANKLIN	FIRST	246.08	28	CONCRETE	66	3.0	0.0	1.0	5.0	5.0	A	W	
	4	FIRST	SECOND	358.00	28	CONCRETE	66	5.0	0.0	1.0	7.0		A	W	
	5	SECOND	THIRD	370.00	28	CONCRETE	66	6.0	0.0	1.0	8.0		A	W	OLD RAILROAD NEEDS TO BE PATCHED
	6	THIRD	FOURTH	366.00	28	CONCRETE	66	6.0	0.0	1.0	8.0		A	W	
	7	FOURTH	SIXTH	731.00	26	CONCRETE	66	6.0	0.0	1.0	8.0	7.8	A	W	
	8	SIXTH	LIBERTY CT	373.00	26	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0		A	W	
	9	LIBERTY CT	KENTUCKY CT	189.00	26	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0		A	W	
	10	KENTUCKY CT	EIGHTH	297.00	26	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0		A	W	
	11	EIGHTH	NINTH	364.20	26	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0		A	W	
	12	NINTH	PLUM CREEK	203.00	26	MIXED BIT ON CONC	66	3.0	0.0	2.0	6.0	6.0	A	W	
	13	PLUM CREEK	CHERRY	258.85	28	CONCRETE	66	3.0	0.0	1.0	5.0		A		
	14	CHERRY	WALNUT	210.00	28	CONCRETE	66	3.0	0.0	1.0	5.0		A		
	15	WALNUT	FOUNTAIN	783.77	28	CONCRETE	66	3.0	0.0	1.0	5.0		A		
	16	FOUNTAIN	LAPLAISANCE	766.25	28	CONCRETE	66	3.0	0.0	1.0	5.0	5.0	A		BRUSH @ DRAIN
LAPLAISANCE RD	1	SIXTH	SEVENTH	604.85	28	MIXED BIT ON CONC	80	6.0	0.0	1.0	8.0		A	E	
	2	SEVENTH	BROADWAY	168.37	28	MIXED BIT ON CONC	80	6.0	0.0	1.0	8.0		A	E	
	3	BROADWAY	OLD CITY LINE	664.53	28	MIXED BIT ON CONC	80	6.0	0.0	1.0	8.0	8.0	A	E	
	4	OLD CITY LINE	NAVARRE	427.00	28	MIXED BIT ON GRAVEL	80	6.0	0.0	4.0	11.0		A		
	5	NAVARRE	JONES	57.00	28	MIXED BIT ON GRAVEL	80	6.0	0.0	4.0	11.0	11.0	A		
LEMERAND ST	1	MONROE N	CHANGE	376.30	32	MIXED BIT ON GRAVEL	60	3.0	0.0	2.0	6.0		A	NS	
	2	CHANGE	MACOMB N	549.15	32	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0	5.4	A	NS	

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MVHF STREET INVENTORY-MAJOR

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LINK ST	1	FRONT	FRONT	173.10	26	CONCRETE	0	5.0	0.0	1.0	7.0	7.0	A		SEAL JOINTS
LORAIN W ST	1	HUBER	BENTLEY	318.00	36	CONCRETE	60	4.0	0.0	1.0	6.0		A	NS	
	2	BENTLEY	TELEGRAPH	338.40	36	CONCRETE	60	4.0	0.0	1.0	6.0	6.0	A		
	3	TELEGRAPH	CHANGE	195.00	36	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A		
	4	CHANGE	VILLAGE GRN	388.39	28	MIXED BIT ON CONC	60	2.0	0.0	2.0	5.0		A		
	5	VILLAGE GRN	CHANGE	741.70	28	MIXED BIT ON CONC	60	2.0	0.0	2.0	5.0	5.0	A		
MACOMB ST	1	BRIDGE	BRIDGE	230.00	42	CONCRETE	0	4.0	0.0	1.0	6.0	6.0	A		
MACOMB N ST	1	BRIDGE	ELM E	292.70	42	MIXED BIT ON CONC	66	1.0	0.0	1.0	3.0	3.0	A		
	2	ELM E	WILLOW	594.85	26	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0		A		
	3	WILLOW	VINE	302.15	26	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0	6.0	A		
	4	VINE	NOBLE	374.77	26	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A		
	5	NOBLE	LORAIN	831.21	26	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A		
	6	LORAIN	PAVT CHANGE	294.10	26	MIXED BIT ON CONC	60	3.0	0.0	2.0	6.0		A		
	7	PAVT CHANGE	GROVE	140.00	36	MIXED BIT ON GRAVEL	63	3.0	0.0	1.0	5.0	5.7	A		
	8	GROVE	SHERIDAN	293.80	36	MIXED BIT ON GRAVEL	63	2.0	0.0	1.0	4.0		A	W	
	9	SHERIDAN	LEMERAND	299.12	36	MIXED BIT ON GRAVEL	63	2.0	0.0	1.0	4.0		A	W	
	10	LEMERAND	MAYWOOD	951.95	36	MIXED BIT ON GRAVEL	66	2.0	0.0	1.0	4.0	4.0	A	W	
	11	MAYWOOD	CITY LIMIT	993.44	36	MIXED BIT ON GRAVEL	66	3.0	0.0	1.0	5.0	5.0	A	W	
MACOMB S ST	1	BRIDGE	FRONT	103.80	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A		
	2	FRONT	FIRST	596.45	36	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	EW	
	3	FIRST	SECOND	367.15	36	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	EW	
	4	SECOND	THIRD	367.05	36	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	W	
	5	THIRD	FOURTH	367.20	28	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	W	
	6	FOURTH	FIFTH	367.15	28	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0	6.7	A	W	
MAYWOOD AVE	1	MACOMB	HOLLYWOOD	793.43	32	MIXED BIT ON GRAVEL	60	2.0	0.0	2.0	5.0		A	N	
	2	HOLLYWOOD	RIVERVIEW	349.50	26	MIXED BIT ON GRAVEL	60	1.0	0.0	1.5	3.5	4.5	A	N	
NOBLE W AVE	1	MONROE N	ST MARYS	380.00	24	MIXED BIT ON CONC	60	5.0	0.0	1.0	7.0		A		
	2	ST MARYS	BORGESS	386.00	24	MIXED BIT ON CONC	60	5.0	0.0	1.0	7.0		A		
	3	BORGESS	GODFROY	316.00	24	MIXED BIT ON GRAVEL	60	4.0	0.0	1.0	6.0	6.7	A		BASE PROBLEM N SIDE
NOBLE E AVE	1	MONROE N	GEE	359.91	24	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0		A		
	2	GEE	SACKETT	157.33	24	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0		A		

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	3	SACKETT	TREMONT	153.00	24	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0		A		
	4	TREMONT	MACOMB	246.00	24	MIXED BIT ON CONC	60	4.0	0.0	1.0	6.0	6.0	A		
	5	MACOMB	LINCOLN	384.10	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	6	LINCOLN	FERN CT	105.00	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	7	FERN CT	HOLLYWOOD	311.00	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	8	HOLLYWOOD	RIVERVIEW	349.12	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	9	RIVERVIEW	ARBOR	315.96	24	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	10	ARBOR	MAPLE	326.15	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	11	MAPLE	MAPLE	70.94	44	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	12	MAPLE	MICHIGAN	251.00	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	13	MICHIGAN	BAPTISTE	335.00	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A		
	14	BAPTISTE	DIXIE N	1622.93	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0	5.0	A		
RIVERVIEW AVE	1	ELM E	NOBLE	1257.15	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A	W	
	2	NOBLE	LORAIN	832.65	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0		A	W	
	3	LORAIN	SCOTTWOOD	1056.77	26	MIXED BIT ON CONC	60	3.0	0.0	1.0	5.0	5.0	A	W	
	4	SCOTTWOOD	PARKWOOD	306.00	26	MIXED BIT ON CONC	60	4.0	0.0	2.0	7.0		A	W	
	5	PARKWOOD	ROSEWOOD	306.00	26	MIXED BIT ON CONC	60	4.0	0.0	2.0	7.0		A	W	
	6	ROSEWOOD	MAYWOOD	306.12	26	MIXED BIT ON CONC	60	4.0	0.0	2.0	7.0	7.0	A	W	
	7	MAYWOOD	LINWOOD	1290.40	32	MIXED BIT ON GRAVEL	60	2.0	0.0	1.0	4.0		A	W	BIG PATCH-SCHOOL
	8	LINWOOD	GREENWOOD	836.60	32	MIXED BIT ON GRAVEL	60	1.0	0.0	1.0	3.0		A	W	
	9	GREENWOOD	ORCHARD	877.55	32	MIXED BIT ON GRAVEL	60	1.0	0.0	0.0	2.0		A	W	
	10	ORCHARD	OAKWOOD	279.70	32	MIXED BIT ON GRAVEL	60	1.0	0.0	0.0	2.0		A	W	
	11	OAKWOOD	CHANGE	206.77	32	MIXED BIT ON GRAVEL	60	1.0	0.0	0.0	2.0	3.0	A	W	
	12	CHANGE	COLE RD	1276.56	32	CONCRETE	60	4.0	0.0	1.0	6.0	6.0	A	W	
ROESSLER ST	1	BRIDGE	BRIDGE	320.00	52	CONCRETE	0	3.0	0.0	1.0	5.0	5.0	A		
ROESSLER N ST	1	BRIDGE	CHANGE	596.34	52	CONCRETE	0	1.0	0.0	0.0	2.0	2.0	A		
	2	CHANGE	ELM W	328.90	36	CONCRETE	65	1.0	0.0	0.0	2.0	2.0	A		
ROESSLER S ST	1	FRONT	BRIDGE	281.71	64	CONCRETE	120	1.0	0.0	0.0	2.0	2.0	A		
	2	FRONT	FIFTH	517.59	26	MIXED BIT ON CONC	66	2.0	0.0	1.0	4.0	4.0	A		
	3	FIFTH	FIFTH	144.77	26	MIXED BIT ON CONC	66	2.0	0.0	1.0	4.0	4.0	A		
	4	SEVENTH W	EIGHTH W	466.00	32	DEEP STRENGTH ASPHALT	66	1.0	0.0	1.0	3.0	3.0	A		

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SCOTT ST	1	FRONT E	HUMPHREY	292.88	32	MIXED BIT ON CONC	80	6.0	0.0	1.0	8.0		A	W	
	2	HUMPHREY	FIRST	372.88	32	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	W	
	3	FIRST	SECOND	366.71	32	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	W	
	4	SECOND	THIRD	366.86	32	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	W	
	5	THIRD	FOURTH	366.79	32	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	EW	
	6	FOURTH	FIFTH	366.54	28	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0		A	W	
	7	FIFTH	SIXTH	367.22	28	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0	7.1	A	W	
SECOND E ST	1	MONROE	WASHINGTON	406.00	36	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0	8.0	A	NS	
	2	WASHINGTON	MACOMB	389.45	52	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0	7.0	A	NS	
	3	MACOMB	SCOTT	325.00	36	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0	7.0	A	NS	
SECOND W ST	1	MONROE	CASS	399.68	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	NS	
	2	CASS	HARRISON	382.66	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	NS	
	3	HARRISON	SMITH	382.00	34	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0	5.0	A	NS	
SEVENTH E ST	1	MONROE	WASHINGTON	406.32	26	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0	7.0	A	S	
	2	WASHINGTON	CUSTER ST	521.50	24	MIXED BIT ON CONC	50	4.0	0.0	1.0	6.0		A	N	
	3	CUSTER ST	SCOTT	184.90	24	MIXED BIT ON CONC	50	4.0	0.0	1.0	6.0		A	N	
	4	SCOTT	SCOTT S	126.10	24	MIXED BIT ON CONC	50	4.0	0.0	1.0	6.0		A	N	
	5	SCOTT S	LAPLAISANCE	240.09	24	MIXED BIT ON CONC	50	4.0	0.0	1.0	6.0	6.0	A	N	
SEVENTH W ST	1	MONROE	CASS	382.00	26	MIXED BIT ON CONC	66	7.0	0.0	2.0	10.0		A		
	2	CASS	HARRISON	382.00	26	MIXED BIT ON CONC	66	7.0	0.0	2.0	10.0		A	N	
	3	HARRISON	SMITH	382.00	26	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	N	
	4	SMITH	HUBBLE	341.50	26	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	N	NEED ASPH AROUND RAISED PATCH
	5	HUBBLE	ADAMS	310.00	26	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	N	NEED ASPH AROUND RAISED PATCH
	6	ADAMS	BACON	258.00	26	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	N	UTILITY PATCH 507
	7	BACON	UNION	683.00	26	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0	9.0	A	N	MH SETTLED
	8	UNION	ROESSLER	362.56	32	DEEP STRENGTH ASPHALT	66	5.0	0.0	1.0	7.0		A	N	
	9	ROESSLER	KAY LANI	349.01	32	MIXED BIT ON GRAVEL	66	7.0	0.0	1.0	9.0		A		
	10	KAY LANI	COOPER	531.46	32	MIXED BIT ON GRAVEL	66	6.0	0.0	1.0	8.0		A		
	11	COOPER	TELEGRAPH	815.40	32	MIXED BIT ON GRAVEL	66	5.0	0.0	1.0	7.0	7.6	A		
SMITH ST	1	FRONT	SECOND	258.55	34	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	W	

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	2	SECOND	THIRD	367.30	26	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0	5.6	A	W	
THIRD E ST	1	MONROE	WASHINGTON	406.00	40	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	2	WASHINGTON	MACOMB	389.00	40	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	3	MACOMB	SCOTT	324.55	40	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	4	SCOTT	WADSWORTH	374.00	36	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	5	WADSWORTH	NAVARRE	745.00	36	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	6	NAVARRE	JEROME	381.00	36	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	7	JEROME	HALF	373.00	36	MIXED BIT ON CONC	66	4.0	0.0	2.0	7.0		A	NS	
	8	HALF	KENTUCKY	794.30	36	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0		A	NS	
	9	KENTUCKY	WINCHESTER	397.50	36	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0	7.1	A	NS	
	10	WINCHESTER	EASTCHESTER	385.00	36	MIXED BIT ON CONC	66	4.0	0.0	1.0	6.0		A	NS	
	11	EASTCHESTER	RAILROAD	425.00	36	MIXED BIT ON GRAVEL	66	5.0	0.0	1.5	7.5	6.8	A	NS	
	12	RAILROAD	ALMYRA	351.90	36	MIXED BIT ON GRAVEL	66	2.0	0.0	1.0	4.0		A		
	13	ALMYRA	CONANT	386.00	36	MIXED BIT ON GRAVEL	66	2.0	0.0	1.0	4.0	4.0	A	NS	
THIRD W ST	1	MONROE	CASS	399.00	40	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	NS	
	2	CASS	HARRISON	384.00	40	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	NS	
	3	HARRISON	SMITH	382.00	40	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	NS	
	4	SMITH	HUBBLE	347.00	36	MIXED BIT ON CONC	66	6.0	0.0	2.0	9.0		A	NS	
	5	HUBBLE	ADAMS	308.00	36	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0		A	NS	
	6	ADAMS	UNION	954.00	36	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0		A	NS	
	7	UNION	FRONT	126.78	16	MIXED BIT ON CONC	66	5.0	0.0	2.0	8.0	8.5	A		
UNION ST	1	THIRD	FOURTH	366.49	28	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A		
	2	FOURTH	FIFTH	366.85	28	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	W	
	3	FIFTH	SIXTH	366.85	28	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	W	
	4	SIXTH	SEVENTH	367.90	28	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A	W	
	5	SEVENTH	EIGHTH	465.40	28	MIXED BIT ON CONC	66	6.0	0.0	1.0	8.0	7.2	A	W	
WASHINGTON ST	1	FRONT	FIRST	467.24	50	MIXED BIT ON BRICK	80	3.0	0.0	1.0	5.0		A	EW	
	2	FIRST	SECOND	366.00	48	MIXED BIT ON CONC	80	4.0	0.0	1.0	6.0		A	EW	
	3	SECOND	THIRD	366.00	36	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0	6.5	A	EW	
	8	SEVENTH	SEVENTH	108.10	26	MIXED BIT ON CONC	80	5.0	0.0	1.0	7.0	7.0	A	W	
WINCHESTER PKWY	1	BRIDGE	BRIDGE	575.29	52	CONCRETE	0	1.0	0.0	1.0	3.0	3.0	A		

*INADEQUATE STREETS RECEIVE ONE ADDITIONAL POINT.
**MAJOR STREETS RECEIVE ONE ADDITIONAL POINT.
✓CORRECTED LENGTH

MVHF STREET INVENTORY-MAJOR

<u>STREET</u>	<u>BLOCK NO.</u>	<u>FROM</u>	<u>TO</u>	<u>LENGTH</u>	<u>WIDTH</u>	<u>SURFACE</u>	<u>R/W</u>	<u>PAVT COND</u>	<u>BASE COND</u>	<u>CURB COND</u>	<u>COMB COND</u>	<u>AVG INDEX</u>	<u>*A/</u>	<u>PARK</u>	<u>COMMENTS</u>
	2	BRIDGE	WINCHESTER	574.91	48	MIXED BIT ON GRAVEL	0	5.0	0.0	1.0	7.0	7.0	A		
WINCHESTER ST	3	WINCHESTER PKWY	FRONT	154.85	36	MIXED BIT ON CONC	66	5.0	0.0	1.0	7.0		A		
	4	FRONT	HUMPHREY	246.00	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	EW	SLURRY SEAL
	5	HUMPHREY	FRANKLIN	246.00	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	EW	SLURRY SEAL
	6	FRANKLIN	FIRST	253.50	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	EW	SLURRY SEAL
	7	FIRST	SECOND	360.50	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0		A	EW	SLURRY SEAL
	8	SECONDE	THIRD E	369.00	36	MIXED BIT ON CONC	66	3.0	0.0	1.0	5.0	5.2	A	EW	SLURRY SEAL
WOOD ST	2	ALMYRA	CONANT	386.00	26	CONCRETE	60	1.0	0.0	0.0	2.0	2.0	A	NS	
		SURFACE TYPE	CONCRETE	DEEP STRENGTH ASPHALT	GRAVEL	MIXED BIT ON AGG	MIXED BIT ON BRICK	MIXED BIT ON CONC	MIXED BIT ON GRAVEL	UNIMPROVED EARTH	TOTALS (LFT)	TOTALS (MILES)			
		TOTAL LENGTH	22595.81	1190.56	0.00	1137.07	6068.55	82142.10	32218.29	0.00	145352.38	27.53			

*INADEQUATE STREETS RECEIVE ONE ADDITIONAL POINT.
**MAJOR STREETS RECEIVE ONE ADDITIONAL POINT.
✓CORRECTED LENGTH

ACT 51 MONIES RECEIVED FROM THE STATE

<u>FISCAL YR</u>	<u>MAJOR STREET</u>	<u>LOCAL STREET</u>
2006	1,017,835.62	344,996.76
2005	1,030,961.05	348,221.60
2004	1,064,219.54	360,135.72
2003	988,302.34	333,152.42
2002	980,194.62	330,266.82
2001	994,714.43	334,643.84
2000	997,646.00	336,167.00
1999	949,284.00	317,995.00
1998	903,410.00	303,518.00
1997	750,270.00	250,436.00
1996	705,626.00	252,155.00
1995	698,085.00	249,965.00
1994	682,086.00	244,274.00

E OF MICHIGAN

TOTAL

1,362,832.38

1,379,182.65

1,424,355.26

1,321,454.76

1,310,461.44

1,329,358.27

1,333,813.00

1,267,279.00

1,206,928.00

1,000,706.00

957,781.00

948,050.00

926,360.00

Typical Resurfacing Costs - 1-1/2" milling and resurfacing - Full curb replacement

Typical costs per thousand linear feet

Item	# of Units	Unit	Unit Cost	Total Cost	Computation
Remove & Dispose Curb	2000	LFT	\$10.00	\$20,000.00	1000' x 2
Remove & Dispose Approach	500	SYD	\$12.00	\$6,000.00	1000' x 15' x 2 x 0.15 / 9
Remove and Dispose Sidewalk	133	SYD	\$12.00	\$1,596.00	25' x 4' x 2 x 4 x 1.5 / 9
Adjust Structure	10	EA	\$600.00	\$6,000.00	Estimate
Cold Mill Pavement	2556	SYD	\$2.50	\$6,390.00	1000' x 23' / 9
Furnish & Install Curb & Gutter	2000	LFT	\$10.00	\$20,000.00	Same as removal
Furnish & Install 6" Concrete Approach	500	SYD	\$30.00	\$15,000.00	Same as removal
Furnish & Install ADA Sidewalk Ramp	1200	SFT	\$4.00	\$4,800.00	Removal x 9
Furnish & Install 13A Pavement	250	TON	\$55.00	\$13,750.00	Mill x 195 / 2000
Hand Patching	10	TON	\$100.00	\$1,000.00	Estimate
Site Restoration	1	LS	\$1,000.00	\$1,000.00	Estimate
Traffic Control	1	LS	\$1,000.00	\$1,000.00	Estimate
Subtotal Typical Pay Items				\$96,536.00	
Engineering (15%)				\$14,480.40	
Contingency (15%)				\$14,480.40	
Total Costs (2007 dollars)				\$125,496.80	
Cost per foot				\$125	

Based on 2003-2006 typical
Covers other items, i.e. storm work

Typical Resurfacing Costs - 1-1/2" milling and resurfacing - No curb replacement

Typical costs per thousand linear feet

Item	# of Units	Unit	Unit Cost	Total Cost	Computation
Remove & Dispose Curb	120	LFT	\$10.00	\$1,200.00	10' at each ramp x 12
Remove & Dispose Approach	0	SYD	\$12.00	\$0.00	
Remove and Dispose Sidewalk	133	SYD	\$12.00	\$1,596.00	25' x 4' x 2 x 4 x 1.5 / 9
Adjust Structure	10	EA	\$600.00	\$6,000.00	Estimate
Cold Mill Pavement	2556	SYD	\$2.50	\$6,390.00	1000' x 23' / 9
Furnish & Install Curb & Gutter	120	LFT	\$10.00	\$1,200.00	Same as removal
Furnish & Install 6" Concrete Approach	0	SYD	\$30.00	\$0.00	Same as removal
Furnish & Install ADA Sidewalk Ramp	1200	SFT	\$4.00	\$4,800.00	Removal x 9
Furnish & Install 13A Pavement	250	TON	\$55.00	\$13,750.00	Mill x 195 / 2000
Hand Patching	10	TON	\$100.00	\$1,000.00	Estimate
Site Restoration	1	LS	\$500.00	\$500.00	Estimate
Traffic Control	1	LS	\$1,000.00	\$1,000.00	Estimate
Subtotal Typical Pay Items				\$37,436.00	
Engineering (15%)				\$5,615.40	
Contingency (15%)				\$5,615.40	
Total Costs (2007 dollars)				\$48,666.80	
Cost per foot				\$49	Round to \$50

Based on 2003-2006 typical
Covers other items, i.e. storm work

Assumptions:

1. Typical local street width of 26 feet between curb faces, typical right-of-way width 66 feet
2. All ADA ramps at each corner must be replaced.
3. Average of 1.5 intersections per 1000 feet (typical for current poor street listing).
4. Design bituminous thickness 1-1/2" but computed based on 1-3/4" - typical overrun

Typical Resurfacing Costs - 3" milling and resurfacing - Full curb replacement

Typical costs per thousand linear feet

Item	# of Units	Unit	Unit Cost	Total Cost	Computation
Remove & Dispose Curb	2000	LFT	\$10.00	\$20,000.00	1000' x 2
Remove & Dispose Approach	400	SYD	\$12.00	\$4,800.00	1000' x 12' x 2 x 0.15 / 9
Remove and Dispose Sidewalk	133	SYD	\$12.00	\$1,596.00	25' x 4' x 2 x 4 x 1.5 / 9
Adjust Structure	10	EA	\$600.00	\$6,000.00	Estimate
Cold Mill Pavement	3222	SYD	\$2.50	\$8,055.00	1000' x 29' / 9
Furnish & Install Curb & Gutter	2000	LFT	\$10.00	\$20,000.00	Same as removal
Furnish & Install 6" Concrete Approach	400	SYD	\$30.00	\$12,000.00	Same as removal
Furnish & Install ADA Sidewalk Ramp	1200	SFT	\$4.00	\$4,800.00	Removal x 9
Furnish & Install 13A Pavement	620	TON	\$55.00	\$34,100.00	Mill x 385 / 2000
Hand Patching	15	TON	\$100.00	\$1,500.00	Estimate
Site Restoration	1	LS	\$1,000.00	\$1,000.00	Estimate
Traffic Control	1	LS	\$1,500.00	\$1,500.00	Estimate
Subtotal Typical Pay Items				\$115,351.00	
Engineering (15%)				\$17,302.65	
Contingency (15%)				\$17,302.65	
Total Costs (2007 dollars)				\$149,956.30	
Cost per foot				\$150	

Based on 2003-2006 typical
Covers other items, i.e. storm work

Typical Resurfacing Costs - 3" milling and resurfacing - No curb replacement

Typical costs per thousand linear feet

Item	# of Units	Unit	Unit Cost	Total Cost	Computation
Remove & Dispose Curb	120	LFT	\$10.00	\$1,200.00	10' at each ramp x 12
Remove & Dispose Approach	0	SYD	\$12.00	\$0.00	
Remove and Dispose Sidewalk	133	SYD	\$12.00	\$1,596.00	25' x 4' x 2 x 4 x 1.5 / 9
Adjust Structure	10	EA	\$600.00	\$6,000.00	Estimate
Cold Mill Pavement	3222	SYD	\$2.50	\$8,055.00	1000' x 29' / 9
Furnish & Install Curb & Gutter	120	LFT	\$10.00	\$1,200.00	Same as removal
Furnish & Install 6" Concrete Approach	0	SYD	\$30.00	\$0.00	
Furnish & Install ADA Sidewalk Ramp	1200	SFT	\$4.00	\$4,800.00	Removal x 9
Furnish & Install 13A Pavement	620	TON	\$55.00	\$34,100.00	Mill x 385 / 2000
Hand Patching	15	TON	\$100.00	\$1,500.00	Estimate
Site Restoration	1	LS	\$500.00	\$500.00	Estimate
Traffic Control	1	LS	\$1,500.00	\$1,500.00	Estimate
Subtotal Typical Pay Items				\$60,451.00	
Engineering (15%)				\$9,067.65	
Contingency (15%)				\$9,067.65	
Total Costs (2007 dollars)				\$78,586.30	
Cost per foot				\$79	Round to \$80

Based on 2003-2006 typical
Covers other items, i.e. storm work

Assumptions:

1. Typical major street width of 32 feet between curb faces, typical right-of-way width 66 feet
2. All ADA ramps at each corner must be replaced.
3. Average of 1.5 intersections per 1000 feet (typical for current poor street listing).

4. Design bituminous thickness 3" but computed based on 3-1/2" - typical overrun

Typical Reconstruction Costs - 6" Concrete Pavements

Typical costs per thousand linear feet

Item	# of Units	Unit	Unit Cost	Total Cost	Computation
Remove & Dispose Pavement & Curb	3000	SYD	\$10.00	\$30,000.00	1000' x 27' / 9
Remove & Dispose Approach	500	SYD	\$10.00	\$5,000.00	1000' x 15' x 2 x 0.15 / 9
Remove and Dispose Sidewalk	133	SYD	\$10.00	\$1,330.00	25' x 4' x 2 x 4 x 1.5 / 9
Adjust Structure	10	EA	\$600.00	\$6,000.00	Estimate
Furnish & Install 6" Conc. w/ Int. Curb	3000	SYD	\$30.00	\$90,000.00	Same as removal
Furnish & Install 6" Concrete Approach	500	SYD	\$30.00	\$15,000.00	Same as removal
Furnish & Install ADA Sidewalk Ramp	1200	SFT	\$4.00	\$4,800.00	Removal x 9
Site Restoration	1	LS	\$1,000.00	\$1,000.00	Estimate
Traffic Control	1	LS	\$1,000.00	\$1,000.00	Estimate
Subtotal Typical Pay Items				\$154,130.00	
Engineering (15%)				\$23,119.50	
Contingency (15%)				\$23,119.50	
Total Costs (2007 dollars)				\$200,369.00	
Cost per foot				\$200	

Based on 2003-2006 typical
Covers other items, i.e. storm work

Typical Reconstruction Costs - 8" Concrete Pavements

Typical costs per thousand linear feet

Item	# of Units	Unit	Unit Cost	Total Cost	Computation
Remove & Dispose Pavement & Curb	3000	SYD	\$12.00	\$36,000.00	1000' x 27' / 9
Remove & Dispose Approach	500	SYD	\$10.00	\$5,000.00	1000' x 15' x 2 x 0.15 / 9
Remove and Dispose Sidewalk	133	SYD	\$10.00	\$1,330.00	25' x 4' x 2 x 4 x 1.5 / 9
Adjust Structure	10	EA	\$600.00	\$6,000.00	Estimate
Furnish & Install 8" Conc. w/ Int. Curb	3000	SYD	\$34.00	\$102,000.00	Same as removal
Furnish & Install 6" Concrete Approach	500	SYD	\$30.00	\$15,000.00	Same as removal
Furnish & Install ADA Sidewalk Ramp	1200	SFT	\$4.00	\$4,800.00	Removal x 9
Site Restoration	1	LS	\$1,000.00	\$1,000.00	Estimate
Traffic Control	1	LS	\$1,000.00	\$1,000.00	Estimate
Subtotal Typical Pay Items				\$172,130.00	
Engineering (15%)				\$25,819.50	
Contingency (15%)				\$25,819.50	
Total Costs (2007 dollars)				\$223,769.00	
Cost per foot				\$224	Round to \$225

Based on 2003-2006 typical
Covers other items, i.e. storm work

Assumptions:

1. Typical local street width of 26 feet between curb faces, typical right-of-way width 66 feet
2. All ADA ramps at each corner must be replaced.
3. Average of 1.5 intersections per 1000 feet (typical for current poor street listing).
4. For approaches, assume \$10 removal instead of typical \$12 due to being able to remove w/pavement.

City of Monroe "Poor" Streets - Rating 8.0 and above - Updated September 2006

Note: Does not include streets considered unimproved where there are no needs for improvement.

Condition Ratings				Local Streets and Major Streets not on Federal Aid System											
Surf.	Curb	Major	All	Project	Proposed Project Type	Curbs	Distance	Width	Squ. Ft.	Cost/LFT	Proj. Cost	Other Eligible Funding	Last Proj.	Age	
6.0	4.0	1.0	11.0	E. Front - CN Railroad to Link	1-1/2" mill / resurface	New	1751	20	35,020	\$125.00	\$218,875	CDBG / Assessment			
8.0	1.0		9.0	Harbor - Rose to Dixie	6" concrete rebuild	Integral	1096	26	28,496	\$200.00	\$219,200	CDBG	1963	43	
7.0	2.0		9.0	Campus Pl. - Godfroy west	1-1/2" mill / resurface	All	299	26	7,774	\$125.00	\$37,375		1941	65	
7.0	2.0		9.0	Hollywood - north of Maywood	4" bituminous (change)	All	372	36	13,392	\$200.00	\$74,400		1968	38	
7.0	2.0		9.0	Michigan - Noble to N of Lorain	6" concrete rebuild	Integral	1087	24	26,088	\$200.00	\$217,400	CDBG	1926	80	
7.0	2.0		9.0	Lavender - Elm to Lorain	1-1/2" mill / resurface	All	1979	26	51,454	\$125.00	\$247,375		1956	50	
6.0	3.0		9.0	E. Eighth - Washington to Custer	Mill / Resurf., plus S.W.	All	398	25	9,950	\$150.00	\$59,700		1924	82	
7.6	1.0		8.6	E. Seventh - Navarre to Reisig	1-1/2" overlay w/mat*	None	934	26	24,284	\$140.00	\$130,760	CDBG - 2007	1963	43	
6.0	2.6		8.6	Lavender - Calkins to McCormick	1-1/2" mill / resurface	All	1368	26	35,568	\$125.00	\$171,000		1984	22	
6.0	2.5		8.5	Riverside Court	1-1/2" mill / resurface	All	156	26	4,056	\$125.00	\$19,500	CDBG	1957	49	
6.4	2.0		8.4	Donnalee - Riverside to Lorain	1-1/2" mill / resurface	All	2024	26	52,624	\$125.00	\$253,000	CDBG	1957	49	
6.3	2.0		8.3	Woodville - S. Custer to south end	3" bituminous rebuild	All	2024	26	52,624	\$150.00	\$303,600		1981	25	
6.3	2.0		8.3	W. Lorain - W of Godfroy to Monroe	1-1/2" mill / resurface	All	1378	26	35,828	\$125.00	\$172,250		1941	65	
6.0	2.3		8.3	Riverside Dr. - Riv.Ct. to Richards	1-1/2" mill / resurface	All	569	26	14,794	\$125.00	\$71,125	CDBG	1957	49	
6.0	2.0		8.0	Winston Court - all	1-1/2" mill / resurface	All	171	26	4,446	\$125.00	\$21,375		1951	55	
6.0	2.0		8.0	E. Sixth - Monroe to Scott	1-1/2" mill / resurface	All	1112	24	26,688	\$125.00	\$139,000		1920	86	
6.0	2.0		8.0	Franklin St. - Kentucky to Winchester	1-1/2" mill / resurface	All	393	26	10,218	\$125.00	\$49,125	CDBG	1981	25	
6.0	1.0	1.0	8.0	Harrison - 4th to 8th	1-1/2" overlay w/mat*	None	1567	28	43,876	\$140.00	\$219,380		1965	41	
5.0	3.0		8.0	Sackett - Noble to Lorain	1-1/2" mill / resurface	All	831	19	15,789	\$125.00	\$103,875		1923	83	
5.0	3.0		8.0	W. Vine - Borgess to Monroe	1-1/2" mill / resurface	All	744	24	17,856	\$125.00	\$93,000		1923	83	
5.0	2.0	1.0	8.0	E. Second - Monroe to Washington	1-1/2" mill / resurface	All	406	36	14,616	\$125.00	\$50,750		1996	10	
Total of all projects rated 8.0 or worse not on Federal Aid System							20659 feet				\$2,872,065		Avg. age		52
							3.91 miles		Cost / Mile		\$734,039				

Note: Date of last project is where determined from City records, for those streets without date, no history of construction exists, or time frame is unreasonably long.

Condition Ratings				Federal Aid Eligible Projects											
Surf.	Curb	Major	All	Project	Proposed Project Type	Curbs	Distance	Width	Squ. Ft.	Cost/LFT	Proj. Cost	Projected Year	Last Proj.	Age	
6.0	4.0	1.0	11.0	LaPlaisance - Jones to old City line	8" concrete realignment	New	484	28	13,552	\$300.00	\$145,200	2011 with Jones			
8.0	1.0	1.0	10.0	Cooper - Seventh to Front	8" concrete rebuild	Integral	1325	32	42,400	\$250.00	\$331,250	2008	1961	45	
6.0	2.0	1.0	9.0	W. Seventh - Union to Monroe	3" mill / resurface	All	2738	26	71,188	\$150.00	\$410,700	2007			
4.0	4.0	1.0	9.0	Jones - DPS to LaPlaisance	8" concrete realignment	Integral	1485	32	47,520	\$400.00	\$594,000	2011 with LaPlaisance			
6.8	1.0	1.0	8.8	E. First - Scott to Winchester	3" mill / resurface	None	3405	36	122,580	\$80.00	\$272,400	2007	1984	22	
5.5	2.0	1.0	8.5	W. Third - Front to Monroe	3" mill / resurface	All	2901	36	104,436	\$150.00	\$435,150	2010	1990	16	
6.1	1.0	1.0	8.1	E. Front - Conant to I-75	8" conc. Rebuild - partial	Integral	2654	12	31,848	\$100.00	\$265,400	2008 or 2009 fill-in	1970	36	
6.0	1.0	1.0	8.0	LaPlaisance - old City line to Scott	5" bituminous rebuild	None	1438	28	40,264	\$150.00	\$215,700	As funds available	1983	23	
5.0	2.0	1.0	8.0	Custer Dr. - Telegraph to W. Elm	3" mill / resurface	All	595	36	21,420	\$150.00	\$89,250	2008 or 2009 fill-in	1977	29	
5.0	2.0	1.0	8.0	N. Dixie - Elm to Spaulding	3" mill / resurface	None	4055	46	186,530	\$80.00	\$324,400	2012 with E. Elm	1995	11	
Total of all projects rated 8.0 or worse on Federal Aid System							21080 feet				\$3,083,450		Avg. age		26
							3.99 miles		Cost / Mile		\$772,325				

Note: City of Monroe Federal funds annual target to be approximately \$400,000 each year through 2009, unknown beyond

City of Monroe Streets with Rating 7.0 to 7.9 - Updated September 2006

Note: Some streets on this list may not have street surface needing replacement within 10 years due to condition of curbs being poor and / or major street status.

Condition Ratings				Local Streets and Major Streets not on Federal Aid System									
Surf.	Curb	Major	All	Project	Proposed Project Type	Curbs	Distance	Width	Squ. Ft.	Cost/LFT	Proj. Cost	Other Eligible Funding	
6.0	1.8		7.8	Parkwood - Hollywood to Maple	1-1/2" mill / resurface	All	1070	26	27,820	\$125.00	\$133,750		
5.7	1.0	1.0	7.7	Conant - Third to Wood	1-1/2" mill / resurface	None	1464	36	52,704	\$50.00	\$73,200	CDBG	
4.7	3.0		7.7	W. Fifth - Monroe to Smith	1-1/2" mill / resurface	All	1163	24	27,912	\$125.00	\$145,375		
6.5	1.0		7.5	Reisig - Seventh to Plum Creek	1-1/2" bit. Overlay w/mat	None	1071	26	27,846	\$140.00	\$149,940	CDBG	
6.5	1.0		7.5	Toll - Lorain to Roessler	1-1/2" overlay w/mat	None	2226	28	62,328	\$60.00	\$133,560		
6.3	1.2		7.5	E. Willow - Monroe to Tremont	1-1/2" mill / resurface	None	667	34	22,678	\$60.00	\$40,020		
5.5	2.0		7.5	Maple W - Linwood to Orchard	1-1/2" mill / resurface	All	1720	20	34,400	\$125.00	\$215,000		
5.0	2.5		7.5	E. Vine - Monroe to Macomb	1-1/2" mill / resurface	All	925	24	22,200	\$125.00	\$115,625		
6.4	1.0		7.4	O'Brien - Front to End	6" concrete rebuild	Integral	971	28	27,188	\$200.00	\$194,200		
6.0	1.3		7.3	W. Noble - Huber to Telegraph	6" concrete rebuild	Integral	656	26	17,056	\$200.00	\$131,200		
5.0	2.3		7.3	Cranbrook - Elm to N of Armitage	1-1/2" mill / resurface	All	1518	26	39,468	\$125.00	\$189,750		
5.2	1.0	1.0	7.2	Union - Eighth to Third	1-1/2" mill / resurface	None	1933	28	54,124	\$50.00	\$96,650		
5.4	1.7		7.1	Arbor - Elm to Scottwood	1-1/2" mill / resurface	All	3144	24	75,456	\$125.00	\$393,000		
5.1	2.0		7.1	John Rolfe - Theodore to N of Lorain	1-1/2" mill / resurface	All	1356	26	35,256	\$125.00	\$169,500		
6.0	1.0		7.0	Bentley - Custer to Lorain	1-1/2" mill / resurface	None	1674	26	43,524	\$50.00	\$83,700		
6.0	1.0		7.0	Liberty Ct. - Kentucky to Church	1-1/2" bit. Overlay w/mat	None	383	26	9,958	\$60.00	\$22,980		
6.0	1.0		7.0	Ninth - Jerome to Kentucky	1-1/2" bit. Overlay w/mat	None	1167	26	30,342	\$50.00	\$58,350	CDBG	
5.0	2.0		7.0	Jefferson Ct. - Huron to Western	1-1/2" mill / resurface	All	852	26	22,152	\$125.00	\$106,500		
5.0	2.0		7.0	John L - Roessler to Calgary	1-1/2" mill / resurface	All	1325	26	34,450	\$125.00	\$165,625		
5.0	2.0		7.0	W. Noble - Telegraph to Theodore	1-1/2" mill / resurface	All	1142	28	31,976	\$125.00	\$142,750		
5.0	2.0		7.0	Palmwood - Telegraph to city line	1-1/2" mill / resurface	All	913	28	25,564	\$125.00	\$114,125		
5.0	2.0		7.0	S. Roessler - Fifth to end	1-1/2" mill / resurface	All	261	26	6,786	\$125.00	\$32,625		
5.0	2.0		7.0	Ross - Riverside to Richards	1-1/2" mill / resurface	All	1215	26	31,590	\$125.00	\$151,875	CDBG	
5.0	2.0		7.0	Stockton - Borgess to Monroe	1-1/2" mill / resurface	All	729	24	17,496	\$125.00	\$91,125		
5.0	2.0		7.0	Stone - Telegraph to Front	1-1/2" mill / resurface	All	1423	32	45,536	\$125.00	\$177,875		
5.0	2.0		7.0	Sylvan - Borgess to Monroe	1-1/2" mill / resurface	All	743	24	17,832	\$125.00	\$92,875		
5.0	2.0		7.0	W. Willow - Godfroy to Monroe	1-1/2" mill / resurface	All	1086	24	26,064	\$125.00	\$135,750		
5.0	1.0	1.0	7.0	Custer Dr. - N. Custer to Telegraph	1-1/2" mill / resurface	None	662	36	23,832	\$50.00	\$33,100		
5.0	1.0	1.0	7.0	Link - Front to Front	6" concrete rebuild	All	173	26	4,498	\$200.00	\$34,600	CDBG	
5.0	1.0	1.0	7.0	E. Second - Washington to Macomb	1-1/2" mill / resurface	None	389	52	20,228	\$50.00	\$19,450		
5.0	1.0	1.0	7.0	E. Second - Macomb to Scott	1-1/2" mill / resurface	None	325	36	11,700	\$50.00	\$16,250		
5.0	1.0	1.0	7.0	E. Seventh - Monroe to Wash.**	1-1/2" mill / resurface	None	406	26	10,556	\$50.00	\$20,300		
4.0	3.0		7.0	Scottwood - Hollywood to Maple	1-1/2" mill / resurface	All	1054	24	25,296	\$125.00	\$131,750		
4.0	2.0	1.0	7.0	Borgess - Elm to Vine	1-1/2" mill / resurface	All	922	24	22,128	\$125.00	\$115,250		
4.0	2.0	1.0	7.0	Riverview - Scottwood to Maywood*	1-1/2" mill / resurface	All	918	26	23,868	\$125.00	\$114,750		
Total of all projects rated 7.0 to 7.9 not on Federal Aid System							37646 feet				\$4,042,375		
							7.13 miles		Cost / Mile		\$566,959		

*Riverview is Federal-Aid eligible roadway, but under-width due to on-street parking.

**E. Seventh is currently a major street, but is planned for demotion to local status in conjunction with E. Sixth promotion to major street.

Condition Ratings				Federal Aid Eligible Projects								
Surf.	Curb	Major	All	Project	Proposed Project Type	Curbs	Distance	Width	Squ. Ft.	Cost/LFT	Proj. Cost	Projected Year
5.8	1.0	1.0	7.8	Kentucky - Sixth to First	8" concrete rebuild	Integral	1825	28	51,100	\$225.00	\$410,625	Part of Rail Cons.-2009
5.6	1.0	1.0	7.6	E. Elm - Monroe to Dixie Hwy.	3" mill / resurface	None	4722	30	141,660	\$80.00	\$377,760	2012 with N. Dixie
5.6	1.0	1.0	7.6	W. Seventh - Telegraph to Union	3" mill / resurface	None	2058	32	65,856	\$80.00	\$164,640	2013
5.1	1.0	1.0	7.1	Scott - Sixth to Front	3" mill / resurface	None	2520	32	80,640	\$80.00	\$201,600	2013
4.2	1.9	1.0	7.1	E. Third - Monroe to Winchester	3" mill / resurface	All	4184	36	150,624	\$150.00	\$627,600	2014
5.0	1.0	1.0	7.0	E. First - Winchester to end	1-1/2" mill / resurface	None	2110	28	59,080	\$50.00	\$105,500	2013
Total of all projects rated 7.0 to 7.9 on Federal Aid System							17419 feet				\$1,887,725	

3.30 miles

Cost / Mile

\$572,202

City of Monroe Streets with Surface Rating 5.0+ for bituminous, 6.0+ for concrete, with overall segment rating less than 7.0

Note: Even though this list includes streets with ratings less than 7.0, it is likely that all of these streets will deteriorate to the point where work should occur within 10 years.

Condition Ratings				Local Streets and Major Streets not on Federal Aid System									
Surf.	Curb	Major	All	Project	Proposed Project Type	Curbs	Distance	Width	Squ. Ft.	Cost/LFT	Proj. Cost	Other Eligible Funding	
6.0	1.0			7.0	Huber - Elm to Noble	8" concrete rebuild	Integral	1095	26	28,470	\$225.00	\$246,375	
6.0	1.0			7.0	Navarre - Humphrey to Second	6" concrete rebuild	Integral	747	26	19,422	\$200.00	\$149,400	
6.0	1.0			7.0	Railroad - Fifth to Wood	6" concrete rebuild	Integral	741	24	17,784	\$200.00	\$148,200	
6.0	1.0			7.0	St. Mary's - Vine to Noble	6" concrete rebuild	Integral	375	28	10,500	\$200.00	\$75,000	
5.0	1.9			6.9	Richards - Riverside to Donnalee	1-1/2" mill / resurface	All	1506	26	39,156	\$125.00	\$188,250	
4.6	1.3	1.0		6.9	E. Fifth - Monroe to Scott	1-1/2" mill / resurface	None	1122	32	35,904	\$50.00	\$56,100	
5.8	1.0			6.8	Donnalee - Lorain to N of Dane	6" concrete rebuild	Integral	759	26	19,734	\$200.00	\$151,800	
5.0	1.8			6.8	Almyra - First to Wood	1-1/2" mill / resurface	All	2199	26	57,174	\$125.00	\$274,875	
5.7	1.0			6.7	Roeder - Seventh to Plum Creek	1-1/2" bit. Overlay w/mat	None	1154	26	30,004	\$140.00	\$161,560	
5.7	1.0			6.7	N. Roessler - Calkins to Hendricks	1-1/2" bit. Overlay w/mat	None	1087	30	32,610	\$60.00	\$65,220	
5.0	1.7			6.7	Orchard - Macomb to Riverview	1-1/2" mill / resurface	All	1140	26	29,640	\$125.00	\$142,500	
4.7	2.0			6.7	N. Roessler - N of John L to City line	1-1/2" mill / resurface	All	491	26	12,766	\$125.00	\$61,375	
4.7	1.0	1.0		6.7	S. Macomb - Fifth to Bridge	1-1/2" mill / resurface	None	2169	36	78,084	\$50.00	\$108,450	
4.7	1.0	1.0		6.7	W. Noble - Godfroy to Monroe	1-1/2" mill / resurface	None	1082	24	25,968	\$50.00	\$54,100	
4.6	2.0			6.6	Western - Erie to Winston Ct.	1-1/2" mill / resurface	All	1679	26	43,654	\$125.00	\$209,875	
5.5	1.0			6.5	N. Roessler - Elm to N of Lorain	1-1/2" mill / resurface	None	2204	32	70,528	\$50.00	\$110,200	
5.5	1.0			6.5	W. Sixth - Monroe to Union	1-1/2" mill / resurface	None	2769	27	74,763	\$50.00	\$138,450	
5.1	1.4			6.5	Maple W - Elm to Scottwood	1-1/2" mill / resurface	None	3141	20	62,820	\$50.00	\$157,050	
5.4	1.0			6.4	E. Eighth - Navarre to Kentucky	1-1/2" bit. Overlay w/mat	None	1539	26	40,014	\$140.00	\$215,460	
5.0	1.0			6.0	E. Fourth - Monroe to Eastchester	1-1/2" mill / resurface	None	4564	26	118,664	\$50.00	\$228,200	
5.0	1.0			6.0	Humphrey - Kentucky to Winchester	1-1/2" mill / resurface	None	393	26	10,218	\$50.00	\$19,650	
5.0	1.0			6.0	Michigan - Greenwood to end	1-1/2" mill / resurface	None	1073	26	27,898	\$50.00	\$53,650	
5.0	1.0			6.0	Riviera - Grace to end	1-1/2" mill / resurface	None	510	26	13,260	\$50.00	\$25,500	
5.0	1.0			6.0	Smith - Eighth to City line	1-1/2" mill / resurface	None	294	26	7,644	\$50.00	\$14,700	
4.9	1.0			5.9	W. Fourth - Union to Monroe	1-1/2" mill / resurface	None	2769	24	66,456	\$50.00	\$138,450	
4.9	1.0			5.9	Washington - Sixth to S of Eighth	1-1/2" mill / resurface	None	1025	26	26,650	\$50.00	\$51,250	
Total of all projects with bituminous surface rating 5.0+ and concrete 6.0+, not on Federal Aid system							37627 feet				\$3,245,640		
							7.13 miles	Cost / Mile			\$455,444		

Condition Ratings				Federal Aid Eligible Projects									
Surf.	Curb	Major	All	Project	Proposed Project Type	Curbs	Distance	Width	Squ. Ft.	Cost/LFT	Proj. Cost	Projected Year	
4.2	1.0	1.0		6.2	N. Dixie - Detroit to Ternes	3" mill / resurface	None	1211	84	101,724	\$80.00	\$96,880	
Total of all projects with bituminous surface rating 5.0+ and concrete 6.0+, on Federal Aid system							1211 feet				\$96,880		
							0.23 miles	Cost / Mile			\$422,400		

Required Funding Level over 10-year period to address expected deficiencies - single millage rate

Calendar Year	Year Forward	Inflation Factor	Present Factor	Actual \$ Needed	Present value in const. yr.	Expected Available Funds from other sources					Shortfall Dollars	Required Millage
						Federal	Major St.	Local St.	CDBG	Self-Help		
2007	0	1.000	1.000	\$1,900,000	\$1,900,000	\$410,000	\$300,000	\$50,000	\$100,000	\$65,000	\$975,000	1.02
2008	1	1.050	0.952	\$1,900,000	\$1,809,524	\$420,000	\$300,000	\$50,000	\$100,000	\$65,000	\$965,000	1.01
2009	2	1.103	0.907	\$1,900,000	\$1,723,356	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2010	3	1.158	0.864	\$1,900,000	\$1,641,291	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2011	4	1.216	0.823	\$1,900,000	\$1,563,135	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2012	5	1.276	0.784	\$1,900,000	\$1,488,700	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2013	6	1.340	0.746	\$1,900,000	\$1,417,809	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2014	7	1.407	0.711	\$1,900,000	\$1,350,295	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2015	8	1.477	0.677	\$1,900,000	\$1,285,995	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
2016	9	1.551	0.645	\$1,900,000	\$1,224,757	\$430,000	\$300,000	\$50,000	\$0	\$65,000	\$1,055,000	1.11
10-year total				\$19,000,000	\$15,404,861							
Identified total amount needed over 10 years					\$15,228,135							
Required annual equivalent millage rate					1.10							

Assumptions:

1. Actual construction inflation will be closer to 5% than the recent general inflation rate of 2 to 3%.
2. City of Monroe's 2006 taxable value of \$953,190,400 remains constant throughout the 10-year term.
3. No structural changes are made to Public Act 51 of 1951 governing receipts to cities from the Michigan Transportation Fund.
4. Major and local street monies will be fully transferrable between funds.
5. Federal Aid entitlement funds will be available to the City of Monroe, however, will remain stagnant with new Bill in 2009.
6. CDBG funds will be available until at least 2008, however, City loses entitlement status at that point.
7. County continues Self-Help Program at same amount over the next 10 years.
8. Major and local street construction budgets remain constant throughout the next 10 years.
9. City does not Special Assess any portion of resurfacing or reconstruction projects..

Survey of Other Michigan Cities (Populations 15,000 to 200,000) - Summary Table

	1. What is the total street mileage maintained by your City? (Not including trunkline maintenance contracts)	2. What routes within City limits are not maintained by the City?	3. Annual funding level for reconstruction / resurfacing?	4. How much of funding comes out of City's general fund?	5. How much of this funding comes out of Act 51 monies?
City					
Adrian	67 miles	M, US routes	\$1,425,000	\$0	\$1,000,000
East Lansing	94.56 miles	M, US routes	\$700k recon., City resur.	None	\$700,000
Ferndale	75 miles	M-102, M-1	\$200k, prev.lg. Program	None	\$200,000
Grandville	57.85 miles	I-196, M-11	\$1.15M maj., \$860k loc.	None	\$813k maj., \$278 loc.
Grosse Pointe Woods	55.39 miles	Mack Avenue	\$1.5 million	Approx. 40%	Approx, 60%
Jackson	164.57 miles	Border sts., M, US	\$2-\$5.1 mil. (2003-07)	\$0-\$300,000	\$411,300
Kentwood	135.19 miles	Various State, County	\$1 to \$1.5 million	None	100% of main.
Livonia	370 miles	Various State, County	\$6.5 million	None	\$2.5 million
Midland	235 miles	16 miles, State	Approx. \$3,000,000	None	75% of buget
Monroe	81.66 miles	I-75, US-24, M-125, M-50	\$700k-\$1.1M (2003-06)	\$0-\$200,000	\$350,000
Owosso	75 miles	M, US routes	\$350k rec., \$150k seal.	60% recon., 25% seal	0% recon., 75% seal
Pontiac	228.60 miles	M-59, US-24, Opdyke	\$500k-\$2 million	Often none, some PE	\$400k - \$1,000,000
Portage	217 miles	I-94, Sprinkle Rd.	\$4.05 million	\$1,500,000	\$850,000
Rochester Hills	249.14 miles	Various County	\$1-8 mil from 2003-06	0.5 mil - \$1.5 million	\$700,000 after main.
Saginaw	280 miles	M, US routes	Match Fed. only	None	\$100,000-\$300,000
Southgate	100 miles	I-75, County	\$600,000	20% of budget	80% of budget
Trenton	59 miles	Various County, M-85		\$0	All
Westland	208.82 miles	Various State, County	\$2.2 million	None	\$2.2 million (all)
Wyoming	240 miles	I-196 BL, US-131, M-11	No typ. Level, \$2.3-\$16M	None	None

Survey of Other Michigan Cities (Populations 15,000 to 200,000) - Summary Table

	6. Does your City have dedicated millage? If so, what is the rate and length?	7. Do you receive an annual allotment of Federal Funds?	8. Are any reconstruction or resurfacing projects funded by Special Assessment?	9. Do your streets generally have curb and gutter? If so, what percentage is curbed?	10. Is there a standard width for your streets between curb faces? If so, what?
City					
Adrian	1 mil, 10-yr., voted	No, small urban	Curbs & drives	Yes, 100%	(No response)
East Lansing	No	No, compete annually	Yes, first-time for unpav.	Yes, all but 10% exist.	28' loc., 48' other+median
Ferndale	No	No	No	Yes, 100%	24' loc., 28' maj.
Grandville	1.15 mil from gen. Fund	No, through MPO	Yes	Yes, 90%	32' local, 11' lane maj.
Grosse Pointe Woods	1 mil from gen. fund	No	No	Yes, 100%	24' local, 28' major
Jackson	No	Yes, \$322k-\$2.624 mil.	Yes, first-time, 50% after	Yes, 91.7%	28-32' local, 11-ft.l., maj
Kentwood	Not ded. (0.2995 gen.)	Compete, \$300-\$600k	Very few, comm. Indus.	Local no, major yes	Variable (see Appendix)
Livonia	0.89 mil, 10-yr. voted	Compete thr. County	First time paving	Yes, 58%	31 b/c to b/c, 34 collect.
Midland	Yes, county road mill.	\$375,000 bi-annually	First time paving	Yes, 80%	36' major, 28' local
Monroe	No, considering now	\$400,000 annually	First time paving	Yes, 99%	26' local, 28' major
Owosso	No	No, comp. W/small cit.	Yes	Yes, 75%	28' local, 36' major
Pontiac	No	No, through MPO	No, bond 20-years ago	Yes, 99%	Act 51 manual
Portage	No, 1 mil on Nov. ballot	\$900-\$950k annually	Yes, comprehensive	80% major / 60% local	29' loc/11' lane maj.
Rochester Hills	No, rejected multiple	No, compete annually	No	Yes, 60%	27' local, 11-12' lanes
Saginaw	No	No, compete for \$2.5M	Nothing in past 10 yr.	Yes, 99%	26', F2 curb
Southgate	Yes, 10 years	Various grants	No	Yes, 95%	
Trenton	No	No	First time paving	Yes	
Westland	No	No, compete annually	First time paving	Yes, 65%	27' back to back
Wyoming	1.8678 mils, st. & util.	No annual, proj. spec.	Yes	Yes, 95%	30-36' loc., 48-70' maj.

Survey of Other Michigan Cities (Populations 15,000 to 200,000) - Summary Table

	11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up?	12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans?	13. What is your typical resurfacing depth on bituminous projects?	14. What is your standard thickness for reconstructed (existing) concrete streets?	15. What is your standard design for new streets in new developments?
City					
Adrian	Yes, to sidewalk	Spot repair; no	3" in 2 lifts	No concrete streets	No concrete
East Lansing	Yes, as need to s.w.	As needed; no	3" local / 4" collector	Replace w/ asphalt	3"(loc.),4"(maj.)/6" Agg.
Ferndale	Only if curb replaced	45%; yes	1-1/2" loc./3" Fed. Aid	8"	N/A
Grandville	No	Replace w/each resur.	3" local / 4-1/2" major	Very few conc. Streets	32' wide, 3" asphalt
Grosse Pointe Woods	No resuf., to s.w. recon.	When needed; no	3"	8"	8" conc. on 6" stone
Jackson	Yes, to sidewalk	Not often, some spot	3-1/2" mill / overlay	No reconstr. In 30 yr.	3-1/2" bit. / 8" stone
Kentwood	Yes, to s.w. on reconstr.	Never; no	3/4" (thin) to 4" (new)	Very few conc. Streets	4" / 6-8" stone/12" cl. 2
Livonia	Narrow strip or first jt.	Only bad; some cases	1-1/2", 3" collectors	7" or 9"	Usually 31' wide, 7" th.
Midland	Yes, to sidewalk	Only bad; no	1-1/2" mill / 3" crush/sh.	8" but do not build now	Curb & gutter
Monroe	Yes, to sidewalk	30% of time; occas.	1-1/2" loc. / 3" major	6" loc.,8" maj.,9" indus.	7" concrete
Owosso	Only if curb replaced	As needed; no	2-1/2"	No concrete streets	28' wide, 5" bit. /6" Agg.
Pontiac	Yes, assessed	Spot repair; yes	1-1/2" loc. / 3 major"	9" reinforced	
Portage	Yes on recon., assess.	When needed; no	1-1/2" loc. / 2" major	No concrete streets	3" A / 6" G / 24" Sand
Rochester Hills	Minimum necessary	Have in past, min. now	2" preserv., 4" str. Over.	7" or 8" / 4" stone	8" C / 4" G or 8" A/6" G
Saginaw	Reconstr., up to s.w.	Usually; yes	Usually 2-3 inches	7" local, 9" major	6" A / 8" G / 12" sand
Southgate	Reconstruct only	Yes (?)	4"	8"	
Trenton	Replace halfway				
Westland	All reconstr., half resur.	Rarely	3"	Geotech. Recommend.	Geotech. Recommend.
Wyoming	Yes, reconstr. Only	As necess.; No	2"-3"	No concrete streets	3" bit./6"stone/12" sand

Survey of Other Michigan Cities (Populations 15,000 to 200,000) - Summary Table

City	16. What is your general breakdown of pavement surfaces?	17. Do you have a set replacement schedule that you strive for, and are you on that schedule?	18. Typically, how many miles of street are reconstructed / resurfaced each year?	19. What is your City's millage rate (City mills only) and taxable value?	20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?
Adrian	100% bituminous	No schedule	No typical miles	(No response)	Yes, very small
East Lansing	Mostly bit., some conc.	20-year cycle	2-3 miles	19.26 mils, \$886.71 mil.	Crack - city crews
Ferndale	98% bit. / 2% conc.	15 years	99% of all since 1999	22.54 mils, \$581.7 mil.	Yes, \$200,000 / 2 yr.
Grandville	99% bit. 1/2%C, 1/2%G	Yes, PASSER 5+	1.5 mi. local, 1 mi. maj.	7.45 mils	Some crack seal
Grosse Pointe Woods	60% conc. / 40% bit.	Try for 30, not on sched.	1.5 miles	13 mils, \$813,000,000	\$100k jt. & crack
Jackson	26%C / 70%A / 4% G	No set schedule	1.5 to 2 miles / year	14.6 mils, \$646.39 mil.	\$283,990 crack / chip
Kentwood	99% bit. / 1% conc.	10% main./2% str. Imp.	10% main./2% str. Imp.	7.8313 / \$1.999 bil.	Crack - \$68-\$80 k
Livonia	62% C / 37% A / 1% G	No, but strive for "good"	13.7 & 3.4 microsurf.	11.3865 / \$2.511 bil.	Jt./cr. \$150,000
Midland	85% A / 10% C / 5% G	25 years	8-10 miles	11 mils / \$2.5 billion	Yes, \$250,000
Monroe	66% A / 33% C / 1% G	40-50 years	1.5 to 2 miles / year	15.3 mils / \$985 million	Yes, \$100,000
Owosso	97% A / 2% G / 1% C	40-yr., use other main.	1.5 miles	13.352, \$274,622,618	\$150,000 cape / slurry
Pontiac	Working on Pave. Man.	Variable			Some joint/ crack
Portage	100% bituminous	40-yr. Local, 20-yr. Maj.	4 mi. resurf./1 mi. recon	10.1442 / \$2.088 bil.	5 miles crack sealing
Rochester Hills	30% C / 59% A / 11% G	Design of 20 years	Around 5 (1999-2003)	9.6681 / \$3.4 billion	Varies, as needed
Saginaw	50% C / 50% A	No	1-2 miles	5.2598, \$776,427,091	\$50,000 - \$75,000
Southgate	90% C / 7% A / 2% G	20 years	Varies		Yes
Trenton	47 C / 10 A / 1 G	25 years - try	Varies	21 / \$1,039 bil.	Yes, \$125,000
Westland	7.5 miles gravel left	Multiple*(see form)	8 miles / 5 years	12.0056 / \$2.245 bil.	Jt./cr. \$50,000
Wyoming	100% bituminous	10-yr. Maj., 30-yr. Local	Varies	10.6773 mils	Yes, \$200,000

Survey of Other Michigan Cities (Populations 15,000 to 200,000) - Summary Table

	21. Do you maintain any type of pavement management system / street inventory?	22. Which aspects of your program are performed in-house, and which by consultants?	23. Any other aspects of your program?	24. Contact person
City				
Adrian	No	Nearly all in-house	Visit anytime	Keith Dersham, PE
East Lansing		Mostly in-house		Ron Lacasse, PE
Ferndale	Yes	Giffels-Webster, all	\$45-mil, 8-year bond	Byron Photiades, DPW
Grandville	Roadsoft	Design, CI consult.		Ron Carr, DPS
Grosse Pointe Woods	PASSER	All consulting	Infrast. Inventory	Joseph Ahee, DPW
Jackson	PASSER / Roadsoft	Both, prog. In-house	No	Jon Dowling, PE
Kentwood	PASER, Roadsoft	In-house / con. On large	Anything we want	Patrick Hughes, PE
Livonia	Carte'Graph	Prog. In / all other con.	Citizen adv. / ratings	Robert Schron, PE
Midland	Yes	Most in-house	Road millage keeps up	Brian McManus, PE
Monroe	Yes, 0-16 scale w/curbs	All in-house	Well-accepted process	Patrick Lewis, PE
Owosso	Access	All in-house	Stress prev. main.	Ronald Baker, PE
Pontiac	Yes	Both		Allan Schneck, PE
Portage	PASSER	Both, prog. In-house	Newsletter articles	Christopher Barnes, PE
Rochester Hills	Startech (PMA)	Both, prog. In-house	Aggressive until 2003	Roger Rouse, DPS
Saginaw	Excel	Most in-house		Phillip Karwat, PE
Southgate	Yes			
Trenton		In-house all		Kelly Fedele, PE
Westland	PASSER	Prog. In / all other con.	Asset man. Program	Thomas Wilson, DPS
Wyoming	Yes	In-house exc. Surv.,test		William Dooley, PE

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department

Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

City Name: Adrian

1. What is the total street mileage maintained by your City?

Local 45
Major 22 Trunkline 16

2. What routes within the City limits are not maintained by the City (state highways county primaries, for example - please name specific routes)?

none

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

Act 51 = ~ 1,000,000 total Construction = ~ 600,000
Millage = ~ 425K

4. How much of this typical funding level comes out of the City's general fund?

\$ 0.00

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

1,000,000

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

4.8 mill¹⁰ yrs, voters

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

no

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

yes
S.A. on new / replacement curb: driveway (concrete)

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

yes 100%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets) and what percentage of your streets meets this standard?

yes, 99%

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

yes, all new drives upon reconstruction

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases and what percentage of the time?

spot repairs on resurfacing never overlay gutters if possible

13. What is your typical resurfacing depth on bituminous projects?

2-1/2 layers

14. What is your standard thickness for reconstructed (existing) concrete streets? Reinforced or non-reinforced?

none

15. What is your standard design for new streets in new developments? Reinforced or non-reinforced?

no concrete

16. What is your general percentage of each type of pavement surfaces (concrete, bituminous, gravel)?

100% bit

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

no

18. Typically, how many miles of street are reconstructed / resurfaced each year?

varies, reconstruction cost more than resurfacing, so with a fixed budget, mileage varies

19. What is your City's millage rate (City mills only) and taxable value?

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

yes very small

21. Do you maintain any type of pavement management system / street inventory (such as PASER rating)? If so, would you be willing to share a copy with us?

no

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection *in house*
- b) Design *95% in house*
- c) Construction Administration *99% in house*
- d) Construction Inspection *99% in house*

If you have one, if there a typical consulting firm used and who?

no

23. Are there any other aspects of your street program that you would be willing to share with us?

come visit!

24. May we have your contact information so that we may contact you with the final analysis and / or report?

sure

Thank you for your participation in this study.

Sincerely,
 Patrick M. Lewis, P.E.
 Director of Engineering and Planning
 City of Monroe
pmlewis@ci.monroe.mi.us
 (734) 384-9124

East Lansing

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

24.06 miles - major streets
61.6 miles - local streets
8.9 miles - state trunkline

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

We provide snow & maintenance removal on state trunklines. All other streets within the City are City owned & maintained.

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

We spend approximately \$700,000 a year on street reconstruction. City crews also overlay streets as needed.

4. How much of this typical funding level comes out of the City's general fund?

-0-

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

100%

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

No

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

No. Federal aid is a priority based process that is completed at the MPO with participation by the local jurisdiction.

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

First time paving is done by the developer in new subdivisions. Paving of non-paved roadways is funded by special assessment.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

All new streets have curb & gutter. 10% of existing streets have no curb & gutter.

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

Regional thoroughfare 48' + median Local street 28' + median
Major arterial 48' + median
Secondary 48' + median

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

Drive approaches are replaced as needed to provide proper curb & gutter grades. They are replaced from curb to sidewalk.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Curb is replaced as needed depending on condition. We do not overlay gutter pans.

13. What is your typical resurfacing depth on bituminous projects?

We generally pulverize existing bituminous streets to 7" depth then repave with 3" bituminous for local streets & 4" on collectors.

14. What is your standard thickness for reconstructed (existing) concrete streets?

We generally replace concrete streets with asphalt.

15. What is your standard design for new streets in new developments?

(see construction standards enclosed) Other based on pavement design
local streets - minimum 6" agg. base, 3" bit surface based on ADT
major streets - minimum 6" agg. base, 4" bit surface

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

Primarily bit over agg base, some 8: concrete ± 1 mile gravel

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

20 year cycle

18. Typically, how many miles of street are reconstructed / resurfaced each year?

2 - 3 miles

19. What is your City's millage rate (City mills only) and taxable value?

(millage) 19.26 (taxable) \$886,710,930.00

We do remit some to 425 Agreement areas.

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

We have an annual crack sealing programing done by city works crews. We do not use slurry seal.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection in-house
- b) Design in-house, sometimes consultants
- c) Construction Administration in-house
- d) Construction Inspection in-house

If you have one, if there a typical consulting firm used and who?

We take proposals for specific projects

23. Are there any other aspects of your street program that you would be willing to share with us?

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Ron Lacasse, Senior Engineer
rlacass@cityofeastlansing.com
(517) 337-9459

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Ferndale

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City? ~~75~~ 75
2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)? M-1 (Woodward) M-102 (Eight Mile). THOUGH WE ARE UNDER CONTRACT WITH MDOT TO REMOVE SNOW, SWEEP AND MOW M-1, AND TO PLOW SNOW ON M-102.
3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year? \$250,000
(ALSO, SEE ENCLOSED NEWS ARTICLES REGARDING \$45-MILLION, 8-YEAR INFRA-STRUCTURE PROGRAM, COMPLETED IN 2002.
4. How much of this typical funding level comes out of the City's general fund? NONE
5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)? ALL
6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters? NO
7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually? NO
8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)? NO

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed? *100%*

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)? *24-28' Locals*

28' MAJORS. COLLECTOR ROUTES: 11' LANES, 40' WITH PARKING.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

ONLY IF CURB IS REPLACED. IF GUTTER IS OVERLAID, WE WILL USE ASPHALT TO MATCH GRADE AND ENSURE PROPER DRAINAGE.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases? *45% YES*

13. What is your typical resurfacing depth on bituminous projects?

1 1/2" Locals, 3" Federal Aid AND SOME MAJORS

14. What is your standard thickness for reconstructed (existing) concrete streets?

8"

15. What is your standard design for new streets in new developments? *N/A*

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

98% BITUMINOUS OVER CONCRETE. REMAINDER: CONCRETE

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

15 YEARS. NEXT SCHEDULED YEAR 2010.

18. Typically, how many miles of street are reconstructed / resurfaced each year?

SINCE 1995: 99%

TAXABLE VALUE: 581,748,940

19. What is your City's millage rate (City mills only) and taxable value? **4.0859 - A/R**
① 14.7648 - OPERATING
② 2.2145 - REFUSE
③ .9747 - LIBRARY
4.5 - INFRASTRUCTURE
ADVERTISING

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?
YES. EVERY TWO YEARS. \$200,000/YR
(ROADS, WATER AND SEWER GENERAL OBLIGATION DEBT)

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?
YES. YES.
TOTAL CITY MILLAGE: 22.54

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection
- b) Design
- c) Construction Administration
- d) Construction Inspection

ALL BY CONSULTANTS

If you have one, if there a typical consulting firm used and who?

RIFFELS-WEBSTER,
OF ROCHESTER HILLS.

23. Are there any other aspects of your street program that you would be willing to share with us?

(SEE ENCLOSED NEWSPAPER ARTICLES. WILLING TO DISCUSS OUR \$45-MILLION, 8-YEAR BOND PROGRAM)

24. May we have your contact information so that we may contact you with the final analysis and / or report?

SEE ATTACHED BUSINESS CARD.

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Ferndale Gives Survival Lesson

Several years ago, Ferndale was pocked with many vacant storefronts, and the Oakland County city was leaning toward the down side of tattered. There were two ways to go: Let it slide, or fix it. Ferndale opted for the latter.

The city provides two lessons for older, ailing suburbs: Problems can be fixed with the correct approach, and whining about changing demographics does little good.

Ferndale is among the older Oakland communities. It sits astride Nine Mile, the first major road north of Detroit, on the inner ring of satellite cities. The population has dwindled 15 percent since 1980 to 22,000.

The suburb's residents and officials took a no-nonsense approach to reform. While some suburbs are tempted to polish their image, Ferndale polished the city itself.

Starting in 1995, a concert-



Ricardo Thomas / The Detroit News

The revival of Ferndale has benefited restaurants like Como's, which has an outdoor patio.

The Issue

What can aging cities like Ferndale do to stay viable?

ed effort convinced voters to pass a millage to improve roads, sewers and other infrastructure. Business was given

a boost by widening Nine Mile Road to create on-street parking.

Some \$45 million was invested, including improving 75 miles of road and seven miles of water mains. A citizens' committee rides herd on the work, assuring themselves that the city gets the most for its money. And since improvements began, the total property value of the city has nearly doubled to a worth of \$620 million.

In short, the refurbishing Ferndale was a local grass-roots effort. They city didn't wait for state or federal bailouts. It took responsibility for itself in a way that deserves emulation.

ferndale-mi.com

CITY OF FERNDALE

Byron A. Photiades
DPW DIRECTOR
DEPARTMENT OF PUBLIC WORKS

521 E. CAMBOURNE
FERNDALE, MICHIGAN 48220
(248) 546-2519
FAX: (248) 546-2521

9-17-02

DETROIT
NEWS

FRONT PAGE
9-4-02

Aging Ferndale discovers formula for staying vibrant

City's worth jumps after \$45M invested in streets, sewers.

By Jennifer Brooks
The Detroit News

FERDALE — Road crews are rumbling down two side streets in Ferndale this week, spreading the last few feet of asphalt that will cap one of the most ambitious suburban renewal projects Metro Detroit has ever seen.

In 1995, the residents in this aging suburb, one of the original bedroom communities for the first autoworkers, knuckled down and approved \$45 million in bonds to rebuild Ferndale from the ground up.

Today, the city's worth has nearly doubled, the downtown has gone from vacant storefronts to a vibrant retail hub, home ownership has skyrocketed and the spruced-up streets have even inspired residents and businesses to improve their own properties' curb appeal. Urban planners now hold Ferndale up as a model for dozens of other deteriorating suburbs that border Detroit.

More than 1.5 million people live in first-generation suburbs like Ferndale, Warren, Dearborn and Southfield — communities with shrinking populations and rising expenses. Ferndale lost 12 percent of its population between 1990 and 2000 as families relocated to farther suburbs.



Customers pack the outdoor patio of Como's Restaurant in Ferndale. A steady diet of improvements has kept the inner-ring suburb an energetic place to live.

Ricardo Thomas / The Detroit News

Fixing Ferndale

Ferndale launched a massive upgrading in 1995 after voters approved \$45 million in bonds to 'rebuild' roads, sewers and water mains. That same year brought passage of a \$48 million bond for city schools and \$1.5 million for city parks. City crews so far have:

- Resurfaced and repaired 75 miles of streets, upgraded 45 miles of curbs and gutters and spread more than 200,000 tons of asphalt.
- Repaired or replaced seven miles of water mains.
- Refined 10 miles of sewers, repaired 1,800 manhole covers and made more than 250 spot repairs to the system.

Value added

From 1995 to 2001, the assessed value property in Ferndale grew from \$350 million to \$620 million.

About this series

Throughout this year, The Detroit News is examining the costs and quandaries of the latest suburban boom. The series details the spiraling costs of suburbanites' ever-outward movement since World War II and explains how the region's Balkanization increases the costs of sprawl. This segment focuses on the challenges facing first-generation suburbs as they deal with aging infrastructure and shrinking populations.

Installments online

Read previous installments of "Grappling with growth: Metro Detroit in transition" at detnews.com/specialreports/

Scott d spotlight weight operati

Stomach infection after surgery killed Detroit councilwoman.

By Cameron McWhirter
The Detroit News

DETROIT — Brenda Scott died from a severe infection in her stomach, only three days after having stomach-reduction surgery, the Wayne County Medical Examiner ruled Tuesday after an autopsy on the three-term councilwoman.

Her stomach lining had somehow been perforated, according to the coroner's office.

The medical examiner classified the abrupt death as accidental, caused by a condition called peritonitis, administrator Steve Brown said.

The 47-year-old Detroit politician — who was 5 feet, 6 inches tall and weighed 361 pounds, according to the autopsy — on Friday had a new kind of stomach surgery at Port Huron Hospital to lose weight. The procedure typically involves five or six small incisions to implant an adjustable ring around the stomach. Patients generally go home the next day.

The appeal of that operation and others like it reflect a recognition that diets don't work for many severely overweight people. More than 63,000 Americans are expected to have stom-

Her d
leave

Editorial: Scott's lie for Detroit rebirth was missed. Page 8A

Scraps
Metro: V number

ach-redu... a surge of... in five ye... ical socie... The p... under ge... lower me... forms of... exist, and... form bein... edging th... the risks.

Scott's known... since the... Administ... implant in... to an ex... Corp., wh... from its B... Barbara... patient d... room fro... getting th... Vice Pres... said.

Please see

Air bag recalls near record level

TODAY
WASHINGTON — Automakers are on track to do a record number of recalls related to air bags this year. More than 1 million vehicles have been recalled this year. Through August, there have been 10 air bag recalls compared with 11 in all of last year, 15 in 2000 and 16 in 1999, a USA TODAY analysis of federal data shows.

that don't inflate when they should and Ford Focus bags that cause burns.

Sally Greenberg of Consumers Union said the increase suggests quality control and testing is lax. Others, like Doug Campbell of air bag supplier TRW, said it shows automakers react quickly to avoid lawsuits.

Recall numbers are expected to rise this year.

What's next

The courts will decide whether these constitutional amendments are on the Nov. 5 ballot:

- To require 90 percent of tobacco lawsuit settlement money — about \$300 million a year — to be used by hospitals, nursing homes and others for health care.
- To allow drug offenders the right to choose substance-abuse treatment

Tobacco, drug plan kicked off Nov. 5 b

By Mark Hornbeck
Detroit News Lansing Bureau

LANSING — A state panel Tuesday rejected two proposals that had appeared headed for the Nov. 5 ballot: a plan to capture \$300 million a year for state health care programs and a measure to send many drug offenders to state-financed substance abuse

Ruling challenged Appeals court will decide fate of controversial initiatives. Page 1B

voters. But after four hours of debate Tuesday, the board barred them from the ballot, saying the petitions were improper.

"The co... anyway," said Democratic Saginaw.

The board putting the ballot. The care prop... Republican... The par...

Continued from Page 1A

In those older suburbs, the residents of the city and the affluent fringe streets and complex who have not yet left with the rising property values, the city services that many of these areas have been provided for years. Many of these areas have been provided for years. Many of these areas have been provided for years.

Ferndale launched its self-improvement project in 1986 when voters overwhelmingly approved the city's request for a \$215 million millage for streets, \$8 million for water and \$15.5 million for sewers. The same year also saw the passage of a \$18 million bond for sidewalks and \$15 million for parks. This was a city that had not passed a road millage since 1982 and had not passed a sewer bond since 1971, a city where voters had been receiving modest millage requests for years. City officials decided they needed a new approach — selling the bond proposed to residents not as a necessary tax burden, but as an opportunity.

"It took us about three years to convince them. There's a tendency for people not to believe what government has to say," said City Manager Tom Barwin.

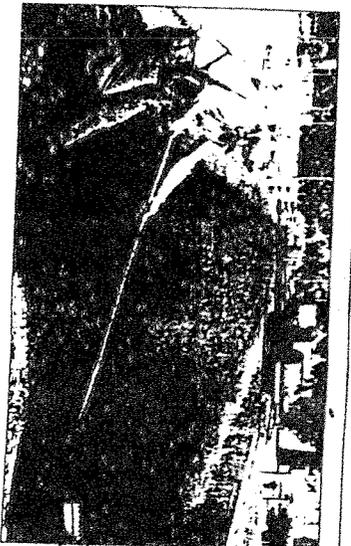
The \$44-million proposal represented a significant tax burden, more than \$100 extra in property taxes on a \$100,000 home. "You can't have something like this that's administratively driven," Barwin said. "You have to get the residents on board."

Most residents agreed that the city's roads, sewers and water lines were in sad shape. Sewing five percent of Ferndale's underground pipes had been put in place before 1990 and much of that dated back to Ferndale's building boom in the 1950s. There were potholes, water leaks, sewer backups, even a sinkhole that collapsed a residential street.

Ferndale turned its millage request into a grass-roots campaign, organizing a citizens committee — the M.A.I.N. Project, for Meeting Aging Infrastructure Needs — to stump for sewers in every precinct in the city.

City officials printed brochures, dispatched crews from the cable access station to film every water main break and decaying street in the city and set up a watchdog committee that would track projects after the bond passed to ensure taxpayers' money was well spent.

"I knew you about streets and sewers," said retired school teacher John Serritt, 62, who nevertheless was one of the first residents to volunteer for the citizens task force. He has served on the watchdog committee for the past six years, watching



Pincrest Road is one of many roads and streets undergoing reconstruction in Ferndale's \$45 million spruce-up project, financed with bonds approved in 1995.

ing as almost every single road in the city was repaired, and miles of leaky sewer and water lines were patched or replaced.

The changes have made a world of difference in Serritt's hometown. "I'm very impressed," said Serritt, who has lived in Ferndale for 32 years. "Housing values are astounding right now. We have places to go to eat, to walk to. I've seen homes fixed up in neighborhoods that used to be in terrible condition."

Between 1995, when the bond passed, and 2001, Ferndale's overall assessed value nearly doubled from \$550 million to \$650 million, reflecting the rising cost of residential and business properties and the city's brightening economic prospects. Although property values shot up almost everywhere in Metro Detroit in the 1990s —

Detroit's went up 87 percent — Ferndale also saw the revitalization of its downtown shopping district and an influx of new residents. As families moved out, newcomers moved in: young, affluent singles and couples, as well as a sizable gay population, all looking to move into "Fashionable Ferndale."

"You can go to other cities and see nice homes, but if the services aren't up to par, if the garbage doesn't get collected, if the streets are full of potholes, nobody's going to want to live there," Barwin said.

Before the repair work, Ferndale kind of had an old, worn look to it," Barwin said. "Once we repaired the streets, put in new curbs and gutters, you started getting a sense that this is not a dying, decaying community, that it's a nice place to live."

When businessman Grant Gray set up shop in downtown Ferndale six years ago, he could have had his pick of any one of at least a dozen storefronts along a single block of Nine Mile. At first, his hair salon, Shades of Gray, had to rely on the loyal clients who followed him from his Detroit location. There was almost no foot traffic through downtown Ferndale at the time, and most drivers on that stretch of Nine Mile were just using it as a shortcut to other destinations.

Gray, who relocated just after the millage vote, was startled when the road crews began the most visible renovation in the city: widening Nine Mile to create on-street parking and slow traffic down enough for people to notice businesses like his. He credits the Nine Mile widening project with expanding his clientele, which now reaches into Bloomfield Hills. And there are no more vacant store fronts in his section of Nine Mile.

"It turned out to be an excellent thing," said Gray, who left Detroit because it could not provide reliable parking, street lights or foot traffic.

Still, Ferndale faces many of the same challenges of other inner-ring suburbs. It continues to lose population and its share of state and federal dollars to the outer-ring communities like Canton, Commerce Township or Macomb Township, which are scrambling to put in roads and water and sewer lines. Now, the older suburbs are join-

ing forces to push for a fundamental change in the way Michigan pays for infrastructure projects. The group wants the state to focus on the roads, bridges, sewers and structures in their cities instead of pumping money into new suburbs. "It's unimoral to treat the inner-ring suburbs as a disposable commodity," said Jim Townsend, spokesman for the Michigan Suburban Alliance, a coalition of 25 of Detroit's oldest suburbs.

The Southeast Michigan Council of Governments is also pushing for reinvestment in Metro Detroit's existing infrastructure, rather than expanding the system outward. SEMCOG estimates the region will have to spend between \$14 and \$26 billion to replace and rebuild the region's aging sewer system. Almost 90 percent of the region's sewers were put in before 1960; two-thirds of the region's sewers predate the 1970s.

SEMCOG also predicts that the region needs at least \$41 million in roadwork over the next 20 years, and the agency is urging the state to target at least 90 percent of its road funds to rebuild, not expand.

"We are going to have to rebuild what we've got. You can't just abandon our major highways," Tait said. "Then we can deal with congestion problems (in the newer suburbs)."

You can reach Jennifer Brooks at (248) 647-8825 or jbrooks@detnews.com.

Cities invest in upgrades

These inner-ring suburbs have raised taxes to fix their aging infrastructures.

- Inster voters approved a 5-mill tax increase for street improvements.
- 2001
- Athol Village voters OK'd a 2-mill increase to resurface and build city streets 2000
- Lincoln Park passed a 2.9-mill increase for road improvements. Its property values rose 12 percent.
- Southgate approved 2 mills for roads. Its property values rose 8.9 percent between 2000 and 2001.
- Utica approved a 1.3 mill increase for local road improvements. Its property values rose 7.3 percent.
- Birmingham voters agreed to a 0.7-mill bond that would raise \$12 million to repair and replace the city's aging sewers. Birmingham's property values rose 14 percent.
- 1999
- St. Clair Shores voters OK'd a 2-mill tax increase to pay for \$32.5 million in state-mandated sewer repairs and \$17 million in additional sewer maintenance. The suburb's property values rose 7.3 percent.

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Wednesday, September 4, 2002

The Detroit News

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ENTERTAINMENT

Grappling with growth
Metro Detroit in transition



Ricardo Thomas / The Detroit News

Customers pack the outdoor patio of Como's Restaurant in Ferndale. A steady diet of improvements has kept the inner-ring suburb an energetic place to live.

Grappling with growth: Metro Detroit in transition
Aging Ferndale discovers formula for staying vibrant

City's worth jumps after \$45 million invested in streets, sewers

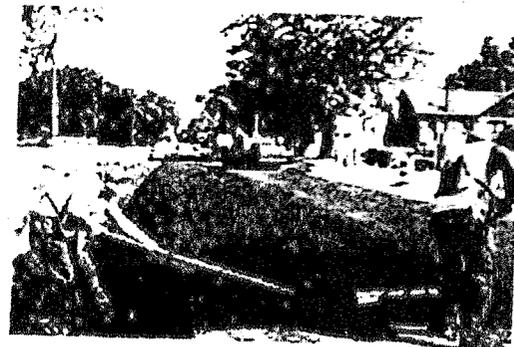
By Jennifer Brooks / The Detroit News

Part of an occasional series in The Detroit News

FERNDALE -- Road crews are rumbling down two side streets in Ferndale this week, spreading the last few feet of asphalt that will cap one of the most ambitious suburban renewal projects Metro Detroit has ever seen.

In 1995, the residents in this aging suburb, one of the original bedroom communities for the first autoworkers, knuckled down and approved \$45 million in bonds to rebuild Ferndale from the ground up.

Today, the city's worth has nearly doubled, the downtown has gone from vacant storefronts to a vibrant retail hub, home ownership has skyrocketed and the spruced-up streets have even inspired residents and businesses to improve their own properties' curb



Charles V. Tines / The Detroit News

Pinecrest Road is one of many roads and streets undergoing reconstruction in Ferndale's \$45 million spruce-up project, financed with bonds approved in 1995.

Fixing Ferndale

Ferndale launched a massive upgrading in 1995 after voters approved \$45 million in bonds to rebuild roads, sewers and

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own properties curb appeal. Urban planners now hold Ferndale up as a model for dozens of other deteriorating suburbs that border Detroit.

More than 1.5 million people live in first-generation suburbs like Ferndale, Warren, Dearborn and Southfield -- communities with shrinking populations and rising expenses. Ferndale lost 12 percent of its population between 1990 and 2000 as families relocated to farther suburbs.

In those older suburbs, the residents who stay and the affluent young singles and couples who move in are left with the rising repair bill for city services that may not have been upgraded for years.

"What Ferndale is doing with its infrastructure just makes sense," said Paul Tait, executive director of the Southeast Michigan Council of Governments, who has tracked the strains that a shrinking tax base and age have put on inner-ring suburbs.

Ferndale launched its self-improvement project in 1995, when voters overwhelmingly approved the city's request for a \$21.5 million millage for streets, \$8 million for water and \$15.5 million for sewers. The same year also saw the passage of a \$48 million bond for schools and \$1.5 million for parks.

This was a city that had not passed a road millage since 1982 and had not passed a sewer bond since 1921; a city where voters had been rejecting modest millage requests for years. City officials decided they needed a new approach -- selling the bond proposal to residents not as a necessary tax burden, but as an opportunity.

"It took us about three years to convince them. There's a tendency for people not to believe what government has to say," said City Manager Tom Barwin.

The 8.44-mill proposal represented a significant tax burden, more than \$400 extra in property taxes on a \$100,000 home. "You can't have something like this that's administratively driven," Barwin said. "You have to get the residents on board."

Most residents agreed that the city's roads, sewers and water lines were in sad shape. Seventy-five percent of Ferndale's underground pipes had been

in bonds to rebuild roads, sewers and water mains. That same year brought passage of a \$48 million bond for city schools and \$1.5 million for city parks. City crews so far have:

- ▶ Resurfaced and repaired 75 miles of streets, upgraded 45 miles of curbs and gutters and spread more than 200,000 tons of asphalt.
- ▶ Repaired or replaced seven miles of water mains.
- ▶ Relined 10 miles of sewers, repaired 1,800 manhole covers and made more than 250 spot repairs to the system.

Value added

From 1995 to 2001, the assessed value property in Ferndale grew from \$350 million to \$620 million.

About this series

Throughout this year, The Detroit News is examining the costs and quandaries of the latest suburban boom. The series details the spiraling costs of suburbanites' ever-outward movement since World War II and explains how the region's Balkanization increases the costs of sprawl. This segment focuses on the challenges facing first-generation suburbs as they deal with aging infrastructure and shrinking populations.

Installments online

▶ Read previous installments of "Grappling with growth: Metro Detroit in transition."

Cities invest in upgrades

These inner-ring suburbs have raised taxes to fix their aging infrastructures:

2002
▶ Inkster voters approved a 5-mill tax increase for street improvements.

2001
▶ Lathrup Village voters OK'd a 2-mill increase to resurface, repair and build city streets.

2000
▶ Lincoln Park passed a 2.9-mill increase for road improvements. Its property values rose 12 percent.

▶ Southgate approved 2 mills for roads. Its property values rose 8.9 percent between 2000 and 2001.

▶ Utica approved a 1.3 mill increase for local road improvements. Its property values rose 7.3 percent.

▶ Birmingham voters agreed to a 0.7-mill bond that would raise \$12 million to repair and replace the city's aging sewers. Birmingham's property values rose 14 percent.

1999
▶ St. Clair Shores voters OK'd a 2-mill tax increase to pay for \$32.5 million in state-mandated sewer repairs and \$17 million in additional sewer maintenance. The suburb's property values rose 7.3 percent.

put in place before 1950, and much of that dated back to Ferndale's building boom in the 1920s. There were potholes, water leaks, sewer backups, even a sinkhole that collapsed a residential street.

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Ferndale turned its millage request into a grass-roots campaign, organizing a citizens committee -- the M.A.I.N. Project, for Meeting Aging Infrastructure Needs -- to stump for sewers in every precinct in the city.

City officials printed brochures, dispatched crews from the cable access station to film every water main break and decaying street in the city, and set up a watchdog committee that would track projects after the bond passed to ensure taxpayers' money was well spent.

"I knew *not* about streets and sewers," said retired school teacher John Sterritt, 62, who nevertheless was one of the first residents to volunteer for the citizens task force. He has served on the watchdog committee for the past six years, watching as almost every single road in the city was repaved, and miles of leaky sewer and water lines were patched or replaced.

The changes have made a world of difference in Sterritt's hometown.

"I'm very impressed," said Sterritt, who has lived in Ferndale for 32 years. "Housing values are astounding right now. We have places to go, to eat, to walk to. I've seen homes fixed up in neighborhoods that used to be in terrible condition."

Between 1995, when the bond passed, and 2001, Ferndale's overall assessed value nearly doubled, from \$350 million to \$620 million, reflecting the rising cost of residential and business properties and the city's brightening economic prospects. Although property values shot up almost everywhere in Metro Detroit in the 1990s -- Detroit's went up 87 percent -- Ferndale also saw the revitalization of its downtown shopping district and an influx of new residents. As families moved out, newcomers moved in: young, affluent singles and couples, as well as a sizable gay population, all looking to move into "Fashionable Ferndale."

"You can go to other cities and see nice homes, but if the services aren't up to par, if the garbage doesn't get collected, if the streets are full of potholes, nobody's going to want to live there," Barwin said.

Before the repair work, "Ferndale kind of had an old, worn look to it," Barwin said. "Once we repaved the streets, put in new curbs and gutters, you started getting a sense that this is not a dying, decaying community, that it's a nice place to live."

When businessman Grant Gray set up shop in downtown Ferndale six years ago, he could have had his pick of any one of at least 10 vacant storefronts along a single block of Nine Mile. At first, his hair salon, Shades of Gray, had to rely on the loyal clients who followed him from his Detroit location. There was almost no foot traffic through downtown Ferndale at the time, and most drivers on that stretch of Nine Mile were just using it as a shortcut to other destinations.

Gray, who relocated just after the millage vote, was startled when the road crews began the most visible renovation in the city: widening Nine Mile to create on-street parking and slow traffic down enough for people to notice businesses like his. He credits the Nine Mile widening project with expanding his clientele, which now reaches into Bloomfield Hills. And there are no more vacant store fronts in his section of Nine Mile.

"It turned out to be an excellent thing," said Gray, who left Detroit because it could not provide reliable parking, street lights or foot traffic.

Still, Ferndale faces many of the same challenges of other inner-ring suburbs. It continues to lose population and its share of state and federal dollars to the outer-ring communities like Canton, Commerce Township or Macomb Township, which are scrambling to put in roads and water and sewer lines.

Now, the older suburbs are joining forces to push for a fundamental change in the way Michigan pays for infrastructure projects. The group wants the state to focus on the roads, bridges, sewers and structures in their cities instead of pumping money into new suburbs.

"It's immoral to treat the inner-ring suburbs as a disposable commodity we can just walk away from," said Jim Townsend, spokesman for the Michigan Suburban Alliance, a coalition of 25 of Detroit's oldest suburbs.

The Southeast Michigan Council of Governments is also pushing for reinvestment in Metro Detroit's existing infrastructure, rather than expanding the system outward. SEMCOG estimates the region will have to spend between \$14 and \$26 billion to replace and rebuild the region's aging sewer system. Almost 30 percent of the region's sewers were put in before 1940; two-thirds of the region's sewers predate the 1970s.

SEMCOG also predicts that the region needs at least \$41 million in roadwork over the next 20 years, and the agency is urging the state to target at least 90 percent of its road funds to rebuild, not expand.

"We are going to have to rebuild what we've got. You can't just abandon our major roadways," Tait said. "Then we can deal with congestion problems (in the newer suburbs)."

You can reach Jennifer Brooks at (248) 647-8825 or jbrooks@detnews.com.

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Michigan

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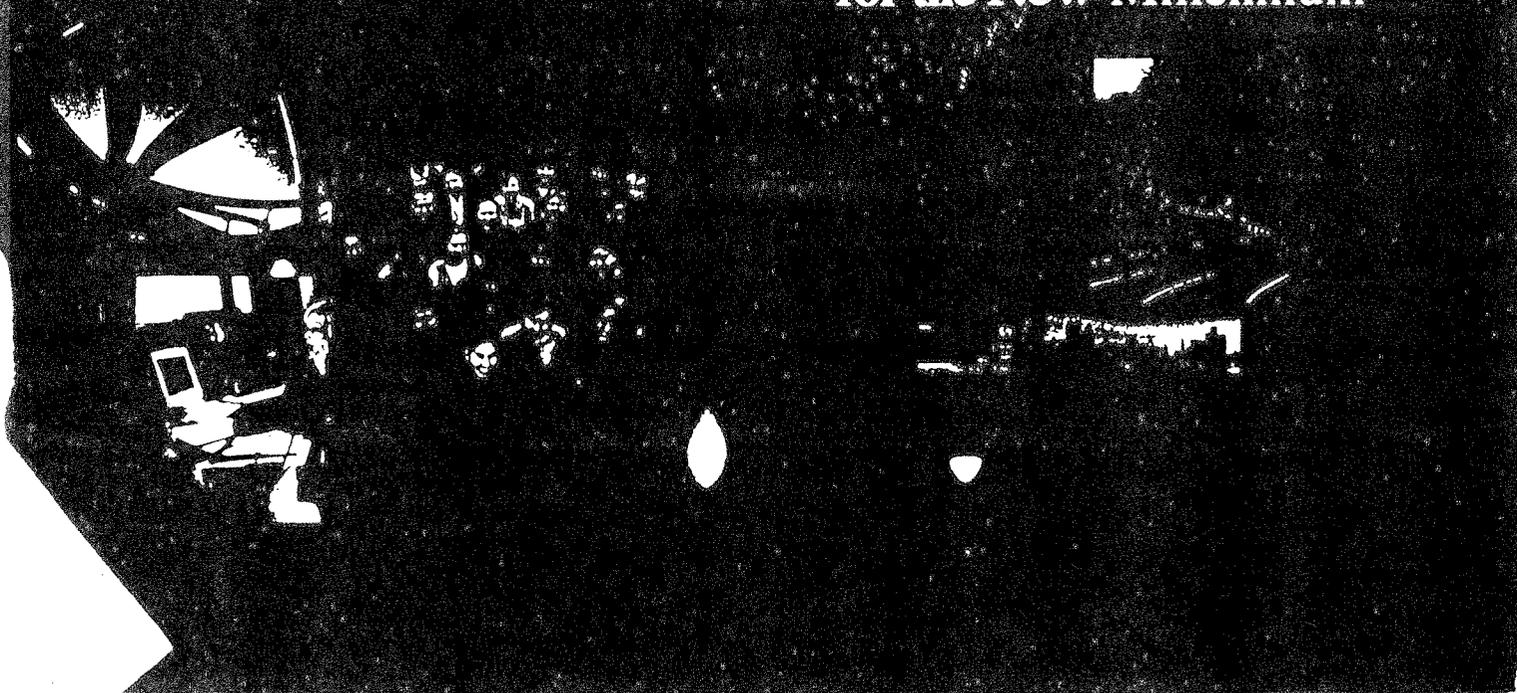
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Ferndale rebuilds aging infrastructure; nearly doubles city's total assessed value in six years

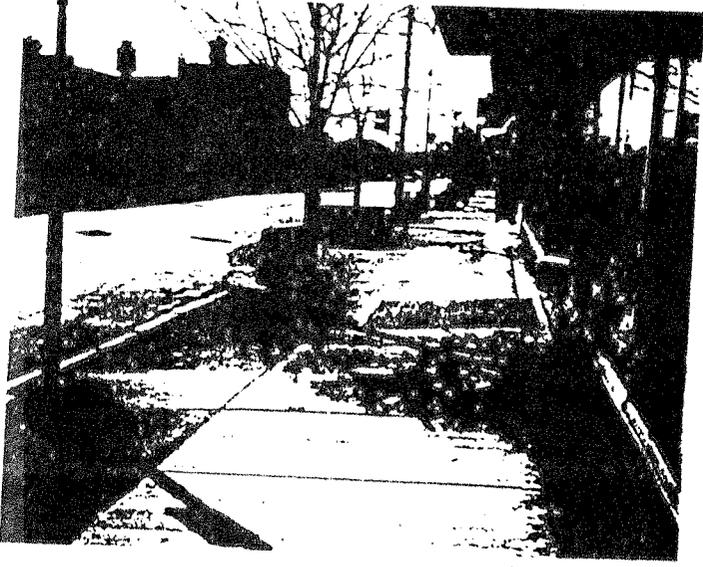
by Keith B. Mayer, PE, Scott Ringle, PE and Byron Photiades

The City of Ferndale, located adjacent to the City of Detroit in southeast Oakland County, was settled by homesteading farmers in the nineteenth century. It grew slowly until the introduction of the automobile and the opening of the Ford Motor Company plant in nearby Highland Park. Since being incorporated as a city in 1927, it has become one of the major suburbs north of Detroit with a population of roughly 22,000 residents (2000 census).

In 1991, Ferndale officials realized that something had to be done to stop the deterioration of the city's aging infrastructure. The sewer system was installed in the 1920s and 1930s, and the water and street systems were placed before 1950. For years, a band-aid approach had been all that the city budget could afford or justify. The city's consulting engineer advised that these infrastructure systems were all reaching the ends of their useful lives.

The only major infrastructure rehabilitation work performed had occurred during the early 1980s and was a \$3M general obligation bond to upgrade streets throughout the city.

The scenario is similar to almost any urban area in the nation. However, that similarity was about to end.



Nine Mile Road near Woodward used to be a vacant, two-lane road with no parking and vacant storefronts.

Identifying the problems

To identify the magnitude of the problem Ferndale asked its engineering consultant to analyze each of the infrastructure systems over a two-year period. The analyses included reviewing city maintenance and

repair records, interviewing key staff, inspecting system structures and pavement surfaces, performing water flow and pressure tests, cleaning and videotaping sewers, inspecting manholes and inspecting water pipe samples from repaired areas, among other techniques. All of these methods helped identify problem areas.

Two reports were prepared, putting the street analysis as the highest priority and the water and sewer systems secondary. Each report summarized problems, causes, possible solutions and evaluation of the alternatives, recommendations, costs and priorities.

The first try

In 1992, the street summary report was presented to the city staff and council. The price tag to make the recommended street repairs totaled approximately \$20M, much more than the city's general-fund budget could support.

After discussing various funding options, the council reluctantly decided to present a bond proposal to the residents. Most of the elected officials and city staff expected the proposal to be defeated by at least 2:1. They were surprised when the street bond issue fell by only three percent of the total vote. According to Byron Photiades, the director of Public Services, "That slim margin of defeat proved that the residents recognized the need and understood the importance of properly maintaining our infrastructure."

Grassroots support grows

In 1994, Photiades recommended that the city staff and administration, together with about 20 concerned residents, form an ad hoc committee to study the condition of the city's infrastructure and determine what funds should be expended to repair and replace the aging system components.

Representatives were selected from each of the city's voting precincts. The committee named themselves the MAIN Committee, an acronym for "Maintain our Aging Infrastructure Now." Four subcommittees were formed: publicity, education, public hearings and fundraising.

Over several months, the MAIN committee met to discuss and understand the technical and non-technical aspects of each of the systems and what the impacts of their recommendations would be to the residents. The city's financial and engineering consultants also attended meetings to provide technical resources. From these meetings an action plan evolved:



Today Nine Mile Road is a bustling, downtown business center. The road was widened to four lanes, including on-street parking; sidewalks and lighting were replaced; and pedestrian cross-walks were added. New businesses have moved in, and Ferndale has seen a huge residential influx of singles and young families. Thanks to the updates, downtown Ferndale is the area's newest, round-the-clock, "hip" place to hang out!

- a campaign to educate the residents on the issues,
- a financial analysis to quantify what the impacts would be to their pocketbooks if nothing were done, and
- public hearings to demonstrate how closely integrated each of the infrastructure systems was – streets, water and sewer, and why it made sense to expend significant funds to simultaneously upgrade all three.

The committee recommended that the city attempt to address as many as possible at one time rather than create further delays by piece-mealing the solution. According to Bob Porter, then-chairman of the MAIN committee, "As stewards of the city's infrastructure, it was the only fiscally and socially responsible thing to do. What other choice did we have?"

The committee not only recommended that bonds be issued to pay for the improvements, but it accepted all of the engineering consultant's recommendations, increasing the funding from \$20M to \$45M: a bond proposal for water (\$8M), for sewer (\$15.5M) and for streets (\$21.5M).

The city council supported the proposals and placed them on the ballot in November 1991. All three were approved by greater than a 2:1 margin and passed in all of the city's 17 voting precincts.

Implementing the improvements

Over the next six to seven years, (1995-2001) approximately 30 contracts were issued for phased improvements that impacted virtually every parcel and street. This year the final phase of the program culminates many years of effort by all of the stakeholders.

To provide the city with suitable contractors to perform the construction work, the engineering consultant also developed a pre-qualification process to be used during the bid process. Projects were bid and constructed following a long-range schedule based on the road condition ratings developed during the analysis phase of the project. Residents with questions or concerns were asked to call the city department of public services, where a residential inquiry process had been implemented.

The MAIN committee did not disband after the bond proposals passed. Members maintained an oversight role, holding periodic meetings with the engineering consultants and city staff to monitor the schedule, scope of work, budget and residents' concerns.

The project is still within budget, due in part to the timing of the overall bond issues and bid packages, the establishment of a pre-qualification process, penalty clauses in the construction contracts, and continual monitoring of the individual projects and budgets.

A further demonstration of the confidence the residents had in the city administration and their commitment to the community was the passage of a \$48M school district capital improvements program in 1996 and a \$1.5M city parks capital improvement program in 1997.

Lessons & benefits

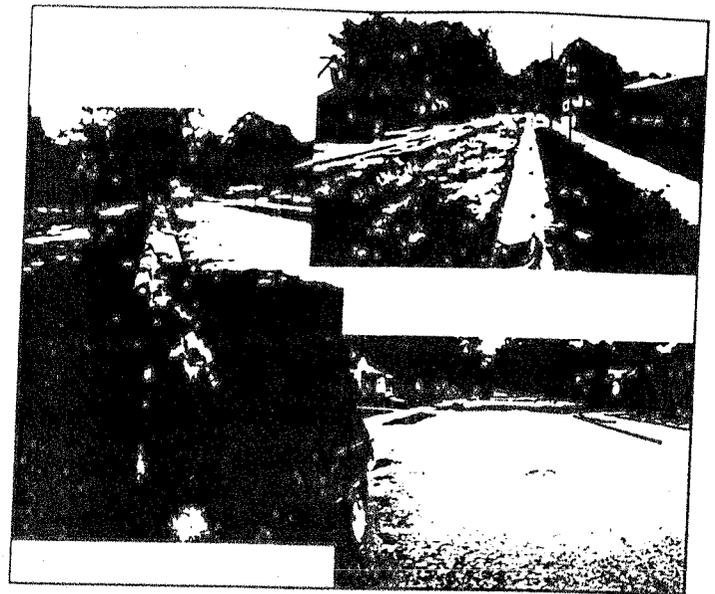
- A thorough up-front analysis is important. Although the initial costs may appear higher, the thorough analysis assures the accuracy of your initial design, which allows a realistic construction budget to be prepared. This helps avoid the cost and time overruns that often occur if a hastily prepared analysis is used to make major financial decisions.
- A significant amount of effort has to be expended in educating the public on these issues and their impacts. There is no question that grass-roots support early on is critical in the success of passing community bond issues.
- A pre-qualification process is valuable in contractor selection.
- Delaying repairs increases future costs exponentially.
- Infrastructure is a long-term investment.

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Most of Ferndale's streets – about 75 miles of them – have been resurfaced, including about 45 miles of curb and gutter replacement and 200,000 tons of asphalt.

- The tax base of the community is directly impacted by the condition of the infrastructure. Between 1995 and 2001, the city's total assessed valuation increased from \$350M to \$620M. This was an astounding 13 percent per year (greater than one percent per month)!
- The quality of life of residents is affected as improvements are placed.
- Constant public communication – through the cable system, printed articles, editorials in local papers, public hearings and timely follow-up with resident concerns and complaints – is a must.
- The \$21.5M of street bond funds has allowed the city to leverage additional state and federal funds for two transportation enhancement grants totaling \$500,000 and four federal Surface Transportation Program grants totaling almost \$3.4 million.

Infrastructure improvements accomplished

- 75 miles of city streets, including approximately 45 miles of curb and gutter replacement and 200,000 tons of asphalt, were resurfaced.
- Over seven miles of water main, approximately 115 individual gate valves and dozens of fire hydrants were replaced.

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Grandville

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

45.35 LOCAL
22.5 MAJOR

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

M-11
I-196

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

46% MAJOR \$ 1,145,000
26.2% LOCAL \$ 860,000

4. How much of this typical funding level comes out of the City's general fund?

0%

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

MAJOR 813,000
LOCAL 278,000

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

1.15 NOT DEDICATED, EARMARKED FOR STREETS.

APPROVED BY CITY COUNCIL

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

~~NO~~ PART OF MPO - FUNDING FOR GRANDVILLE

DEPENDANT ON TECH COMMITTEE RECOMMENDATIONS
8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

YES.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed? YES 90%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

LOCAL 32'

MAJOR 11' PER LANE MIN.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)? NO

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

REPLACE WITH EACH RESURFACE

13. What is your typical resurfacing depth on bituminous projects?

LOCAL 3"

MAJOR 4 1/2"

14. What is your standard thickness for reconstructed (existing) concrete streets?

NA.

15. What is your standard design for new streets in new developments?

32' FACE TO FACE 3" ASPHALT

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

99% BIT. 1/2% CONCRETE 1/2% GRAVEL

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)? YES - ASER 50R ABOVE

ON SCHEDULE

18. Typically, how many miles of street are reconstructed / resurfaced each year?

1.5 MILES LOCAL

1. MILE MAJOR

19. What is your City's millage rate (City mills only) and taxable value?

7.45 MILLS.

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

SOME CRACK SEAL

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

ROAD SET

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection IN HOUSE
- b) Design CONSULT.
- c) Construction Administration IN HOUSE
- d) Construction Inspection CONSULT

If you have one, if there a typical consulting firm used and who?

MOORE & BRUGINK

23. Are there any other aspects of your street program that you would be willing to share with us?

24. May we have your contact information so that we may contact you with the final analysis and / or report?

CARR @ CITYOFGRANDVILLE.COM

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

55.39 miles

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example – please name specific routes)?

Mack Avenue (2 Miles) – South City Limit to North City Limit

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

\$1.5 Million -- Typically every year

4. How much of this typical funding level comes out of the City's general fund?

Approximately 40%

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

Approximately 60%

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

Yes - 1 Mill Unlimited - Not Voted On - Council Policy

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

No

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

No

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes, 100%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

Yes, 24' Local - 28' Major

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

No - For Resurface

Yes - For Reconstruction, to the sidewalk

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Always - some as needed.

No.

13. What is your typical resurfacing depth on bituminous projects?

3"

14. What is your standard thickness for reconstructed (existing) concrete streets?

8"

15. What is your standard design for new streets in new developments?

8" concrete on 6" aggregate base

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

Concrete - 60%; Asphalt - 40%

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

Ideally, 30 years -- No, we are not on schedule

18. Typically, how many miles of street are reconstructed / resurfaced each year?

1.5 Miles

19. What is your City's millage rate (City mills only) and taxable value?

13 Mills, \$813,000,000

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

There is an annual Joint & Crack Sealing program; approximately \$100,000

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

We have completed a city-wide passer rating. Yes, we will share if requested.

22. Are the following engineering services provided in-house or by consultants?

a) Programming / project selection

b) Design

c) Construction Administration

d) Construction Inspection

If you have one, if there a typical consulting firm used and who?

We have a contract with Anderson, Eckstein & Westrick

23. Are there any other aspects of your street program that you would be willing to share with us?

We have an infrastructure inventory which is used annually to determine proposed projects.

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Yes - Joseph Ahee, Director of Public Works, (313) 343-2460

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Jackson

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

164.57 miles (Major, Local and Trunklines)

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example – please name specific routes)?

Border Streets maintained by County

Brown Street: Ganson to Monroe

South Street: Jackson to S. Cooper

Park Road: Horton to Stonewall

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

Resurface/reconstruct every year

From fiscal year 2003 to fiscal year 2007 ranged from \$1,999,200 to \$5,194,200

4. How much of this typical funding level comes out of the City's general fund?

Usually none. Has been \$300,000 for past two years.

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

For fiscal year 2007, \$411,300

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

No

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

Yes. Our MPO is Region 2 Planning Commission for the Jackson Urban Area

From fiscal year 2003 to fiscal year 2007, ranged from \$322,097 to \$2,624,700

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

Yes. Reconstruction/resurfacing projects are special assessed, 50% reduction after first-time construction.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes, 91.7%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

28-32 feet for Local Streets (face to face)
11-foot lanes for Major Streets. Depends on number of lanes

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

During reconstruction, we replace the whole approach to the sidewalk.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Not often. Some spot repair.

13. What is your typical resurfacing depth on bituminous projects?

3-1/2 inches mill and overlay

14. What is your standard thickness for reconstructed (existing) concrete streets?

We have not reconstructed a concrete street in 30 years.

15. What is your standard design for new streets in new developments?

Local Street, 8 inch gravel, 3-1/2 inch bituminous

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

25.8% concrete, 70.5% bituminous, 3.7% gravel

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

No set schedule

18. Typically, how many miles of street are reconstructed / resurfaced each year?

An average of 1.5 to 2 miles each year.

19. What is your City's millage rate (City mills only) and taxable value?

14.6 mills and taxable value of \$646,390,000 for 2006.

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Fiscal year 2007, chip seal and crack sealing on Major and Local
= \$283,990

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

The city uses PASER to rate our streets and RoadSoft 6.3

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection In-house
- b) Design Some in-house and some by consultants
- c) Construction Administration Some in-house and some by consultants
- d) Construction Inspection Some in-house and some by consultants

If you have one, if there a typical consulting firm used and who?

Capital Consultants DesignWorks, Wilcox Associates,
DLZ Michigan, Wade-Trim

23. Are there any other aspects of your street program that you would be willing to share with us?

No

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Jon H. Dowling, P.E., City Engineer
161 W. Michigan Avenue
Jackson, MI 49201
(517) 788-4160

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

135.19 MILES (MAJOR & LOCAL - NO TRUNKLINE MILEAGE)
= 320.02 LANE MILES

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

BY STATE → I-96 M-37 (BROADMOOR AVENUE) M-11 (28th STREET) M-44 (E. BELTLINE)
BY KENT COUNTY → PATTERSON AVE., BURTON ST., 44th STREET, 60th STREET, KALAMAZOO AVE. (2.0 MILES OF KALAMAZOO AVENUE BETWEEN 44th & 60th TO BE TURNED OVER TO CITY IN 2007)

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

VARIES; BETWEEN 2003 AND 2006, RANGED FROM \$1 MILLION TO \$1.5 MILLION

4. How much of this typical funding level comes out of the City's general fund?

NONE

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

100% (FOR MAINTENANCE)

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

WE HAVE IN THE PAST, BUT THIS MILLAGE WAS "SHIFTED" TO POLICE AND FIRE AT THE AUGUST 8 ELECTION.

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

VARIES FROM ABOUT \$300,000 TO \$600,000 PER YEAR YES YES

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

- NO SA. FOR RESURFACING PROJECTS.
- OCCASIONAL S.A. SET UP FOR COMMERCIAL AND/OR INDUSTRIAL PARCELS (NEVER RESIDENTIAL), BUT ONLY A VERY SMALL PERCENTAGE OF PROJECTS ARE EVER FUNDED BY SPECIAL ASSESSMENTS.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

GENERALLY, LOCAL STREETS DO NOT HAVE C & G. MOST MAJOR STREETS DO HAVE C & G.

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

WE HAVE STANDARD STREET WIDTHS DEPENDING ON ROW WIDTH. (PUBLIC STREETS) AND NUMBER OF UNITS SERVED (PRIVATE STREETS). SEE BACK OF THIS PAGE.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

NO

YES, TO SIDEWALK

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

NEVER

NO; IT'S TIME TO MILL & REPLACE!

13. What is your typical resurfacing depth on bituminous projects?

DEPENDS ON TYPE OF RESURFACING BEING DONE.

ULTRA-THIN IS GENERALLY 3/4". NEW PAVEMENT IS GENERALLY 1 1/2" AC OVER 2 1/2" 3C OVER 6"-8" Z1AA.

14. What is your standard thickness for reconstructed (existing) concrete streets?

WE HAVE VERY FEW CONCRETE STREETS

15. What is your standard design for new streets in new developments?

1 1/2" AC WEARING

2 1/2" 3C LEVELING

6"-8" Z1AA AGGR BASE OVER 12"-15" CLASS II SUBBASE

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

99% BITUMINOUS

1% CONCRETE

OF STREETS WHICH CITY MAINTAINS.

WE ONLY HAVE ONE GRAVEL PUBLIC STREET IN THE CITY (ENGLESIDE DRIVE)

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

NO SET SCHEDULE, WE GENERAL SHOOT FOR ABOUT 10% EACH YEAR (IE 10-YEAR CYCLE) FOR CAPITAL PREVENTATIVE MAINT. (6.9% IN 2006) AND ABOUT 2% FOR STRUCTURAL IMPROVEMENTS (1.7% + 1.1% = 2.8% IN 2006)

18. Typically, how many miles of street are reconstructed / resurfaced each year?

ABOUT 2%

ABOUT 10%

19. What is your City's millage rate (City mills only) and taxable value?

For 2006 { 7.5318 MILLS (ALL PURPOSES) \uparrow \$1,998,524,947
0.2995 MILLS (STREETS)

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

CRACK SEALING PROGRAM \$68,000 IN 2005 (~70,000 LFT)
(NO SLURRY SEAL) \$80,000 IN 2006 (74,950 LFT)

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

PASER ; ROAD SOFT ; INVENTORY ON EXCEL SPREADSHEET.
WE WOULD BE HAPPY TO SHARE... WHAT WOULD YOU LIKE?

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection → IN-HOUSE
- b) Design → MINOR PROJECTS IN-HOUSE ; MAJOR PROJECTS CONSULTANTS
- c) Construction Administration → IN-HOUSE
- d) Construction Inspection → SAME AS DESIGN

If you have one, if there a typical consulting firm used and who?

NO ONE FIRM ; EACH PROJECT IS BID

23. Are there any other aspects of your street program that you would be willing to share with us?

WE CAN SHARE ANYTHING... WHAT WOULD YOU LIKE?

CALL OR EMAIL

24. May we have your contact information so that we may contact you with the final analysis and / or report?

YES, ABSOLUTELY! WE ARE VERY INTERESTED IN SEEING THE RESULTS OF THIS STUDY.

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124



PATRICK T. HUGHES, P.E.

Assistant City Engineer

4900 Breton Avenue, S.E.
P.O. Box 8848
Kentwood, Michigan 49518-8848
Phone: (616) 554-0739
Fax: (616) 698-7118
email: hughesp@ci.kentwood.mi.us



City of Kentwood

as of: August 17, 2006

2006 Road Reconstruction Improvements

Reconstruction

South, East and West Grove Drive (Bailey's)	0.65 lane miles =	0.2% of total city
36th Street - Phase III (Shaffer to Broadmoor)	1.10 lane miles =	0.3% of total city
52nd Street (Breton to Breezefield)	3.59 lane miles =	1.1% of total city
	<u>5.34 lane miles</u>	<u>1.7% of total city</u>

Rehabilitation (Pulverize, Reshape and Repave)

40th Street (Soundtech Ct. to Patterson Ave.)	1.51 lane miles =	0.5% of total city
Brockton Court (Brockton Drive to W. terminus)	0.20 lane miles =	0.1% of total city
Brockton Drive (40th Street to 44th Street)	1.01 lane miles =	0.3% of total city
Danvers Drive (Donker Court to 44th Street)	0.31 lane miles =	0.1% of total city
Donker Court (Danvers to N. terminus)	0.45 lane miles =	0.1% of total city
Soundtech Court (40th to N. terminus)	0.20 lane miles =	0.1% of total city
	<u>3.68 lane miles</u>	<u>1.1% of total city</u>

2006 Road Surface Maintenance

Crack Sealing: 74,950 feet	=	47.33 lane miles, or	14.8% of total city
Joint Repair: 3,738 feet	=	3.54 lane miles, or	1.1% of total city
		<u>50.87 lane miles</u>	<u>15.9%</u>

Microsurfacing (only): 0 sq. yds.	=	0.00 lane miles, or	0.0% of total city
Chip Sealing (only): 7,473 sq. yds.	=	0.85 lane miles, or	0.3% of total city
Chip Seal w/ Micro Overlay: 163,241 sq. yds.	=	19.17 lane miles, or	6.0% of total city
Ultra-Thin HMA Overlay *: 15,592 sq. yds.	=	1.92 lane miles, or	0.6% of total city
		<u>21.94 lane miles</u>	<u>6.9% of total city</u>

Total City Mileage

Total Local Streets: 98.27 miles	196.28 lane miles, or	61.3% of total city
Total Major Streets: <u>36.92 miles</u>	<u>123.74 lane miles, or</u>	<u>38.7% of total city</u>
Total City: 135.19 miles	320.02 lane miles	100%

* Re-striping required: 0.97 miles (48th Street)

Livonia

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

61 Miles - City Major
309 Miles - City Local

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

Highways - I-275, I-96, Grand River, Ann Arbor Road, Plymouth Road
County Roads - Inkster, Middlebelt, Merriman, Farmington, Haggerty, Five Mile, Plymouth Road (west end), Edward Hines Drive, Joy Rd., Six Mile, (see reverse side)

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

6.5 Million (4.0 Millage, 2.5 Act 51)

4. How much of this typical funding level comes out of the City's general fund?

None

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

2.5 Million

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

Yes, 0.89, 10 Years, Voters (Includes minor funds for sidewalks heaved by street trees and tree replacement)

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

Complete annually through Wayne County

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

Only for FIRST time paving. The process is very time consuming.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes, 58%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

31 feet B/C - B/C
34 feet B/C - B/C Collector

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

Varies but we try only to replace a narrow strip or to the first joint ($\frac{1}{2}$ ±)

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Only if curb is deteriorated. Gutter pans are overlaid in some cases but we try to create a gutter pan by grinding away from the face of the curb

13. What is your typical resurfacing depth on bituminous projects?

1½" plus wedging if necessary. We have used micro surfacing on newer roads. Major concrete collectors have been resurfaced with 3" of asphalt

14. What is your standard thickness for reconstructed (existing) concrete streets?

7" or 9"

15. What is your standard design for new streets in new developments?

Usually 31' wide, 7" thick

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

62% Concrete, 37% Asphalt, 1% Gravel

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

No. It is the goal of the program to bring all streets to a "good" or better condition in 10 years. Reconstruction, Rehabilitation or Maintenance are selected based on the road's PCI (Pavement Condition Index)

18. Typically, how many miles of street are reconstructed / resurfaced each year?

13.7 miles, plus 3.4 miles of microsurfacing

19. What is your City's millage rate (City mils only) and taxable value?

11.3865 mills (lowest in Wayne County)
\$2,510,700,000

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Joint and Crack Sealing \$150,000/year

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

Carte'Graph PAVEMENTview
PMS - would be happy to share

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection
- b) Design
- c) Construction Administration
- d) Construction Inspection

If you have one, if there a typical consulting firm used and who?

- a) in house
- b), c) and d) are consultants (Orchard Hiltz & McCliment,
Spalding DeDecker and Hubbell, Roth & Clark)

23. Are there any other aspects of your street program that you would be willing to share with us?

Streets for repair are selected by staff, reviewed by a Citizen's Advisory Committee and approved by City Council. Use of an outside unbiased pavement rating removes most of the controversy about which streets are done first. Our program is not a "worst first" approach but attempts to (see reverse side)

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Robert J. (Bob) Schron
City Engineer
33000 Civic Center Drive
Livonia, MI 48154

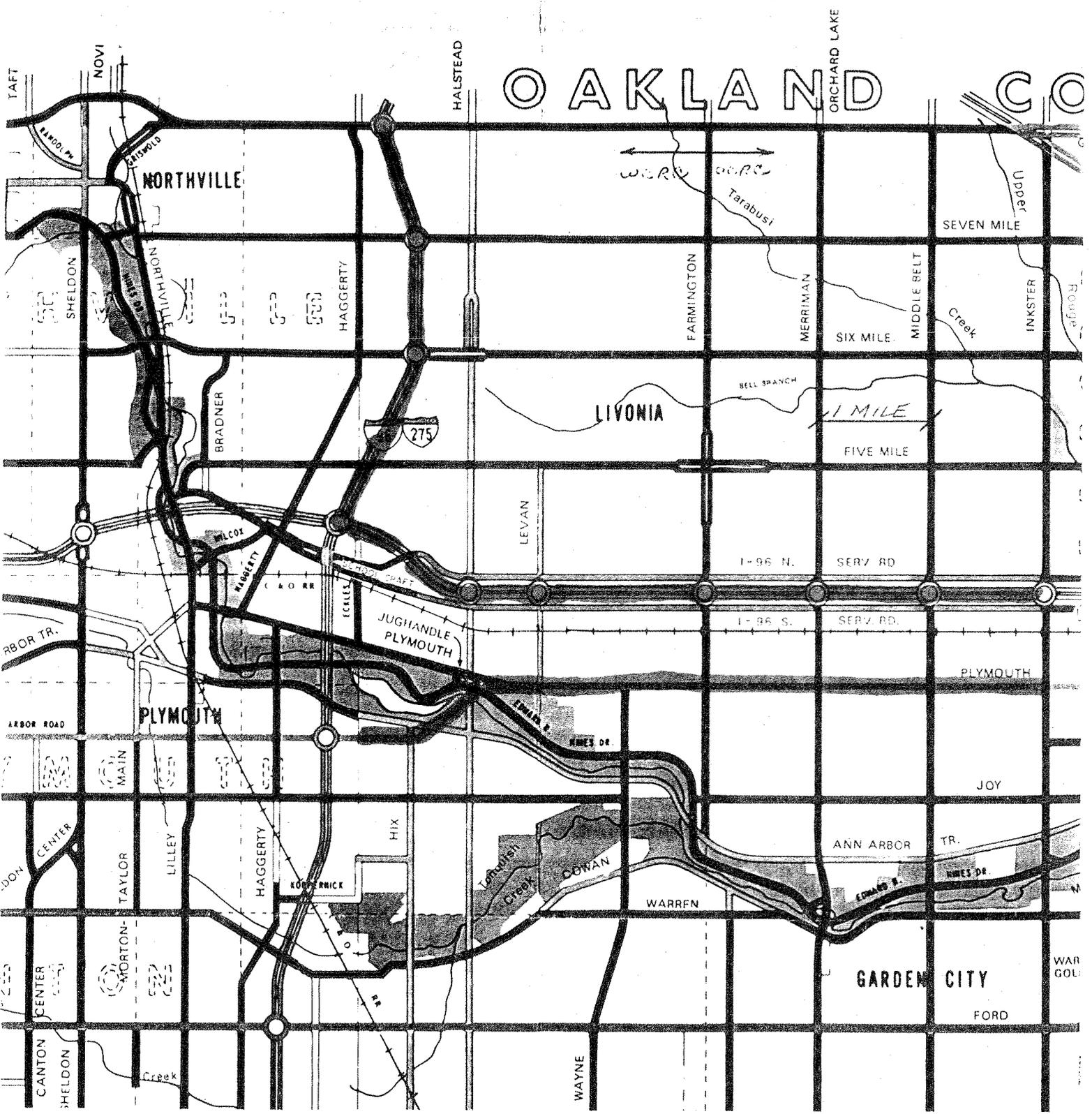
(734) 466-2570
(734) 466-2195 (FAX)
rschron@ci.livonia.mi.us

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

TO
FARMINGTON

AKLAND CO



WAYNE COUNTY

MDOT



MIDLAND, MI

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

~~250 1/2~~ 235 MILES

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

16 MILES

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

\$ 3M + SPECIAL PROJECTS SPECIFIED FOR ROAD MILLAGE

4. How much of this typical funding level comes out of the City's general fund?

NONE

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

75%

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

YES, BOUNTY ROAD MILLAGE

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

NO. SMALL URBAN GRANT ABOUT \$375,000 BI-ANNUALLY

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

YES - IF NOT IMPROVED IN PAST

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes, 80%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

36' MAJOR
20' LOCAL

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

Yes TO R.O.W. LINE. IF BAD ONLY.
DO SOME ON EVERY JOB USUALLY

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

NO

REPLACE ONLY
BAD CURB.

13. What is your typical resurfacing depth on bituminous projects?

Mix 1 1/2"
CRUSH & SHAPE 3"

14. What is your standard thickness for reconstructed (existing) concrete streets?

8" - WE DO NOT BUILD CONCRETE ANY MORE.

15. What is your standard design for new streets in new developments?

STORM SEWER, CURB & GUTTER

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

C - 10% G - 65%
B - 85%

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

STRIVE FOR 25 YR

18. Typically, how many miles of street are reconstructed / resurfaced each year?

8-10 MILES

19. What is your City's millage rate (City mills only) and taxable value?

11 Mills

\$ SEV - 2.732 B
\$ TAXABLE - 2.5 B

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Yes

\$ 250,000/yr TOTAL LOCAL + MAJOR

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

Yes, Yes

Call BRAD MARI (989) 837-3351

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection IN
- b) Design IN (95%)
- c) Construction Administration IN
- d) Construction Inspection IN (99%)

If you have one, if there a typical consulting firm used and who?

AYRES ASSOCIATES, MIDLAND

23. Are there any other aspects of your street program that you would be willing to share with us?

ROAD MILLAGE HAS HELPED GREATLY.
ACT 51 CANNOT KEEP UP.

24. May we have your contact information so that we may contact you with the final analysis and / or report?

BRIAN McMANUS

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124



Brian P. McManus, P.E.
City Engineer

City Hall
333 W. Ellsworth
Midland, MI 48640
989.837.3353
989.837.5710 Fax
bmcmanus@midland-mi.org E-mail

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

City of Monroe Answers to Survey - example

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?
80.47 miles (major and local – no trunkline mileage)
2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example – please name specific routes)?
I-75, US-24, M-125, M-50 (1.25 miles of M-50 between US-24 and M-125 to be turned over to City in October 2006)
3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?
Between 2003 and 2006, ranged from \$700,000 to \$1,100,000, includes roughly \$400,000 in Federal Aid funds per year. Resurface at least some streets every year in recent history.
4. How much of this typical funding level comes out of the City's general fund?
Often none, normal range is \$0 to \$200,000
5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?
Usually have total of around \$350,000 "free" for construction after maintenance activities.
6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?
No – one attempt was made in 1980s but considering again.
7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?
Yes – Monroe Urban Area receives around \$900,000 per year, split with Monroe County Road Commission proportionate by population in and out of City, we get about \$400,000 per year of this.
8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?
First-time paving or curb installation of any street is Special Assessed, but City is basically done with all first-time paving.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes – City has roughly 1 mile of “streets” that are really just certified rights-of-way with no real purpose but to retain ownership “in case”, other than that, over 99% of remaining mileage has curb and gutter.

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

Minimum width is generally 26 feet for local streets (parking on one side), 28 feet for major streets (parking on one side), although 24-foot locals do exist. Standard collector routes have at least 10-foot lanes, many are 36 feet with parking on both sides.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

If curb is replaced, we always remove entire approaches at project cost. If gutter is overlaid, we will replace if no “lip” exists.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

During the past 10 years, about 30% of mileage has been complete curb replacement, most are “spot curb” projects. Overlaying gutter pan is generally only considered where asphalt does not have to be “feathered” up into drive approaches.

13. What is your typical resurfacing depth on bituminous projects?

1-1/2” on local streets, 3” on Federal Aid routes and most major streets.

14. What is your standard thickness for reconstructed (existing) concrete streets?

6” for local streets, 8” for major streets, 9” for industrial parks, all non-reinforced.

15. What is your standard design for new streets in new developments?

7” plain concrete over compacted subgrade (used for extra thickness due to truck traffic for new home construction).

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

Roughly 1/3 concrete, 1/3 bituminous over concrete or brick, 1/3 bituminous over stone base, approximately 1 of 80+ miles is unimproved.

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

No set schedule, however, we strive for 2 miles per year (rarely reach), which would be a 40-year cycle. Cycle is actually more like 50-year cycle.

18. Typically, how many miles of street are reconstructed / resurfaced each year?
The last 10 years have ranged from 1.5 to 2.0 miles in general.

19. What is your City's millage rate (City mills only) and taxable value?
15.3 mills in City millage and taxable value is \$985,000,000 for 2006

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?
Yes, we typically will try to slurry seal 1 mile of streets, and crack seal 5 miles of bituminous roadway. Usually budget \$100,000 for all surface maintenance activities on streets.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?
Yes, rate street surface from 0 (perfect) to 10 (impassible), curbs from 0 (perfect) to 4 (none), add extra point for base failure, and extra point for major streets, for total of 16 points. Streets begin to be considered at 8 points total, usually 8-10 miles in this category at any one time.

22. Are the following engineering services provided in-house or by consultants?
a) Programming / project selection - **Never**
b) Design – **Not in past 20 years**
c) Construction Administration – **One time in 20 years**
d) Construction Inspection – **In new subdivisions only based on schedule**
If you have one, if there a typical consulting firm used and who? - **None**

23. Are there any other aspects of your street program that you would be willing to share with us?
Selection process seems well-accepted by public, however, general perception is that City is falling behind (true). 2004 resident survey showed marginal (52%) support for generic street millage (no rate provided). Federal Aid routes and major streets in general are adequately funded due to entitlement funding since 2003, but local street construction generally only funded as general fund allows.

24. May we have your contact information so that we may contact you with the final analysis and / or report? **See below – please return your survey to address below.**

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City? 75 m.

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)? THE CITY MAINTAINS LOCAL, MAJOR AND MDOT TRUNK LINES IN THE CITY

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?
RECONSTRUCTION \$350,000 WE HAVE DONE RECONSTRUCTION AND SEALCOATIVE
SEALCOATIVE 150,000 EACH YEAR

4. How much of this typical funding level comes out of the City's general fund?

60% RECONSTRUCTION
25% MAINTENANCE (SEALCOATING)

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

0 RECONSTRUCTION
75% MAINTENANCE

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters? NO

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually? NO

WE COMPETE EACH YEAR THROUGH THE SMALL CITIES GRANT PROGRAM

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)? YES

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed? YES, ABOUT 75%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)? 28' LOCAL 36' MAJOR

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)? ONLY IF CURB IS REPLACED, WE REPLACE GRAVEL DRIVE APPROACHES EVEN IF CURB IS NOT REPLACED, WHEN NEW CURB IS REPLACED THE CURBS ARE RAISED AND THE WHOLE DRIVE APPROACH IS REPLACED

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases? WE REPLACE CURBS IF THEY ARE NON FUNCTIONAL WE DO NOT OVERLAY GUTTER, WE MILL AND GAP STREETS WITH GOOD CURB

13. What is your typical resurfacing depth on bituminous projects? 2 1/2"

14. What is your standard thickness for reconstructed (existing) concrete streets? WE HAVE NO CONCRETE STREETS

15. What is your standard design for new streets in new developments? 28' wide
5" OF ASPHALT, 6" GRAVEL BASE

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)? 1% CONCRETE 97% ASPHALT, 2% GRAVEL

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)? WE BUILD THE STREETS TO LAST 40 YEARS THROUGH CRACK SEALING, SEAL COATING, GAPS SEALING AND MILL AND GAP WE EXPECT TO EXCEED THAT.

18. Typically, how many miles of street are reconstructed / resurfaced each year?

1 1/2 miles

19. What is your City's millage rate (City mills only) and taxable value?

13.0540 OPD. , .2980 DWI
274,622,618 TV

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

WE HAD SEAL COATED IN THE PAST BUT ARE NOW GOING WITH A
CAP SEAL OF A SINGLE SEAL TOPPED WITH A SLURRY SEAL, WITH A BUDGET OF
\$150,000. CITY CARRIES OUT CRACK SEALING WITH A BUDGET OF ABOUT \$50,000

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us? YES

IT IS A LOCALLY DEVELOPED SYSTEM USING ACCESS,

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection IN HOUSE
- b) Design IN HOUSE
- c) Construction Administration IN HOUSE
- d) Construction Inspection IN HOUSE

If you have one, if there a typical consulting firm used and who?

23. Are there any other aspects of your street program that you would be willing to share with us? WE EMPHASIZE PREVENTATIVE MAINTENANCE, AND

BASE OUR RECONSTRUCTION SCHEDULE ON THE STREETS THAT HAVE THE WORST PAVEMENT CONDITION ACCORDING TO OUR ANNUAL STREET CONDITION EVALUATION

24. May we have your contact information so that we may contact you with the final analysis and / or report?

RONALD BAKER
CITY ENGINEER
CITY OF OWASSO
301 W. MAIN ST,
OWASSO, MI 48867

PHONE 989-725-0551
RONALD.BAKER@CI.OWASSO.MI.US

Thank you for your participation in this study!

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Pontiac

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

67.37 – Major 161.23 - Local

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example – please name specific routes)?

MDOT Highway – M-59
MDOT Trunkline – US-24 (Telegraph)
Boundary streets with the County – Opdyke Rd

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

Depends on priorities & obligations - \$500,000 to \$2,000,000. Attempt to perform some resurfacing on local roads every year.

4. How much of this typical funding level comes out of the City's general fund?

Often none, some funding for PE & CE

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

Again, depends on priorities and obligations. Approximately \$400,000 to \$1,000,000 "free" after maintenance activities.

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

Not to my knowledge.

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

Again, it depends on if funding was obligated through a competitive process where communities seek funding for roads based on need. The MPO (SEMOG) accepts these recommendations from the Federal Aid Task Force of Oakland County.

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

Not in recent history. There was a bonding programming about 20 years ago.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes, I would approximate 99% are curb & gutter.

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

Yes, at a minimum we following the guidelines outlined in the Act 51 manual.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

If we resurface and stay between the curbs, typically no but during a reconstruction the vertical profile may change to warrant replacement. During most projects, we assess the driveway approach and repair as needed.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

We usually do spot curb & gutter replacement. If drainage issues can be corrected, overlaying the gutter is explored but by practice, we try to retain curb face.

13. What is your typical resurfacing depth on bituminous projects?

1 ½" on Local, 3" on Major

14. What is your standard thickness for reconstructed (existing) concrete streets?

9" and we are exploring the idea of non-reinforced

15. What is your standard design for new streets in new developments?

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

Working towards utilizing a Pavement Management System to assist road conditions and locate roads in need to replacement.

18. Typically, how many miles of street are reconstructed / resurfaced each year?

Depends on funding obligated through the Federal Aid Task Force and success in obtaining funds through other resources.

19. What is your City's millage rate (City mills only) and taxable value?

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Some joint & crack sealing performed by in-house personnel.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

Yes and Yes.

22. Are the following engineering services provided in-house or by consultants?

a) Programming / project selection – **utilize some assistance from consultant**

b) Design - **Consultant**

c) Construction Administration – **utilize consultant assistance with City Engineer being Project Engineer/Manager**

d) Construction Inspection – **Small projects (City staff – if available), all others -Consultant**

If you have one, if there a typical consulting firm used and who? **Primarily one consultant has provided as needed services but moving towards retaining 3 consultants.**

23. Are there any other aspects of your street program that you would be willing to share with us?

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Allan E. Schneck, P.E.
City Engineer
City of Pontiac
55 Wessen Street
Pontiac, MI 48341
248-758-3650 (Office)
aschneck@pontiac.mi.us

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

71.06 miles (centerline) Major Streets
145.94 Miles (centerline) Local Streets 217 Total Miles of Streets
217.00

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

County Primary Sprinkle Road - 6.5 Miles
STATE INTERSTATE 1-94 6 MILES

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

\$2,200,000 Reconstruction This amount is spent annually.
1,850,000 Resurfacing Reconstruction amount is somewhat variable
\$4,050,000 Total based on local MPO TIP.

4. How much of this typical funding level comes out of the City's general fund?

\$1,500,000

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

\$850,000

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

No. A ballot proposal is before the city residents this November to replace Special Assessments with a dedicated millage of 1.0 mil max.

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

We are generally allotted \$900,000 - \$950,000 ^{by} our MPO. This is generally about 40% - 50% of our typical reconstruction funding budget.

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

New street construction petitioned by the abutting property owner as well as street reconstruction (heavy 4 in. mill and overlay)-see attached. We occasionally have local streets which are petitioned for curb & gutter and storm drainage. City Council also initiates special assessment for major street reconstruction.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

80% of Major Streets have curb & gutter
60% of Local streets have curb & gutter

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

New local streets are 29 ft. face to face

Old local streets are 35 ft. face to face

Major streets are generally 11 ft. driving lanes, 4 ft. bike lane & 12 ft. median.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

For resurfacing, driveways are matched with the paver by winging out.

For reconstruction, the entire driveway is replaced with concrete (paid for by assessment) e.g. "Drive approach"

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Curbs are replaced where deteriorated or settled prior to resurfacing; overlaying in the gutter pan is not an option.

13. What is your typical resurfacing depth on bituminous projects?

1 1/2" 36A for Local Streets

2" 4c for Major Streets

14. What is your standard thickness for reconstructed (existing) concrete streets?

No concrete streets

15. What is your standard design for new streets in new developments?

1 1/2" 36A Surface

24" sand subbase

1 1/2" 2B Leveling

6" 22A Gravel

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

100% bituminous

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

Generally 40 years for local streets with a resurface at 20 years and 20 years for major streets.

18. Typically, how many miles of street are reconstructed / resurfaced each year?

4.0 miles of resurfacing

1.0 miles of reconstruction

19. What is your City's millage rate (City mills only) and taxable value?

10.1442 is city only millage rate
Total taxable value is \$2,088,334,800

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Crack sealing on major streets only. No slurry sealing. Approximately 5 miles of crack sealing per year.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

PASSER is utilized with annual inspections to all local and major streets.

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection - in house/
- b) Design -in house/consultant
- c) Construction Administration -in house/consultant
- d) Construction Inspection - in house/consultant

If you have one, if there a typical consulting firm used and who?

We generally have several under contract: Wightman & Associates, Fishbeck, Thompson Carr & Huber, Abonmarche, etc.

23. Are there any other aspects of your street program that you would be willing to share with us?

See the attached special assessment documents and Portager articles.

Note*: I would also like a tabulated result of your survey.

24. May we have your contact information so that we may contact you with the final analysis and / or report?

W. Christopher Barnes, P.E.
Portage City Engineer
269/324-9256
barnesc@portagemi.com

Thank you for your participation in this study.

Sincerely,

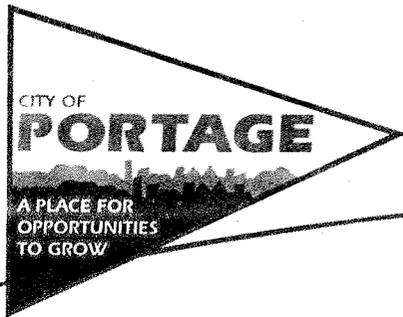
Patrick M. Lewis, P.E.

Director of Engineering and Planning

City of Monroe

pmlewis@ci.monroe.mi.us

(734) 384-9124



Transportation & Utilities Department

August 8, 2006

Mr. Patrick M. Lewis, P.E.
Director of Engineering & Planning
City of Monroe
120 East Monroe Street
Monroe, MI 48161

Subject: Street Funding/Maintenance Questionnaire

Dear Mr. Lewis:

As per your request, we have completed the above subject questionnaire and are returning it to you. Your request is timely as the City of Portage will be voting on a ballot proposal to replace street special assessments for City Council initiated projects. Special assessments have served the City of Portage well in maintaining an excellent infrastructure system.

I have included several documents which will further explain City of Portage street funding methods. If you have any questions, please let me know. If possible, please send me a copy of your questionnaire results.

Sincerely,

A handwritten signature in black ink that reads "W. Christopher Barnes". The signature is fluid and cursive, with the first name "W." and last name "Barnes" clearly legible.

W. Christopher Barnes, P.E.
City Engineer

Attachments

Street Improvements Effective January 1, 2006

A. Special Street Assessment Fees: The rates as shown below for street improvements are currently in effect but are adjusted annually by City Council. The actual assessment rate charged for various types of street improvements or sidewalk will be the rate that is in effect at the time Resolution #1 is adopted by City Council. Resolution #1 initiates the Special Assessment process.

Residential assessments represent approximately 2/3 of the costs for curb and gutter projects and 1/2 the cost for sidewalk projects, while industrial and commercial assessments represent approximately 4/5 of the cost for curb and gutter and 1/2 the cost for sidewalk projects. The City-at-large bears the remaining cost. Current assessment rates per front foot for various type street improvements are as shown below:

	Industrial/Commercial	Residential
1. Street reconstruction with new curb & gutter	\$65.52	\$62.28
2. Street and curb & gutter reconstruction (adequate storm system)	\$48.17	\$44.93
3. Curb & gutter-added with sanitary sewer project*	\$35.41	\$35.41
4. Street reconstruction without curb & gutter	\$27.39	\$24.16
5. Sidewalk	\$17.54	\$14.73

*This rate is in addition to the stated rate for sanitary sewer.

Concrete Drive Approach from the curb to the property line on improved lots only, installed in conjunction with new curbs and gutters, is currently assessed at \$1,223.98 per drive approach.

Corner Lots: For single family residentially zoned property, corner lots are assessed based on the total frontage on the "short side" plus the frontage on the "long side." If new curbs and gutters are installed on both the "short side" and the "long side," a corner credit of 150 feet is applied. In no case, however, is the frontage to be assessed less than the "short side" frontage of the property.

If new curbs and gutters are installed only on the "short side" of the corner lot, the short side frontage is used to determine the assessment. The corner credit would be applied when curbs and gutters are installed in the future on the "long side" of the lot. If new curbs and gutters are installed only on the "long side" of the corner lot, the short side frontage is still used to determine the assessment. The corner credit would be applied when curbs and gutters are installed in the future on the "short side" of the lot.

The "short side" of a corner lot represents the minimum frontage used to determine a corner lot assessment.

The same methodology described above is used for computing corner credit for residential lots as described above is used when adjacent streets are reconstructed without the installation of curbs and gutters.

Properties with frontage along front and rear yards shall not be assessed for roadway improvements along the rear yard frontage.

Sidewalks installed along major thoroughfares are not assessed.

- B. Method of Payment: Cash, or the assessment for frontage and drive approach (where appropriate) can be spread over ten years with yearly interest on the unpaid balance. The interest rate shall be one percent above the average interest cost on the bonds sold to finance the improvements. The first installment will be payable with no interest in August following the confirmation of the Assessment Roll. The remainder is to be paid in nine installments with interest each year. Remaining balances may be paid off at any time to save future interest costs.
- C. Questions and Information: Should you have any questions or need further information, please contact the Department of Transportation & Utilities at 329-4422.

City Council Puts Roadway Special Assessment Issue Before Voters in November Election

After several months of discussion and deliberation, the Portage City Council voted on May 28, 2006 to put the issue of roadway special assessments before voters on the November 7, 2006 ballot. Voters will be asked if they prefer the use of special assessments to partially fund street improvements or if they support a millage levy for this purpose.

A History of Special Assessments in Portage

The Portage City Charter provides the general power to assess property owners for public improvements within the city "which are of such a nature as to benefit especially any property or properties within a district." The use of special assessments is practiced throughout the state – the City of Portage is not unique in the use of special assessments for financing public improvements. Since incorporation in 1963, the city has utilized special assessments to partially fund sewer and water, sidewalk and street improvements whereby benefiting property owners in the project area are charged directly for a portion of the cost of improvements made adjacent to their property. Special assessments provide only a portion of the funding utilized to support infrastructure

in their neighborhood. The question that Portage residents will answer in November, however, involves only the use of special assessments to fund city-initiated roadway projects. Regardless of the outcome of the November vote, special assessments will continue to be used to partially fund all petitioned projects and all city-initiated sewer, water and certain sidewalk projects.

The City of Portage Code of Ordinances provides that "special assessments shall be based on or in proportion to the benefits derived or to be derived, as determined by Council." The city special assessment policy provides measures to help ensure the cost of improvements to property owners do not exceed benefits derived from the project:

- First, assessment rates in place ensure that abutting residential property owners pay no more than approximately two-thirds of the cost of a typical two-lane local residential street project, with the city-at-large paying the remaining

are based upon a two-lane roadway only. In cases where the improvement involves a multiple-lane roadway, the city-at-large assumes the added cost associated with the additional travel lanes. In other words, the assessment cost is the same whether the resident lives on a 2-lane roadway or a 5-lane roadway. The citizens-at-large, through general taxes, pay the remaining cost of the roadway improvement. While major streets serve a larger portion of the population, street improvements benefit residential properties along these streets in the same manner that they do local residential street properties. All residential properties (regardless if located on a major, collector or local street) are assessed in the same manner and at the same rate per front foot for street improvements. (See chart below.)

Street Special Assessment Rate Comparison

Residential Street (2-lanes)
Assessment Rate for property with 100 foot frontage = \$7,239*

Collector/Minor Arterial Street (3-lanes)
Assessment Rate for property with 100 foot frontage = \$7,239*

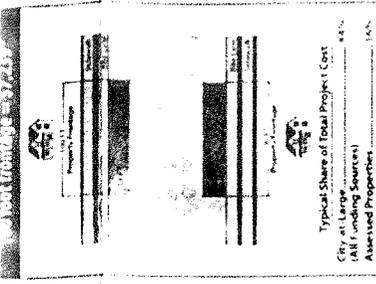
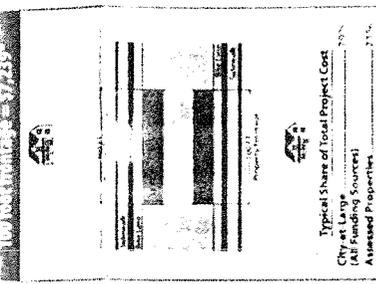
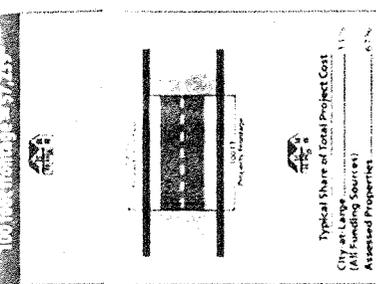
Arterial Street (5-lanes)
Assessment Rate for property with 100 foot frontage = \$7,239*

their property. Special assessments provide only a portion of the funding utilized to support infrastructure projects. For roadways, federal and/or state funding are the major sources of project funds and all city taxpayers contribute to the funding needed for each street reconstruction project. As an example, the recent Oakland Drive reconstruction project from Romence Road to West Centre Avenue was funded by property owner special assessments (19 percent), the city-at-large (36 percent) and state/federal funding (45 percent).

A special assessment project, whether it is a sewer, water, sidewalk or street improvement project – may be initiated by the city or by a petition signed by a group of property owners wanting a specific improvement made

project, with the city-at-large paying the remaining one-third. Non-residential properties (commercial or industrial) pay 80 percent of the cost, while the city-at-large pays the remaining 20 percent.

■ As an added measure to ensure equity among property owners, figures used to establish the special assessment rates



■ **Property Owner Special Assessment Share of Construction Cost** ■ **City At Large Share of Construction Cost**
 • **Special Assessment is for street reconstruction with curb and gutter and drive approach.**
 A special assessment for a street reconstruction and project for a typical residential property with 100 feet of frontage will total \$7,219, regardless of the type of street on which the property is located: residential street, collector/minor arterial street or arterial street.

Please see **Special Assessments, page 2**

Announcing the New Monthly Curbside Brush Collection Program

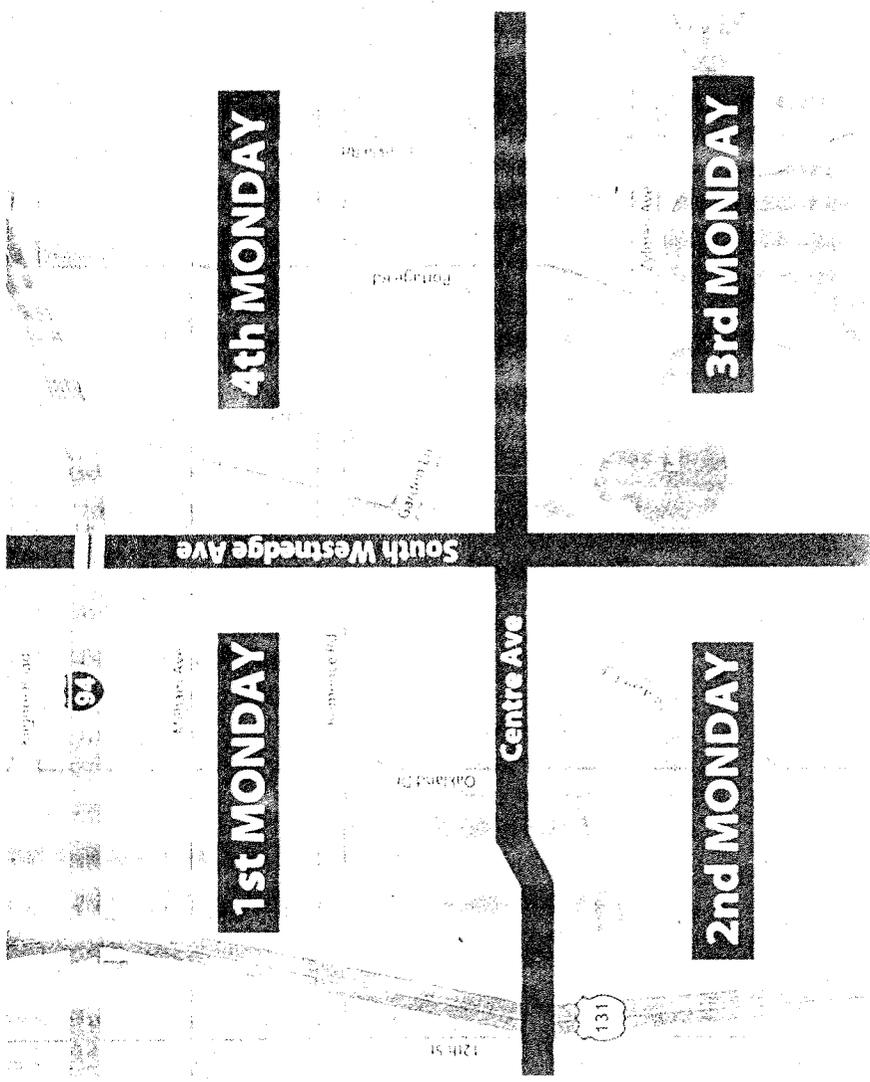
The City of Portage is pleased to announce monthly curbside brush collection beginning Monday, July 3, 2006. This program includes the monthly collection of brush, a pickup of Christmas trees in January and one collection of bagged leaves in April. This program does not include the collection of household items. For collection purposes, the city has been divided into quadrants and each quadrant has been assigned a week of the month when brush collection will take place. The map (right) indicates the Monday designated for pickup in your neighborhood. Please have brush at curbside by 7 a.m. on Monday of your designated week.

How should I prepare my brush?

Branches and brush should be cut into lengths of 4 feet or less, no greater than 3 inches in diameter and stacked in neat piles along the street.

What will not be collected?

Branches or brush in excess of 4 feet in length or 3 inches in diameter, lumber, timbers, ornamental shrubs, roots, railroad ties, firewood, brush generated from large tree removal, building material or tree stumps. The collection equipment cannot handle these items.



Portage

CITY OF
PORTAGE

A PLACE FOR
OPPORTUNITIES
TO GROW

August 2006

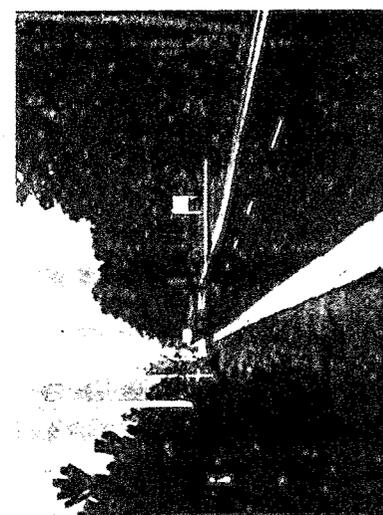
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Roadway Funding Ballot Proposal – Q&A

On November 7, 2006, Portage residents will be asked if they prefer the use of a millage levy to partially fund street improvements as opposed to continuing the current practice of using property owner special assessments for this purpose. If approved by voters in November, a millage levy of up to 1.0 mill will replace roadway special assessments (unless a street improvement project is initiated by a property owner petition). Each year, the City Council would decide the amount of millage necessary to provide funding for roadway projects planned for the upcoming year. If the roadway millage levy is rejected by voters, roadway special assessments will continue to be charged against property owners benefiting from the road improvement.

The City Council and City Administration want to provide adequate information to the public concerning this subject so that voters can make an informed decision in November. Below are several frequently asked questions concerning the ballot proposal and special assessments.



Question

When the street in front of my house is reconstructed, who would pay for the project?

Answer if Ballot Proposal Passes (Millage Levied):

The city-at-large would pay for every city-initiated roadway reconstruction project through the millage levy. On average, over the past several years, the city has raised approximately \$600,000 per year through special

Answer if Ballot Proposal Fails (Special Assessments Remain):

The special assessment district on a typical two-lane local residential street would pay no more than approximately two-thirds of the cost of roadway reconstruction, with the city-at-large paying the

raised approximately \$600,000. The goal through special

reconstruction with the city at only paying the

remaining one-third. For the owner of a typical 80-foot-wide residential lot, the special assessment at current rates for a roadway improvement without curb and gutters would equal \$1,933. The same project with the installation of curb and gutter and driveway approach would require a special assessment of \$6,206. Roadway special assessments may be paid over a period of ten years with interest on the unpaid balance.

assessments to assist with the financing of roadway improvements. At this time, raising \$600,000 of funding through a millage would require a levy of approximately 0.30 mills, which translates to approximately \$22.50 per year for the owner of a \$150,000 home. If a full 1.0 mill were to be levied, the owner of the same property would pay approximately \$75 per year for roadway improvements.

If the street in front of my house is a two-lane roadway with a center turn lane, how much would I pay for the project when the street is reconstructed?

The same special assessment rate applies to the owner of a residential lot on a two-lane local residential street, the owner of a residential lot on a three-lane collector/minor arterial street and the owner of a residential lot on a five-lane arterial street. The owner of a typical 80-foot-wide residential lot would pay approximately \$24.16 per foot of lot frontage along the roadway for street reconstruction without curb and gutter (at current rates) regardless of the type of street on which the property is located. If curb and gutter is added, the rate increases to \$62.28 per foot of lot frontage, plus \$1,223.98 for installation of a driveway approach.

The same millage rate would apply to every Portage taxpayer, regardless of the type of street on which the property is located. The total dollar amount to be paid would depend on the amount of the millage levied and the taxable value of the property to which the millage is applied.

How would I be affected if I paid or am paying a special assessment for a previous roadway project in front of my house?

Residents who have paid or are paying a special assessment for a previous roadway project would continue to pay any outstanding special assessments and would contribute to the city-at-large portion of future roadway projects through general taxes at current city millage rates.

Residents who have paid or are paying a special assessment for a previous roadway project would not have assessment costs refunded. In addition, residents would be taxed at the same millage levy as all other Portage residents.

If water mains are installed in the street in front of my house, who will pay for the project?

The November ballot proposal involves funding for city-initiated roadway projects only. Regardless of the outcome of the November vote, special assessments will continue to be used to partially fund all petitioned projects, as well as all municipal sewer, water and certain sidewalk projects.

The property owner would continue to pay a special assessment for installation of sanitary sewer and roadway reconstruction with the city-at-large contributing approximately one-third of the cost of the project.

The property owner would be assessed for installation of sanitary sewer. The city-at-large, however, would pay for the cost for repaving the roadway through the millage levy.

If the city initiates a project or if my neighborhood petitions for the installation of sanitary sewer in the road in front of my house, who will pay for the project?

Look for more information about this important issue in future editions of the Portager newsletter and on the city website. An informational meeting will be held to give residents the opportunity to ask questions and learn more about how special assessments work and about the impact of a millage levy. If you have questions or comments concerning the

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?
249.14 Major and Local Roads

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example – please name specific routes)?
Rochester Road, Crooks Road, Tienken Road, Walton Boulevard, Avon, Auburn, South Boulevard, Adams, Dequindre, Livernois (north of Tienken), Dutton, Mead

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?
*Between 2003-2006 ranged from \$1,000,000 to \$8,000,000.
Resurface at least some streets every year.*

4. How much of this typical funding level comes out of the City's general fund?
.5 Mill transfer from General Fund – approximately \$1,500,000.

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?
Approximately \$700,000 after maintenance activities.

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by council or the voters?
No, rejected by voters several times.

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to complete for these funds annually?
No, we compete for federal funds on a project basis.
8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?
Not currently. There are no local funds available to cover the City's share.
9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?
Yes, 60% with curb and gutter.
10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?
*Residential: 27' B/C to B/C (22' of driving lanes and 5' of curb and gutter).
Major Roads: Varies. Typically 11' or 12' lanes with 3' paved shoulders if open ditch or concrete curb and gutter.*
11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to the sidewalk, halfway, narrow strip)?
*Asphalt drives: Minimum necessary to facilitate installation of edge drain, sump pump collections, new LIM, etc.
Concrete: If disturbed, one panel length.*
12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?
During previous 5-year local street program, if road needed full reconstruction, then all of the curbing was R and R. With limited funding now, looking at keeping curb as is and only replacing the worst of the worst. Preference is to edge mill along curb line.
13. What is your typical resurfacing depth on bituminous projects?
*2" for preservation overlay.
4" for structural overlay.*

14. What is your standard thickness for reconstructed (existing) concrete streets?

7" or 8" concrete over 4" 21AA aggregate base.

15. What is your standard design for new streets in new developments?

*8" concrete over 4" aggregate base, or
8" asphalt over 6" aggregate base.*

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

*Local Roads: Concrete 30%
 Asphalt 59%
 Gravel 11%*

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

Design life of 20 years used for roads; however, try to increase through preventative maintenance.

18. Typically, how many miles of street area reconstructed / resurfaced each year?

Local Roads: Varies. From 1999-2003 City averages a little over five miles per year.

19. What is your City's millage rate (City mills only) and taxable value?

9.6681 Mills for the City, and taxable value of \$3.4 billion for 2005.

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Varies year to year on an "as needed" basis.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

We utilize Startech Software (PMA). Yes, we would provide a copy of report if requested.

22. Are the following engineering services provided in-house or by consultants?

- a. Programming / project selection – *In house*
- b. Design – *Both, City does "Log Job" type projects for Local Roads.*
- c. Construction Administration - *Both*
- d. Construction Inspection - *Both*

If you have one, is there a typical consulting firm used and who?
Hubbell, Roth & Clark, Inc.

City previously used Orchard, Hiltz, & McCliment, Inc.

23. Are there any other aspects of your street program that you would be willing to share with us?

The City had an aggressive 5-year local street rehab program from 1999-2003 that was funded through the general fund. Since 2003, no major work has taken place on local streets after two failed millages.

24. May we have your contact information so that we may contact you with the final analysis and / or report?

*Roger Rouse, Director of Public Service
1000 Rochester Hills Drive
Rochester Hills, MI 48309-3033
(248) 656-6485*

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Saginaw

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City? ± 280 miles 100-Major
180-Local
26 miles MDOT ± 26 -MDOT Hwy
 ± 306 miles

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

All Routes Maintained by City of Saginaw

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

No money in Act 51 funds to use as match. Only can resurface/reconstruct when in conjunction with Federal STP Funds. Funds used as match are Sewer, Water, General Fund, Community Dev. Block Grant, TDF-F, TE.

4. How much of this typical funding level comes out of the City's general fund?

\$0.00

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)? \pm \$100,000 - \$300,000 per year.

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

No

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

\pm \$2,500,000 per year to be shared equally among eligible communities through our local MPO. Federal STP Funds! Need 20% match

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

Have been in the past. Nothing in last \pm 10 yrs.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes. 99%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

FLC to FLC = ± 26 feet. FZ Curb & Gutter.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

Resurface - No
Reconstruct Including C & G, Yes. Up to Sidewalk.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Depending on Funding available, always. Otherwise leave C & G alone
1/2 Maximize money available on pavement replacement only.
Yes we only gutter pans sometimes.

13. What is your typical resurfacing depth on bituminous projects?

Depending on existing pavement thickness (cores). Typically
Mill & Replace 2-3 inches.

14. What is your standard thickness for reconstructed (existing) concrete streets?

7" - Local Streets, 9" - Major Streets. All now-reinforced.

15. What is your standard design for new streets in new developments?

26' FLC to FLC, 6" Asphalt, 8" Agg Base, 22 or 23A, 12" C11 Sand, Subbase Underdrain

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

50% - Concrete

50% - Bit

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

No

18. Typically, how many miles of street are reconstructed / resurfaced each year?

± 1 to 2 miles, depending on funding.

19. What is your City's millage rate (City mills only) and taxable value?

5,2598 mills / taxable value 776,427,091.

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

This is handled through Maintenance & not Engineering, but yes & approximatel 50,000 to 75,000 per yr.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

Currently working on to get into Roadsoft, currently have in excell spreadsheet

22. Are the following engineering services provided in-house or by consultants?

- a) Programming / project selection In House
- b) Design 90% In House, 10% Consultant
- c) Construction Administration In House
- d) Construction Inspection In House

If you have one, if there a typical consulting firm used and who?

Went out for QBS, 4 Firms used. SPICER, ROWE, WADE TRIN, William Kibler.

23. Are there any other aspects of your street program that you would be willing to share with us?

NA

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Phillip Karwat, City Engineer, 1315 S. WASHINGTON AVE,
SABINA, MI 48601

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Southgate

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

100 miles

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example – please name specific routes)?

(I-75, Eureka, Northside, Dix)
(STATE) (County of WAYNE)

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

MILLAGE 500,000
NOV MILLAGE 100,000

4. How much of this typical funding level comes out of the City's general fund?

20%

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

80%

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

10yrs - VOTER APPROVAL

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

BASED ON GRANTS

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

NOT AT THIS TIME

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

Yes 95%

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

Resurface no
Reconstruct Yes

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Yes

13. What is your typical resurfacing depth on bituminous projects?

4"

14. What is your standard thickness for reconstructed (existing) concrete streets?

8"

15. What is your standard design for new streets in new developments?

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

Concrete 90%
Bituminous 7%
Gravel 2%

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

20yr

18. Typically, how many miles of street are reconstructed / resurfaced each year?

Various

19. What is your City's millage rate (City mills only) and taxable value?

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

yes

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

yes -

22. Are the following engineering services provided in-house or by consultants?

a) Programming / project selection

b) Design

c) Construction Administration

d) Construction Inspection

If you have one, if there a typical consulting firm used and who?

23. Are there any other aspects of your street program that you would be willing to share with us?

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Thank you for your participation in this study.

Sincerely,

Patrick M. Lewis, P.E.

Director of Engineering and Planning

City of Monroe

pmlewis@ci.monroe.mi.us

(734) 384-9124

Westland

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

47.47 miles - major roads

161.35 miles - local roads

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

Ford Road, Warren Road, Cherry Hill Road, Hannon Road, Wayne Road, Middlebelt Road, Inkster Road, Hines Drive, Joy Road

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

Funding from Act 51, \$2.2 million. Westland resurfaces or reconstructs streets while combining for larger programs.

4. How much of this typical funding level comes out of the City's general fund?

None

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

All

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

No

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

Compete for these funds annually.

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

First time paving only - about 6 1/2 miles of dirt road left.

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

All new construction since 1997.
About 65% is curb and gutter.

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

Back of curb to back of curb 27 feet.

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

The best way we have found is to replace street to curb on a reconstruct and for an overlay, we cut the approach's slab by the curb in half and replace.

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

Rarely.

13. What is your typical resurfacing depth on bituminous projects?

3 inches

14. What is your standard thickness for reconstructed (existing) concrete streets?

Westland does soil boring and allows a geo-technical engineer make his recommendation.

15. What is your standard design for new streets in new developments?

Geo-technical engineer sets standard per soil condition.

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

7.5 miles of gravel road

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

Asphalt standard - 17 major, 31 local
Concrete - 20 major, 116 local
Composite - 3 major, 2 local

18. Typically, how many miles of street are reconstructed / resurfaced each year?

The last five years has been a total of about 8 miles of road.

19. What is your City's millage rate (City mills only) and taxable value?

City 12.0056, taxable value \$2,245,434,327

20. Do you utilize slurry sealing / joint and crack sealing? If so, approximately what dollar amount or length of street is a typical program?

Joint and crack sealing - about \$50,000 per year.

21. Do you maintain any type of pavement management system / street inventory (such as PASSER rating)? If so, would you be willing to share a copy with us?

We use PASSER rating.

22. Are the following engineering services provided in-house or by consultants?

a) Programming / project selection - In house

b) Design - Orchard, Hiltz & McCliment Consultants

c) Construction Administration - Orchard, Hiltz & McCliment Consultants

d) Construction Inspection - Orchard, Hiltz & McCliment Consultants

If you have one, if there a typical consulting firm used and who?

23. Are there any other aspects of your street program that you would be willing to share with us?

Have a current asset management program for Westland street system.

24. May we have your contact information so that we may contact you with the final analysis and / or report?

Thomas Wilson, Director
Department of Public Service
City of Westland
37137 Marquette

Westland, MI 48185

Thank you for your participation in this study.

Sincerely,
Patrick M. Lewis, P.E.
Director of Engineering and Planning
City of Monroe
pmlewis@ci.monroe.mi.us
(734) 384-9124

Wyoming

Street Funding / Street Maintenance Questionnaire
Prepared by City of Monroe Engineering Department
Please return to Patrick M. Lewis, P.E., Director of Engineering and Planning
City of Monroe, 120 East First Street, Monroe, MI 48161

Note: For the purposes of this analysis, please consider "resurfacing" to include 1-1/2 inches of pavement milling and / or replacement or deeper.

1. What is the total street mileage maintained by your City?

240 MILES

2. What routes within the City limits are not maintained by the City (state highways, county primaries, for example - please name specific routes)?

I-196 (BUSINESS), US131, M-11

3. What is your typical annual funding level for street reconstruction / resurfacing (include all funding sources)? Do you resurface / reconstruct streets every year or combine for larger programs if insufficient funding in one year?

THERE IS NO TYPICAL. CURRENT C.I.P. RANGES FROM \$2.3 M TO \$16.2 M, NOT INCLUDING UTILITIES

4. How much of this typical funding level comes out of the City's general fund?

NONE

5. How much of this typical funding level comes out of the Major and Local Street funds (Act 51 monies)?

NONE

6. Does your City have any type of dedicated street millage? If so, what is the rate and length of the levy? Did it have to be approved by Council or the voters?

1.8678 FOR STREET AND UTILITY IMPROVEMENTS
PERMANENT MILLAGE APPROVED BY VOTERS

7. Do you receive an annual allotment of Federal Aid funds for use on any streets? If so, how much per year, or do you have to compete for these funds annually?

NO ANNUAL ALLOTMENT, FED FUNDING IS PROJECT SPECIFIC.

8. Are any street reconstruction / resurfacing projects funded by Special Assessment (such as for first-time paving)?

YES

9. Do your streets generally have curb and gutter? If so, approximately what percentage is curbed?

95 %

10. Is there a standard width for your streets between curb faces? If so, what (can be multiple for major and local streets)?

MAJOR STREETS : 48 TO 70 FEET

LOCAL STREETS : 30 TO 36 FEET

11. When you resurface / reconstruct streets, do you typically replace driveway approaches, and if so, how far up (such as all the way to sidewalk, halfway, narrow strip)?

RESURFACE - NO , RECONSTRUCTION - YES

12. How often do you replace curbs on resurfacing projects? Do you consider overlaying gutter pans in certain cases?

AS NECESSARY , NO OVERLAYS

13. What is your typical resurfacing depth on bituminous projects?

2 TO 3 INCHES

14. What is your standard thickness for reconstructed (existing) concrete streets?

NO CONCRETE STREETS

15. What is your standard design for new streets in new developments?

12 INCH SAND SUBBASE

6 INCH STONE BASE

3 INCH BITUMINOUS PAVEMENT

16. What is your general breakdown of pavement surfaces (concrete, bituminous, gravel)?

100% BITUMINOUS

17. Do you have a set replacement schedule that you strive for, and are you on that schedule (20 years, 30 years, etc.)?

MAJOR STREET RESURFACING : 10 YEARS

LOCAL STREET RESURFACING : 30 YEARS

18. Typically, how many miles of street are reconstructed / resurfaced each year?

VARIABLES