City of Milwaukee
Department of Public Works

Federal/State aid, Local Street, Alley and Traffic Calming Programs

Overview

Street Inventory
(miles)

City maintained:

Local Streets: 908.9 (71.5%)

Collectors: 77.6 (6%)

Minor Arterials: 223.2 (17.5%)

Major Arterials: 62.5 (5%)

Total: 1,272.2

Others:

County Trunk Highways: 32.4

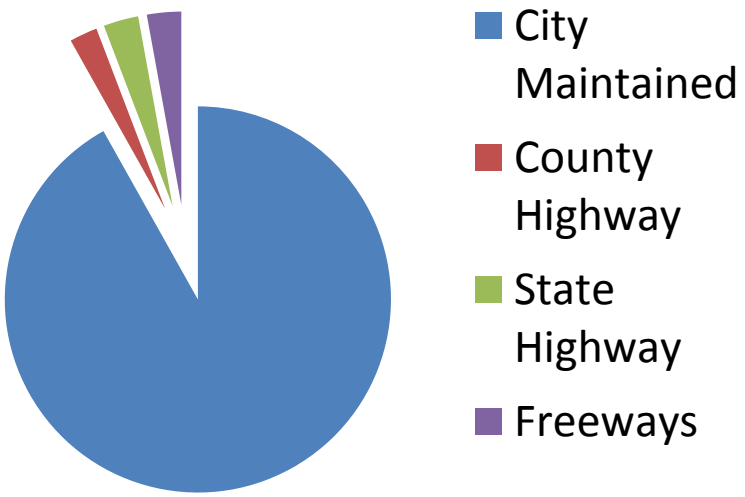
State Maintained Highways: 40.6

Freeways: 39.7

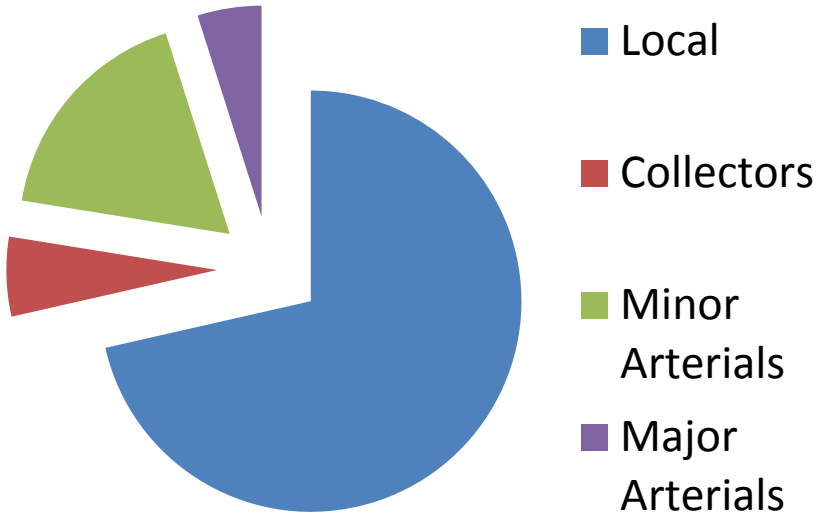
Total:1,384.9

Street Inventory

All Streets



- City Maintained



Pavement Condition Ratings

Every seven years DPW obtains a condition rating for every street segment in the City under the PMS (Pavement Management System) and rates them on various pavement distresses such as:

- Severity of cracking
- Potholes
- Joint failure
- Rutting

Pavement Ratings

A PQI (Pavement Quality Index) is identified from the distresses on a scale of 2 to 10

10 is the best, brand new street

7-10 is Good

4.5 to 7 is Fair

4.5 to 2 is Poor

Stantec Consultant

- Last survey done in 2006-2007
- North half of the city in 2006
- South half in 2007

- Cost about $160,000 for the survey, is budgeted in the Major street program

2010 Pavement condition by classification (miles)

	Good	Fair	Poor
	PQI >7	**>4.5, <7**	**<4.5**
Major Arterial	44	11	7
Minor Arterial	123	64	37
Collector Streets	40	28	10
Local Streets	388	400	122
2010 Total	595 (46%)	503(39%)	76(14%)
2011 Total	54.3%	37.8%	7.9%

How a street is programmed:

Adjustment to project timing are impacted by:

- pavement type: asphalt vs concrete
- underground work
- adjacent development
- adjacent projects
- citizen and Aldermanic input
- available funding
- bids received on other projects

Programs - Published

- Preliminary and Final program – includes all projects anticipated to be constructed
- Major Street program – 6 year
- Local Street program – 6 year

For each program, the first three years are based on anticipated budgets.

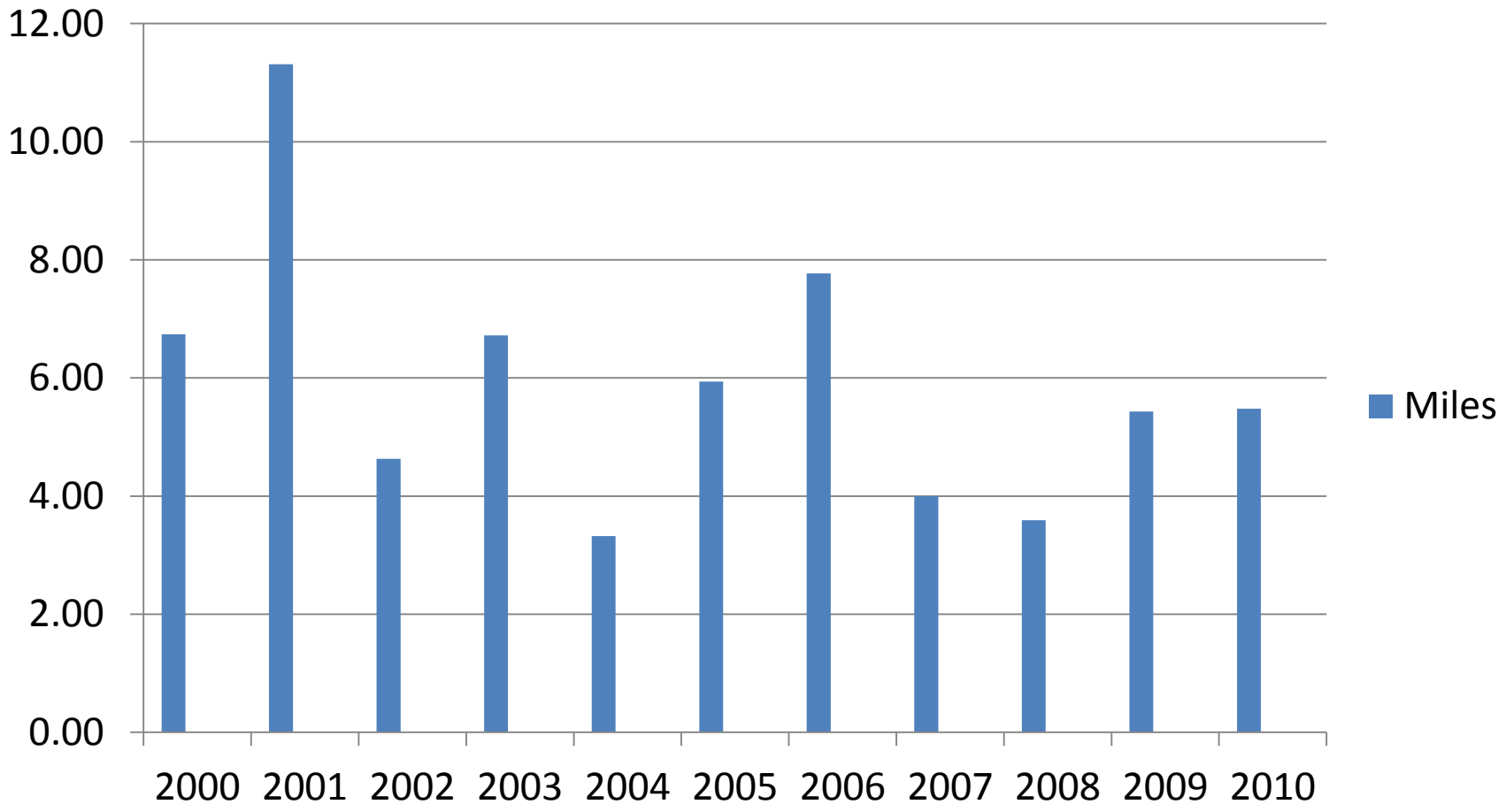
State and Federal Aid Program

Additional factors affecting timing of projects due to the State of WI “Facilities Design Manual” (FDM) process

- Right of way acquisition
- Historical/Archeological review
- Railroad coordination
- Utilities
- Hollow walks
- Environmental
- Changes to State and Federal requirements

Miles of Major Streets constructed

Does not include 14 miles of ARRA projects in 2010



2012 Service Life Estimate

Existing pavements of Minor Arterial streets :

Type:	Miles	% of total	Estimated life (years)	Replacement rate (miles/yr)*	Replacement pavement	Cost per mile	Amount needed per year
Composite (asphalt over concrete):	57.7	26%	30	1.92	Reconstruct (45%)	$ 2,150,000	$ 4,135,167
Composite (asphalt over concrete):	75.7	34%	30	2.52	asphalt (55%)	$ 1,662,000	$ 4,193,780
Rigid (concrete)	89.8	40%	55	1.63	asphalt	$ 1,662,000	$ 2,713,593
Totals	223.2	100%		6.08			$ 11,042,539

Replacement cycle **37 years**

*** = number of miles/assumed life**

Existing pavements of Principal Arterial streets :

Type:	Miles	% of total	Estimated life (years)	Replacement rate (miles/yr)*	Replacement pavement	Cost per mile	Amount needed per year
Composite (asphalt over concrete):	21.9	35%	30	0.73	concrete (50%)	$ 2,675,000	$ 1,952,750
Composite (asphalt over concrete):	17.3	28%	30	0.58	asphalt (50%)	$ 2,100,000	$ 1,211,000
Rigid (concrete)	23.3	37%	55	0.42	asphalt	$ 2,100,000	$ 889,636
Totals	62.5	100%		1.73			$ 4,053,386

Total Minor and Principal Arterials **$ 15,095,926**

Replacement cycle **36 years**

*** = number of miles/assumed life**

Rounded $ 15,000,000

Advanced planning $ 800,000

total need $ 15,800,000

Capital/Atkinson/Teutonia Triangle: Funded with Congestion Mitigation Air Quality Funds(CMAQ)

E. State St. – N. Edison St. to N. Prospect Av. : Connecting Highway Project, funded by State Trunk Highway Program

S. 2nd St. – W. National Ave. to the Milwaukee River: Major Arterial project, Funded by State Transportation Fund (STP)

W. Burleigh St. Intersection At N. 60th St. – Funded by Highway Safety Improvement Program (HSIP)

Local Street Program

2012 Service Life Estimate

Local streets – existing pavements

Type:	Miles	% of total	Estimated life (years)	Replacement rate (miles/yr)*	Replacement pavement	Cost per mile	Amount needed per year
Composite (asphalt on concrete):	118	13%	47	2.5	Reconstruct (45%)	$ 1,450,000	$ 3,645,670
Composite (asphalt on concrete):	136	15%	47	2.9	asphalt (55%)	$ 725,000	$ 2,103,271
Flexible (asphalt)	145	16%	58	2.51	asphalt	$ 725,000	$ 1,818,000
Macadam	82	9%	100	0.82	asphalt	$ 750,000	$ 613,575
Rigid (concrete)	427	47%	75	5.70	asphalt	$ 700,000	$ 3,987,480
Totals	909	100%		**14.44**			**$ 12,167,996**

* = number of miles/assumed life

Replacement cycle 63 years

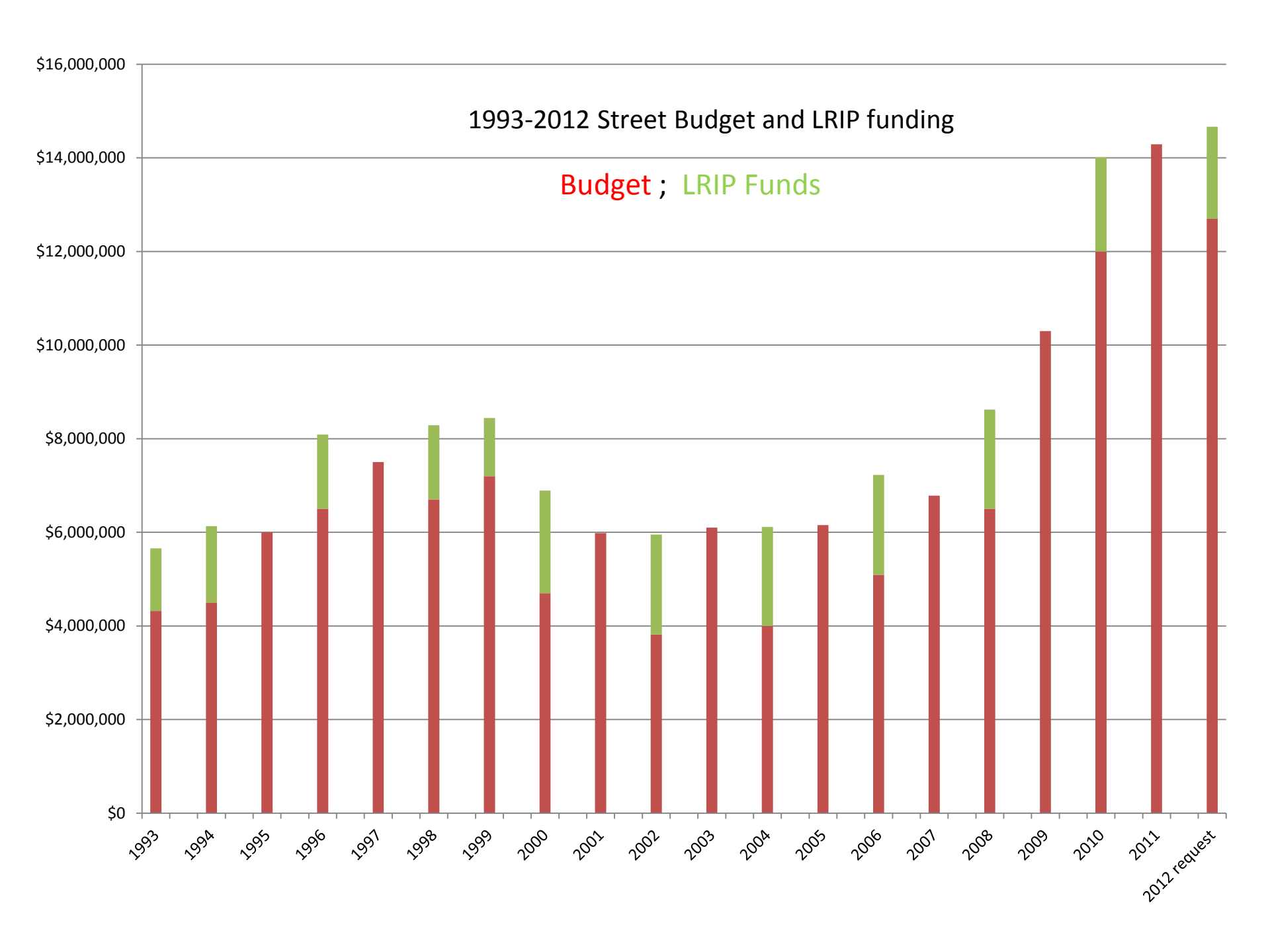
Collector Streets: Existing pavements

Type:	Miles	% of total	Estimated life (years)	Replacement rate (miles/yr)*	Replacement pavement	Cost per mile	Amount needed per year
Composite (asphalt on concrete):	14	18%	45	0.3	concrete (50%)	$ 1,450,000	$ 452,400
Composite (asphalt on concrete):	14	18%	45	0.3	asphalt (50%)	$ 725,000	$ 226,200
Flexible (asphalt)	17	22%	55	0.31	concrete	$ 1,450,000	$ 452,400
Macadam	4	5%	100	0.04	asphalt	$ 750,000	$ 29,250
Rigid (concrete)	29	37%	70	0.41	asphalt	$ 700,000	$ 288,600
Totals	78	100%		**1.39**			**$ 1,448,850**

Replacement cycle 56 (years)

Service Life -- Budget Calculation:

Total Locals and Collectors	$	13,616,846
Rounded	$	13,600,000
Advanced planning	$	900,000
Maintenance	$	1,300,000
Total request (2012):	$	15,800,000
LRIP funds (in even years)	$	2,000,000
Capital request	**$**	**13,800,000**


1993-2012 Street Budget and LRIP funding
Budget ; LRIP Funds
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012 request

Local Street Project approval rate

Year	Streets	% Approved
2011	65/67	97.0 (2 speed humps deleted)
2010	50/59	85.0 (9 speed humps deleted)
2009	62/64	96.8
2008	47/60	78.3 (VRF approved in mid 2008)
2007	34/46	73.9
2006	34/43	79.1
2005	40/61	65.6
2004	34/40	85.0
2003	39/53	73.6
2002	33/52	63.5 * assessments rates increased
2001	31/38	81.6
2000	53/56	94.6

Miles constructed

Year	Miles
2007	4.2
2008	9.7
2009	9.5
2010	19.5
2011	15.9
2012	16.5 (estimated)

Street project prior to asphalt

Replacement rate

- Based on the rehabilitation of over 16 miles per year, we can anticipate a replacement cycle of 60-65 years based on current funding

South 20th Street south of West College Avenue

Alleys

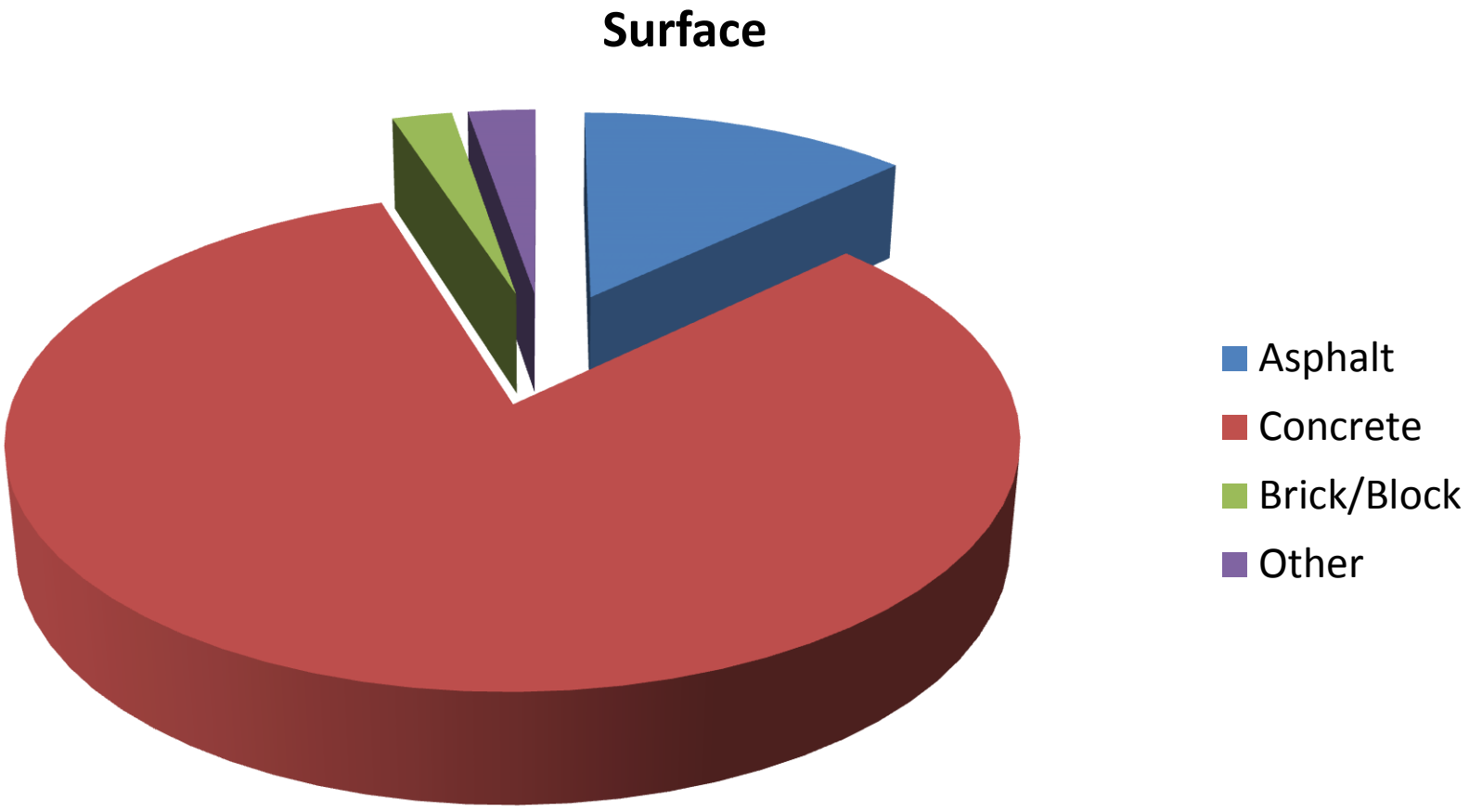
Alley in need of repair

New alley

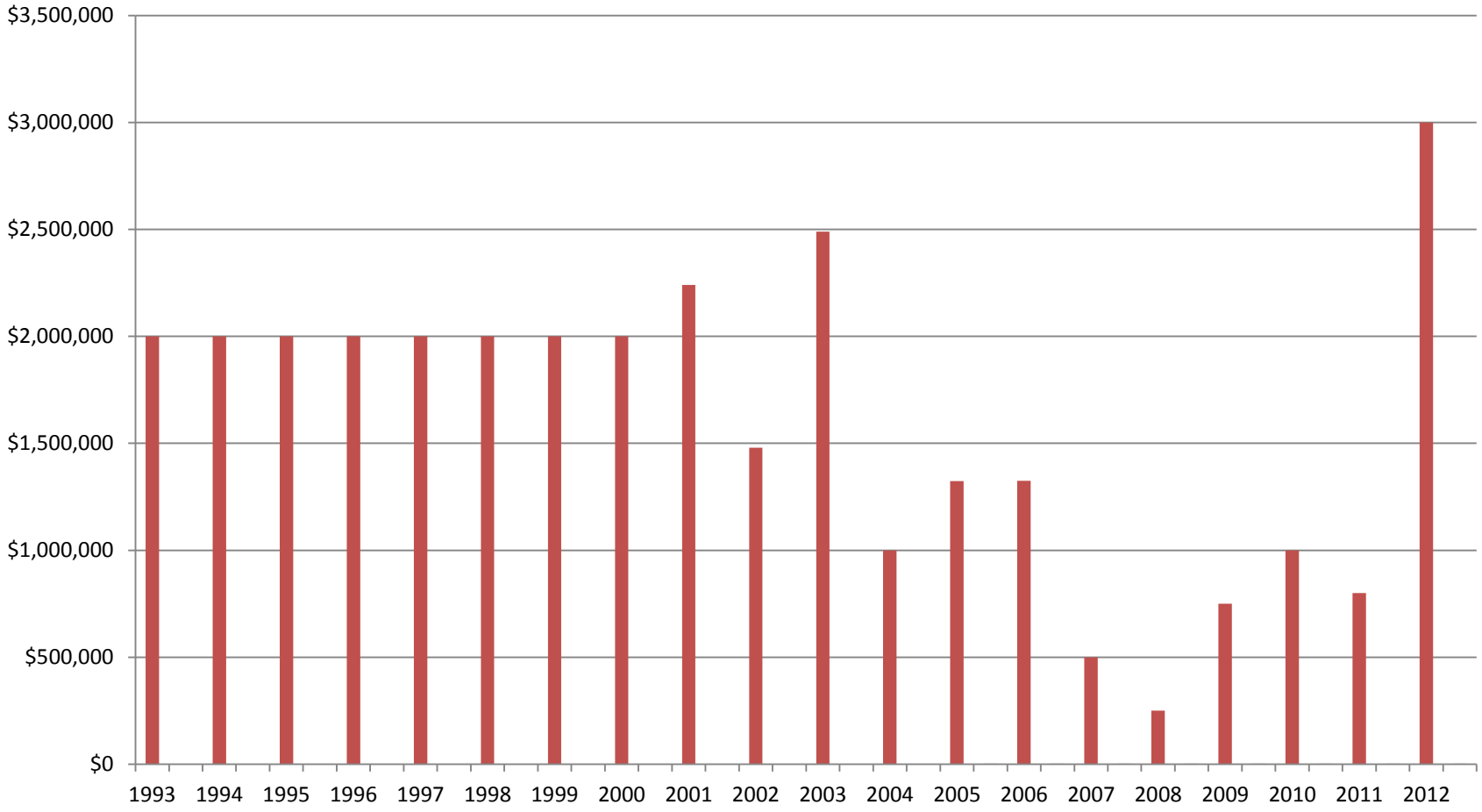
Alley Inventory

There are 4,028 paved alleys with a length of 414 miles

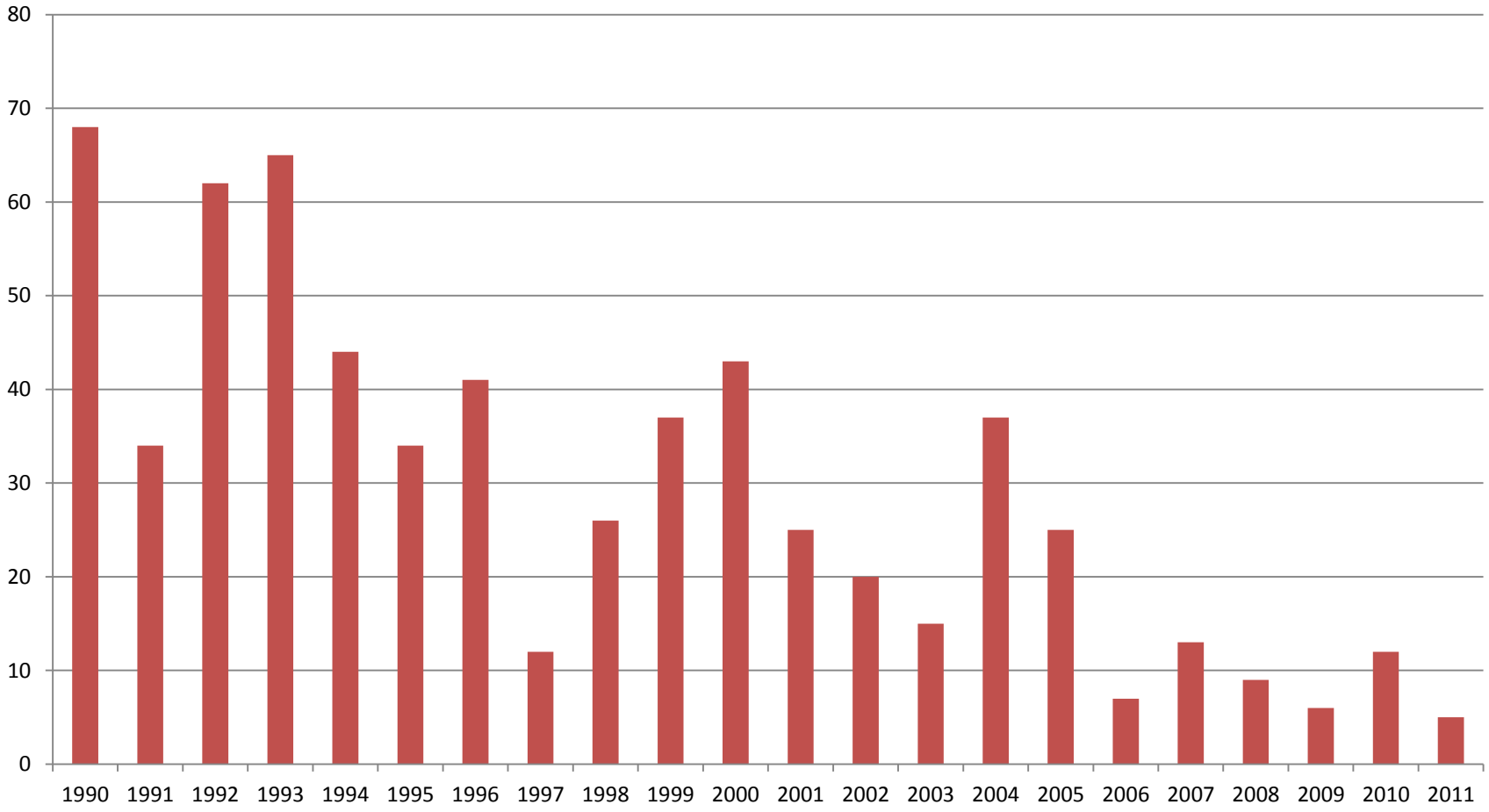
Alley pavement types



Funding for Alleys
1993- 2012



Alleys Constructed 1990-2011



Alley replacement rate

- At the current rate of 12 alleys per year, the replacement rate is over 300 years.
- A challenge we have is that alleys are assessed at between $1000-$1500 per property and many owners are not in support of the cost.
- The rate of $38/foot for a 20 foot wide alley recovers 60% of the adjacent work, but 40% of the total cost due to non assessable items
- The extra $2.0 M in 2012 will construct about 30 alleys that were previously deleted

- We have 19 alley segments deleted twice
- There is a $5.5M backlog of deleted projects
- We will reduce the backlog with the additional funds for 2012.

Traffic calming: Part of Neighborhood traffic Management program

Neighborhood Traffic Management Program

- Education
- Enforcement
- Encouragement
- Engineering

Traffic Calming Ordinance

- Enacted in 2007 by Resolution 060841
- Speed humps constructed:
- 2007- 3 locations
- 2008- 7 locations
- 2009-11 locations
- 2010-10 locations
- 2011- 9 locations

Assessment for Speed Humps

- The rate is $6.00 per frontage foot
- Generally the local Alderman requests a survey of the property owners
- For 2012, 15 locations have been requested

Questions?