

Alley Improvement Strategy

Presented to the Transportation
and Environment Committee

February 11, 2008



Alley Issues

Today's Discussion

Improve alleys used for rear entry and/or sanitation collection

Future Alley Discussions...

Address alleys other than rear entry/sanitation collection alleys?

Regulate future alley construction?

Move sanitation out of alleys?

Address code/crime issues in alleys?

Purpose

- Review the history, uses, and challenges associated with alleys

- Present the current alley maintenance level

- Provide a strategy for improving the condition of alleys used for rear-entry and/or sanitation collection

Overview

- The City of Dallas began building alleys in 1920
 - 1363 miles of alleys citywide
 - 1164 miles of paved alleys
 - 1142 miles of rear-entry and/or sanitation collection alleys

- Alleys have been constructed using several different materials including:
 - Concrete (1055 miles)
 - Asphalt (109 miles)
 - Dirt/Gravel/Flexbase (199 miles)

Overview

- The standard alley pavement width has varied
 - 8-foot pavement (1964 to 1980) - 707 miles built or rebuilt
 - 9-foot pavement (1980 to 1990) - 44 miles built or rebuilt
 - 10-foot pavement (1990 to present) - 413 miles built or rebuilt

- Alleys have been constructed within varying widths of right-of-way (ROW)
 - Prior to 1964 there was no standard width
 - Since 1964 the City has had a 15 foot standard

Overview

Alleys have various uses:

- Property access
- Garbage/recycling collection
- Drainage
- Public and private utility routes
 - Water/sewer
 - Gas
 - Electric
 - Phone
 - Cable

Challenges

- ❑ Maintaining and improving alleys is difficult due to:
 - Narrow pavement and rights-of-way
 - Encroachments
 - ❑ Overgrowth: trees, vegetation, and landscaping
 - ❑ Structures: fences, buildings, overhangs, poles, wires
 - Restrictive corners and intersections
 - Deteriorated alley conditions
- ❑ Sanitation Collection
 - Automated sanitation trucks are 9.6 ft from mirror to mirror
 - Most Sanitation trucks are 8 ft from wheel to wheel making it a challenge to stay on the pavement

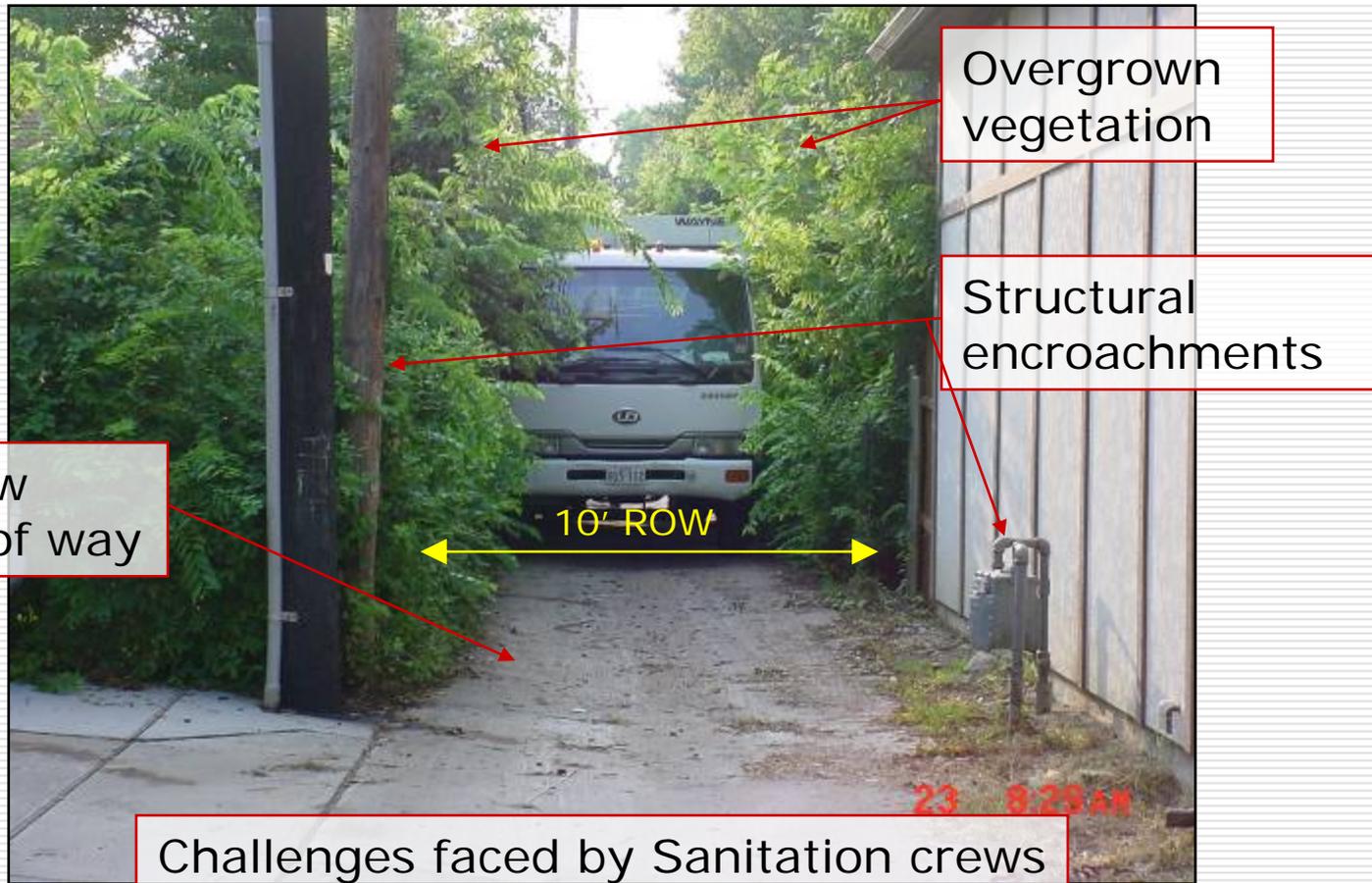
Challenges



Challenges



Challenges



Challenges

Overgrown
vegetation

Damage
from
avoiding
growth



Challenges

Recent asphalt
repair-service
request

Past alley clip
repair to expand
the width of the
alley to prevent
rutting

Narrow turning
radii force
vehicles off of the
roadway causing
rutting



Alley Maintenance

- ❑ Street Services receives approximately 2100 service request for alley repairs annually
- ❑ Since 1995, the primary focus has been placed on improving the condition of streets
- ❑ Funding allocated for alley improvements has allowed for primarily temporary repairs

Maintenance Comparison

Representative Maintenance Disparity

Street Repair:

- Permanent repairs are made if possible
- Prescriptive maintenance programs for different street types
 - Partial reconstruction
 - Full-depth asphalt repair
 - Minor concrete repairs
 - Restoration
 - Rehabilitation
 - Micro-surfacing
 - Slurry-seal

Alley Repair:

- Repairs are primarily temporary in nature such as potholes and small level-ups
- Minor concrete repairs are made to correct major drainage issues or repair small localized failures

Maintenance Comparison

Street before repair



Alley before repair



VS

Street after repair



Alley after repair



Alley Maintenance Activities

Concrete alley
with asphalt
repairs



Alley Maintenance Activities



Repairs are often temporary in nature

Alley Improvement Funding

Reconstruction and routine maintenance are funded through two primary sources:

- Capital bond program
- Street Services general fund budget

Alley Improvement Funding

- Average operating funds from 2003 through the present averaged \$1.4M annually
- 2003 Capital Bond Program allocated \$17.2M over four years for alley improvements (including discretionary fund alley improvements)
- 2006 Capital Bond Program includes \$7.7M for alley improvements (\$1.9M annually)
- \$187M of alley needs identified with cost estimates

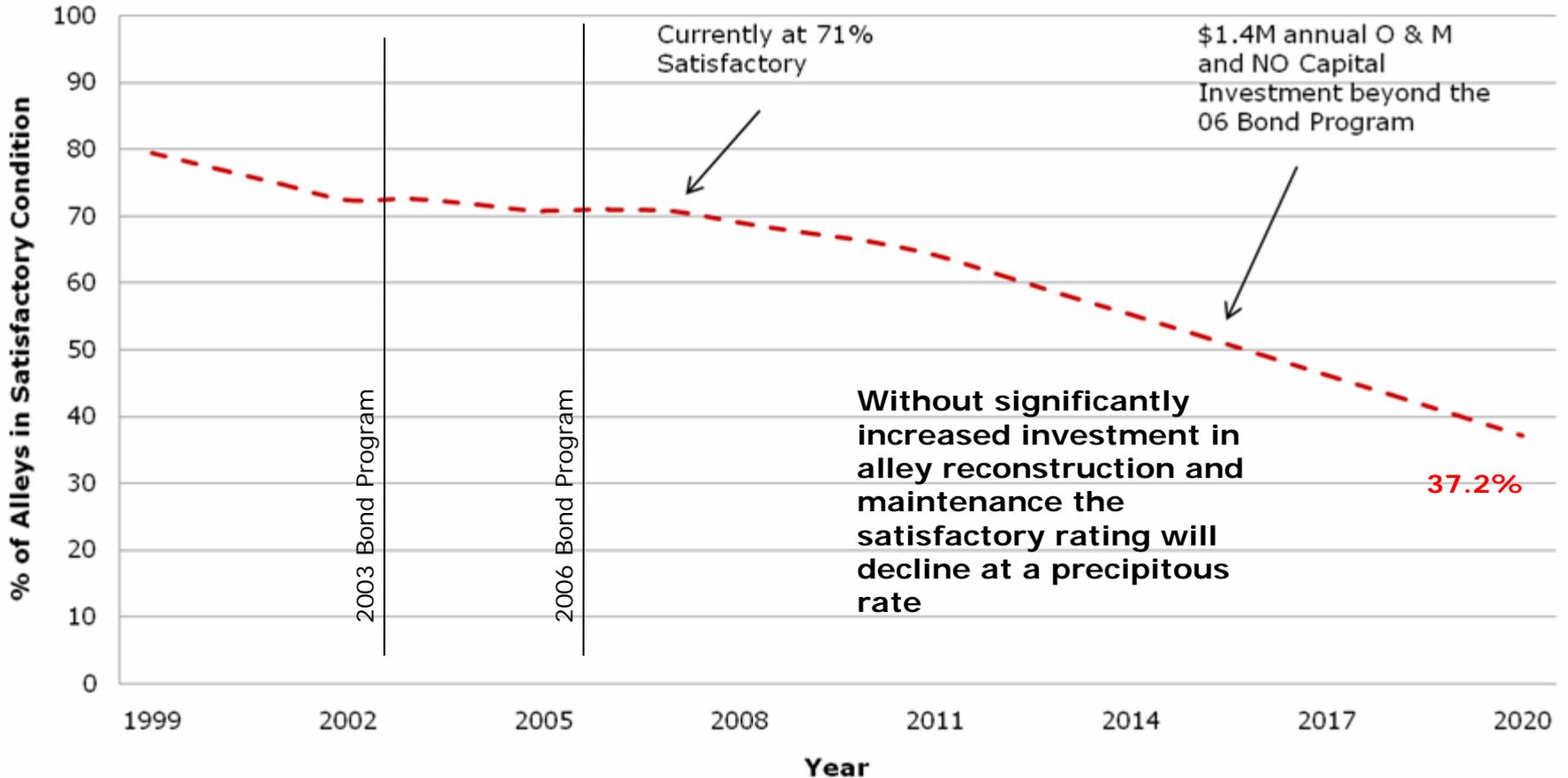
Alley Condition Rating System

- The City of Dallas began rating alley conditions in 1993
- Beginning this summer, one-third of the alleys are scheduled to be evaluated each year using the new Pavement Management System and equipment, replacing the old method of windshield observations
- A letter grade rating is assigned based on condition
 - A - Good
 - B – Acceptable
 - C – Fair
 - D – Poor
 - E – Unacceptable



Currently 71% of Rear Access/Garbage Collection Alleys are in Satisfactory Condition

Resulting Alley Conditions in 2020 With Flat O & M Investment Level and No Additional Capital Investment Beyond the 2006 Bond Program



To Achieve a 100% Satisfactory Rating...

\$430million (an average of \$33.1M total annually beginning now through 2020 including both capital and operating & maintenance) for alleys with rear access/garbage & recycling collection

Given the significant cost associated with achieving a 100% satisfactory rating, more realistic options must be explored...

How do we begin to approach a solution?

- Currently 71% of rear-entry and/or sanitation route alleys are in satisfactory condition and our current goal for street conditions is 87%
- Initially several strategies were explored to improve the condition of rear-entry and/or sanitation route alleys across the city
 - Option 1: Achieve a 75% satisfactory rating by 2020
 - Option 2: Achieve an 85% satisfactory rating by 2020
 - Option 3: Achieve a 75% satisfactory rating by 2030
 - Option 4: Achieve an 85% satisfactory rating by 2030



Summary of Projected Costs

(2007 Dollars)

Costs in \$Millions

| To Achieve | Avg Annual O&M* | Avg Annual Capital** | Total Avg Annual Cost | Total O&M | Total Capital | Total (FY08 – Goal) |
|---------------------------|-----------------|----------------------|-----------------------|-----------|---------------|---------------------|
| Option 1 – 75% by 2020 | \$2.9 | \$8.8 | \$11.7 | \$37.6 | \$114.5 | 152.1 |
| Option 2 – 85% by 2020 | \$2.9 | \$18.1 | \$21.0 | \$37.6 | \$235.0 | 272.6 |
| Option 3 – 75% by 2030 | \$3.6 | \$5.7 | \$9.3 | \$82.7 | \$130.1 | 212.8 |
| Option 4 – 85% by 2030 | \$4.2 | \$10.9 | \$15.1 | \$95.9 | \$250.6 | 346.5 |

* Average Annual O&M numbers include the current funding level of \$1.4M annually.

** Average Annual Capital numbers include actual amounts programmed in the 2006 Capital Program and larger projected capital programs for alleys in 2010, 2014, and 2018.

*(Current annual investment is \$1.85M capital plus \$1.4M O&M for a total of **\$3.25M**)*

Recommendation

Implement a strategy that achieves an 80% satisfactory rating for rear-entry and/or sanitation collection alleys by 2020

- Increase O & M funding by \$1.5M in FY08-09
- Includes \$7.7M from the 2006 Bond Program and a total of \$167M in future capital programs – for example:
 - 2010 \$61M
 - 2014 \$66M
 - 2018 \$40M



Summary of Projected Costs (2007 Dollars)

Costs in \$Millions

| To Achieve | Avg Annual O&M* | Avg Annual Capital** | Total Avg Annual Cost | Total O&M | Total Capital | Total (FY08 – Goal) |
|---------------------------|-----------------|----------------------|-----------------------|-------------|---------------|---------------------|
| Option 1 – 75% by 2020 | \$2.9 | \$8.8 | \$11.7 | \$37.6 | \$114.5 | 152.1 |
| Option 3 – 75% by 2030 | \$3.6 | \$5.7 | \$9.3 | \$82.7 | \$130.1 | 212.8 |
| Recommendation | | | | | | |
| 80% by 2020 | 2.9 | 13.4 | 16.3 | 37.6 | 174.7 | 212.4 |

* Average Annual O&M numbers include the current funding level of \$1.4M annually.

** Average Annual Capital numbers include actual amounts programmed in the 2006 Capital Program and larger projected capital programs for alleys in 2010, 2014, and 2018.

*(Current annual investment is \$1.85M capital plus \$1.4M O&M for a total of **\$3.25M**)*

Other Issues

- Should the city address alleys other than those used for rear-entry/ sanitation collection?
- Should future development allow alleys?
- Should the city consider moving some or all sanitation collection out of alleys?
- Should the city continue to participate in the improvement of un-paved alleys?
- How does the city address code and crime issues in alleys?

Appendix A-Maintenance Activities

Appendix A-Maintenance Activities

- Current maintenance activities include:
 - Small concrete alley repairs
 - Limited concrete repairs are made to alleys
 - Most concrete alleys are repaired using asphalt
 - Priority is given to residential properties with rear entry access and Sanitation Services
 - Activities include:
 - Repairs to pavement
 - Alley clips
 - Rut repairs (using flexbase)
 - Drainage repairs

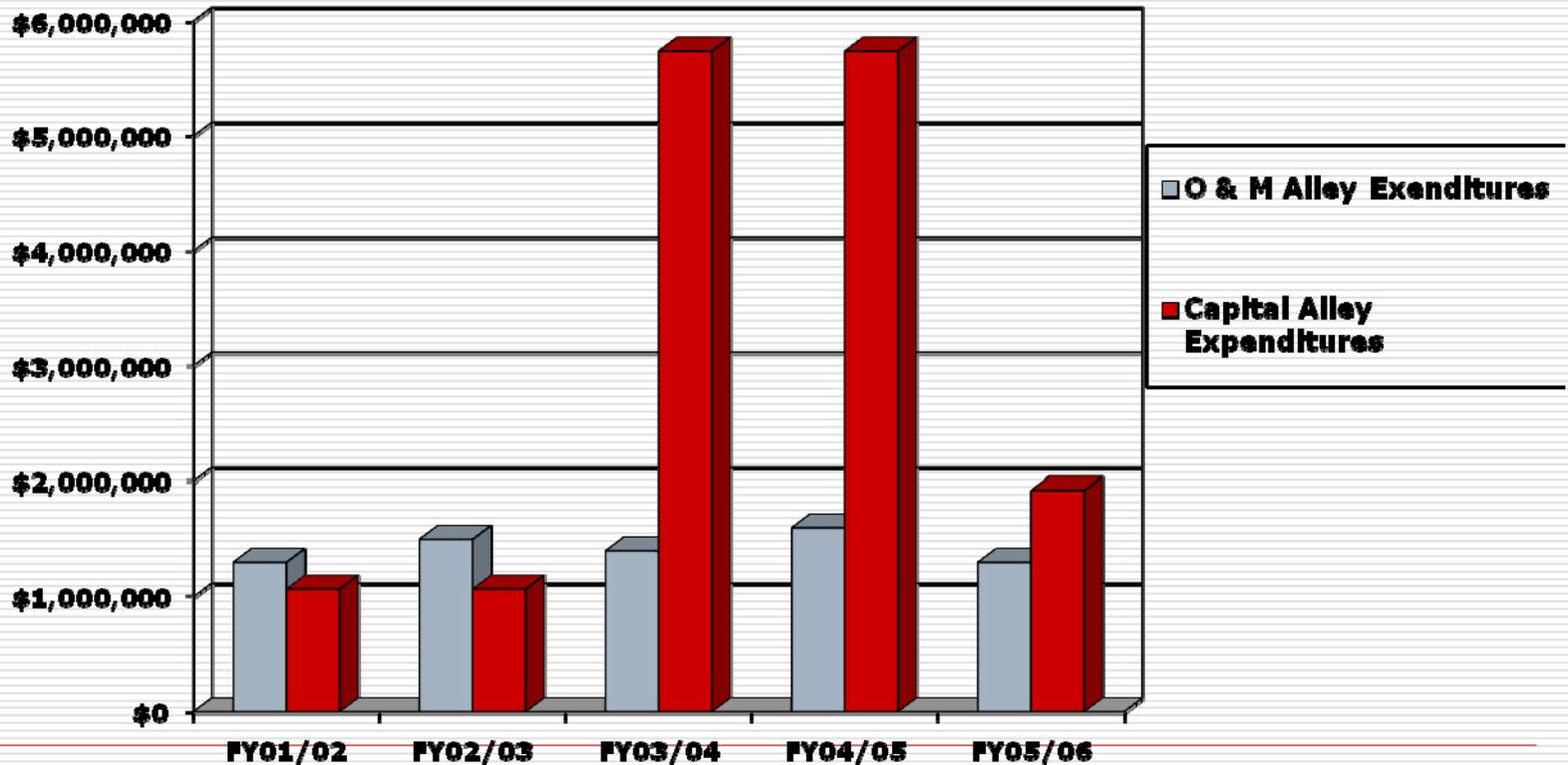
Appendix A-Maintenance Activities

- Current maintenance activities include (cont'd):
 - Asphalt alley repairs
 - Activities include:
 - Limited pavement and base repair
 - Pothole repairs
 - Level-ups
 - Drainage repairs
 - Unimproved alley repairs
 - Gravel or dirt alley ways
 - Activities include:
 - Re-grading of the alley surface
 - Add flexbase to even out the driving surface
 - Drainage repairs

Appendix B-Expenditures

Appendix B-Expenditures

- Expenditures have varied for the Capital program, while expenditures for the O & M program have remained constant



Appendix B-Expenditures

| <input type="checkbox"/> Capital Bond Programs | <input type="checkbox"/> Operating Expenditures |
|--|---|
| ■ 1985 - \$1M | ■ FY 01/02 - \$1.3M |
| ■ 1995 - \$2.5M | ■ FY 02/03 - \$1.5M |
| ■ 1998 - \$5.3M | ■ FY 03/04 - \$1.4M |
| ■ 2003 - \$17.2M | ■ FY 04/05 - \$1.6M |
| ■ 2006 - \$7.7M | ■ FY 05/06 - \$1.3M |
| TOTAL: \$33.7M | TOTAL: \$7.1M |

Appendix B-Projected Costs

