Memorandum
Lawrence-Douglas County Metropolitan Planning Organization

TO: Barack Matite, Eudora, KS
CC: L-DC MPO Technical Advisory Committee
FROM: Jessica Mortinger, Transportation Planner
Date: January 7, 2014
RE: Sidewalk Inventory

Project Description
The MPO as part of the Regional Pedestrian Planning process worked with local volunteers and staff in your community to create a basic sidewalk inventory. The entire sidewalk network was inventoried. Staff walked and/or bicycled all sidewalks locations within the city and as they encountered a defect recorded it (see map on p.3). Large areas with multiple overlapping defects were marked with replacement required. Also noted were “gaps” or missing sidewalk and ADA ramp information. This GIS inventory data was collected based on the visual observations during the field assessment of the built environment related to the following categories:

- Vertical Deflection less than or equal to 1"
- Vertical Deflection more than 1"
- Horizontal Gap
- Tree Roots
- Cross Slope
- Brick Reset
- Manhole
- Missing Sidewalk
- End of Sidewalk
- ADA Compliant Ramp
- Not ADA Compliant Ramp
- Ramp Does not Exist
- Replacement Required (multiple defects)

A photo inventory of each of these categories starts on p.8.

Findings
Total summary of defects and breakdown of quantities are listed below. In total 5,861 linear feet of defects were identified along the city’s existing sidewalks. While sidewalks vary in width depending on their location we assumed an average of 5’ width to calculate quantities and cost. The estimated total cost for needed repairs to the existing sidewalk system is $175,830. This number is based on an average cost of $6.00 per square foot. We know that some areas will likely cost more to repair due to issues currently not identified, such as, property acquisition, the difference in cost to replace/repair brick sidewalks, slope and cross slope, retaining walls, tree removal, storm sewer, utility relocation, and sprinklers for example. It also does not address ADA ramp issues. Therefore, this estimate should be viewed as a starting point planning level cost that will increase as the engineering work for these repairs is completed.

The inventory process identified locations where sidewalks were never constructed (either one side or both sides of the street) or long stretches where sidewalk currently does not exist. The total linear feet of missing sidewalk is 185,145 linear feet or 35.1 miles (see map on p.4). The estimated

<table>
<thead>
<tr>
<th>Sidewalk Defect</th>
<th>Linear Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement Required (multiple defects)</td>
<td>2,225</td>
</tr>
<tr>
<td>Vertical Deflection less than or equal to 1&quot;</td>
<td>479</td>
</tr>
<tr>
<td>Vertical Deflection more than 1&quot;</td>
<td>789</td>
</tr>
<tr>
<td>Horizontal Gap</td>
<td>30</td>
</tr>
<tr>
<td>Tree Roots</td>
<td>N/A</td>
</tr>
<tr>
<td>Cross Slope</td>
<td>35</td>
</tr>
<tr>
<td>Brick Reset*</td>
<td>2,249</td>
</tr>
<tr>
<td>Manhole</td>
<td>54</td>
</tr>
<tr>
<td>Total Linear Feet of Defects</td>
<td>5,861</td>
</tr>
<tr>
<td>Existing Linear Feet of Sidewalk</td>
<td>83,281</td>
</tr>
<tr>
<td>% of Existing Sidewalk Defective</td>
<td>7.04%</td>
</tr>
<tr>
<td>Missing Sidewalk</td>
<td>185,145</td>
</tr>
</tbody>
</table>

* Construction costs would be calculated differently.
cost to place sidewalk on both sides of all streets in these locations based on an average of 5’ width is $5,730,180. Existing Sidewalk segments were also mapped (see map on p.5).

The visual inventory identified 310 ADA ramps in total, 144 are currently ADA compliant, 166 are not ADA complaint and another 615 corners were identified as having no ramp. The average cost to place an ADA ramp is approximately $800. This does not account for any property acquisition, slope issues, retaining wall or realignment. Given the inventory (see map on p.6) we have estimated 781 locations for an approximate cost for repairs/construction of ramps at $624,800.

Including all three of these areas of sidewalk repair and/or construction the estimated cost today to create a complete sidewalk system in Eudora is $6,354,980. Of that total the amount needed to repair existing sidewalks and provide or upgrade ramps where needed is only $308,630 (166 ramps at $800 each plus $175,830 repair costs for existing defects).

Some of the fixes to improve pedestrian access include clearing brush and/or tree growth from the space over the sidewalk. These defects (see map on p.7) will vary from season to season, but for the 2015 spring/summer seasons, landscaping maintenance should be explored as cheap solutions to clean up the pedestrian environment. These expenses are not included in the estimates above.

**Next Steps**

Eudora cannot fund that entire $6.5 million cost in one year. However, this information does provide a basis for the city to plan and prioritize its sidewalk improvements so that some work can be accomplished each year towards the goal of providing a pedestrian facility network throughout the city.

Sidewalk work can be organized from year to year in various ways (around neighborhoods or zones, along corridors connecting important sites in town, based on the defect type and severity, complaint driven prioritization, etc.), and each method to how you organize and schedule sidewalk work has its own pros and costs and cost impacts. The project and scheduling details will need to be decided later. Eudora officials should review this sidewalk inventory, acknowledge the magnitude of the sidewalk needs, and after public discussion make a decision to improve its sidewalk network as feasible.
2014 Eudora Sidewalk Inventory – Tree or Brush Clearance

Date: 1/7/2015

The map is intended to provide a visual representation of existing conditions or requirements. The user should consult the original data sources or the project manager for the most current and accurate information. This map is not to scale.

1 inch = 1,472 feet

[Map of Eudora with markings for schools, tree or brush clearance, and parks.]

0.5 Miles

N 1200 Rd

W 28th St

W 20th St

E 22nd St

N 1300 Rd

N 1420 Rd

E 208 Rd

N 1200 Rd

E 2100 Rd

W 14th St

Chester St

10th St

Helm St

Main St

13th St

Oak St

11th St

White St

14th St

W 12th St

E 12th St

W 11th St

E 11th St

W 10th St

E 10th St

W 9th St

E 9th St

W 8th St

E 8th St

W 7th St

E 7th St

W 6th St

E 6th St

N 1420 Rd

E 208 Rd

N 1200 Rd

E 2100 Rd

W 14th St

Chester St

10th St

Helm St

Main St

13th St

Oak St

11th St

White St

14th St

W 12th St

E 12th St

W 11th St

E 11th St

W 10th St

E 10th St

W 9th St

E 9th St

W 8th St

E 8th St

W 7th St

E 7th St

W 6th St

E 6th St

N 1420 Rd

E 208 Rd

N 1200 Rd

E 2100 Rd

W 14th St

Chester St

10th St

Helm St

Main St

13th St

Oak St

11th St

White St

14th St

W 12th St

E 12th St

W 11th St

E 11th St

W 10th St

E 10th St

W 9th St

E 9th St

W 8th St

E 8th St

W 7th St

E 7th St

W 6th St

E 6th St
2014 Sidewalk Inventory—Photo Guide

The Sidewalk Inventory Tool was developed by the City of Lawrence in 2014 to update the sidewalk inventory for budget purposes. The City of Lawrence has an extensive pedestrian network consisting primarily of sidewalks, Shared use paths (both within road right-of-way and in off-road corridors), and recreational trails. This GIS inventory data was collected based on the visual observations during the field assessment of the built environment related to the following categories:

- Vertical Deflection less than or equal to 1"
- Vertical Deflection more than 1"
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- Missing Sidewalk
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- Ramp Does not Exist

The following pages are a photo inventory picturing examples of each of the categories used in the identification process found in Douglas County.

Vertical Deflection more than 1”
Vertical Deflection less than or equal to 1"

Tree Roots
2014 Sidewalk Inventory—Photo Guide

Cross Slope

Brick Reset Required?

Yes!

Yes!

Yes!

No!
Manhole

Horizontal Gap
End of Sidewalk

Missing Sidewalk

ADA Compliant Ramp
2014 Sidewalk Inventory—Photo Guide

Not ADA Compliant Ramp

Ramp Does not Exist