



Legislation Details (With Text)

File #: ID-455-17 **Version:** 1 **Name:**
Type: Informational Report **Status:** Agenda Ready
File created: 11/19/2017 **In control:** City Council
On agenda: 11/28/2017 **Final action:**
Title: Alley Assessment Study
Sponsors:
Indexes:
Code sections:
Attachments: 1. Appendix B - Overall Condition Classifications Map.pdf, 2. Appendix C - Drainage Condition Classifications Map.pdf, 3. Core Area Alleys 2016.jpg

Date	Ver.	Action By	Action	Result
------	------	-----------	--------	--------

Department of Streets & Fleet

Reference: Alley Assessment Study

To: Mayor Richard N. McLean and Members of City Council

Through: Philip Rodriguez, City Manager

Prepared By: Christopher Montoya, Streets Engineer

Through: Kimberly Dall, Director of Streets and Fleet

Date Prepared: November 19, 2017

PURPOSE

Provide City Council with the findings from the Alley Assessment Study including surface condition and drainage condition assessments and a proposed action plan.

BACKGROUND AND PROCESS

HDR, Inc. was selected through a competitive formal bid process to perform an assessment of the core area public alleys within the City of Brighton. The purpose of the study was to evaluate and document the existing conditions of the alleys and identify strategies for best management of alleys as an asset. The study provides recommendations for maintenance and repair options and a high level overview of construction costs associated with those recommendations.

An overall condition assessment of the alleys was performed between February and August 2017 and stored into a Geographic Information System (GIS) database. This information included: observed deficiencies in alley surfacing, drainage issues, alley geometrics, obstructions and other hazards, and information such as right-of-way, location of utility infrastructure, and maintenance requests. Each alley was then assigned an overall rating for surface and drainage conditions based on the alleys characteristics and grouped into the following classifications:

Overall Surface Condition Assessment Classifications

- No Improvements Required
- Non-Significant Repairs Needed

- Potentially Substantial or Significant Repairs Needed
- Substantial or Significant Repairs Needed

Drainage Condition Assessment Classifications

- No Drainage Issues
- Minor Drainage Issues
- Significant Drainage Issues

A break-out of the results from the overall condition assessment of the alleys is provided in the figures below:

Figure 1. Overall Surface Condition Assessment Classification Results

Figure 1. Overall Condition Assessment Classification Results

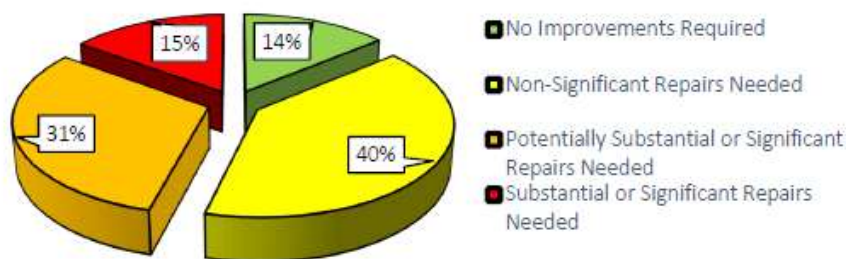
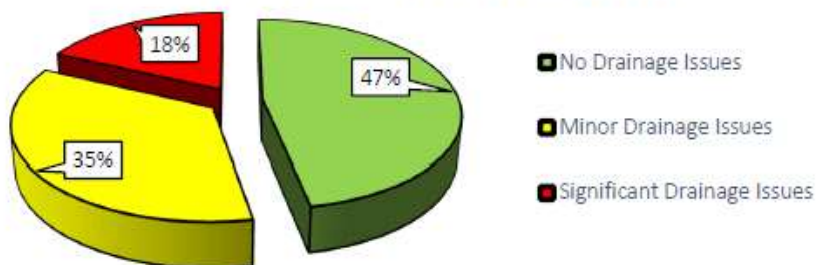


Figure 2. Drainage Condition Assessment Classification Results

Figure 2. Drainage Condition Assessment Classification Results



The results of the study identified categorical classifications of each alley identifying the specific deficiencies overall and drainage deficiencies separately, which is displayed in summary on the attached maps. Currently, over 50% of the alleys are not in need of any significant repairs or improvements. About 20% of the alleys display a need for significant drainage improvements, which is one of the most costly improvements.

REPAIR AND MAINTENANCE RECOMMENDATIONS

Repair and maintenance recommendations range from design and reconstruction to routine maintenance. Alleys, like any infrastructure asset, deteriorate over time; applying a strategy of addressing the more critical alleys first will reduce the overall repair costs by avoiding more costly remedies. Based on that strategy, three

priority groups were established for the alleys. Recommendation for each group are summarized as follows:

- Priority 1 alleys require surface reconstruction and consideration to drainage, including design and construction to correct drainage.
- Priority 2 maintenance and repair activities focus on preventing deterioration with spot repairs and identifying future major repair or reconstruction needs.
- Priority 3 activities include regular maintenance activities such as grading and leveling that preserve the condition of the alley.

It is important to note that the work programming for the alleys will address all three priority groups simultaneously; the focus will be to retain the alleys in good condition and target activities to increase the conditions of the other alleys.

FINANCIAL CONSIDERATIONS

Alley improvements are separated into two primary categories of surface treatment improvements and drainage improvements; surface treatments tend to be far less costly than drainage improvements as a result of the design and materials necessary.

The Streets and Fleet Department has taken an approach of preserving assets through ensuring high quality infrastructure conditions are sustained with routine maintenance, performing spot repairs to mitigate accelerated asset deterioration and depreciation, and evaluating innovative methods of infrastructure preservation. The department has developed a program to implement and evaluate new surface treatment methods that will consist of the following:

- Chip Seal Surfacing
- Gravel Reconstruction with Binders
- Recycled Asphalt Reconstruction

These surfacing options will be evaluated for durability, ease of application, and drainage impacts. Alleys with asphalt surfacing will also be included in the analysis. Surfacing an alley with hot mix asphalt is approximately three times the cost of surfacing with alternatives mentioned above; selecting the least costly yet still effective surface treatment will ensure no greater or lesser funding is expended to preserve the asset.

Alleys requiring drainage improvements will be evaluated independently since the drainage characteristics and improvements are unique to the conditions and location of the alley. The drainage improvements will require engineering analysis, design, and construction documents for formal bid. These costs are anticipated to be substantially higher than surface improvements and would be programmed in the multiyear capital plans.

ATTACHMENTS

1. Surface Condition Map
2. Drainage Condition Map
3. Core Alley Surface Map