



TO: City Council

FROM: City Manager and Staff

COUNCIL MEETING DATE: 11/7/2011

Source:

Public Works

RE: Brick Street Renovation (CM # 3295)

City Fiscal Impact

Enter all that apply:

0	City's current net FY cost.
0	Amount of funds already appropriated.
0	Amount of budget amendment needed.
Estimated 2 year net costs:	
0	One Time.
0	Operating / Ongoing

Program Impact

N	New program/agency (Y/N)
N	Duplicates/expands an existing program (Y/N)
N	Fiscal impact on any local political subdivision (Y/N).

Resources Required

N	Requires add'l FTE personnel? (Y/N)
N	Requires additional facilities? (Y/N)
N	Requires additional capital equipment? (Y/N).

Mandates

N	Federal or state mandated? (Y/N)
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Vision Implementation Impact

Enter all that apply:

Refer to website:

EXECUTIVE SUMMARY:

Staff has prepared for Council consideration a report concerning the viability of brick streets.

FISCAL IMPACT:

None with this report.

VISION IMPACT:

None

<http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php>

SUGGESTED COUNCIL ACTIONS:

For information only.

N Item	Vision Impact? (Y/N or if N, go no further)
# Item	Primary Vision, Strategy and/or Goal Item#
# Task	Secondary Vision, Strategy and/or Goal Item #.
#	Fiscal Year Implementation Task#.

DISCUSSION:

At the March 21, 2011 council meeting, council requested a staff report indicating the cost of rehabilitating the existing brick street versus the installation and maintenance of a concrete street.

Background Information

Many streets in the downtown area were initially paved with brick pavers with concrete curbs in the early 1900's. A large portion of the brick paver streets were overlaid with asphalt in the mid 1960's. Since that time the asphalt surface has been maintained with periodic chip/sealing and mill & overlay. Some streets in the downtown area were last overlaid in 1994.

Some brick paved streets in the downtown area remain with the bricks exposed. Among these streets are Short Street, portions of Seventh Street, and portions of Cherry Street. Brick pavements in the downtown area are generally in fair condition with various amounts of rutting and uneven surface conditions due mostly to the poor strength of the base under the pavement. This uneven surface condition is also evident on some of the brick paved streets that have been overlaid with asphalt. The vehicle loads in the downtown area are considerably heavier than in the early 1900's when the brick pavements were originally placed.

Comparative Costs

This portion of the report presents comparative costs per square yard of street pavement for three options available for future maintenance or renovation of downtown streets. The costs are for the street pavement only and do not include any additional associated projects that could include sidewalk replacement or utility replacement. The costs have been estimated using recent bid prices for city projects in Columbia and other communities in the Midwest that are working on similar issues.

Cost to mill and overlay an existing asphalt overlay on an historic brick paved street.....\$30 per Square Yard

Cost to remove a brick paved street (with or without asphalt overlay) and reconstruct a brick paved street to the correct elevation and grade on an improved base:

Two options are available for reconstructing a brick paved street. One option is to use historic pavers; the other is to use modern pavers. There are pros and cons to each option. The cost is slightly higher for using historic pavers, due mostly to the availability of the historic pavers and the need to place all pavers by hand. Additional pavers are needed since many of the existing pavers are broken. With modern pavers the option exists to place pavers mechanically which can save labor costs. Both types of pavers need to be placed on a suitable base which in the downtown area is a concrete base pavement due to the vehicle loads and the proximity of underground utility and service connections.

Using historic pavers..... \$190 per Square Yard

Using modern Pavers.....\$165 per Square Yard

Cost to remove a street (any material) and replace with a Portland Cement Concrete street..... \$95 per Square Yard

Summary

From the above tabulated costs it can be seen that the different options have vastly different costs, additionally, options have different levels of disruption to the street use during the time needed to pursue the option. Overlay is a fairly rapid project usually taking place over several days depending on the street length, where a major removal and reconstruction project will take several months to an entire construction season.

An additional cost has been estimated for the cost per square yard to remove and salvage sound historic pavers for future maintenance use. This cost has been tabulated to help guide the decision whether to salvage and store sound brick pavers when they are removed from the Right of Way during construction and utility work. The salvaged pavers could be used in maintenance activities on existing exposed brick streets. Historic brick pavers are available at various locations and the price ranges from \$1.00 to 2.00 per each. There could also be shipping charges depending on the location of the source.

The cost to sort and place sound useable brick pavers on pallets is primarily labor and shipping to a storage location. The cost is estimated to be \$8.00 per square yard of pavement being removed. An audit of the existing brick pavements on Short Street and Seventh Street indicates that approximately 60% of the bricks are sound and re-useable. This is expected to yield 19 sound and re-useable pavers per square yard of pavement removed. This works out to a per paver price of \$0.40 each.