



Mobility & Infrastructure Committee Memorandum

City of Arts & Innovation

TO: MOBILITY & INFRASTRUCTURE COMMITTEE DATE: MAY 11, 2023
FROM: PUBLIC WORKS DEPARTMENT WARDS: ALL
SUBJECT: PAVEMENT TRENCH CUT FEE STUDY – DIRECT SUBMITTAL

ISSUE:

Consideration of a Pavement Trench Cut Fee Study to assess and quantify damage caused by trench and utility cuts in the public right-of-way and consider a fee schedule to recover costs associated with the respective damage.

RECOMMENDATION:

That the Mobility & Infrastructure Committee recommend that the City Council approve a Pavement Trench Cut Fee Study to assess damage caused by trenching in the roadway and sidewalk associated with development and utility work to consider adopting a fee schedule to recover costs from such damage.

BACKGROUND:

The Public Works Department has adopted a Pavement Management Program, extended the paving moratorium from three to five years, recommends paving and restorative projects utilizing specialized software, developed a GIS Paving Map to identify planned and recently completed paving projects, and pursues grant opportunities to improve the condition of City streets. In addition, staff assess truck traffic volumes and cut-through traffic concerns to recommend adoption of 4 or more axle-restrictions to encourage trucks and heavy vehicles to remain on local freeways to minimize damage on the City's roadway network. The City's Pavement Management Program budget has increased from \$13 million in 2013 to over \$24 million in 2023, and staff continues to consider and pursue programs, materials, and policies to better address roadway repairs and paving needs.

Recently, the Public Works Department partnered with the Public Utilities Department to recommend an on-call services contract to address the backlog of outstanding trench repairs associated with water line repairs and upgrades. The contract specifications and list of locations are being prepared to bid this work later in 2023. Public Works has also contracted with Infrastructure Management Services (IMS) to perform citywide pavement condition surveys to make objective recommendations on paving projects and respective treatments. Collectively, these practices and funding allocations are aimed at improving the quality of life for residents, attracting increased investment in the community, and maximizing the useful life of roads.

DISCUSSION:

Cities such as Austin, Kansas City, Burlington, Cincinnati, Los Angeles, Sacramento, Phoenix, San Francisco, and recently Anaheim have conducted Pavement Trench Cut studies and all have concluded that excavations within roadways degrade, shorten the life, and reduce the Pavement Condition Index (PCI) score of streets even when the excavations are patched and repaired in conformity with adopted standards. Excavations in paved streets can impact the roughness/rideability of the road and place an added burden on the agency to prematurely resurface the street. The City of Riverside maintains over 875 centerline miles of roads and alleys, and it is not practical or feasible to pave roads before they reach their useful life.

Cities have conducted Pavement Trench Cut studies to determine the extent of the damage associated with trench repairs, assess and quantify pavement damage caused by utility cuts, conduct structural and functional damage at various sites with varying PCI classes and pavement ages, and review City trench repair standards and policies. The study may also recommend a fee structure to partially recover actual and direct costs and expenses incurred to maintain, repair, or surface the road to fully mitigate the degradation that excavations cause. As an example, the City of Anaheim adopted the following fee schedule per their study:

Table 1 – City of Anaheim Pavement Trench Cut Fee Schedule

PCI	Fee	
	Trench or Bore Pit (\$/SF)	Pothole (\$/EA)
>65	\$8.40	\$69.30
55 to 65	\$11.60	\$95.70
<55	\$3.60	\$29.70

Increased fees are associated with roads having a PCI between 55 and 65 (Fair to Good) as roads in this PCI range can quickly degrade to a conditional rating of *Poor* and *Very Poor* as illustrated in the graphic below and the cost to repair them drastically increases.

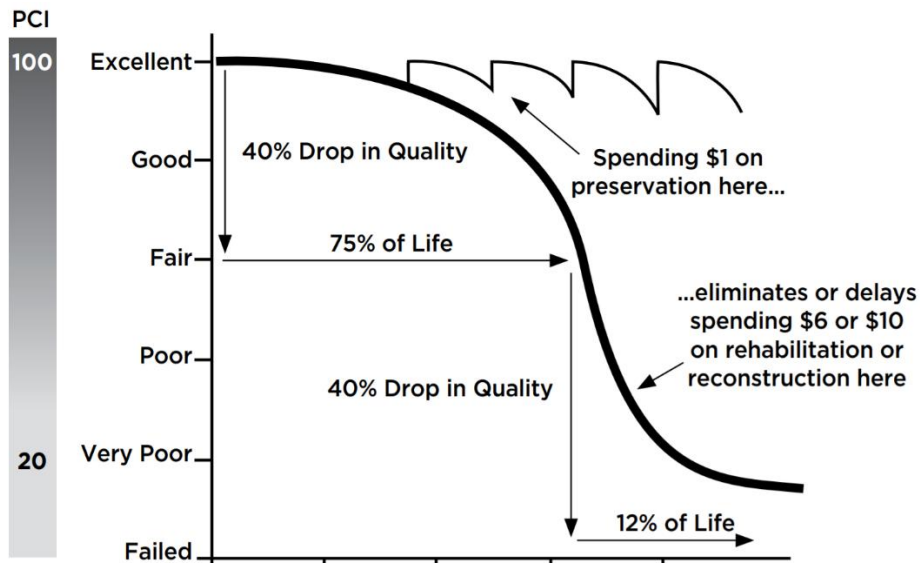


Figure 1: Pavement Degradation Curve

Cities aim to prevent roads from prematurely going into a rating of *Poor* and *Very Poor* as per Figure 1 it can cost six to ten times more to repair. Thus, contractors and utility companies conducting work on streets with a PCI range of 55 to 65 are more likely to have a direct impact on the roadways' useful life. Some of the key findings in Anaheim's study include:

- 65% of test sites exhibited structural damage in the cut or zone of influence
- 45% of test sites needed an average additional overlay thickness of 3.1 inches in the cut zone of influence to compensate for structural damage
- On average, the PCI of sections with utility cuts was 20 points lower than those without cuts
- The average reduction in service life due to cuts was 21.3%
- Pavement with higher PCIs experience more functional damage than pavements with lower PCIs

Staff have prepared a GIS Paving Map that allows developer and utility companies the opportunity to assess planned paving projects to coordinate street work and minimize trench repairs. Despite the best coordination efforts, utility trenching cannot always be avoided and unanticipated work is often required to maintain essential public services. Staff recognizes that trench repairs and utility work will continue to occur but a system that balances impacts and costs is needed to better accommodate companies while helping preserve City streets.

The Public Works Department would like to seek proposals to conduct a Pavement Trench Cut study to assess and quantify pavement damage caused by roadway trenches and develop a fee schedule to recover costs associated with this damage. The fees collected would go toward the support of the Pavement Management Program and would only be assessed on companies and developers trenching on City streets. The study may also help the Public Works Department consider policies and/or standard drawings to help preserve infrastructure.

STRATEGIC PLAN ALIGNMENT:

This item contributes to **Strategic Priority No. 6 Infrastructure, Mobility and Connectivity** and **Goal No. 6.2** – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – The proposed study aligns with the City's goals to improve the roadway network and quality of life for residents and visitors. The Public Works Department (Public Works) has provided numerous presentations to the City Council, Transportation Committee, and Budget Engagement Commission as part of the City's Pavement Management Program. This study would make recommendations on policies, practices, and new fee schedule to help preserve and maintain roads.
2. **Equity** – Public Works strives to improve the City's roadway network to provide safe and reliable transportation to all areas of the city. Additionally, staff meets with each City Councilmember to discuss goals, budgets, recommendations for street improvements, and obtain feedback on the requests received from their constituents. This Trench Cut Study would allow the City to make policy and fee schedule recommendations to better maintain city streets.

3. **Fiscal Responsibility** – Public Works responsibly manages a variety of funding sources to complete projects and award consultant contracts to help advance the department’s mission. Public Works is a prudent steward of public funds and staff would form a team to review and score proposals.
4. **Innovation** – Progressive agencies see the benefit in conducting a Pavement Trench Cut Fee study that assesses and quantifies pavement damage caused by utility cuts to develop a fee schedule to offset this damage.
5. **Sustainability & Resiliency** – The Pavement Trench Cut Fee Study would include findings, recommendations, and a preliminary fee schedule to better repair and preserve city streets.

FISCAL IMPACT:

There is no fiscal impact with this report. A trench cut fee would provide additional revenue to the City to offset the degradation of City streets caused by trench cuts. The cost of a trench cut fee study is unknown pending the release of an RFP and receipt of bids.

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Attachment: Presentation