



## CITY COUNCIL MEMORANDUM

**FROM:** The Office of the City Manager   **DATE:** April 24, 2023  
**SUBJECT:** Consider the 2023 Preventive Street Maintenance Program  
**PRESENTER:** Boe Blankenship, Assistant Director of Public Works - Operations

### **SUMMARY:**

The Public Works Department will present the proposed 2023 Preventive Street Maintenance Program based on 2019 Pavement Assessment data. The program is comprised of six types of preventive maintenance techniques ranging in scope from full-depth subgrade stabilization and resurfacing to crack sealing, and incorporates 123 different streets into the program for the 2023 year at an estimated cost of \$2.7 million.

### **GENERAL DESCRIPTION:**

The Preventive Street Maintenance Program was created to invest in proactively maintaining the City's streets to prolong their useful life. Prior to 2019, the priorities were set based on visual staff observations, and had proven successful for a number of years. Following Council approval of a Pavement Assessment project in the 2018/2019 budget, we were able to have the City's roadway network surveyed and assessed using an outside consultant. The assessment project produced a long-term plan of action that if followed, would make better use of available maintenance funds to improve overall condition rating. The overall Pavement Condition Index (PCI) rating ranges from 0 to 100, with 100 being the best condition and 0 being the worst condition. A lower PCI rating indicates a poorer condition of the street and a worse ride quality.

The proposed 2023 Program is a single-year program, incorporating the fifth year of recommendations from the 2019 Pavement Assessment project. The list of streets being recommended for each of the six different techniques along with location maps is included for reference. Streets are selected for inclusion in the program if their condition falls within ranges specific to each maintenance technique. As a general rule, the pavement assessment report considers a PCI rating of 40 as the minimum appropriate condition for maintenance techniques. While this is a single-year program, the scope of work is roughly twice that of our recent single-year programs due to an increased funding allocation. As a result, the streets chosen for inclusion go beyond the original fifth-year recommendations, extending into years six and seven.

The six types of preventive maintenance techniques include the three that staff has utilized for several years (Crack Seal, Slurry Seal and 2" Overlay) along with three

newer techniques. Two of the newer techniques are a result of staff recommending preventive maintenance on some concrete streets in addition to the asphalt streets. We started including concrete streets in the program in 2019/2020. All six techniques are summarized below:

Asphalt Streets:

1. Crack Seal – This is the technique where the large cracks in the pavement are sealed in order to prevent water and debris from getting to the subgrade. This extends the longevity of the pavement.
2. Slurry Seal – This is an application of asphalt and very small aggregate that is used to seal the fine cracks in the pavement. This process covers the entire surface of the roadway and is used for less traveled streets such as residential streets.
3. Micro Surfacing – This is a newer technique. It is similar to a Slurry Seal except the asphalt application consists of material that is more durable and will hold up on more traveled roadways such as collector streets.
4. 2" Asphalt Overlay – This technique is used to apply a new 2" thick asphalt surface over the existing pavement.

Concrete Streets:

5. Crack Seal – This technique serves the same purpose as the Crack Seal for asphalt streets but it is a different material and needs to be applied somewhat differently.
6. Partial Pavement Replacement – This technique involves replacing bad areas of concrete pavement. The size of the area replaced can range in size from a few square feet to a few panels.

Additionally, this year's program includes the rehabilitation of Sunset Road from Mid-Cities Boulevard to Rufe Snow Drive to be completed in partnership with Tarrant County Precinct #3. The City's Preventive Street Maintenance Program has utilized the Tarrant County's paving services through interlocal agreements on one or more streets per year since 2011. This partnership with Tarrant County has been successful for several years. Recent cooperative programs include streets like Onyx Drive South, Meadow Road, and Susan Lee Lane.

Staff presented this year's program to the Capital Improvement Projects (CIP) Committee on Monday, April 10, 2023 and the committee recommended it's approval.

Funding for this year's program is available in the FY 2022/23 Adopted Budget.



Exhibits of Streets Recommended for the Preventive Street Maintenance Program

- Asphalt Crack Seal (List & Map)
- Asphalt Slurry Seal (List & Map)
- Asphalt Microsurface (List & Map)
- Asphalt Overlay (List & Map)
- Concrete Crack Seal (List & Map)
- Concrete Partial Pavement (List & Map)

Recommendation:

Approve the 2023 Preventive Street Maintenance Program.