

To the Mayor and Members of the City Council

April 1, 2025

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SUBJECT: PAVEMENT MARKINGS UPDATE

The purpose of this Informal Report is to provide an update on the maintenance of the pavement markings program and material life span in the City of Fort Worth.

The Transportation and Public Works Department, Transportation Management Division (TM), is responsible for maintaining 8.7 million linear feet of pavement markings throughout the City. The TM Division’s goal is to restripe an average of 2.9 million linear feet of pavement markings annually (a 3-year life cycle started in FY 2023) using in-house staff and contractors.

Pavement markings are installed when the minimum air and pavement surface temperature is above 55°F. Markings are not installed when moisture is present because it will have a negative effect on the bond formed between the pavement marking and the pavement surface. Therefore, the majority of pavement marking installation occurs in warmer months.

Pavement Markings Program Update:

Year	Linear Feet Installed	Budget
FY 2023	2.00 million linear feet	\$8.8 million
FY 2024	2.92 million linear feet	\$10.4 million
FY 2025	0.86 million linear feet as of January 2025	\$10.8 million

Pavement Marking Material Characteristics:

Thermoplastic: The majority of the City’s pavement markings are thermoplastic materials and reflectors. These materials are durable and have a lifespan of 3 to 4 years, depending on traffic volumes, pavement conditions, and other environmental factors. Because of the thermal bonding characteristics between thermoplastic and asphalt, nearly all thermoplastic materials are well suited for application on new Hot Mixed Asphalt surfaces. Not all thermoplastic materials have been shown to provide suitable durability on concrete surfaces. The average cost of the thermoplastic material is \$0.73/LF. This does not include mobilization, removal, and installation.

Preformed: Preformed material is used for contrast crosswalks, arrows, and railroad legends. The material can last up to 4 years. Preformed tapes do not require expensive application equipment or experienced operators to place, and require no drying or curing times. Preformed tapes are highly durable and abrasion-resistant in most applications. Because of their high installation costs and slow application procedure, they are often used only in locations with the most severe traffic conditions that require frequent replacement of standard pavement markings. Preformed material is used for all crosswalks in the City. The preformed material cost varies for crosswalks, arrows, and railroad legends. The cost ranges from \$250.00 to \$885.00 for each item.

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3M Material: 3M Stamark tape consists of abrasion-resistant zirconia-enriched optical beads bonded in a highly durable polyurethane topcoat and is known for its durability, lasting retro-reflectivity and long-term value. The 3M material can last 8 to 10 years but is roughly 10 times the cost of thermoplastic. The 3M Stamark material was used in a FY23 pilot project on Hulen Street from the Bellaire Drive Bridge to West Vickery Boulevard. The material has performed well. The average cost for 3M material is \$6.43/LF. This does not include mobilization, removal, and installation.

Multipolymer (Epoxy): Multipolymer is a two-component epoxy with exceptional durability on asphalt and concrete surfaces and is less sensitive to application factors. Epoxies often take much longer to dry than other pavement marking materials and have a 3 to 4 years of service life based on traffic volumes. Multipolymers were primarily used in FY22 and FY23. Special installation equipment requirements have limited the City's contractor's ability to install Multipolymer. The multipolymer pavement markings were installed on Basswood Boulevard from Blue Mound Road to IH-35 during FY23 and have performed well. The average cost for multipolymer material is \$1.93/LF. This does not include mobilization, removal, and installation.

Methyl Methacrylate (MMA): MMA pavement marking material does not rely on the addition of heat to cure and is therefore an option during the colder times of the year but does require specialty application equipment. The material can last up to 5 years on asphalt, concrete, and surface treatments. MMA is often used to delineate bike lanes, bus lanes, or other specialty applications requiring durable markings. The cost of MMA is similar to thermoplastic and epoxy materials. MMA pavement markings were installed in September 2024 on the South Jones Street Bus Lane. The material has performed well. The average cost for MMA is \$13.80/LF. This does not include mobilization, removal, and installation.

Due to the low material cost and suitable durability, thermoplastic is the primary material used for pavement markings within the City of Fort Worth.

If you have any questions, please contact Martin Phillips, Transportation and Public Works Assistant Director, by e-mail to martin.phillips@fortworthtexas.gov.

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