



City of Denton

City Hall
215 E. McKinney Street
Denton, Texas
www.cityofdenton.com

AGENDA INFORMATION SHEET

DEPARTMENT: Capital Projects

CM/ DCM/ ACM: Mario Canizares

DATE: March 21, 2018

SUBJECT

Receive a report, and hold a discussion regarding Pavement Art and its use as a Traffic Calming technique.

BACKGROUND

During the January 2018 Mobility Committee Meeting, staff was asked to present information on "Traffic Calming Art". As such, staff researched the use of pavement art in slowing traffic on residential streets. The findings of this research are presented below.

Typically, the pavement art creates a 3-Dimensional (3-D) object which can be seen by motorists traveling along the street. Based on their initial perception, the driver tends to slow down but once vehicle reaches within a specific distance the object flattens out and the vehicles travels over the pavement art. It is a low cost traffic calming alternative. The primary goal of reducing speed (traffic calming) is typically achieved by the surprise element of the pavement art. Once this surprise element is lost (motorist that use the same road everyday), the traffic calming effect of the pavement art reduces considerably. Pavement are (3-D) art can become an effective tool initially for reducing speed and later for educating citizens/residents. Even after drivers catch on to them, they can have long-term value as a reminder that slower speeds help prevent accidents and injuries.

The use of pavement art in traffic calming is not uncommon in Europe, but has only been implemented in a few Cities in the nation. As such, the effectiveness of pavement art in traffic calming is not extensively studied and/or documented. There is one study in Philadelphia which documented the effectiveness of 3-d pavement art. According to the study, drivers along a segment of a two-lane road, often used it as a neighborhood shortcut. Before installation of 3-D pavement art the average speed of vehicles traveling along this segment was 38 miles per hour (mph), which was 13 mph above the posted speed limit. A month later, after the implementation of the 3-D pavement art that figure had dropped to 23 mph during the first couple of weeks.

The cost for installation of pavement art varies and could range between \$500 to a couple of thousand depending on the scope of the project. Given the north Texas weather, typically (paint) pavement markings have a very short life span and need to be replaced every two years. Hence, such type of 3-D pavement art should be installed as a one-time temporary installation for traffic calming and promote (educate) slower speeds in residential neighborhoods.

As more and more cities experiment with the pavement art and its application in traffic calming and crosswalk treatments, Federal Highway Administration (FHWA) has issued an official ruling regarding the application of colored pavement. This ruling concludes that if colored pavement is used to regulate,

warn, or guide traffic or otherwise attempts to communicate with the roadway user, the colored pavement constitutes a traffic control device. Current federal guidelines limit the use of colored pavement used as a traffic control device to the colors yellow and white with interim approval of green for bicycle facilities. All other colors for use on highway pavement in the right-of-way are either disallowed or are experimental as described above, unless the colored pavement is a purely aesthetic treatment and makes no discernible attempt to communicate with a roadway user.

RECOMMENDATION

This is a discussion item. There are no recommendations.

STRATEGIC PLAN RELATIONSHIP

The City of Denton's Strategic Plan is an action-oriented road map that will help the City achieve its vision. The foundation for the plan is the five long-term Key Focus Areas (KFA): Organizational Excellence; Public Infrastructure; Economic Development; Safe, Livable, and Family-Friendly Community; and Sustainability and Environmental Stewardship. While individual items may support multiple KFAs, this specific City Council agenda item contributes most directly to the following KFA and goal:

Related Key Focus Area: Safe, Liveable & Family-Friendly Community

Related Goal: 2.2 Enhance connectivity and seek solutions to improve mobility

EXHIBITS

1. Agenda Information Sheet
2. Presentation

Prepared by:

Pritam Deshmukh

Senior Engineer – Traffic