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Governor


**COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET**


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**FROM:** Jeff Wolfe, P.E.   
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**DATE:** April 3, 2019

**SUBJECT:** Pavement Markings on the State Primary Road System

The Kentucky Transportation Cabinet continues to look for ways to improve our pavement marking system. Durable pavement markings (thermoplastic and Type I Tape) were more commonly used by the Cabinet in past decades; however, their use has decreased over the years due to the low costs associated with restriping of painted lines.

Based on research conducted by the Kentucky Transportation Center, expanded use of more durable pavement markings appears to be justified. While the cost of initial installation of thermoplastic markings is greater than the costs for waterborne paint, life cycle costs are comparable when one takes into account the longevity of the durable line. In addition, the higher profile of thermoplastic lines can provide enhanced performance in wet conditions.

Likewise, there is significant national research identifying the improved performance of six-inch striping versus four-inch striping. It seems clear that expanded use of wider striping is another way that the Cabinet can enhance our pavement marking system.

With this in mind, the Cabinet's pavement marking policy is hereby modified as follows:

**NORMAL WIDTH:**

Striping on the State Primary Road System (SPRS) shall have a normal width of six (6) inches.



## Pavement Markings on SPRS

### **MATERIALS:**

Permanent striping on new surfaces for highways on the State Primary Road System shall be installed using durable pavement marking materials with thermoplastic on asphalt pavements and Type I Tape on concrete surfaces. Material specifications for these materials can be found in Section 836 (Durable Preformed Pavement Markings Type I Tape) and 837 (Extruded Thermoplastic Pavement Marking Materials) of the Standard Specifications.

The use of thermoplastic and Type I Tape is intended for SPRS projects involving a significant length of new surface that is suitable for installation of such markings. While not considered a durable pavement marking material as part of this policy, high-build waterborne paint may still be used on the State Primary Road System when it is the most economical approach in the short-term, such as short sections of repaired roadways or striping on roadways that will be resurfaced in the near future.

### **CONSTRUCTION:**

Unless otherwise directed by the Project Engineer, installations shall conform to Section 714 of the Standard Specifications. Contrary to the Standard Specifications, spray or ribbon applied thermoplastic is recommended for any lines placed within a rumble strip.

### **APPROVAL FOR NON-STANDARD PAVEMENT MARKING APPLICATIONS:**

The use of six-inch striping and/or thermoplastic and Type I Tape on highways that are not on the State Primary Road System shall require the approval of the Division of Traffic Operations. In addition, the approval of the Division of Traffic Operations shall be required for the use of all-weather and/or grooved markings on any highway. Requests to use such pavement markings shall be forwarded to the Division of Traffic Operations for consideration.

The use of paint, instead of thermoplastic or Type I Tape, on projects involving a significant length of new surface on the State Primary Road System shall require the approval of the State Highway Engineer's office.

There is no deadline for upgrading to thermoplastic or Type I Tape on the State Primary Road System. These materials shall normally be installed as roadways are resurfaced or rehabilitated. Decisions about whether to install more durable markings on existing pavements should be based on engineering judgment and available funding. When making such decisions, thermoplastic lines should not be considered unless they are expected to last at least 4 years, as this is the service life where thermoplastic is comparable in price to durable paint. In addition, thermoplastic markings are more suitable for relatively new pavements with a single application of paint as they can be directly applied over the existing striping. Roadways with more layers of paint would likely require striping removal to facilitate the application of thermoplastic material, which would impact the installation costs and required life to justify installation of thermoplastic lines. Scheduled/pending preventive maintenance activities may also impact a District's decision to retroactively install thermoplastic lines if the maintenance activities would negatively impact the striping.

Markings on older SPRS pavements where durable markings will not be immediately installed shall be maintained with durable waterborne paint. However, any roadways on the State Primary Road System with four (4) inch striping shall be converted to six (6) inch striping as your restriping schedule allows. Please note that this modification will expand the use of six-inch striping to more highways. Previous

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policy had limited the use of six-inch lines to interstates and parkways.

This revised policy is effective with the June 21<sup>st</sup>, 2019 letting, but it may also be applied to projects let prior to this date if reasonable based on the project development or construction schedule. Please note that the use of durable/wider markings makes it even more critical to maintain an offset (2" minimum) between longitudinal pavement joints and lane lines to facilitate preventive maintenance without damaging long line striping.

These changes will be included in a forthcoming rewrite of the Markings chapter of the Traffic Operations Guidance Manual. This rewrite will be completed pending the consideration of other pavement marking modifications along the rest of the state maintained system. As a result, you are likely to see additional changes to pavement marking policy in the coming months.

If you have any questions regarding this information, please contact the Division of Traffic Operations.

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