

5230202 PATTERNED PAVEMENT
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Gerry Oliver
(704) 996-7248
gerry@patternpaving.com

Comments: (10-21-19, Industry)

Can you please elaborate on durability issues? We were getting ready to send off a green color sample for approval of our FrictionPave Product.

Response: (11-19-2019) Per this revision, no new products for green-colored pavement markings will be added to the APL for Section 523.

Gerry Oliver
(704) 996-7248
gerry@patternpaving.com

Comments: (11-7-19, Industry)

Hello Ed, Based on the short notice of the proposed specification change to 5230202, I am requesting an extension of the November 14, 2019 deadline for comments to December 14, 2019. The fact that the manufacturers of 523 products did not receive a copy of the Forensic Investigation on Green Bike Lanes for more than a year and a half after it was produced, I feel we need more time to discuss the mode of failure with the department. Is there not a department protocol in place to ensure that reports like these are presented to the manufactures to allow time to review and discuss? Thanks, Gerry Oliver

Response: (11-19-2019) For questions related to vendors and the APL, please contact Product Evaluation.

Tiffany Albright
(317) 441-4981
t.albright@pavewaysystems.com

Comments: (11-14-19, Industry)

While I appreciate the initial investigation the Department has completed to assess the issue at hand, the report provided by the Department has failed to provide sufficient evidence to indicate a problem with all APL 523 products. According to the forensic report provided, this situation is isolated to one product on the APL. Please also note, Street Brick XL as well as other "Epoxy" based systems had the status of Approved for Bike Lane Use removed in June of 2019. While I cannot speak for other manufactures, this removal came without warning or proper discussion regarding the matter. When this change was implemented, I received the following excerpted from a message from the Department the same day that that the change went into effect. The Florida Department of Transportation (FDOT) has been investigating problem related to Green Bike Lane product installations. The inspections identified locations exhibiting significant distress relating to premature cracking of green bike lane materials on new asphalt overlay applications. It has been determined that 91% of the Epoxy projects evaluated displayed thermal cracking, and damage to both roadway substrate and green bike lane material. Other distresses noted include surface wear, color variations, and color loss with regards to sunlight and traffic. Based on roadway damage identified in this report, FDOT has decided that all use of epoxy

based products for Green Bike Lane will be terminated until further notice. Unfortunately, all of the facts for this change in June and the current industry review do not appear to be supported by the forensic report we received on November 4th, 2019. I would agree that the time frame for comments and a determination should be extended at the very least, as the manufactures do not appear to have all of the information to make fully informed comments. For example, it was noted in a department email that asphalt had to be replaced in certain conditions. I believe it would be beneficial for everyone to better understand how this replacement requirement occurred as well as the documented basis for that determination. According to the following statement directly from the forensic report, there is no damage to the asphalt surface as a result of the product installed which contradicts the understanding that asphalt needed to be replaced. "Cracking observations from cores showed that the cracks were initiated at the green epoxy overlay and didn't propagate into the asphalt layer to any visually identifiable degree. Figure 7 shows a typical field core picture of a cracked green area. As shown, cracks were limited to the green overlay." Based solely on forensic report findings, the problem would appear to be the result of deficient asphalt which created undue stress on the Street Brick XL and or the result of the product installation process. According to the report the failure problem only exists where there is a deficiency in the asphalt density and it does not exist where the asphalt is within acceptable limits. Furthermore, the application process of Street Brick XL differ in the two areas. Therefore, a determination cannot be made regarding the cause being the product as there is no reference to failure of Street Brick XL when the asphalt is not also deficient. That being said, I struggle with not having conclusive results. Up to this point we have not been provided with the research and results that indicated a 91% failure rate of Epoxy based systems used in bike lanes which could confuse matters further. Again, the research provided is limited to one product. Due to the enormous number of formulating options, generalizing all systems that are epoxy based and on the APL for Spec 523 would be short sighted. The Industry Review has left me with more questions than comments. The memorandum issued by the Department offered recommendations that were not exercised. Why are they not included in the industry review process? Will the recommendations be implemented? What will the implementation process include and how will the manufactures involved be invited to participate and kept informed? In the event there is additional research and reporting available it would be beneficial for it to be provided. In addition, consideration should be given to postponing the current industry review and also give consideration to the inclusion of the reversal of the mandated changes made to the Approved for Bike Lane Use status of the APL 523 products in June until such time that all parties involved can get up to date on the issues at hand. Thank you for the opportunity to provide input.

Response: (11-19-2019) Distress was not limited to a single epoxy-based product. Current asphalt paving requirements will not be changed to accommodate pavement marking products. Due to the anticipated evolving nature of green-colored pavement markings, a Developmental Specification will be used until additional research has been completed.
