

June 8, 2023

Faith Alkhatib, PE
Flagler County Engineer
Flagler County Engineering Department
1769 East Moody Boulevard, Building 2
Bunnell, FL 32110

Subject: SR 100 Pedestrian Overpass Enclosure Sunlight Glare

Dear Mrs. Alkhatib,

On June 4th, 2023, KCA received notice via e-mail there were concerns associated with sunlight glare observed by drivers on SR 100 associated with the newly installed stainless-steel safety enclosure of the Graham Swamp Trail SR 100 Pedestrian Overpass Bridge. Peek glare was reported to occur between approximately 3:30 to 4:15 pm for drivers traveling in the eastbound direction of SR 100.

Simon Hagedoorn of KCA visited the site on June 5th, 2023, to observe glare associated with the newly constructed safety enclosure. Mr. Hagedoorn made passes in his vehicle back and forth throughout the day starting at noon until 4:45 pm. Each pass was from Colbert Lane east of the bridge to Old Kings Road and back on a repeated basis. The intensified glare described by others began to occur at 3:37 pm while traveling in the eastbound direction from Old Kings Road toward the bridge. The sky conditions could be described as slightly cloudy with scattered haze when the glare was observed to intensify at 3:37 pm. Mr. Hagedoorn parked in the median of SR 100 just east of Old Kings Road at this point to make observations of the glare. The intensified glare quickly ended around 4:05 pm. Observations during the period of intensified glare determined the roadway, lane stripes, vehicles traveling eastward toward and under the bridge, constructions workers and terrain adjacent to the bridge remained visible throughout this duration.

County Engineer, Faith Alkhatib, stopped at the bridge at approximately 5:00 pm. I described my observations and notified Mrs. Alkhatib I was planning to return the next day (June 6th) to make additional observations considering the forecast was for completely clear skies.

On June 6th Mr. Hagedoorn returned to the site with Guillermo Madriz (KCA - Vice President) and Christian MacCarroll (HKS Architects). We were joined by Amy Stroger (Flagler County - Project PM). Sky conditions were completely clear throughout the day. We all drove the corridor together back and forth and at around 3:35 pm observed the intensification of the glare. We made observations of the glare from between I-95 on eastbound SR 100 up to the bridge. We were joined by Mrs. Alkhatib at approximately 4:00 pm and continued our observations looking eastward toward the bridge from the median of SR 100. The intensified glare began to dissipate around 4:20 pm. We all discussed our observations. The consensus was that at no time during to the intensified glare period, vehicles traveling eastward toward and under the bridge were inhibited from seeing the roadway, lane striping, nearby pedestrians, the adjacent terrain and other vehicles traveling in front. It was also agreed it may be desirable in addressing

public comments, that treatments for the enclosure to lessen the intensity of sunlight reflection during the period of the day having intensified glare be evaluated.



Traveling Eastbound Toward Bridge during Period of Intensified Glare



Traveling Westbound Toward Bridge during Period of Intensified Glare

KCA spoke with the England - Thims & Miller (ETM) CEI inspector on site to see if a similar occurrence of intensified glare has been occurring in the mornings relative to westbound traffic. Doug Kellum, ETM Inspector, indicated a similar period of intensified glare does occur from approximately 10:30 am to 11:00 am relative for traffic traveling westbound.

In relation to our observations and discussion, KCA and HKS are in the process of evaluating treatments to reduce sunlight reflectivity from the enclosure relative to the times of day having intensified glare that appear to be of concern to the public as noted by social media comments. These treatments include:

- Application of chemicals to accelerate the process of naturally occurring patina of the stainless-steel surfaces by which the glare would lessen.
- Application of painted coatings that would reflect less sunlight.
- The addition of lettered signage which would reduce the area of the stainless-steel enclosure that is generating glare.

Upon evaluation of these potential treatments which can be implemented in a practical manner, KCA will provide with Flagler County with recommendations to be considered as necessary.

Sincerely,



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