

**TRAFFIC SIGNAL SUBCOMMITTEE  
BALTIMORE METROPOLITAN COUNCIL**

**MONDAY, OCTOBER 17, 2016**

**MEETING NOTES**

**USE OF FLASHING RED ARROW – BEFORE/AFTER STUDY**

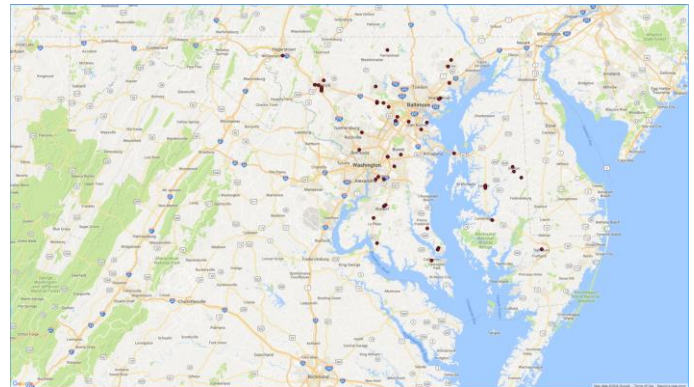
Piotr Rachtan (SHA) provided an update on a study that is being conducted in partnership with UMD. He noted that only Maryland and Delaware use the flashing red arrow (FRA) while most states use the flashing yellow arrow. It has been in use in Maryland since 1989 and is used both as a temporary or permanent solution. Safety on exclusive/permissive (EP) controlled left-turns (LT) is the main reason for using FRA. There are about 60 locations where the FRA is being used – District 7 has the most with 19.

The purpose of the study was to determine the effect of Flashing Red Arrow on crashes. In addition, if the FRA improves one crash pattern but has a negative impact elsewhere.

The study analyzed 11 intersections using a set of screening criteria and crash data availability. The conclusions are as follows:

- Left-turn related and total number of crashes decreased after the FRA treatment
- No change in the number of rear-end crashes
- Gathering a larger sample expected to yield a more statistically convincing argument and allow for CMF development

Moving forward, Piotr noted that Crash Modification Factors for FRA will be developed to systematically model the effect on safety and as the sample size increases, expand the study onto more strictly defined sub-groups of intersections (e.g. previously unsignalized, T-only, effect of number of opposing lanes, etc.). SHA is looking to develop FRA application guidelines in 2017 and release a research paper on this study.



**[Handout: Flashing Red Arrow: Left-turn indication and intersection safety]**

### **MD 140 PILOT CORRIDOR STUDY**

Eileen Singleton (BMC) provided an overview of a new task in the FY 2017 Unified Planning Work Program (UPWP) under operations planning. The purpose of this new task is to identify potential congestion management strategies for corridors that have significant operational issues. Congestion management strategies include items such as:

- geometric improvements
- adaptive traffic signal control and other low-cost operational strategies that could reduce recurring as well as non-recurring congestion
- transportation system management strategies that manage demand and reduce single occupant vehicle usage

Eileen noted that BMC staff, working closely with SHA and local jurisdiction representatives, identified MD 140 from I-695 to the Carroll County line as the pilot corridor under this initiative. Congestion patterns, crash history, projects in the long-range plan and TIP, new developments along the corridor, were behind the selection of this corridor.

Over the next several months, staff will work with team members to scope out the study and bring a consultant on-board to help with the analysis.

***[Handout: Update on New UPWP Operations Task]***

The meeting adjourned around 3:00 PM.

### **ATTENDEES**

Ben Myrick, SHA/OOTS

Breck Jeffers, FHWA

Raj Sharma, Baltimore City DOT

Kris Nebre, Baltimore County DPW

Mike Harrington, Baltimore City DOT

Piotr Rachtan, SHA

Eileen Singleton, BMC

Craig Hinnens, McCain

Nick Driban, STV, Inc.

Eddie Bostic, Century Engineering, Inc.

Ed Stylc, BMC

Bala Akundi, BMC