

## FATAL CRASH REVIEW

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**Location:** MD 355 (Rockville Pike) at Grosvenor Lane  
**Accident Date/Time:** Friday, November 20, 2020 at approximately 5:16 AM  
**Local Case No:** 200045803  
**Police District:** District 2, Bethesda  
**Review Date:** Wednesday, November 25, 2020  
**Review By:** Vincent Ho

### **Description of Crash:**

A police preliminary investigation report indicated that a fatal collision occurred on November 20, 2020 around 5:16 AM at the intersection of MD 355 (Rockville Pike) and Grosvenor Lane. The report stated that a motorist traveling north on Rockville Pike struck a pedestrian who was attempting to cross northbound Rockville Pike from Grosvenor Lane. The pedestrian was pronounced deceased at the scene and the motorist was not considered injured by the collision.

### **Location and Site Description:**

MD 355 (Rockville Pike) is classified as an urban principal arterial oriented north-south with a posted speed limit of 45 MPH. MD 355 intersects Grosvenor Lane, a minor arterial oriented east-west, as a 4-way signalized intersection. At this intersection, MD 355 is a closed section road divided by a grassy median with WMATA's Metro aerial structure located above the median. MD 355 consists of 3 through lanes at the northbound approach and 3 through lanes and a right turn lane at the southbound approach. The west leg of the intersection on Grosvenor Lane consists of 1 westbound through lane, 2 dedicated left turn lanes onto NB MD 355 and a stop-controlled slip lane onto SB MD 355. At the east leg on Grosvenor Lane, there are 2 dedicated left turn lanes onto SB MD 355, a westbound through lane, and a short, yield-controlled slip lane onto NB MD 355.

### **Site Observations:**

An on-site evaluation of the intersection was conducted by the County's Traffic Area Engineer on November 25, 2020 between 12:00 PM and 1:00 PM. The following comments were noted during the evaluation:

- **Road Geometry:** The east leg of the intersection contains a yield-controlled slip lane with a very short storage length. The slip lane does not provide much benefit when access to the slip lane is blocked when multiple cars are queued in the WB through lane (see picture 11 in appendix).
- **Pavement Markings:** Pavement markings were generally found to be in fair condition and visible. Crosswalks were recently upgraded to high visibility, continental style crosswalks. However, the four left turn arrow pavement markings at the west leg of the intersection are cracked and beginning to fade (see picture 16).

- **Signage:**
  - At the east leg, the yield sign for the slip lane is currently being obstructed by foliage and a utility pole and looks to be undersized (see picture 4). The yield sign should be replaced with a larger 36”x36” sign and relocated such that the sign’s sight distance is not obstructed.
  - At the east leg, the “South MD 355, Left” guide sign lacks a complete retroreflective border. Additionally, the lettering and arrows are not flush with the sheet aluminum sign (see picture 5). Consider replacing this sign.
  - Along the NB MD 355 approach to the intersection, the “Metro, Next Right” sign lacks a complete retroreflective border and is faded (see picture 10). Consider replacing this sign.
  - At the southbound approach of the north leg, the “No Left Turn” sign mounted on the mast arm is extremely faded and should be replaced (see picture 14).
  - A “No Left Turn” sign located at the median of the north leg has been knocked-over and damaged (see picture 19). This sign should be replaced and reinstalled.
  
- **Pedestrian facilities:** Sidewalks along MD 355 generally terminate at Grosvenor Lane and do not extend south past this intersection.
  - A bus stop along NB MD 355 exists at the southeast corner of the intersection with a short sidewalk path to the bus pad, however, there is no proper ADA path/ramps to reach this corner of the intersection. It is recommended that this bus stop be relocated to the far side of the intersection at the northeast corner of the intersection where it would be more accessible. (See pictures 7 and 8).
  - At the west leg, the unmarked crossing across the slip lane is a skewed crossing where the two corresponding ramps do not align. This is a hazard for pedestrians unable to identify the skewed crossing and follow the natural direction of the ramp (see picture 18).
  
- **Signals:**
  - Multiple signal heads at the east leg of the intersection were observed to be nonfunctioning, possibly burnt out bulbs (see pictures 5 and 6). Fortunately, dual signals provided redundancy and traffic operations was still maintained. The outage was reported immediately by the Area Engineer to the County’s TMC on November 25, 2020 for immediate restoration of the signal heads.
  - At the northeast corner, the push button located on the pedestrian signal pedestal is incorrectly facing the road (see picture 12). It should be reoriented perpendicular to the road so that it is facing the user and a pedestrian does not have to reach around to activate the signal.
  - While older style pedestrian signals and push buttons are available, enhancements to meet the latest APS/CPS standards can be provided as some of the signals did not include countdowns nor were any audible tones provided to communicate crossing information to pedestrians in non-visual formats.
  
- **Lighting:** Both LED and high-pressure sodium vapor lighting is present at the intersection. However, additional LED lighting should be provided over the existing crosswalk area to better illuminate pedestrian activity. Note that proper operation and

adequacy of the streetlights could not be determined during the time of the field investigation.

- **Drainage:** Curb and grate inlets are present along the southbound side of MD 355. Typical debris and sediment build-up and pavement deterioration around the grate inlet located at the northwest corner was noted (see picture 20).
  
- **Other Hazards:**
  - Overhanging branches with foliage encroaching over NB MD 355 has the potential to obstruct one of the signals for motorists approaching the intersection (see picture 9).
  - Tree branches and foliage extending towards the roadway currently obstructs the “Stop Ahead” sign at the west leg of the intersection. (see picture 16).

### **Conclusion/Recommendations:**

Although the cause of the accident is still to be determined, several improvements can be made to this intersection to enhance traffic and pedestrian safety. It should be noted that during the evaluation, a respectable volume of pedestrians and bicyclists were observed crossing at this intersection, specifically in route to and from Beach Drive. Therefore, many of the recommendations below are provided with consideration to the significant pedestrian activity.

Because MD 355 (Rockville Pike) is maintained by the Maryland Department of Transportation State Highway Administration (MDOT SHA), MCDOT recommends that MDOT SHA consider the following improvements:

1. At the northeast corner, consideration should be made to eliminate the yield-controlled slip lane to enhance pedestrian safety.
  
2. At the northeast corner, reorient the pedestrian push button to directly face the user as it is currently facing the roadway (see picture 12). Additionally, consideration should be made to upgrade all pedestrian signals and pushbuttons to the latest APS/CPS standards.
  
3. Trim foliage or relocate the yield sign at the northeast corner so that it is not obstructed by the existing foliage and utility pole. (see picture 4).
  
4. Replace the knocked-over and damaged “No Left Turn” sign located in the median of the north leg (see picture 19).
  
5. Relocate the NB MD 355 bus stop at the southeast corner to the northeast corner. Relocating the bus stop to the far side of the intersection will provide better accessibility as there is currently no ADA ramps or clear path to safely get to the existing bus stop location (see pictures 7 and 8).

6. Replace the “South MD 355, Left” and the faded “Metro, Next Right” guide signs as indicated in the site observation description section above. (See pictures 5 and 10).
7. Refresh the cracked and fading left turn arrow pavement markings at the west leg of the intersection (see picture 16).
8. Trim back foliage and branches over hanging NB MD 355 prior to the intersection to prevent potential obstruction to the signal’s sight distance (see picture 9).
9. Trim back foliage and branches extending towards the roadway which currently blocks the “Stop Ahead” sign (see picture 16).
10. Provide overhead LED lighting with longer lighting arms at the northeast and northwest corner to better illuminate pedestrians utilizing the crosswalk.
11. Clean debris and repair pavement around the grate inlet at the northwest corner of the intersection (see picture 20).

## Appendix: Pictures



**Picture 1:** Aerial image of the accident scene on November 20, 2020.



**Picture 2:** Notice of accident posted by neighbors.



**Picture 3:** East leg of intersection facing MD 355.



**Picture 4:** Slip lane to NB MD 355. Yield sign is blocked by foliage and utility pole (see yellow highlight).



**Picture 5:** Signals facing east leg traffic. The green left turn signal is out (see yellow highlight).



**Picture 6:** Signals facing east leg traffic. Green signal is out for through movement (see yellow highlight).



**Picture 7:** Bus stop at southeast corner of the intersection.



**Picture 8:** No ADA ramp/path across intersection to reach bus stop at SE corner of the intersection.





**Picture 9:** Northbound MD 355 approaching intersection. Foliage and branches have potential to block signal (see yellow highlight).



**Picture 10:** Faded “Metro, Next Right” sign with incomplete retroreflective border.



**Picture 11:** Crosswalk within slip lane at the NE corner of intersection.



**Picture 12:** Push button at NE corner of intersection faces the road.



**Picture 13:** SB MD 355 approaching intersection.



**Picture 14:** Faded “No Left Turn” sign on signal mast arm.



**Picture 15:** West leg of intersection facing MD 355.



**Picture 16:** Tree branches blocks “Stop Ahead” sign. Cracked and fading left turn arrow pavement markings along west leg approach.



**Picture 17:** Stop-controlled slip lane at west leg of intersection.



**Picture 18:** Unaligned ramps with screwed crosswalk at west leg slip lane.



**Picture 19:** “No Left Turn” sign knocked-over and damaged at north leg median.



**Picture 20:** Debris, sediment build-up, and deteriorating pavement around grate inlet at the NW corner.