

**Lenhart Traffic Consulting, Inc.**  
Transportation Planning & Traffic Engineering

**Memorandum:**

**Date: December 21, 2023**

TO: Town of Mount Airy  
P.O. Box 50  
Mount Airy, MD 21771

FROM: Nick Driban

RE: Executive Summary and Pre-Workshop Information Request for Mount Airy Crossing

A Traffic Impact Analysis (TIA) was conducted for the proposed Mount Airy Crossing development, located along both the east and west sides of MD 27, just south of Center Street in Mount Airy, Maryland. The scope of the TIA was coordinated with Staff from both the Town of Mount Airy and the Maryland Department of Transportation State Highway Administration (MDOT SHA) and includes an evaluation of the transportation system under the existing, background, and total traffic conditions.

The eastern portion of the site is proposed to be developed with 173 senior single-family units and 41,500 square feet of commercial space. Access to the eastern portion of the site will be provided via a future extension of Center Street and Century Drive.

The western portion of the site is proposed to be developed with 33 single-family detached units, 110 single family attached units, 160 senior multifamily units, and 93,700 square feet of commercial space. Access to the western portion of the site will be provided via Center Street and Beck Drive.

The results of the TIA indicate that each study intersection will operate within the adequacy standards of MDOT SHA and the Town of Mount Airy with the construction of the proposed road improvements, discussed in more detail below. Specifically, with the proposed improvements, each study intersection operates with a level of service (LOS) "D" or better using the Critical Lane Volume (CLV) methodology, therefore meeting the MDOT SHA standards. When analyzed using the Highway Capacity Manual (HCM) methodology, each intersection exclusively maintained by the Town of Mount Airy operates with a LOS "B" or better and each intersection maintained by Carroll County or MDOT SHA operates with LOS "C" or better, therefore meeting the adequacy requirements of the Town of Mount Airy.

The following improvements to the transportation system within the study area are proposed as part of the Mount Airy Crossing development. It should be noted that several road improvements are proposed in the Town of Mount Airy Master Plan, and others are proposed to mitigate the impacts of the proposed development on the transportation system.

Center Street Extensions

On the west side of MD 27, Center Street is proposed to be extended to connect the existing termini between MD 27 and Lookout Avenue. The completion of Center Street on the west side of MD 27 will provide a connection between S. Main Street and MD 27. Access to the western portion of Mount Airy Crossing will be provided along the extended portion of Center Street. This improvement, including the extension of Center Street and the access to the western portion of Mount Airy Crossing, is proposed in the Town of Mount Airy Master Plan.

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Center Street will also be extended on the east side of MD 27 from its current terminus just east of the access to the Church of Jesus Christ of Latter-day Saints. The extension will provide access to the eastern portion of the Mount Airy Crossing development and will ultimately connect with the Century Drive extension through Mount Airy Crossing. This extension is proposed in the Town of Mount Airy Master Plan. The Century Drive extension is discussed in more detail below.

### Beck Drive Extension

Access to the western portion of Mount Airy Crossing is proposed via an extension of Beck Drive, which will ultimately extend through Mount Airy Crossing to the north to connect with the extension of Center Street. No major diversions of existing traffic are expected due to the connection between Beck Drive and Center Street. The extension of Beck Drive into Mount Airy Crossing provides the local connection to Mount Airy Crossing that is proposed in the Town of Mount Airy Master Plan.

### Century Drive Extension

Access to the eastern portion of Mount Airy Crossing is proposed via an extension of Century Drive, which will extend through Mount Airy Crossing to the north to connect with Center Street and ultimately to MD 27. It is assumed that a portion of westbound right turns at the intersection of MD 27 & Twin Arch Road (destined north along MD 27) that originate from Century Drive will divert to use the new extension of Century Drive to the north to reach Center Street and MD 27. These diversions are included in the TIA. The extension of Century Drive and connection to Center Street to reach MD 27 are proposed in the Town of Mount Airy Master Plan.

### Intersection of MD 27 & Center Street Improvements

In order to mitigate the impacts of Mount Airy Crossing on the intersection of MD 27 & Center Street, it is proposed that the intersection is signalized, and the east- and westbound approaches of Center Street are reconstructed to include dedicated left-turn, through, and right-turn lanes. With these improvements, the intersection will operate adequately under the MDOT SHA and Town of Mount Airy Guidelines. It should be noted that the proposed traffic signal will incorporate pedestrian signal technology to SHA's latest standards, in order to facilitate safe and efficient crossings for pedestrians.

### Intersection of MD 27 & Park Avenue/Twin Arch Road Improvements

In order to mitigate the impacts of Mount Airy Crossing on the intersection of MD 27 & Park Avenue/Twin Arch Road, it is proposed that the existing traffic signal phasing is modified to remove the east- and westbound split phasing. This will allow the westbound approach to be restriped to accommodate two left-turn lanes and a shared through/right-turn lane. This improvement will fully mitigate the impacts of the proposed Beck Property on the intersection and improve the overall intersection delay compared to the background conditions without the development.

### Intersection of MD 27 & E. Ridgeville Boulevard

In order to mitigate the impacts of Mount Airy Crossing on the intersection of MD 27 & E. Ridgeville Boulevard, it is proposed that right-turn overlap phases are provided for the north- and southbound right-turn movements along MD 27. This improvement will fully mitigate the impacts of the proposed Beck Property on the intersection and improve the overall intersection delay compared to the background conditions without the development.