# 2023 CARROLL COUNTY TRANSPORTATION MASTER PLAN

Planning & Zoning Commission Approved November 2023

# EXECUTIVE SUMMARY

# Chapter 1 Introduction (pages 1-2)

The 2014 Carroll County Master Plan as amended 2019 (CCMP) Transportation Chapter 7 goal for enhancement of how the County travels was to *provide a safe and functional intra-County transportation system that promotes access and mobility for people and goods through a variety of transportation mode.* In furtherance of this goal, one of the principal transportation-related recommendations in the Plan is to *update the 1962 Major Street Plan with a Countywide Transportation Master Plan".*

The following recent studies, as well as input from County residents, business owners and the eights municipalities, serve as the foundation of this update:

- The 2018 Maryland Department of Transportation State Highway Administration (MDOT SHA) Planning and Environmental Linkages (PEL) study on MD 32, focusing on the 7.2-mile portion that is shared between Howard and Carroll Counties. (Appendix B)
- The 2020 MD 26 Corridor Planning Study, MD 32 to the Liberty Reservoir. (Appendix C)
- The 2020 Transportation Corridor & Subarea Analysis completed for the entire County through the Baltimore Regional Transportation Board's Unified Planning Work Program (UPWP).

## Vision

Carroll County is a suburban and rural community where community members travel efficiently by automobile through a safe, well-connected, and functional transportation system. An interconnected network of state, County, and municipal roadways provides access and mobility for people and goods to reach their destinations throughout and beyond Carroll County and its eight municipalities, protects quality of life through economic prosperity, and facilitates innovative and emerging technologies.

## Goals

1. Pursue policies and strategies that facilitate near-term incremental improvements to the road network that have a broad public benefit to improve mobility and safety within and approaching the County's Designated Growth Areas. (Chapter 5 Transportation Corridor & Subarea Analysis)
2. Pursue policies and strategies that facilitate Planned Roadway Projects to improve transportation safety, connectivity, and accessibility and to further the efficient flow of traffic for the ultimate development of the County's transportation network. (Chapter 6 Planned Roadway Projects)
3. Promote communication and coordination between and among the County, the municipalities, and the state with respect to access management, and pursue corridor-level access management planning processes. (Chapter 7 Access Management)
4. Integrate transportation planning with environmental and cleaner energy goals; transition to a cleaner and more efficient transportation system, with electric vehicle readiness and accommodation of autonomous vehicles incorporated into public and private projects. (Chapter 8 Emerging Trends)

# Chapter 2 Demographics (pages 3-5)

**Population Growth** Since 1960 Carroll County has seen its population triple from 52,785 to more than 172,891, according to the 2020 Census. The period over the last 60-years saw the most rapid growth during the 1970s and 1980s. These two decades had the greatest rate of change, over 30% in 1970s and almost 40% in the 1980s. From 1990 to 2010 population continued to grow in Carroll County but at a much slower pace than in the preceding decades and dropped significantly from 2010 to 2020 with only a 3.4% rate of growth.

**Age** The County's population has been steadily shifting to an older population. Even though working aged adults make up the vast majority of Carroll County residents, this number has been steadily declining since 2010 and is expected to continue to decline into 2045.

**Household Size** In 2000, the average household size was 2.92 persons per household, and by 2010, it was 2.85 and has steadily decreased to 2.68 persons per household. It is anticipated that household size will remain around 2.60 for the next 30 years, which will keep the pace of population growth low.

**Housing Growth** The number of housing units grew 5.4% between 2010 and 2020 for a total of 65,793 housing units in Carroll County, which was considerably less than the 17% growth rate seen between 2000 and 2010. Part of this downward trend could be attributed to stronger land use controls such as the state law regulating subdivision on septic systems, referred to as the Sustainable Growth & Agricultural Preservation Act of 2012, making less land available for development.

**Housing Values** For many reasons, including quality of life, good schools and higher educational attainment, housing values in Carroll County have and remain higher than Maryland and the nation, with a median housing value of $343,400.

**Income** Households in Carroll County have a median annual income of $96,769, which is more than the median annual income of $65,712 across the entire United States. This is in comparison to a median income of $93,363 in 2018, which represents a 3.65% annual growth.

**Education** According to the U.S. Census, census reporter, 93.1% of residents have a high school diploma or higher, with 37% achieving a Bachelor's degree. This graduation rate is higher than both the state and the country, which have rates of 90.6% and 88.5% repectively.

**Jobs, Employment and Commuting Characteristics** Jobs in Carroll County have remained stagnant over the last decade, with only a 2% job growth rate. Approximately 49% of county residents work outside their County of residence. This leads to longer commute times for County residents, more stress on the road network, and peak hour congestion.

# Chapter 3 Other Transportation Plans (pages 6-7)

This Transportation Plan is intended to be a comprehensive analysis of the road network and the improvements which are necessary to accomplish the long-range vision set forth in the County Master Plan, the Community Comprehensive Plans, and the eight municipal Master Plans. The following plans are the County's guidance on the future of other modes of transportation and other aspects of transportation planning.

- 2019 Carroll County Transit Development Plan (TDP)
- 2015 Carroll County Regional Airport Master Plan
- 2019 Carroll County Bicycle Pedestrian Master Plan
- 2022 Carroll County Strategic Traffic Safety Plan (STSP)
- Carroll County Six- Year Community Investment Plan (CIP)
- 2023 Long Range Regional Transportation Plan - Resilience 2050
- State of Maryland Highway Needs Inventory (HNI)
- State of Maryland Transportation Plan (MTP)
- State of Maryland Six-Year Consolidated Transportation Plan
- 2010 Hampstead Community Comprehensive Plan (2017 Update)
- 2018 Manchester Community Comprehensive Plan
- 2013 Mount Airy Community Comprehensive Plan
- 2007 New Windsor Community Comprehensive Plan (2010 Amendment)
- 2021 Sykesville Community Comprehensive Plan
- 2010 Taneytown Community Comprehensive Plan
- 2008 Union Bridge Community Comprehensive Plan (2014 Update)
- 2009 Westminster Community Comprehensive Plan (2018 Amendment)

# Chapter 4 Existing Facilities (page 8)

This chapter provides a Table and Countywide map showing lane mileage of interstate highways, state highways, County roads and municipal roads by functional classification. Below is the total lane mileage for these roadways.

| Roadway Lane Miles | Interstate Highway | State Highway | County | Municipal | Total |
|---|---|---|---|---|---|
| Total | 9.7 | 512.8 | 1,981.7 | 366.2 | 2,860.7 |

# Chapter 5 Transportation Corridor and Subarea Analysis (pages 9-41)

The purpose of this Transportation Corridor & Subarea Analysis is to help County policymakers with prioritization and implementation of projects which will improve mobility within and approaching the County's DGAs over the next 20 years. The analysis aims to identify how the largest of transportation projects which have been identified in the County and municipal Master Plans could be implemented incrementally to achieve mobility benefits sooner rather than later. The plan recommends thinking beyond major projects which have long been identified and desired, in favor of improvements which can maintain or improve today's traffic congestion levels even as the number of trips increases over the next 20 years.

This plan identifies the most promising potential improvements (see table below) following an analysis of the following geographic areas: Eldersburg-Sykesville, Finksburg, Hampstead-Manchester, Mount Airy, Taneytown and Westminster. The analysis included study of the existing road networks, recent improvements, land use and demographics, commuter flows, local goals and policies, existing traffic conditions, and projected traffic conditions for each of the six areas.

Again, this transportation plan is not exhaustive of all transportation improvements which are necessary and desirable. To improve project delivery, the recommended approaches suggest transportation improvements which are cost-effective in meeting the desired objective.

| Location | Sub Area | Project Name |
|---|---|---|
| **1** | Eldersburg-Sykesville | MD 32/MD 26 Quadrant Roadway |
| **2** | Eldersburg-Sykesville | Dickenson Road Extended & MD 26 Access Management |
| **3** | Eldersburg-Sykesville | Georgetown Boulevard Extended |
| **4** | Eldersburg-Sykesville | MD 32 Operational Improvements – Main Street to Howard County Line |
| **5** | Eldersburg-Sykesville | Southeast Quadrant Connectivity |
| **6** | Finksburg | MD 140/MD 91 Jug Handle |
| **7** | Finksburg | MD 140 Median |
| **8** | Finksburg | Dede Road Extension |
| **9** | Finksburg | Old Westminster Pike at MD 140 Access Management |
| **10** | Hampstead-Manchester | MD 27/Westminster St Roundabout |
| **11** | Hampstead-Manchester | MD 30 at Westminster Street New Left Turn |
| **12** | Hampstead-Manchester | MD 30 at MD 27 Intersection Improvements |
| **13** | Hampstead-Manchester | MD 30 at New Street – New Left Turn |

| | | |
|---|---|---|
| **14** | Hampstead-Manchester | Southwestern Avenue Extended |
| **15** | Hampstead-Manchester | Maiden/Long Lane Upgrade |
| **16** | Mount Airy | South Main Street Roundabout |
| **17** | Mount Airy | Center Street East |
| **18** | Mount Airy | Center Street |
| **19** | Mount Airy | Century Drive Extension |
| **20** | Mount Airy | MD 94 Corridor Improvements |
| **21** | Taneytown | MD 140/MD 194 Left Turn Bay Extension |
| **22** | Taneytown | Allendale Lane/Antrim Blvd Extension |
| **23** | Westminster | Gorsuch Rd at MD 140 Right-In/Right-Out |
| **24** | Westminster | MD 14 at Ralph Street/Cranberry Road |

# Chapter 6 Planned Roadway Projects (pages 42 – 64)

An inventory of Planned Roadway Projects, including Maryland State Highway Projects, Planned Major Streets, and Planned Neighborhood Connections has been listed in Carroll County Master and Comprehensive Plans since 1964. These planned roadways serve as a guide for necessary transportation improvements and connections as the County develops.

This chapter includes all Planned Roadway Projects in Carroll County. These improvements are Maryland State Highway Projects, Planned Major Streets, and Planned Neighborhood Connections. All the listed projects have originated in a state or local planning document or are the result of a recognized capacity or safety improvement. The alignments shown are generally for planning purposes; the exact alignments are to be determined at the time of design.

The Maryland State Highway Projects are listed in the 2020 Highway Needs Inventory (HNI). The Planned Major Streets and Planned Neighborhood Connections all originated in a County or municipal planning document. These roadways are necessary to further the efficient flow of traffic and overall connectivity in a specific area of the County. An analysis of these planned roadways was conducted considering current need, feasibility, availability of right-of-way, and status of completion. Following this examination, 24 roads were removed; 44 roadways remain future Planned Major Streets and Planned Neighborhood Connections. Maps and descriptions of each are provided.

While the 44 road improvements outlined are all considered necessary improvements and connections for the ultimate development of the County, certain roads are more feasible, will have a greater impact, and are more significant to the realization of the County's adopted land use plans. Future road

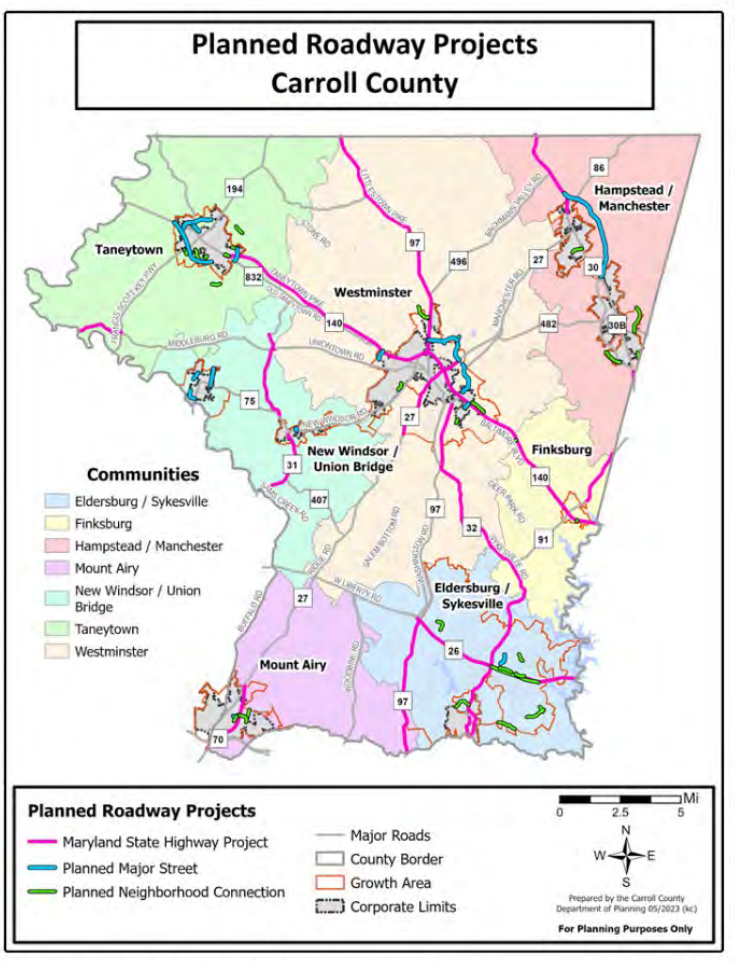
improvements were ranked using ten criteria. These criteria are all in the furtherance of the goal in the 2014 CCMP to *provide a safe and functional intra-County transportation system that promotes access and mobility for people and goods through a variety of transportation modes.* The projects listed below are considered High Priority:

Planned Major Streets:

- Bennett Cerf Drive – Meadow Branch
- Center Street Extended
- Georgetown Boulevard Extended
- Market Street Extended
- Taneytown Greenway (Antrim Blvd. Extended)

Planned Neighborhood Connections:

- Allendale Lane Extended
- Arrington Road Realigned
- Dede Road Extended
- Dickenson Road Extended
- Leidy Road Extended
- Monroe Avenue Extended
- Pleasant Valley Road Realigned
- Prothero Road Extended
- Ridenour Way Extended




*Map 6.1: Planned Major Roadway Projects Carroll County*

# Chapter 7 Access Management (pages 65-66)

Access Management (AM) is the proactive management of vehicular access points to land parcels adjacent to all manner of roadways. Good AM promotes safe and efficient use of the transportation network. AM encompasses a set of techniques that can be used to control access to highways, major arterials, and other roadways. These techniques include:

- Access Spacing,
- Driveway Spacing,
- Safe Turning Lanes,
- Median Treatments, and
- Right-of-Way Management.

Implementing AM provides three major benefits to transportation systems, which are essentially the result of minimizing or managing the number of conflict points that exist along a corridor:

- Increased roadway capacity,
- Reduced crashes, and
- Shortened travel time for motorists.

MDOT SHA has identified roadway corridors in Carroll County that could benefit from corridor-wide AM concepts. These corridors include MD 26, MD 140, and MD 32. The plans and studies for these corridors have not been implemented in a deliberate manner nor are they legally binding. Moving forward, it is essential that corridor-level AM planning processes be assessed and adopted by all relevant parties.

# Chapter 8 Emerging Trends (pages 67-70)

In order to plan effectively in 2023, it is important to discuss emerging transportation technologies such as electric vehicles (EV) and autonomous vehicle (AV) technology. Every year, EV technology assimilates more into society, as exemplified with the many new public EV charging stations located throughout Carroll County, and with the many new EV models being offered by vehicle manufacturers. Increasing EV production and utilization can be attributed to advancements in battery technology, increased federal and state monetary incentives, along with increasing public sentiment for a more sustainable future. AV technology is currently emerging in a society that will bring about positive changes and uncertainties.

Transitioning from internal combustion engine (ICE) to EVs requires adapting our lifestyles and the way we plan for the County, particularly for EV charging infrastructure.

AV transportation technology has the potential to drastically shape how we live, work, and play. AVs are in the preliminary stages of testing, which means that it is imperative that we strive to make this technology safe and equitable before it is even partially integrated into society. AV technology is poised to have numerous benefits over and above those provided by EVs such as improved safety, supporting aging in-place, reduced transportation costs (if shared), reduced congestion, and reduced right-of-way devoted to transportation.

# Chapter 9 Recommendations (pages 71-72)

| | |
|---|---|
| General | 1. Affirm and continue to implement the recommendations in the 2014 Carroll County Master Plan as amended 2019 Amended, 2018 Freedom Community Comprehensive Plan, and 2013 Finksburg Corridor Plan where they reinforce the Carroll County Transportation Master Plan. |
| | 2. Monitor the progress of ongoing municipal plan updates and amend this Plan to be consistent with all municipal plans. |
| | 3. Adopt by reference the Carroll County Transportation Master Plan, and any amendment to it, into the future Master Plan update. |
| | 4. Study the County's land use and transportation interaction as part of the future Master Plan update. |
| | 5. Propose amendments to the Zoning Ordinance and Subdivision Regulations that promote developments, designs, and strategies to reduce congestion. |
| Chapter 5 Transportation Corridor & Subarea Analysis & Chapter 6 Planned Roadway Projects | 1. Advance the design, right-of-way acquisition, and construction of Planned Roadway Projects and Most Promising Potential Improvements through<br>a. the use of the County's CIP, bonds, special assessments, and other financing tools,<br>b. the development review process, and<br>c. partnerships with the municipalities, state, BMC, landowners, land developers, and other public-private partnerships. |
| | 2. Planned Roadway Projects and Most Promising Potential Improvements should be designed and constructed to<br>a. improve connectivity,<br>b. enhance safety,<br>c. reduce traffic congestion,<br>d. reduce conflicts between short distance and longer distance travel on major roadways,<br>e. accommodate all users of the right-of-way,<br>f. comply with the County's road standards, and<br>g. maintain a high quality of life. |
| | 3. Where complete construction is infeasible, partial construction should be completed to facilitate inter-parcel connectivity. |

| | |
|---|---|
| | 4. Coordinate with BMC to Adopt Planned Roadway Projects and Most Promising Potential Improvements into the Long-Range Transportation Plan and advance County priorities through the Unified Planning Work Program. |
| | 5. Develop a right-of-way preservation strategy for Planned Roadway Projects and Most Promising Potential Improvements, in coordination with the municipalities when appropriate, and proactively work to acquire land necessary. |
| | 6. Further analyze the feasibility of Planned Major Street and Planned Neighborhood Connection alignments. |
| | 7. Study the efficacy of traffic impact fees as a means to fund Planned Roadway Projects and Most Promising Potential Improvements. |
| | 8. Evaluate whether existing methods to fund transportation improvements though the CIP and conditions of development approval are sufficient to expand the transportation network to meet anticipated travel demand. |
| | 9. Identify other potential sources for funding Planned Roadway Projects and Most Promising Potential Improvements, including roadway and intersection capacity enhancement, road extension, and road realignment projects. |
| | 10. Investigate a greater role and responsibility for construction of state arterial and collector roads with the CIP funding in partnership with the state. |
| | 11. Continue to work with MDOT SHA and the municipalities to identify additional Planned Roadway Projects by analyzing evolving roadway conditions and areas where development and traffic patterns are changing. |
| | 12. Continue to work with MDOT SHA to<br>a. prioritize and advance roadway and intersection projects along state highways,<br>i. through the submission of the County's annual CTP Priority Letter; work with the County's Delegation to the General Assembly, and<br>ii. through the update of Carroll County's Highway Needs Inventory (HNI).<br>b. rank roadway and intersection projects along state highways, and<br>c. seek funding for municipal streetscape improvements. |

| | |
|---|---|
| | 13. Continue to monitor and advocate for MDOT SHA's I-70 Transportation Systems, Management, and Operations (TSMO) plans. |
| Chapter 7<br>Access Management | 1. Coordinate with MDOT SHA to promote Access Management (AM) best practices along state highways.<br>a. Update existing AM plans as needed.<br>b. Identify corridors in need of an AM plan, and request MDOT SHA reconvene AM planning processes.<br>c. Adhere to recommendations and implementation strategies in existing AM plans.<br>d. Develop policy to implement existing and future AM plans and achieve adoption of plans by the respective municipalities. |
| | 2. Review the County Code for obstacles to access management best practices, on all types of streets, to reduce vehicle trips and improve traffic circulation. |
| Chapter 8<br>Emerging Trends | 1. Evaluate County codes and policies that may be impacted by the transition to EVs and/or AVs. |
| | 2. Coordinate with federal, state, regional, and local agencies to implement EV and AV technology.<br>a. Prepare the County's roadways for EVs and AVs.<br>b. Educate the public about EV, AV, and other new forms of transportation technology. |