



CLIMATE ASSESSMENT FOR

ZTA 25-02, WORKFORCE HOUSING – DEVELOPMENT STANDARDS

PURPOSE OF CLIMATE ASSESSMENTS

The purpose of the Climate Assessments is to evaluate the anticipated impact of master plans and zoning text amendments (ZTAs) on the county's contribution to addressing climate change. These assessments provide the County Council with a better understanding of the potential climate impacts and implications of proposed master plans and ZTAs, at the county level. The scope of the Climate Assessments is limited to addressing climate change, specifically the effect of land use recommendations in master plans and ZTAs on greenhouse gas (GHG) emissions and sequestration, and how actions proposed by master plans and ZTAs could improve the county's adaptive capacity to climate change and increase community resilience.

While co-benefits such as health and cost savings may be discussed, the focus is on how proposed master plans and ZTAs may impact GHG emissions and community resilience.

SUMMARY

Depending on the number, type, size, density, and location of new housing construction resulting from ZTA 25-02, mostly minor to moderate negative and positive local impacts are expected on greenhouse gas emissions and minor to moderate negative impacts on carbon sequestration considering transportation, building embodied emissions, energy, and land cover change and management-related factors. Minor to significant negative and positive local impacts are expected on community resilience and adaptive capacity considering exposure, sensitivity, and adaptive capacity-related factors.

BACKGROUND AND PURPOSE OF ZTA 25-02

ZTA 25-02 was introduced on February 4, 2025 and sponsored by Councilmembers Friedson and Fani-González, and co-sponsored by Council President Stewart and Councilmembers Balcombe, Luedtke, and Sayles. ZTA 25-02 will allow duplexes, triplexes, townhouses, and apartment buildings in the R-40, R-60, R-90, and R-200 zones if along the following road types: Boulevard, Downtown Boulevard, Downtown Street, Town Center Boulevard, or Controlled Major Highway. The front lot line, typically indicated by the street address, must abut the applicable corridor. 15% of the units, with a minimum

of 1 workforce housing unit if an application has at least 3 units, must meet the requirements for workforce housing, which is defined as 70-120% area median income (AMI) in the County Code.

VARIABLES THAT COULD AFFECT THE ASSESSMENT

CLIMATE-RELATED VARIABLES

Transportation- Vehicle miles traveled by type, Number of trips, Non-vehicle modes of transportation, Public transportation use.

Building Embodied Emissions – Building square footage, Building life span, Pavement infrastructure, Material waste produced, Use of green building materials.

Energy – Electricity usage, Electricity efficiency.

Land Cover and Management –Area of non-forest tree canopy, Area of green cover.

COMMUNITY RESILIENCE-RELATED VARIABLES

Exposure-Related Factors – Activity in flood-risk areas, Exposure to other hazards (e.g., storms, wind, drought).

Sensitivity-Related Factors –Change to non-forest tree canopy, Change to quality or quantity of other green areas, Change to impacts of heat, Change in perviousness, Change in stormwater management system treatments, Change to water quality or quantity, Change to air quality.

ADAPTIVE CAPACITY-RELATED VARIABLES

Change to access to transportation, Change to community connectivity

ANTICIPATED IMPACTS

GREENHOUSE GAS EMISSIONS, CARBON SEQUESTRATION, AND DRAWDOWN

Depending on the number, type, size, density, and location of new housing construction resulting from ZTA 25-02, minor to moderate negative and positive local impacts are expected on greenhouse gas emissions and minor to moderate negative local impacts on carbon sequestration. [Note: The *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County* indicate that carbon sequestration, drawdown, and reduction are generally used interchangeably. The *Recommendations* document uses the term sequestration.]

Transportation-related minor to moderate negative impacts is expected to be due to potential increases in Vehicle Miles Traveled (VMT) and number of trips. Transportation-related positive impacts are expected to be primarily due to minor to moderate potential long-term increases in non-vehicular modes of transportation and public transportation use.

Building embodied emissions-related minor to moderate negative impacts are expected due to minor increases in building square footage and pavement infrastructure. Building embodied emissions-related minor positive impacts are expected due to longer building life spans for projects that involve buildings that are retrofitted or adaptively reused, and those that use green building materials in new construction. Building embodied emissions-related minor negative impacts are expected for projects that involve the production of material waste from tear down and rebuild activities.

On one hand, energy-related minor negative impacts are expected due to increased electricity usage on a total grid scale. On the other hand, minor positive energy-related impacts are expected due to decreased usage of natural gas, as well as decreases in electricity use and slight increases in energy efficiency on a per-capita basis.

Land cover change and management-related minor to moderate negative impacts on carbon sequestration are expected due to decreases in tree canopy and minor negative impacts on carbon sequestration due to decreases in other areas of green cover.

COMMUNITY RESILIENCE AND ADAPTIVE CAPACITY

Depending on the number, type, size, density, and location of new residential construction resulting from ZTA 25-02, minor to moderate negative local impacts are anticipated on community resilience (exposure and sensitivity-related factors) and minor positive local impacts are anticipated on adaptive capacity factors.

Depending on the project location and density with respect to flood hazard area mapping currently under development as part of the county's *Comprehensive Flood Management Plan*, exposure-related minor to significant negative impacts could occur due to potential increases of activity in flood risk areas. Similarly, depending on the location of projects with respect to the road network, exposure-related minor to moderate negative impacts could occur due to potential increased exposure to noise.

Depending on the number, density, and location of projects, sensitivity-related minor to moderate negative impacts are expected due to decreases in non-forest tree canopy and other green areas, increased heat impacts due to increases in impervious surfaces, decreases in pervious cover, potential need for enhancements in existing stormwater management systems, increased stormwater runoff and decreased water quality, and decreased air quality due to increases in numbers of motor vehicle trips and vehicle miles traveled.

Adaptive capacity-related minor positive impacts are expected due to increases in access to transportation and increases in community connectivity.

RELATIONSHIP TO GREENHOUSE GAS REDUCTION, SEQUESTRATION, AND OTHER ACTIONS CONTAINED IN THE MONTGOMERY COUNTY CLIMATE ACTION PLAN (CAP)

The CAP details the effects of a changing climate on Montgomery County and includes interagency strategies to reduce greenhouse gas emissions and climate-related risks to the county's residents, businesses, and the built and natural environment.

The CAP includes 86 climate actions as a pathway to meet the county's ambitious climate goals while building a healthy, equitable, and resilient community. Each county department has responsibilities for specific climate actions that are relevant to the work of that department. The following section provides a list of the CAP action items relevant to Montgomery Planning and pertain to ZTA 25-02. While it is not possible to know the rate of implementation, development, funding, or other implications, each CAP action item was rated as high, medium, low, negative, or not addressed for its potential to reduce GHG gas emissions, sequester carbon, and support other CAP climate actions.

Climate Adaptation Actions

- A-11: Climate Adaptation Development Standards. Not Addressed.
- A-13: Ban Stormwater Management Waivers. Not Addressed.

Building Actions

- B-5: All-Electric Building Code for New Construction. LOW. Depending on the amount of new construction resulting from this ZTA, there is the potential for increased use of electricity vs fossil fuels.
- B-6: Disincentivize and/or Eliminate Natural Gas in New Construction. LOW. Depending on the amount of new construction resulting from this ZTA, there is the potential for decreased use of natural gas in new construction.
- B-7: Net zero Energy Building Code for New Construction. LOW. Depending on the amount of new construction resulting from this ZTA, there is the potential for an increased number of net zero energy buildings.

Carbon Sequestration Actions

- S-2: Retain and Increase Tree Canopy. Negative. Minor to moderate decreases in tree canopy would be expected to result from this ZTA.

RECOMMENDED AMENDMENTS

Potential amendments to ZTA 23-02 to mitigate negative impacts could include reducing parking requirements to help reduce increases in impervious cover (or give the Planning Board the option to do so), and to take flood hazard information (currently under development in a new county

comprehensive flood management plan) into account in siting new development under this ZTA to minimize exposure to flooding and increasing flood risk.

Stormwater management provisions exist for small lots (under 15,000 square feet) that address lot-to-lot drainage for residential lots for one-family and two-family properties. The current county stormwater management code is silent on protections for three- and four- unit multiplex buildings. Planning Staff recommends code changes, ZTA changes, or other enforceable mechanisms as appropriate to require control of water runoff from small building sites including detached, duplex, and multiplex building types at least consistent with current redevelopment standards, and possibly more stringent standards to support CAP Climate Adaptation Action [A-11: Climate Adapted Development Standards](#) (see relationship to the CAP section). Planning Staff also recommend assessing the potential need for code changes, ZTA changes, or other enforceable mechanisms as appropriate to develop new standards regarding stormwater management waivers for this type of development to support the rationale underlying CAP Climate Adaptation Action [A-13 Ban Stormwater Management Waivers](#) (see relationship to the CAP section). Doing so would mitigate stormwater quantity, flooding, and water quality negative impacts that could otherwise result from ZTA 25-02.

The CAP Carbon Sequestration Action [S-2: Retain and Increase Tree Canopy](#) (see relationship to the CAP section) specifically addresses tree canopy issues. A current provision in Chapter 55 (the tree canopy law) of the county code prohibits property owners from receiving a credit for on-site tree canopy unless they have a minimum 400 square feet of open space. This requirement has compelled many applicants who trigger the law to pay the off-site fee rather than replace trees on site. Planning Staff recommends code changes, ZTA changes, or other enforceable mechanisms as appropriate to reduce tree spacing in the right-of-way and reduce the open area requirements on private lots to lessen the tree canopy loss that could otherwise result from ZTA 25-02.

SOURCES OF INFORMATION, ASSUMPTIONS, AND METHODOLOGIES USED

The climate assessment for ZTA 25-02 was prepared using the methodology for ZTAs contained within the *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County, December 1, 2022*.