Montgomery Planning

CLIMATE ASSESSMENT FOR

ZTA 25-03, EXPEDITED APPROVALS - COMMERCIAL TO RESIDENTIAL RECONSTRUCTION

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 commercial to residential reconstruction resulting from ZTA 25-03, minor negative and positive local impacts on greenhouse gas emissions and minor positive local impacts on carbon sequestration considering transportation, building embodied emissions, energy, and land cover change and management-related factors. Minor to moderate negative and minor positive local impacts on community resilience, and minor to moderate positive local impacts on adaptive capacity are expected considering exposure, sensitivity, and adaptive capacity-related factors.

BACKGROUND AND PURPOSE OF ZTA 25-03

ZTA 25-03 was introduced on February 4, 2025, sponsored by Councilmembers Friedson and Fani-González, and co-sponsored by Council President Stewart and Councilmembers Balcombe, Luedtke, and Sayles. ZTA 25-03 will create the Commercial to Residential Reconstruction use, which will be defined as a building that is converted or demolished from a 50% vacant commercial building to a

residential building. This new use will be allowed in the Commercial/Residential, Neighborhood Retail (NR), and Employment Office (EOF) zones. ZTA 25-03 will also remove the residential restriction on FAR in the NR and EOF zones, so that total commercial-residential FAR can be used for residential.

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, Activity in urban heat island.

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.

ADAPTIVE CAPACITY-RELATED VARIABLES

Change to accessibility or prevalence of community and public spaces, Change to access to transportation, Change to community connectivity, Change in distribution of resources and support

ANTICIPATED IMPACTS

GREENHOUSE GAS EMISSIONS, CARBON SEQUESTRATION, AND DRAWDOWN

Depending on the number, type, size, density, and location of new residential construction resulting from this ZTA 25-03, is anticipated to have minor negative and positive local impacts on greenhouse gas emissions and minor positive 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 positive or negative impacts are expected depending on the level of densification of a project and associated increases or decreases in Vehicle Miles Traveled (VMT) and number of trips. Transportation-related minor to moderate positive impacts are expected due to potential long-term increases in non-vehicular modes of transportation and public transportation use.

Building embodied emissions-related minor positive or negative impacts are expected depending on the level of densification of a project and associated increases or decreases in building square footage and pavement infrastructure. Building embodied emissions-related minor positive impacts are expected due to longer building life spans in projects that involve adaptive reuse of existing buildings, and projects 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.

Energy-related negative impacts on the one hand are expected to be minor 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.

Depending on existing site conditions, land cover change and management-related minor positive impacts on carbon sequestration associated with some projects could occur due to increases in tree canopy and other green areas that may occur through redevelopment.

COMMUNITY RESILIENCE AND ADAPTIVE CAPACITY

Depending on the number, type, size, density, and location of new residential construction resulting from ZTA 25-03, minor to moderate negative and minor to moderate positive local impacts are anticipated on community resilience (exposure and sensitivity-related factors) and minor to moderate positive local impacts are anticipated on adaptive capacity factors.

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

Depending on existing site conditions, sensitivity-related minor positive impacts associated with some projects could occur due to increases in non-forest tree canopy and other green areas that may occur through redevelopment. Likewise, depending on existing site conditions, sensitivity-related minor positive impacts associated with some projects could occur due to decreased heat impacts, decreases in impervious surfaces, and increases in pervious cover that generally result from redevelopment. In

general, sensitivity-related minor to moderate positive impacts are expected due to improved stormwater management systems, decreased stormwater runoff, and increased water quality that are required for redevelopment.

Adaptive capacity-related minor to moderate positive impacts are expected due to increases in accessibility or prevalence of community and public spaces, access to transportation, increases in community connectivity, and change in distribution of resources and support through mixed use development.

RELATIONSHIP TO GREENHOUSE GAS REDUCTION AND SEQUESTRATION 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.

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 increased number of net zero energy buildings.

Carbon Sequestration Actions

- S-2: Retain and Increase Tree Canopy. Low. Depending on existing site conditions, slight increases in tree canopy associated with some projects could be expected to result from this ZTA.

RECOMMENDED AMENDMENTS

Depending on the number, type, size, density, and location of new residential construction ZTA 23-10 will likely result in a range of mostly minor, and some moderate, local positive and negative impacts on the County's goals regarding greenhouse gas emissions, sequestration, community resilience, and adaptive capacity, and Planning Staff does not have any recommended climate-related amendments to add. The ZTA does not offer obvious additional opportunities to significantly mitigate negative impacts or enhance positive climate change-related impacts beyond the potential benefits as discussed in this assessment.

SOURCES OF INFORMATION, ASSUMPTIONS, AND METHODOLOGIES USED

The climate assessment for ZTA 25-03 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*.