



Appendix H: Carbon Analysis

Montgomery County Bill Number 32-07 establishes a goal to stop increasing greenhouse gas emissions by the year 2010, and to reduce emissions to 20 percent of 2005 levels by the year 2050. In order to estimate the amount of greenhouse gas emissions, a model is used that includes embodied energy emissions, building energy emissions, and transportation emissions. The model documentation defines embodied energy emissions as “emissions that are created through the extraction, processing, transportation, construction and disposal of building materials as well as emissions created through landscape disturbance (by both soil disturbances and changes in above ground biomass). Building energy emissions are created in the normal operation of a building, including lighting, heating, cooling and ventilation, operation of computers and appliances, etc. Transportation emissions are released by the operation of cars, trucks, buses, motorcycles, etc.

This model was run for the existing conditions and the projected buildout of the Veirs Mill Corridor Master Plan, with the following results.

Scenario	Emissions (MTCO ₂ e*)
2010 Baseline	5,238,264
2040 Buildout, average of low and high scenarios	5,387,046

*Metric Tons Carbon Dioxide Equivalents (over the life of the development)

While the 2040 projected buildout of the Veirs Mill Corridor Master Plan shows a small increase in total emissions, there is a decrease in emissions on a per capita basis. The decrease in per capita emissions is due to the master plan recommendations which:

- Focus on shifting transportation use from automobiles to mass transit;
- Increase the number of multifamily residential units, which are more energy efficient than single-family homes; and
- Increase growth without substantially increasing the amount of pavement.