**WESTCHESTER COUNTY FAIR AND AFFORDABLE HOUSING
IMPLEMENTATION PLAN**

August 9, 2010

Appendix E-3(i): **Memo from B. Connolly to E. Buroughs identifying data layers
for maps**

TO: Ed Buroughs, Acting Commissioner

FROM: Brian Connolly, Planner

DATE: February 25, 2010

SUBJECT: **Understanding the Housing Implementation Plan maps**

This memo is intended as an in-house guide to have a common baseline understanding of the data being used to create the Housing Implementation Plan maps. This memo outlines important caveats that must be understood to properly interpret the maps and the data that is presented; these caveats will be paramount to the completion of an accurate analysis moving forward.

Overview. The maps provided represent the county's existing conditions and allow for data refinement to facilitate more detailed analysis of eligible properties going forward. At present, however, the maps are not an analysis of the suitability of individual properties for housing construction.

Geographic basis. Geographies are basic building blocks that represent areas of the earth's surface. For the purposes of this study, there are two basic types of geographies. *Physical* geographies are those that are based on physical features on the earth's surface: roads, railroads, rivers, utility lines, wetlands, etc. Physical geographies are the foundation of census blocks, transportation layers, and environmental layers. On the other hand, *legal* geographies are those that are based solely on ownership of land or another creation of the state. Tax parcels, zoning districts, and sewer districts are examples of legal geographies.

Rarely, if ever, are physical and legal geographies the same. Thus, it is improper to say, "a census block is a collection of tax parcels." *Although these geographies may overlap on the earth's surface, they are fundamentally unrelated to one another from an analytical standpoint.*

Creation and sources of GIS data. GIS data layers are overlays on a map that show specific themes on a map (i.e. census blocks, tax parcels, etc.). Furthermore, *each GIS layer is created by different people, at different times and for different analytical purposes.* Examples of GIS layers used for the present study are:

- *Census block data* is based on physical geography and is created once every ten years by the Census Bureau for the sole purpose of counting people and housing units.

- *Tax parcel data* is created at the municipal level for the purpose of showing property ownership, assessments and other information.

- *Zoning district data,* created by WCDP, represents local laws and ordinances which allow analysis of permitted uses and development densities.

- *Transportation data* was created by various agencies to show the locations of physical infrastructure and to conduct analysis on roads, rail and other transit.

- *Environmental data,* which includes data on steep slopes and wetlands, was created from various sources to analyze physical features of the natural environment and analyze potential constraints on development.

Because of the fundamental differences in the way the data was created, the layers do not usually "line up" perfectly on a map. For example, the technique that the Census Bureau used to identify census block boundaries is very different from that used by WCGIS to input streets. Thus, census block boundaries, although many of them are intended to be street centerlines, do not "line up" to streets.

"Tagging" of data. GIS allows the combining of data from different layers of information, a process that is typically referred to as "tagging." For example, tax parcels can be tagged with information on their land use, zoning, census block, proximity to transit, etc. *However, because of the fundamental differences in geography and collection methods outlined above, these tags can be misrepresented in a limited number of circumstances.* Although the margin of error in any GIS analysis is extremely limited, it is important to understand that the mathematical limitations of GIS software make the process imperfect, as in any scientific analysis. Thus, while the present study provides a baseline survey of existing conditions, a true analysis would require verifying the accuracy of the data on a parcel-by-parcel basis to account for inconsistencies.

BJC/

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