Barriers to Basic Needs: Education, Goods & Services, and Recreation Methodology

We used a similar methodology for the Education, Goods & Services, and Recreation portions of the Barriers to Basic Needs section (the Jobs and Housing analyses have a separate methodology document). Destinations were defined as outlined below.

1. Goods and Services locations included:

   - Health Care:
     - Hospitals: hospitals in Dutchess County that serve the general public. The VA Medical Center was not included since it is restricted to veterans. Sharon Hospital in Sharon, Connecticut, which serves northeast Dutchess residents, was not evaluated since it is outside of Dutchess County.
     - Clinics: urgent care facilities and other clinics that serve outpatients without an appointment. We did not evaluate doctors' offices due to the sheer number and difficulty of capturing all of them.
     - Pharmacies: stand-alone pharmacies as well as those at hospitals and in grocery stores.

   - Food Resources:
     - Grocery stores: full-service grocery stores, excluding any that require a membership. We did not include corner markets or health-food stores, as they may not provide a full range of products. We did include big box stores with full grocery sections (e.g., Target, Walmart).
     - Food banks: food banks that are open every day.

   - Community Facilities:
     - Community centers: senior centers, municipal community centers, and privately-run community centers, if they have permanent locations open to the public, are consistently used for events/activities, and do not require a paid membership.
     - Town, Village, and City halls
     - Post offices: public post offices
     - Libraries: public libraries

2. Education locations included:
   - Public schools (grades K-12), including Dutchess BOCES
     - Some schools share locations; we focused on each location for the analysis.
   - Colleges, including Dutchess Community College, Dutchess Community College-South, Bard College, Marist College, Vassar College, and the Culinary Institute of America.

3. Recreation sites included:
   - All public parks, as defined in our county-maintained parks GIS layer, minus any monuments or memorials that do not serve a recreational purpose. We reviewed all parks under two acres to remove these sites.
     - Because of their length, we divided our linear parks (the rail trails and the Appalachian Trail) into several pieces, with each access point (or cluster of access points) considered a separate "park."

For each location we assigned one or more access points, typically on the main public road near the entrance (not along driveways). If various roads provide access, we placed multiple access points. These access points served as proxies for the destinations. We then created a half-mile road network buffer from the access point(s). The road network buffer measures the half-mile along streets, rather than as a birds-eye radius, giving a more accurate picture of access. We used ArcGIS's Spatial Join tool to evaluate the following:

- Transit access: We evaluated weekday, Saturday and Sunday bus service within a half-mile of each destination, using the frequent/somewhat frequent/infrequent levels established in our bus access analysis. We did not evaluate transit access for grade schools as almost all provide bus service.
- Sidewalk access: We evaluated the sidewalk coverage within a half-mile of each destination, using a custom sidewalk layer that distinguishes between sidewalks along streets and those internal to a site. We used the on-street sidewalks to measure the percentage of sidewalk coverage using the formula (sidewalk length/[road length x 2])x100.
- Bicycle access: We evaluated whether each destination was within a half-mile of a rail trail. However, in some cases the trail is not currently accessible (it may be elevated or lacking a direct connection). We included these locations in order to see areas of potential access.
- High-congestion locations: We evaluated whether each destination was within a half-mile of any of the four priority high-congestion locations identified in our congestion analysis.

- High-crash locations: We evaluated whether each destination was within a half-mile of one of the high-crash segments or intersections (vehicular, pedestrian, or bicycle), based on our crash analysis. We did not include the high-crash corridors in this analysis because of their length.