Using Model Builder to Build a Regional Transit Oriented Development (TOD) Database

Session Title: Developing Modeling Techniques in ArcGIS
TOD Data Collection

- Document existing conditions around station areas.
- Provide a baseline for measuring key performance measures related to TOD.
- Aid in updating long-term transportation and land use planning.

- Online TOD Database and Map
- Pedestrian Service Areas (“Walksheds”) Related to Transit

What areas are truly accessible to transit?
TOD Data Collection (DATA)

- Site-specific development projects located within one-half mile of an existing transit stop. (Points)
- Categorized based on the primary use (Office, Institutional, Residential, Retail, or Mixed).
- Track and display investment and development related to transit.

- Represent the area within a defined distance/radius from the transit station (typically one-quarter or one-half mile areas). (Polygons)
- Capture information that is not necessarily specific to a particular site (demographics, density, employment, etc.).
- Establish baseline criteria for evaluation over a period of time.
TOD Data Collection

DATA SETS
- STATION CHARACTERISTICS
- STATION AREA CHARACTERISTICS (ONE-HALF MILE)
- DEVELOPMENT CHARACTERISTICS

PRODUCTS
- INTERACTIVE ONLINE MAP
- STATION AREA FACT SHEETS
- TOD REPORT(S)
TOD Data Model
TOD Data Collection *INTERACTIVE MAP*

http://www.nctcog.org/trans/sustdev/TOD/TODdatacollection.asp
TOD Data Collection  

INTERACTIVE MAP
TOD Data Collection

INTERACTIVE MAP
TOD Data Collection INTERACTIVE MAP
TOD Data Collection  STATION AREA FACT SHEETS
Access to Rail (UPDATE 2002 STUDY)

Catalogue existing conditions at all rail stations

Needs Assessment: Analyzing on- and off-street facilities

- Map with existing and recommended facilities for each station area
- Supplemental Maps (land use, population, employment)
- “Station Basics”
- GIS Data available online

Audience:

- Public, Transit Agencies, Governments

http://www.nctcog.org/trans/sustdev/bikeped/access_to_rail/index.asp
Access to Rail ("WALKSHEDS")

Network-based assessment of accessibility to transit, based on mode (e.g. walking or bicycling)
Access to Rail ("WALKSHEDS")

Create new “Service Areas” (polygons)

Fully integrate supplemental data (land use, population, employment, property values, etc) into the database.

Bay Area Travel Survey (MTC, 2000):

The reduction in buffer size caused more than a **30 percent loss of sample** in the one-quarter mile and one-half mile groups.
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