

Agenda

- Project Overview
- Scenario Planning 101
- CommunityViz[®] Software
- The Planning Process
- Case Study: Mooresville, NC
- Software Demonstration
- Next Steps



Project Overview

- Update to the Regional Travel Demand Model
- New SE data software platform (replaces ULAM)
- Software benefits / who's using it
- Project protocol report
- Software training
- Deliverables



Project Overview

What are the challenges?

Forecasting future year land use conditions can be challenging:

- It is difficult to normalize land use data that is submitted by individual towns and counties
- Land use forecasts are hard to update as change occurs
- The “big projects” change everything
- No direct way to test the effect of alternative development patterns on the transportation system



Scenario Planning

What is scenario planning?

Scenario planning is an analytical process that provides the framework for developing a shared, long-term vision of a community.

How does it measure sustainable development?

- environmental stewardship
- economic prosperity
- equitable distribution of community resources



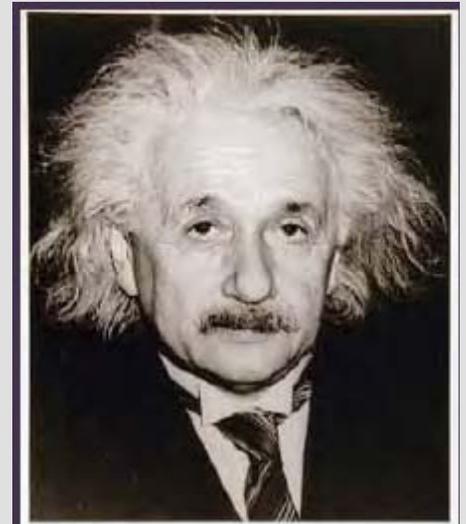
Sustainable development is all about playing well with others.



Scenario Planning

Why do scenario planning?

- Explore the “what if’s” of a region’s future
- Consider the tradeoffs between different development scenarios or policy decisions
- Re-frame local growth questions
- Answer what, where, when & how development occurs within a more sustainable region



“We cannot solve our problems with the same thinking we used when we created them”

Source: Renaissance Planning Group, 2007



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Scenario Planning

The what, where, and when of planning.



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Scenario Planning



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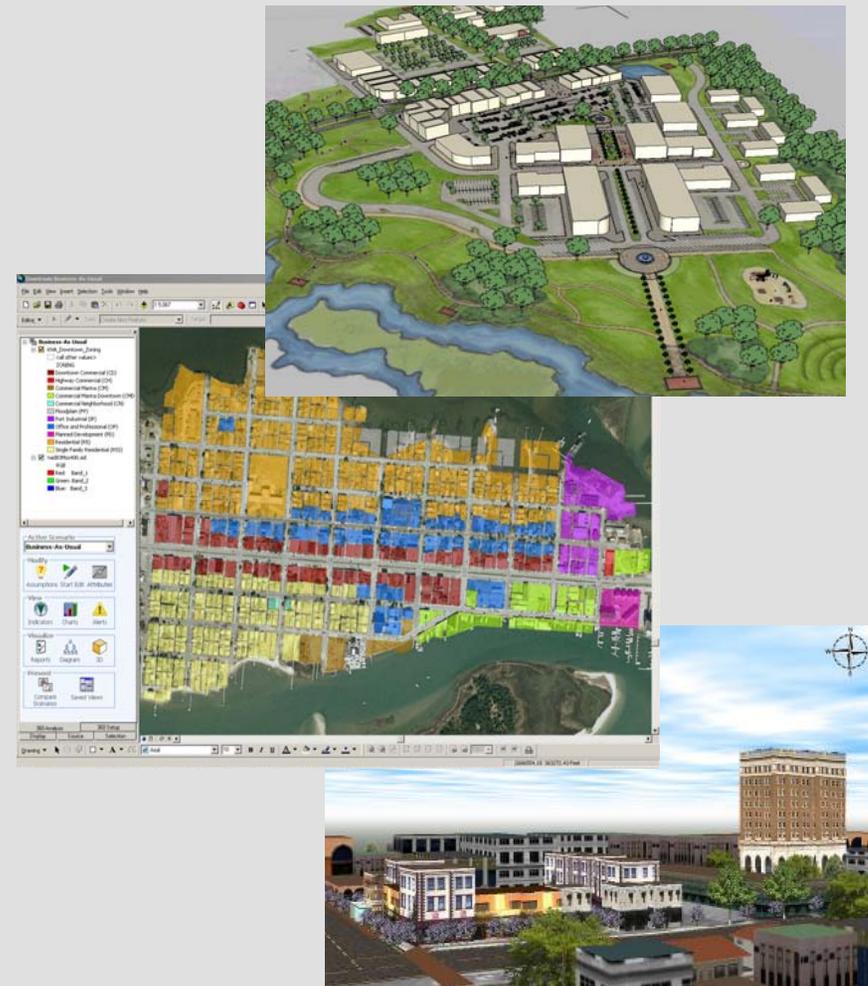
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Scenario Planning

The New Way:

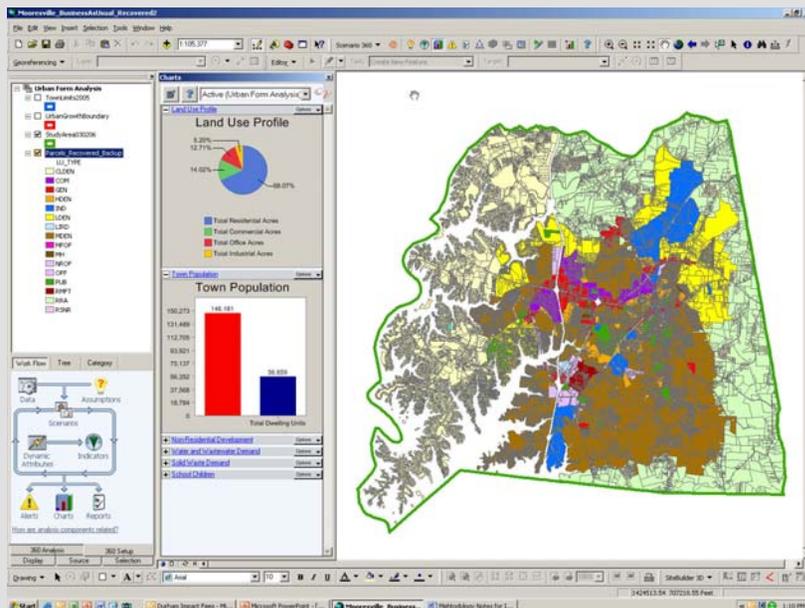
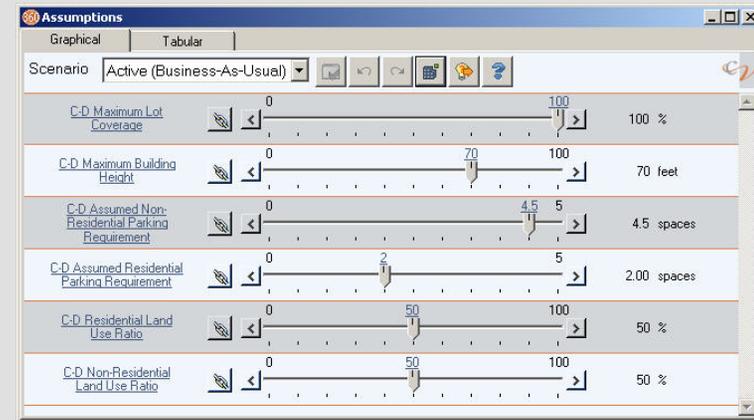
- Community exercise
- GIS database
- Visual / statistical analysis
- Dynamic alternatives
- Quick results



CommunityViz[®] Software

What is it?

A decision support software that evaluates competing future land use scenarios under consideration by a community.



Benefits:

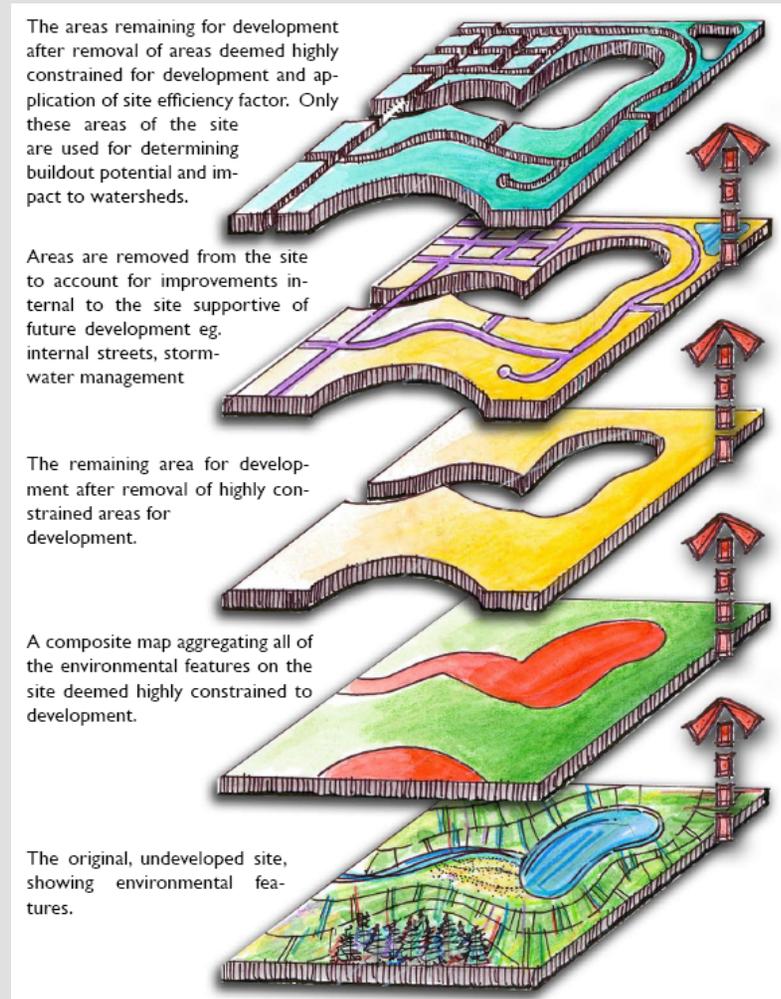
- Time savings
- Local context
- Side-by-side comparisons
- Public involvement tool
- Quick updates
- New municipal planning tool



CommunityViz[®] Software

The difference is the methodology:

1. How do we determine the “build area” for a parcel?
2. What about residential vs. non-residential development?
3. What is the “zoning envelope”?
4. What is the impact of parking?



CommunityViz[®] Software

How does this link to the regional travel demand model?

- SAFETEA-LU requirements
- Micro vs. macro analysis
- TransCAD interface (GISDK scripts)
- Database management



The Planning Process

Trend Analysis

- Existing development patterns / policy initiatives
- Population projections

Carry Capacity Analysis

- Highly-constrained areas for development
- Areas in conflict for development

Land Suitability Analysis

Full Build-Out Potential

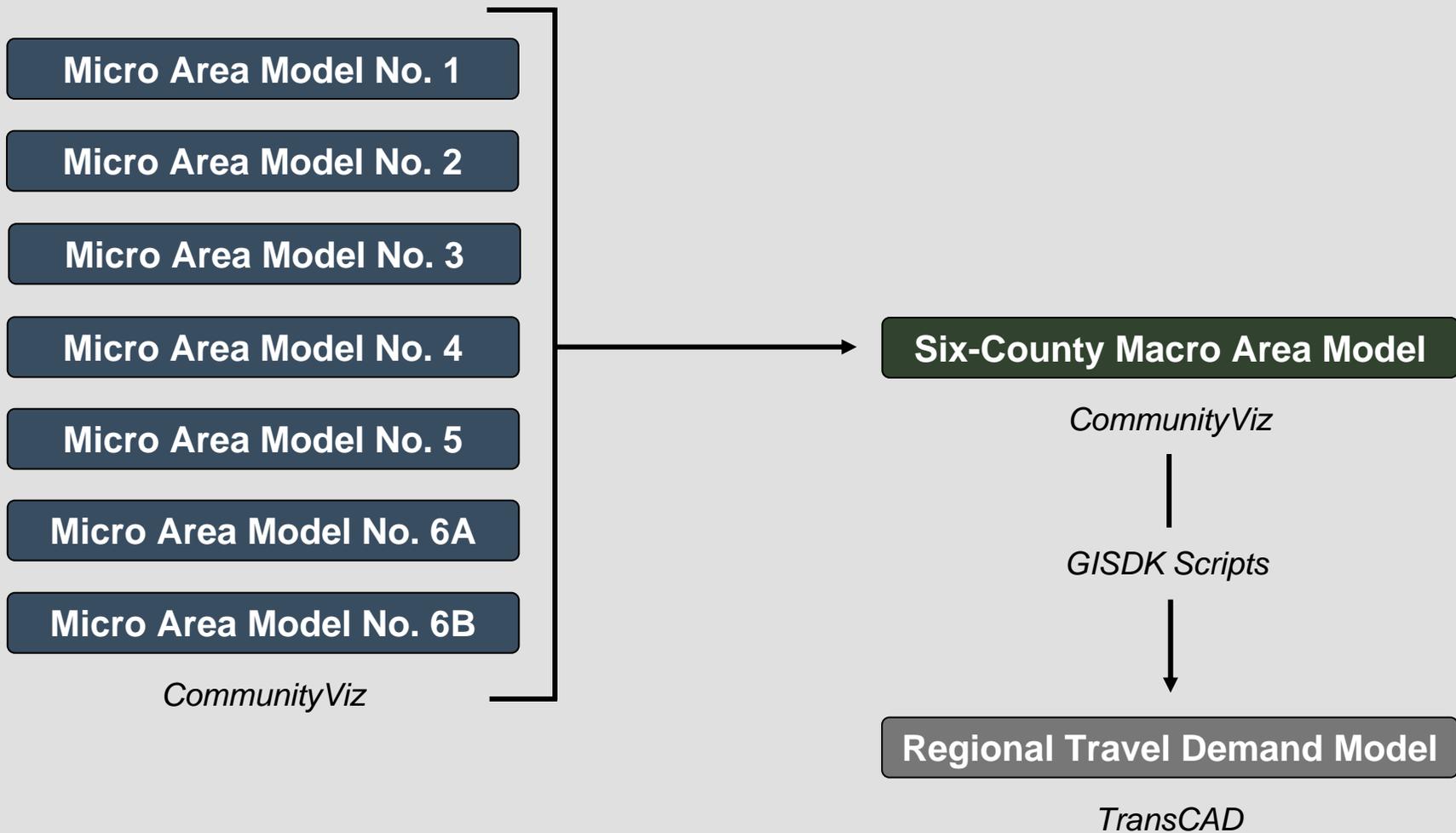
Model Calibration

Future Year Scenarios

- How will we grow?
- Where will we grow?



The Planning Process



CV Case Study



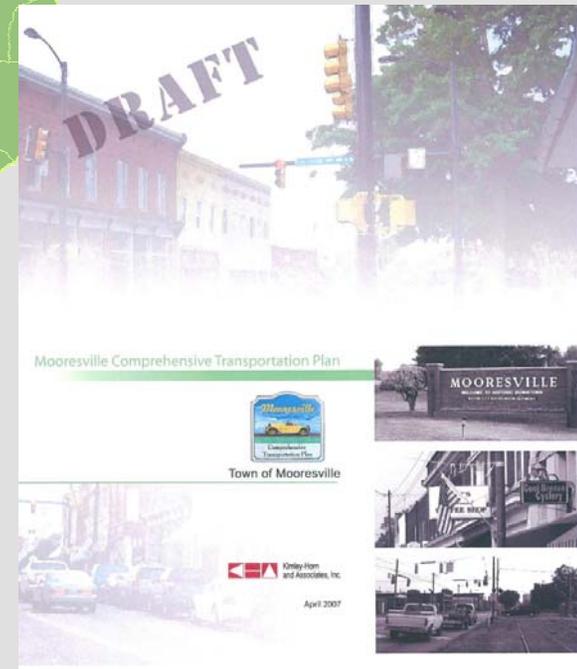
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Comprehensive Transportation Plan Mooreville, North Carolina



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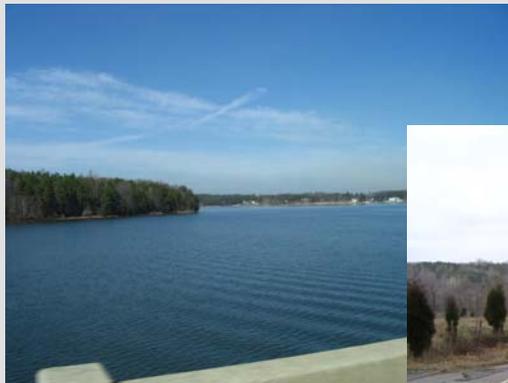
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Background

Total Population, 2005-2025

	2005	2010	2015	2020	2025	2005-2025 Change	
						Number	Percent
Mooresville	62,046	75,139	88,139	98,251	109,602	47,556	76.6%
Troutman	12,956	14,691	18,638	23,302	27,243	14,287	110.3%
Total	75,002	89,830	106,777	121,553	136,845	61,843	82.5%

Source: Warren & Assoc.



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CV Case Study

Scenario Planning Steps

Trend Analysis

Scenario Development

- How will we grow?
- Where will we grow?

Preferred Scenario

- Which Scenario is best?
- Steering Committee Forum

Implementation

- Modify plans, programs, & policies



CV Case Study

Environmentally Sensitive Areas (T1)



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Rural (T2)



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Suburban (T3)



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General Urban (T4)



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Urban Core (T5)



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Special District (T6)



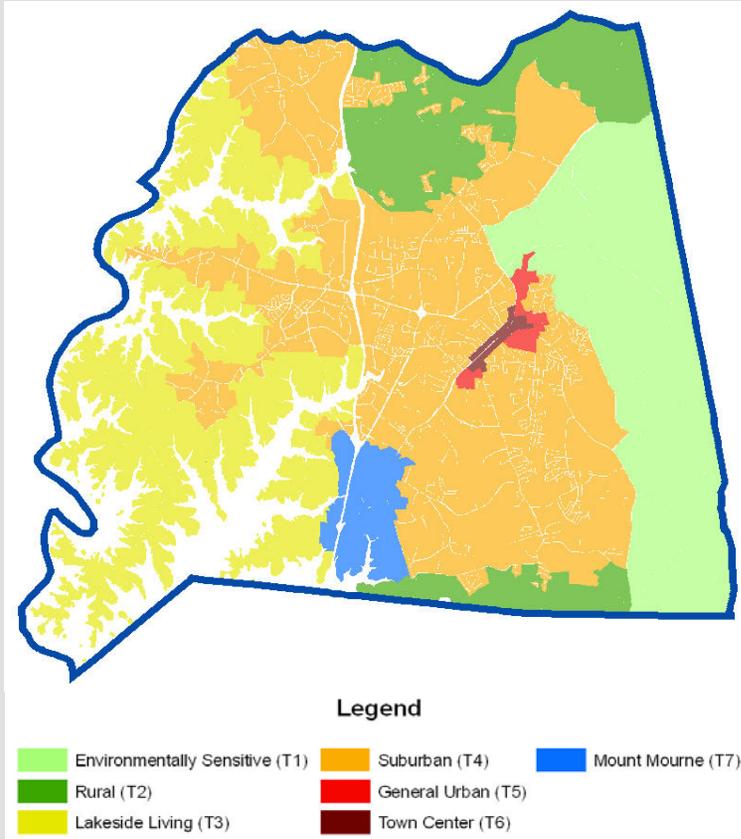
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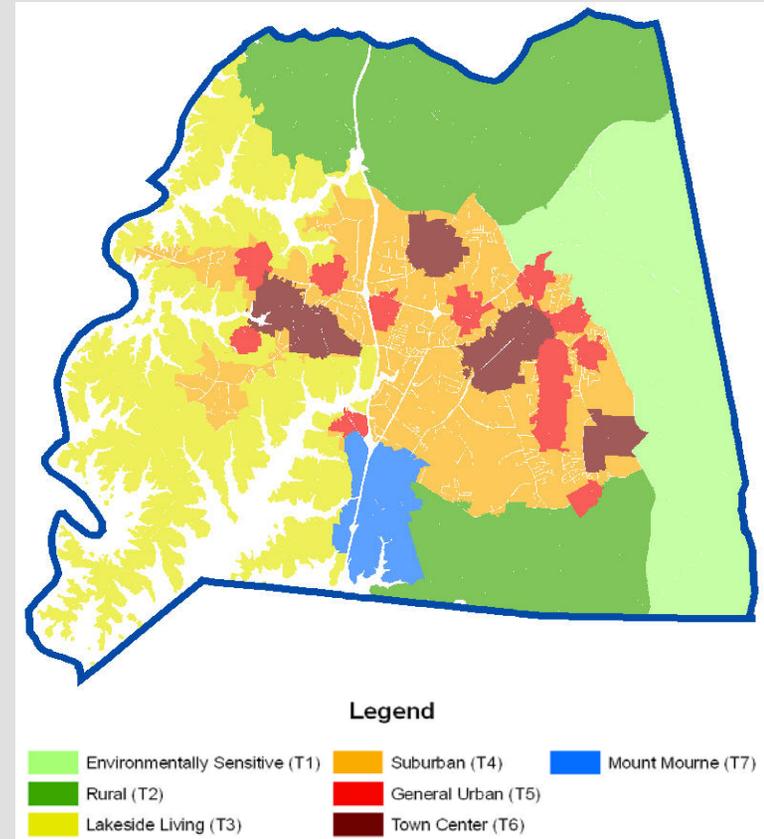


CV Case Study

Two Growth Scenarios:



Sprawl Development



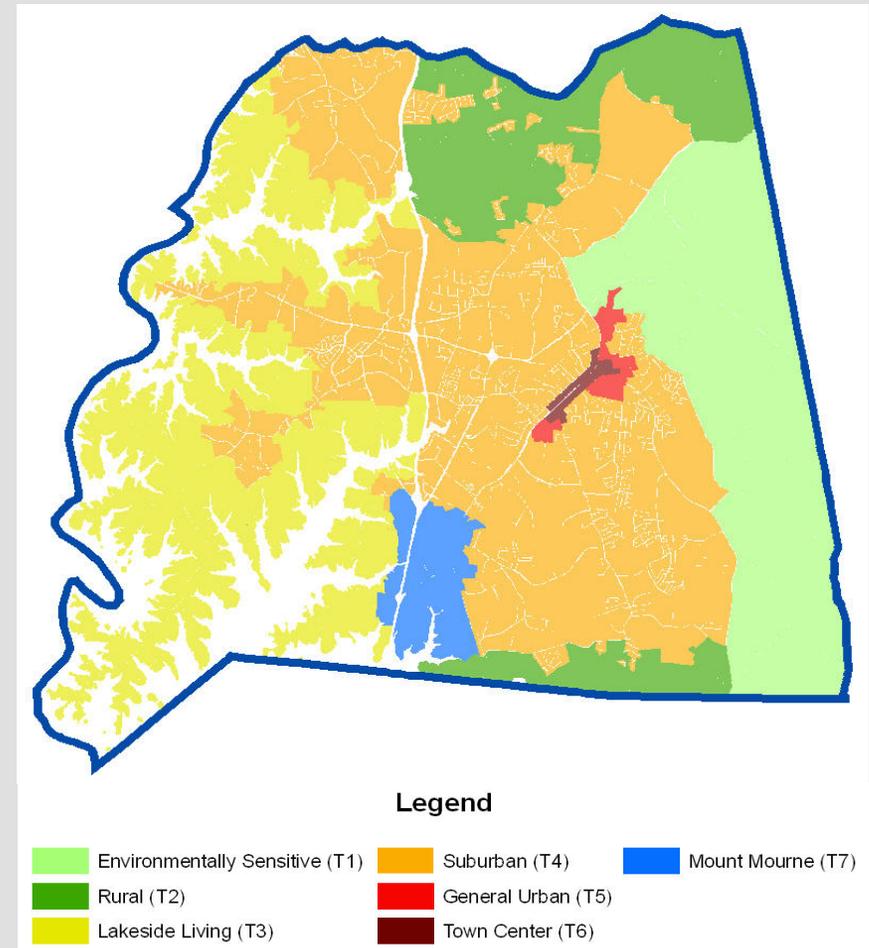
Compact Development



CV Case Study

Sprawl Development

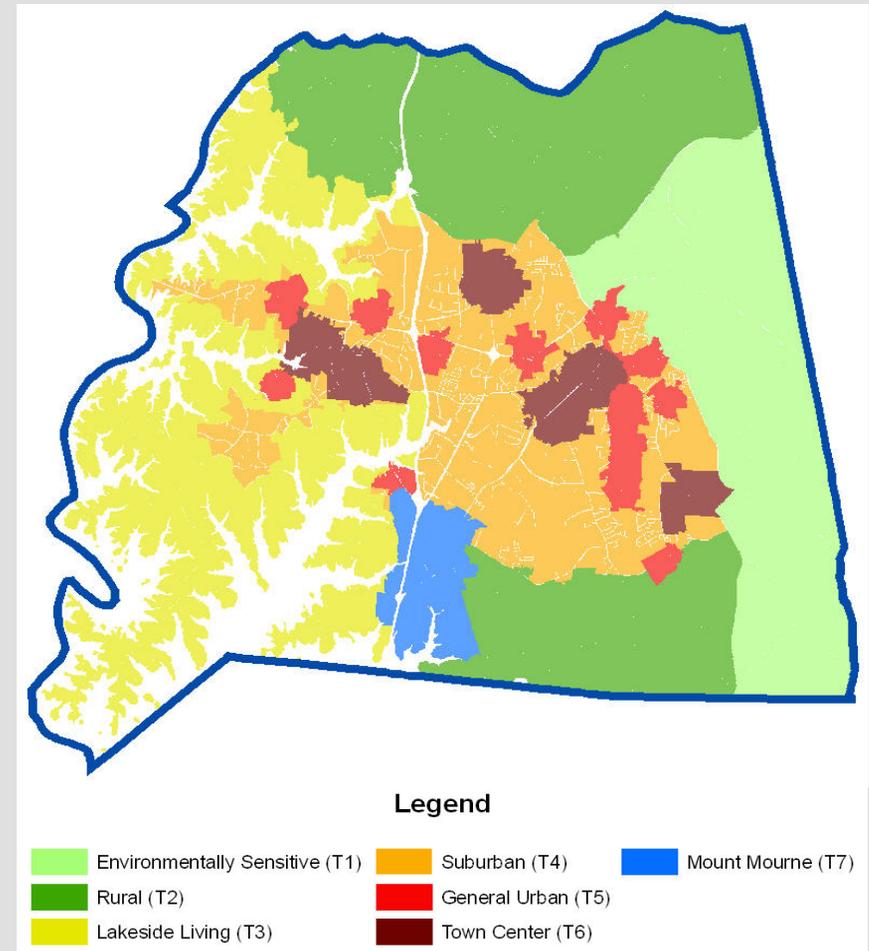
- Maintain adopted plans, programs, & policies
- Development characteristics:
 - low densities & intensities
 - separation between complementary land uses
 - Absence of pedestrian & bicycle infrastructure in the study area



CV Case Study

Compact Development

- Paradigm shift in planning philosophy
- Development characteristics:
 - direct growth toward activity centers
 - encourage close-by, complementary land uses
 - Significant improvements to pedestrian, bicycle, & transit infrastructure



CV Case Study

Scenario Planning Results

Urban Form Category	Sprawl Development Scenario		Compact Development Scenario		Change
	Acres	Percentage	Acres	Percentage	Acres
Environmentally Sensitive Area	11,919	20%	11,857	20%	-62
Rural	8,247	14%	17,622	29%	9,375
Lakeside Living	12,234	20%	11,877	20%	-357
Suburban	25,287	42%	11,590	19%	-13,697
General Urban	387	1%	2,453	4%	2,066
Urban Center	195	0%	2,870	5%	2,675
Mount Mourne Special District	1,829	3%	1,829	3%	0
Total	60,098	100%	60,098	100%	0



Case Study

Scenario Planning Results

Measure of Effectiveness (MOE)	Sprawl Development Scenario	Compact Development Scenario	Percent Change
Total Person Trips (1,000s)	511	521	1.92%
Total Population	110,269	110,204	-0.06%
Person Trips per Person	4.64	4.73	1.07%
Walk/Bike Trips	7,303	8,100	9.84%
Vehicle Miles Traveled (1,000s)	4,020	3,928	-2.31%
Vehicle Miles Traveled per Person	36.5	35.6	-2.28%
Vehicle Hours Traveled (1,000s)	108	104	-3.85%
Vehicles Hours Traveled per Person	0.98	0.94	-3.78%
Average Vehicle Speed (mph)	37.2	37.8	1.59%
Vehicle Miles Traveled @ LOS E (1,000s)	942	835	-12.81%
% Vehicles Miles Traveled Over Capacity	23%	21%	-2.89%



Software Demonstration

Time to take a test drive...

community *viz*[®] 3



Next Steps

- MPO coordination meetings
- Project protocol report
- Develop micro & macro models
- Software training
- Model calibration / TDM interface
- Target date -- September 2008

