

## **2035 LRTP and CTP Land Use Scenarios (6/11/08)**

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### **Land Use Scenarios Proposed**

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) prepares Socioeconomic Data (SE Data) for input into the Triangle Regional Model (TRM). The TRM produces transportation system performance data, such as the level of congestion and vehicle miles traveled, for the Long Range Transportation Plan (LRTP) and Comprehensive Transportation Plan (CTP). The question is often asked during the development process – How might changes in land use plans or policies affect the design and performance of future transportation system? And, how might local jurisdictions change their plans and policies to realize a desired outcome in the future transportation system?

The DCHC MPO has created land use scenarios as part of the 2035 LRTP and CTP development process. That is, the MPO has developed alternative land use assumptions that change the SE Data and subsequently will have an impact on the transportation system performance data of the TRM (travel demand model).

The proposed land use scenarios are summarized in the table on the next page.

### **Additional Information**

There are a few additional points that are important to understanding the use of these scenarios:

CAMPO Participation – The Capital Area Metropolitan Planning Organization (CAMPO) has developed SE Data for a set of land use scenarios that complement the four DCHC MPO land use scenarios. The SE Data for these scenarios has been combined and checked by the Triangle Regional Model Service Bureau.

Scenario Implementation

The TAC might be able to adopt the SE Data produced by a favorable land use scenario. The 2035 LRTP and Air Quality Conformity Determination would also be based on this newly adopted SE Data.

## 2035 LRTP and CTP Land Use Scenarios (June 11, 2008)

No.	Name	Description	Purpose	SE Data Changes	Land Use Plan Changes	Control Total Changes
1	<b>Baseline</b>	Uses current land use plans, policies and official actions. Most likely future reality.	Produces adopted LRTP and Air Quality Conformity Determination	None	None	No change -- Use baseline control totals
2	<b>Build-out</b>	Assumes all available land is developed as proposed in existing long range land use plans, policies and official actions.	Identify needs in CTP, which does not have time horizon, and show long range trajectory of current plans	Realize buildout for each TAZ	None	No control totals used because there is no time horizon
3	<b>Constrained Growth</b>	Assume overall slower growth than current forecasts (could include only "existing plus committed" transportation network)	Impact of slower growth because of congestion (reduced mobility)	Decrease development in specified TAZs	May not include any policy changes	Reduce population and employment control totals
4	<b>Travel Corridors</b>	Increase population and employment development in key <u>corridors</u> (perhaps those identified by Special Transit Advisory Commission)	Impact of new policies that direct development to existing transportation infrastructure	Increase development in identified TAZs, and reduce in other TAZs	Recommended specific policy changes that encourage and permit more development in corridors	No change -- Use baseline control totals
5	<b>Transit Nodes</b>	Increase population and employment development in transit oriented areas ( <u>distinct nodes</u> )	Impact of new policies that direct development to existing and appropriate transportation infrastructure	Increase development in identified TAZs, and reduce in other TAZs	Recommended specific policy changes that encourage and permit more development in corridors	No change -- Use baseline control totals

## Scenario Review

The remainder of this document presents several methods for reviewing the Scenarios.

### Total Comparison

The following two tables compare the total employment and population for each Scenario with the Baseline SE Data (the data approved by the TAC for use in the 2035 LRTP development and that is based on the current land use plans and policies of the jurisdictions). The tables demonstrate that the overall totals for the Travel Corridor and Transit Nodes Scenarios remain equal to the Baseline SE Data, and that the Buildout and Constrained Scenarios show expected increases and decreases, respectively, compared to the Baseline SE Data.

### Population

Jurisdiction	Baseline		Buildout		Constrained		Travel Corridors		Transit Nodes	
	2005	2035	Pop.	% Change	Pop.	% Change	Pop.	% Change	Pop.	% Change
Durham (1)	244,022	354,164	545,514	54%	325,325	-8%	354,163	0%	354,164	0%
Orange (2)	44,904	57,649	217,359	277%	50,346	-13%	57,649	0%	57,649	0%
Chatham (3)	34,067	117,130	140,583	20%	75,986	-35%	117,130	0%	117,150	0%
Chapel Hill (4)	58,339	80,483	86,957	8%	72,373	-10%	80,466	0%	80,483	0%
Carrboro	20,858	28,269	28,269	0%	24,626	-13%	28,255	0%	28,269	0%
Hillsborough	12,438	22,380	22,380	0%	21,262	-5%	22,380	0%	22,382	0%
<b>Total</b>	<b>414,628</b>	<b>660,075</b>	<b>1,041,062</b>	<b>58%</b>	<b>569,918</b>	<b>-14%</b>	<b>660,043</b>	<b>0%</b>	<b>660,097</b>	<b>0%</b>

## Employment

Jurisdiction	Baseline		Buildout		Constrained		Travel Corridors		Transit Nodes	
	2005	2035	Emp.	% Change	Emp.	% Change	Emp.	% Change	Emp.	% Change
Durham (1)	175,487	282,571	440,830	56%	258,653	-8%	282,583	0%	282,601	0%
Orange (2)	4,290	10,087	34,347	241%	9,204	-9%	10,087	0%	10,087	0%
Chatham (3)	8,199	23,863	47,035	97%	17,606	-26%	23,863	0%	23,853	0%
Chapel Hill (4)	36,702	74,875	82,313	10%	67,735	-10%	74,875	0%	74,923	0%
Carrboro	4,390	6,857	6,945	1%	5,734	-16%	6,856	0%	6,856	0%
Hillsborough	5,679	14,453	14,625	1%	13,916	-4%	14,452	0%	14,426	0%
<b>Total</b>	<b>234,747</b>	<b>412,706</b>	<b>626,095</b>	<b>52%</b>	<b>372,848</b>	<b>-10%</b>	<b>412,716</b>	<b>0%</b>	<b>412,746</b>	<b>0%</b>

(1) Durham County does not include Chapel Hill jurisdiction

(2) Includes parts of Orange County that are not in Carrboro, Chapel Hill and Hillsborough

(3) Includes eastern half of Chatham County

(4) Includes parts of Chapel Hill in Orange County and Durham County

### Movement Comparison

The total population and employment in the Travel Corridor and Transit Node Scenarios remains the same as that of the Baseline SE Data. However, the TAZ totals increase and decrease to depict a shift, or movement, of the population and employment from one TAZ to another. The following two tables show the amount of population and employment movement that occurs in these two Scenarios for the various jurisdictions, and indicates what percentage of the total this movement represents.

## Travel Corridor Movement

Jurisdiction	Population			Employment		
	Total	Movement	Percent Move	Total	Movement	Percent Move
Durham (1)	354,163	20,002	6%	282,583	13,138	5%
Orange (2)	57,649	4,780	8%	10,087	297	3%
Chatham (3)	117,130	0	0%	23,863	0	0%
Chapel Hill (4)	80,466	2,140	3%	74,875	1,371	2%
Carrboro	28,255	928	3%	6,856	230	3%
Hillsborough	22,380	849	4%	14,452	421	3%
<b>Total</b>	<b>660,043</b>	<b>28,699</b>	<b>4%</b>	<b>412,716</b>	<b>15,457</b>	<b>4%</b>

## Transit Node Movement

Jurisdiction	Population			Employment		
	Total	Movement	Percent Move	Total	Movement	Percent Move
Durham (1)	354,164	15,842	4%	282,601	20,535	7%
Orange (2)	57,649	5,370	9%	10,087	848	8%
Chatham (3)	117,150	24,671	21%	23,853	14,556	61%
Chapel Hill (4)	80,483	5,643	7%	74,923	1,532	2%
Carrboro	28,269	26	0%	6,856	830	12%
Hillsborough	22,382	842	4%	14,426	803	6%
<b>Total</b>	<b>660,097</b>	<b>52,394</b>	<b>8%</b>	<b>412,746</b>	<b>39,104</b>	<b>9%</b>

### TAZ Maps

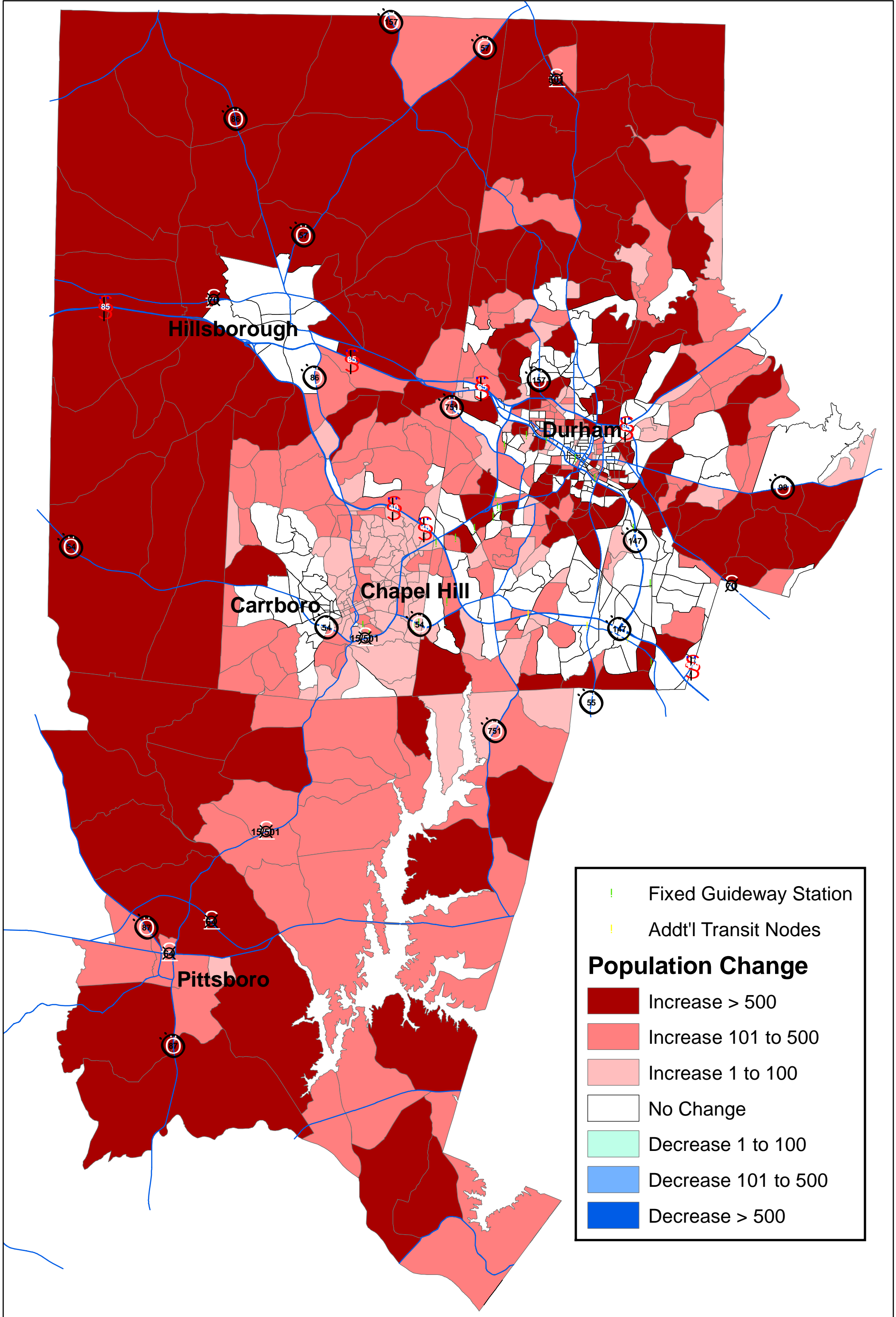
The remaining pages present eight maps; a population and employment map for each of the four Scenarios. The map coloring depicts the level of increase or decrease of population and employment in each TAZ (Traffic Analysis Zone) for that Scenario. The reader can distinguish the expected patterns such as the increases around transit stations and along corridors for the Transit Node and Travel Corridor Scenarios, and decreases in areas of low transportation access for the Constrained Scenario.

### TAZ Tables

The tables showing the detailed SE Data for each of the four scenarios are voluminous and therefore are not included in this document. The tables are available on the MPO's Web site – [www.dchhcmpo.org](http://www.dchhcmpo.org), or by contacting Andy Henry, (919) 560-4366.

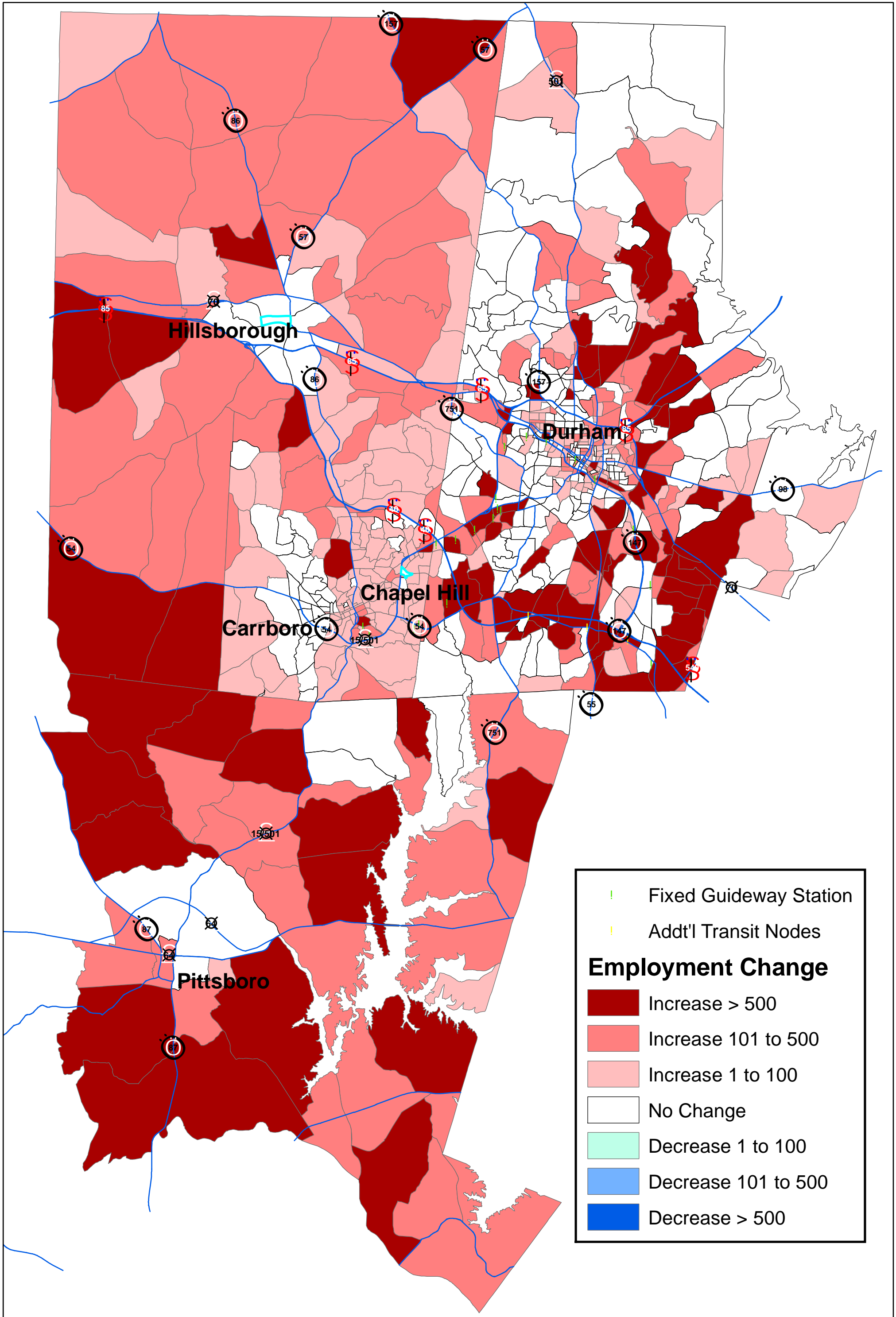
# Buildout L.U. Scenario -- Population Compared to Baseline

TAC 6/11/2008 Attachment 10A



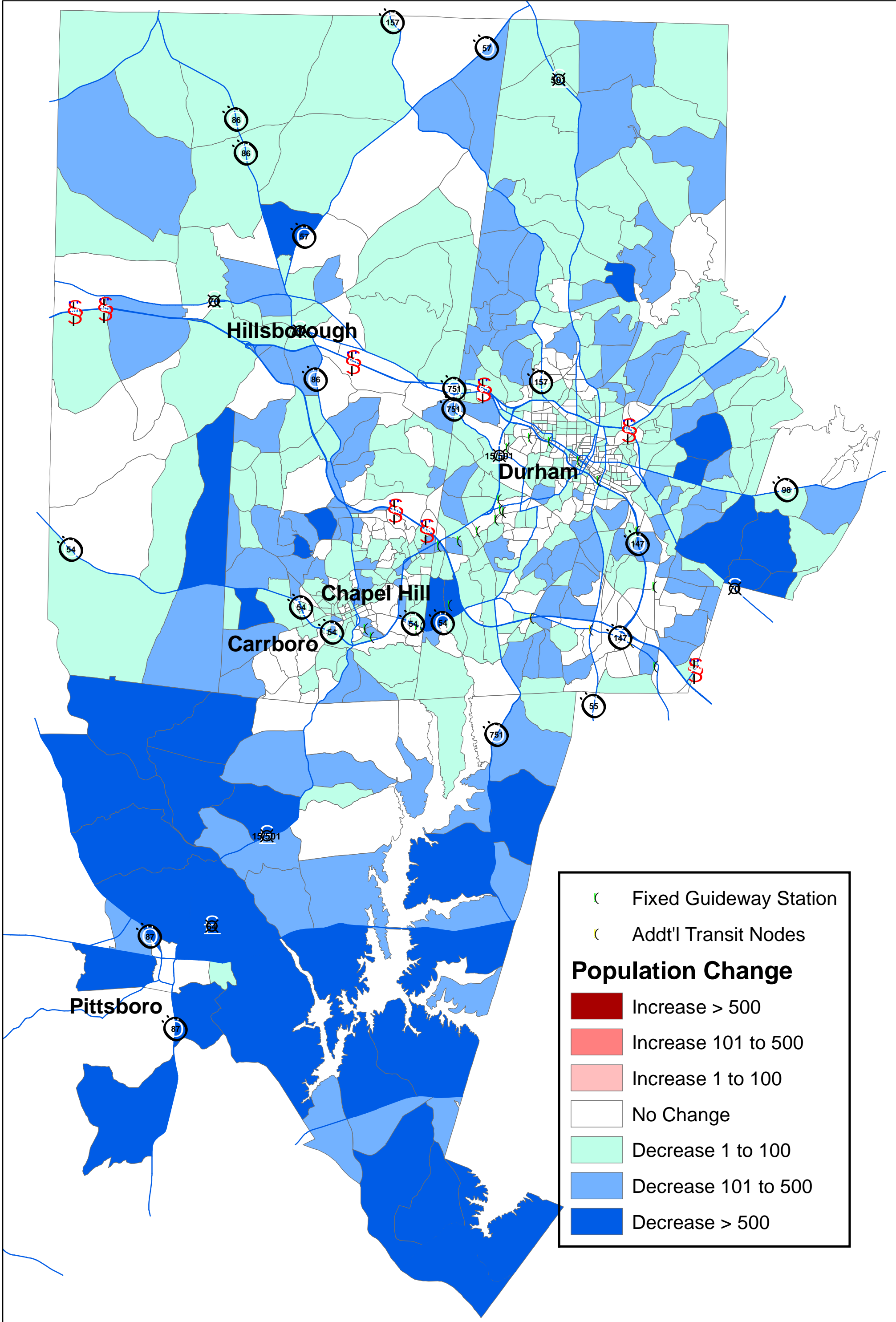
# Buildout L.U. Scenario -- Employment Compared to Baseline

AC 6/11/2008 Attachment 10A

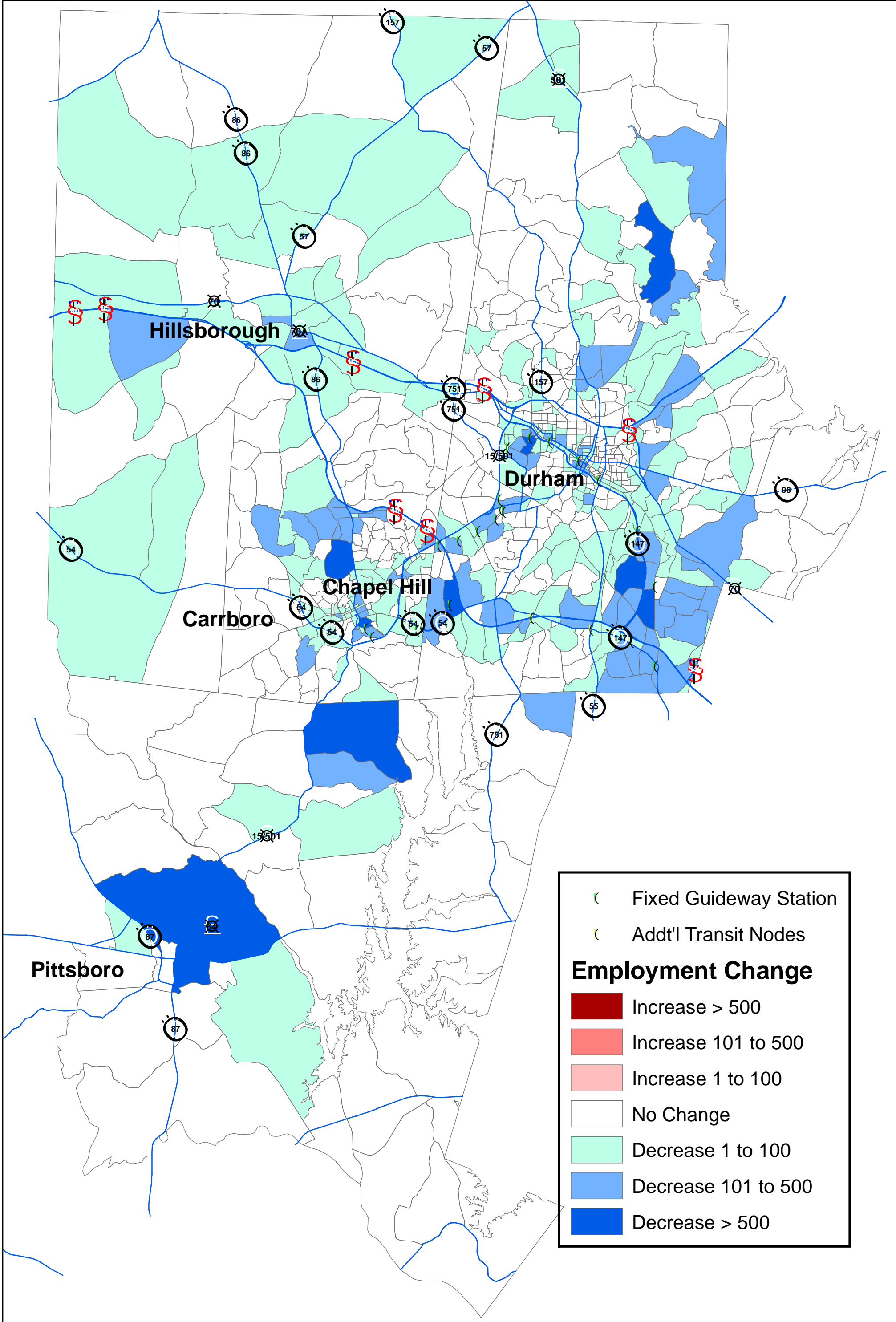




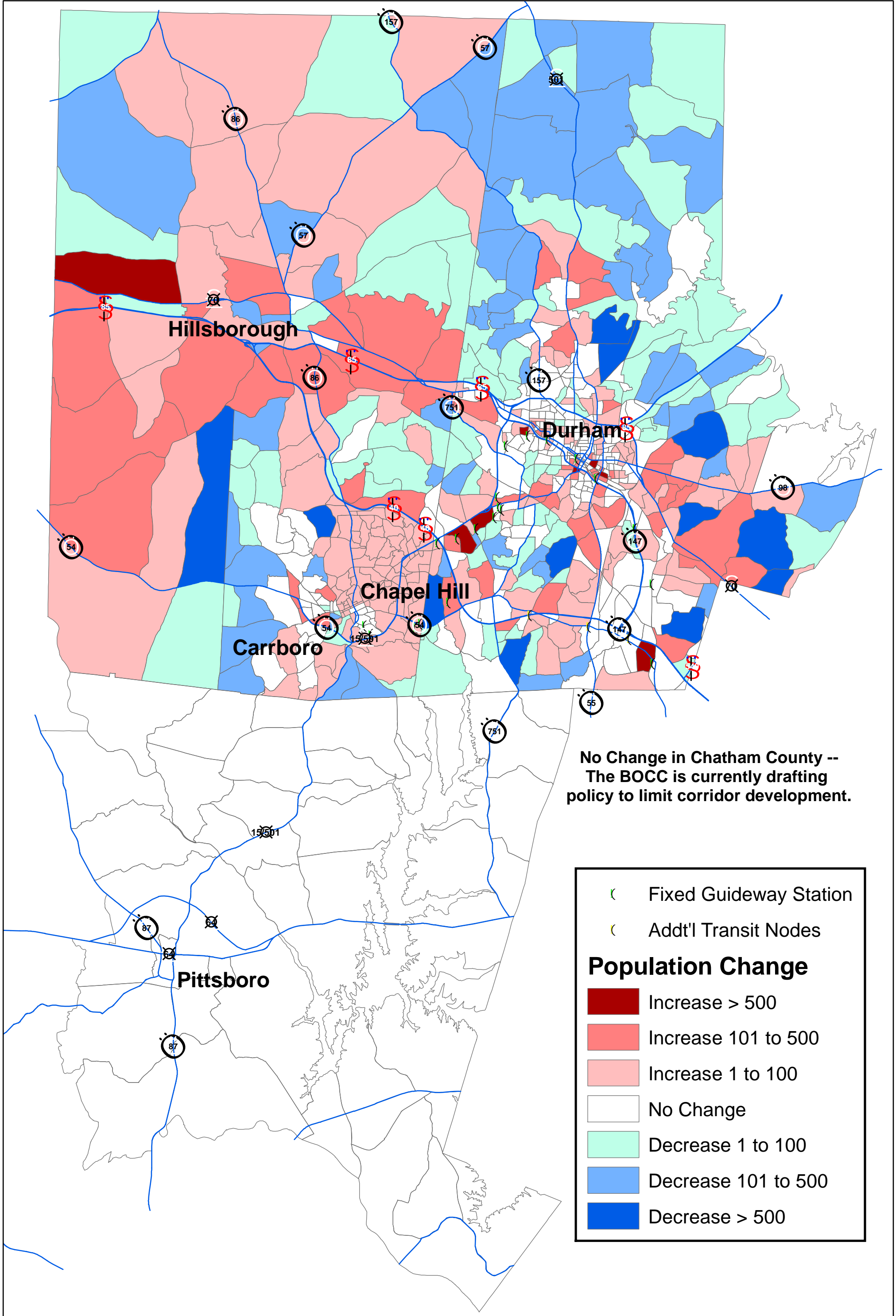
# Constrained L.U. Scenario -- Population Compared to Baseline



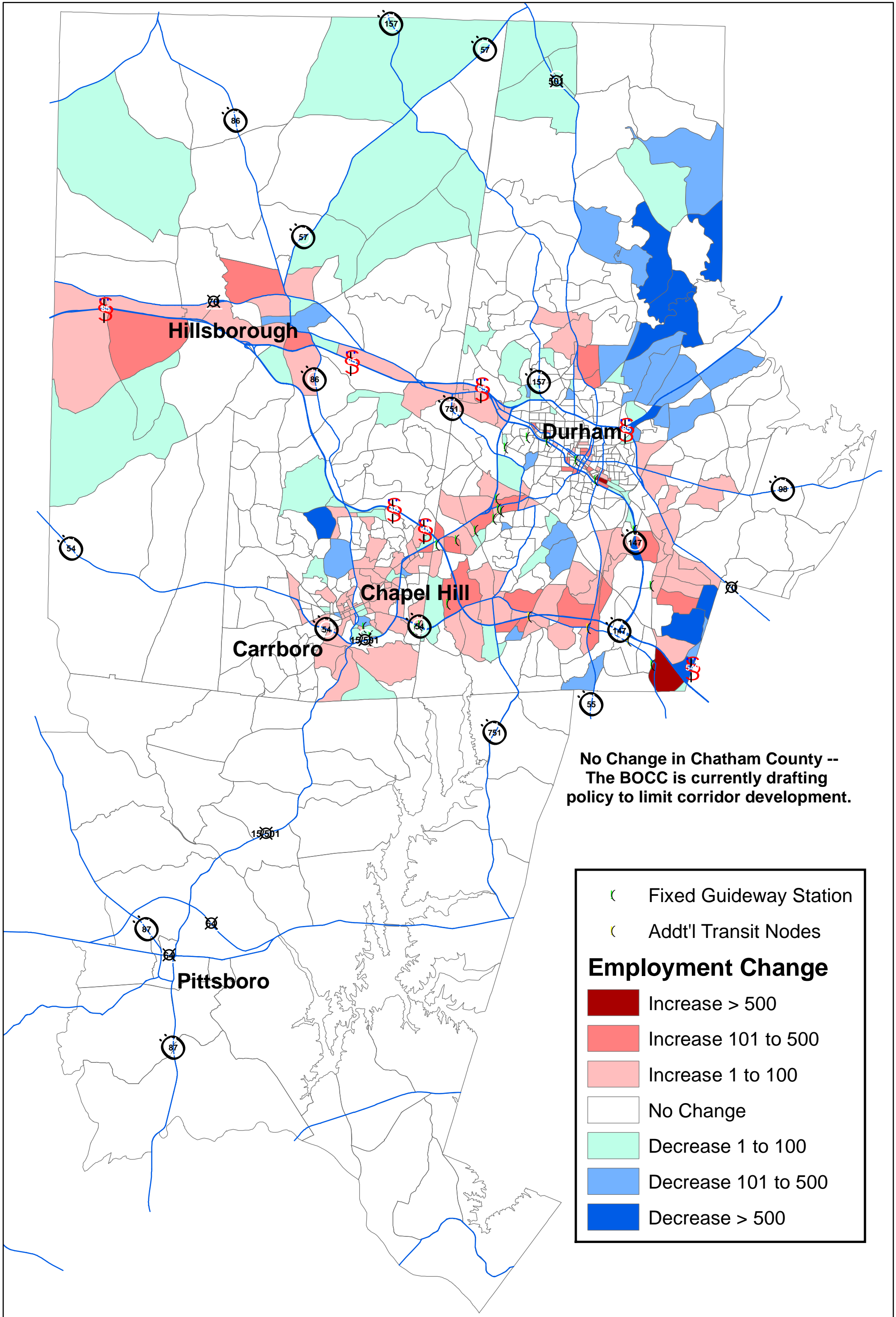
# Constrained L.U. Scenario -- Employment Compared to Baseline



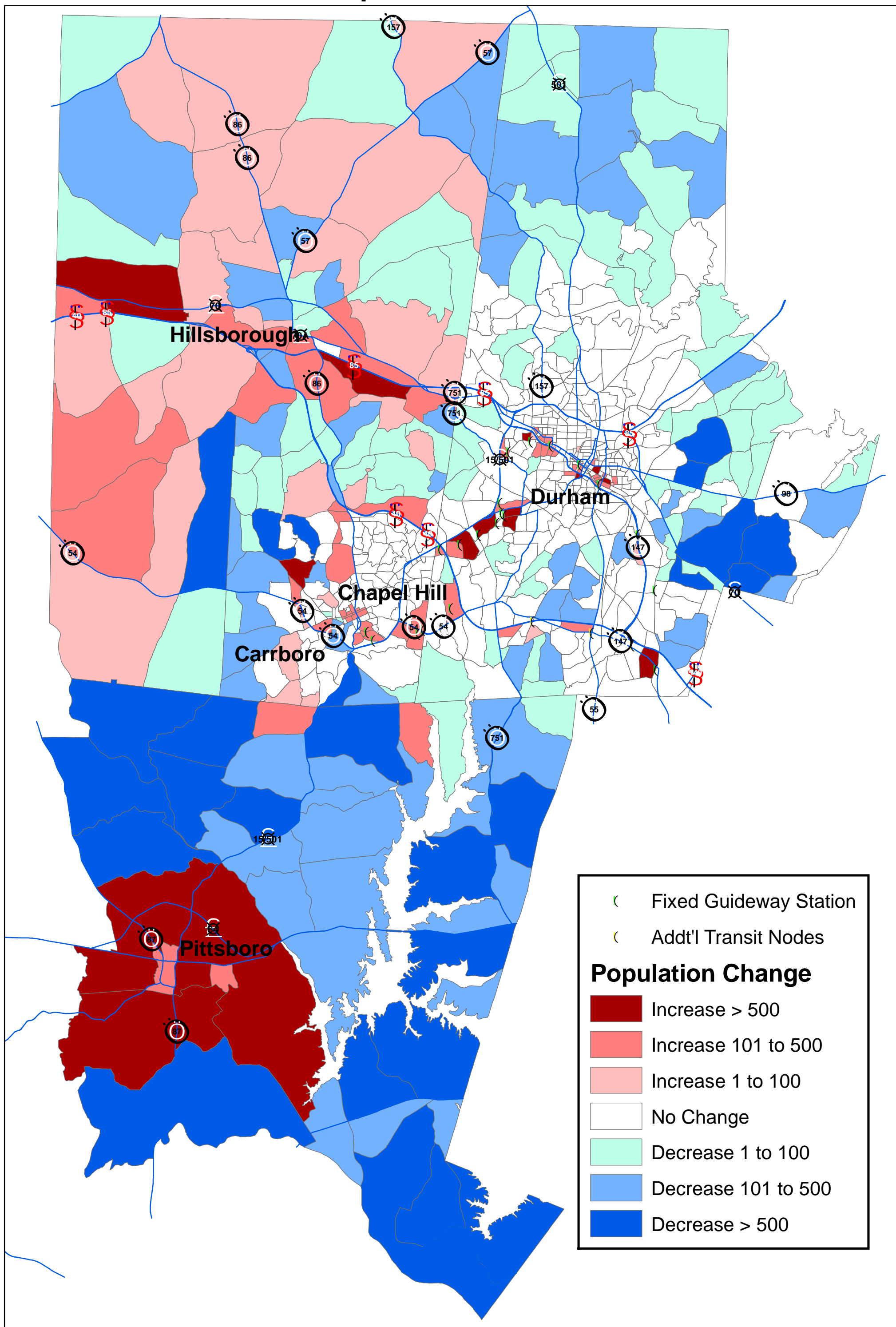
# Travel Corridor L.U. Scenario -- Population Compared to Baseline



# Travel Corridor L.U. Scenario -- Employment Compared to Baseline



# Transit Node L.U. Scenario -- Population Compared to Baseline



- Fixed Guideway Station
- Addt'l Transit Nodes

**Population Change**

- Increase > 500
- Increase 101 to 500
- Increase 1 to 100
- No Change
- Decrease 1 to 100
- Decrease 101 to 500
- Decrease > 500

# Transit Node L.U. Scenario -- Employment Compared to Baseline

