Cumberland Region Tomorrow

a report to the region

RESULTS FROM THE WORKSHOPS OF CUMBERLAND REGION TOMORROW
WE are a private, non-profit, citizen-based organization working with the Greater Nashville Regional Council and others in the public sector, dedicated to planning for the future livability and economic vitality of our 10-county region.

WE believe that it is possible to develop a shared vision and common identity for our region, that we can use tools and intelligence to develop alternatives, and that we can work effectively with elected officials to make our vision real.

WE seek to bring together diverse interests; to enhance the quality of decision making through education, research, and discussion; to foster regional thinking and planning; and to encourage all citizens to become involved in growth planning for the future of the region.

WE enable citizens to have a say and be involved in making choices about how we grow that will be good for their families, jobs and properties; we listen to all voices and seek agreement across county lines and city limits.

WE know we can continue our current prosperity and growth without losing what makes our region so attractive, without becoming "Anywhere, U.S.A."—but only if we work together.
CUMBERLAND REGION TOMORROW
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Fellow citizens of the Cumberland Region,

The Cumberland Region is one of the most diverse and beautiful parts of Tennessee. This diversity and beauty are two of our most important regional assets, whether we consider them from an economic, cultural, environmental or livability perspective. The Cumberland Region—and it is a region—is where we live, share an economy, a transportation network, sports and cultural activities, places to work and shop as well as environmental resources. In the global economy, it is our region that is competing for new growth and better jobs. We need to think and act regionally if we are to continue our prosperity and design a future that we all desire.

We hope that you will find the results of our Visioning Project thought-provoking—and that you will join us in advocating for a future Cumberland Region that is more reflective of our regional values than the future the “business as usual” trend will provide us. A Report to the Region … Continuing the Discussion is intended to serve as an update on our ongoing activities and lay the groundwork for conceptualizing a future that can be created through new growth and development scenarios and strategies. Cumberland Region Tomorrow will continue research and discussion initiatives and move toward offering tools and resources to assist governments, regional groups and citizens in implementing concepts from this and future reports.

We would like to thank the many interested citizens and elected officials who generously gave of their time to participate in our many meetings and workshops. We especially want to express our appreciation to the financial supporters of Cumberland Region Tomorrow and our Regional Visioning Project.

Cumberland Region Tomorrow is inclusive of diverse perspectives and membership. Our Board of Directors consists of residents of each of our ten counties and represents a broad array of interests and perspectives. We look forward to hearing your input on the many ideas discussed in this report, as the perspective of every citizen of this region is important. Please join us as we continue the discussion of our region’s future.

Sincerely,

DeWitt Ezell
Co-Chairman
Cumberland Region Tomorrow

Julius Johnson
Co-Chairman
Cumberland Region Tomorrow
THE CUMBERLAND REGION TODAY

The Cumberland Region is made up of 3.4 million acres in ten counties. Over 1.4 million people call it home. Located in the center of Middle Tennessee, the region consists of Cheatham, Davidson, Dickson, Maury, Montgomery, Robertson, Rutherford, Sumner, Williamson and Wilson counties.

These ten counties are the population and economic center of Middle Tennessee. Unlike metropolitan areas such as Atlanta or Chicago, most of the 34 cities and 20 towns of the Cumberland Region are physically separate. Residents of the region, however, are interdependent, with daily living, shopping and working patterns crossing many political, economic and geographic boundaries.
The Cumberland Region is emerging as one of the most land-extensive metropolitan areas in the United States. Only about 15 percent, or 504,000 acres, of land in the Cumberland Region is developed; the great majority of land is undeveloped farmland, woodland and natural areas.

In our region, 80 percent of the population resides in urban or suburban areas. The remaining 20 percent of the region’s population lives in what might be called rural residential areas—plots of land too small to be farmed but at too low a density to constitute a suburb. Density of development in the Cumberland Region is an important indication of growth trends. Higher density means that more people and businesses are located nearer each other, thus reducing automobile travel between them. Lower density indicates a spreading out of residential and commercial development, using more land per person.

The average density of the 52 largest metropolitan areas in the country is approximately 4.7 persons per acre. If just the areas of the Cumberland Region defined as urban (those with density levels of 1.6 or higher persons per acre) are considered, our average density is 4.8 persons per acre. Total population density in our region, which includes urban, suburban, and rural residential areas, averages 2.7 persons per acre, which is sixty percent of the national average. This level of development suggests what some people identify as “sprawl,” a popular buzzword with many different levels of acuteness. In the following sections, we will explore the implications and applications of low- and high-density development and we will also discuss aspects of growth and development that contribute to sprawling conditions and alternatives that will alleviate this growth pattern.
The Creation of Cumberland Region Tomorrow

Cumberland Region Tomorrow (CRT) was founded in 2000 as an outgrowth on a regional planning summit sponsored by Vanderbilt University and the Greater Nashville Regional Council the previous year. The 1999 summit was organized around issues raised by the Pierce Report, a series of articles in The Tennessean, that explored current and future growth issues for the region. The study was sponsored by the Vanderbilt Institute for Public Policy Studies and The Tennessean. Much discussion at and after the 1999 summit centered on the need for a regional, citizen-based organization to bring attention to growth-related issues. CRT is that organization.

As a private, non-profit, citizen-based organization, we work with the Greater Nashville Regional Council and others in the public and private sector. CRT is dedicated to planning for the future livability and economic vitality of the ten-county region.

We are pursuing our mission through positive action. Our first steps were leading a Regional Visioning Process that involved hundreds of citizens participating in numerous public workshops across the region. The goals of the Visioning Process are to determine core regional values or guiding tenets as we prepare for continued growth, to analyze the consequences of current trends if we do not act on these values, and to start discussion of alternative growth scenarios and practices that can lead to different growth and development outcomes.

As the region-wide discussion of these issues continues, CRT’s focus will turn to the consideration and development of implementation tools which will help government officials, other decision makers and citizens bring new growth and development patterns to reality. The results of the community workshops and our future steps are the subjects of this report.

Cumberland Region Tomorrow is a private sector regional organization working with the public sector to support and encourage growth planning, with emphasis on land use, transportation, and preservation of the rural landscape and character of the region’s communities.
THE CUMBERLAND REGION IN THE PAST DECADE

The Cumberland Region’s population and land development exploded in the 1990’s. Total population increased by 22 percent, a growth of approximately 250,000 residents. This population growth was accompanied by a jump in employment which increased by 38 percent.

In 1990, the Cumberland Region was one of the least congested mid-sized regions but it has now become the most congested area of its size in the country. Between 1990 and 2000, daily per capita driving in the Nashville metropolitan area increased from 30 miles per person per day to 37.5 miles per person per day. Time lost waiting in traffic also increased substantially during the same decade. Longer commutes and time spent in traffic increases the cost of fuel consumption and contributes significantly to air pollution.

One of the greatest challenges the region faces is the continuation of these patterns: lower density development, accelerated land consumption, and increased traffic congestion. A combination of forces is responsible for this dispersal of the population—the preference of many residents to have a house in the country while enjoying job opportunities in the cities, extensive investment in freeways and expressways, and the restrictive zoning practices of many local governments.

Continuation of these practices will result in increasing loss of open spaces and agricultural lands, longer commutes, large amounts of funds required for infrastructure and the possibility that existing cities and towns will decline as growth moves to newly developed land.

The Coliseum, Nashville, Davidson County

The new residents and new jobs brought an unprecedented land development boom to the Cumberland Region. Over 167,500 acres or 5% of the region’s total land area was developed from farms and natural areas into housing, businesses and roads during the 1990s. On average, one acre was developed for every 1.41 persons of population increase. This pattern of growth and reduction of development density has contributed to the current sprawling development patterns evident throughout the region and threatens the distinct character of our cities and towns.

The decrease in density also had a significant impact on the region’s transportation network. Due to the spreading out of development, residents of the region traveled further between work, home, school and shopping, and as the population continued to grow, traffic volume increased.

Dickson County
THE REGIONAL VISIONING PROCESS

One of the basic tenets of CRT is the concept that we in the region can guide our growth. We also believe that by working together we can develop new ideas to change the direction that current trends take us. There are many reasons to do so: the savings in infrastructure dollars, the revitalization of our cities and towns, the improvements in our environment. However, all of these will only be possible if we as a region can agree to a common vision, one that will engender enough support from enough people that change is feasible. This vision must be based on a core set of common values; it must solve real, critical problems without making things worse; and it must be achievable.

In order to discover this common vision and better document growth scenarios, CRT identified model initiatives and secured national experts to guide its research program. The services of Fregonese Calthorpe & Associates, a nationally recognized firm specializing in regional growth planning were secured in early 2001 to guide CRT’s research and visioning efforts. Research was then completed to identify other regions of the country that faced and are successfully addressing similar rapid growth issues. Envision Utah, a public/private partnership, was identified as the most effective model because of its emphasis on the wide-ranging participation and support of citizens, developers, regional, state, and local government officials, and many other constituency groups through a workshop/scenario planning process. Based on Envision Utah’s methods, CRT gathered trend data and conducted a series of workshops from which three important sets of information were determined—the Base Case, Guiding Tenets, and the Alternative Case. The following sections describe what we learned.

DEVELOPMENT TRENDS AND GROWTH PROJECTIONS

In order to predict growth and development patterns relating to our region, CRT first identified the following indicators and trends utilizing the most up-to-date data available. Primary sources used included census data, information from government agencies and professional consultants.

Population and Household Growth

We can expect the ten-county Cumberland Region population to increase by about a half million residents in the next 20 years—from 1.4 to 1.9 million people if current trends continue. In Davidson County alone the population is projected to increase by 62,000 persons. In the six counties surrounding Nashville-Davidson County total population is expected to increase by 300,000. The largest projected population increases are in several of the counties surrounding Nashville-Davidson County—notably Cheatham County, 64 percent; Williamson County, 58 percent; and Rutherford County, 54 percent.

As the population increases, the number of households is projected to increase more rapidly. However, households will become smaller from 2.66 to 2.58 people per household. This trend is attributed to the changing demographics of the region. While the resident population will age and household size will decline, much of the region’s growth will result from immigration from other parts of the United States and the world. The region’s Hispanic population, which grew by 140 percent in the last ten years, from 11,300 to 27,000, will continue to become a larger percentage of the Cumberland Region population representing 26 percent of the forecasted new growth.
Since much of the growth is from immigration, the birth rate will be much higher than it would be otherwise. People who move to a new area are usually in their 20s and 30s. They often bring children with them and continue to have children after they settle. The proportion of young people will remain stable—and schools will continue to be a large need. In addition, the number of persons over age 65 will increase dramatically. The only population that will fall in proportion to current percentages are key members of the labor force—those ages 20 to 49. Their percentage will fall from 40 percent to 34 percent of the population.

**Employment Growth**

The number of jobs in the Cumberland Region is expected to increase by 33 percent in the next 20 years, an increase of 323,540 from the current 973,580 employed persons. The majority of the increase will be in the service sector. Manufacturing will decline slightly as a percentage of the job market; other sectors will remain stable. Service jobs tend to develop close to households unlike industrial jobs that locate independently of households. Service sector jobs also tend to have lower wages and be more sensitive to land use and transportation factors, thus increasing the need for affordable housing throughout the region. Clearly, employment trends will have a large impact on the types of future development in the Cumberland Region.

**Use of the Land**

The most important and alarming trend in the Cumberland Region relates to land use. Most new development is occurring outside of existing cities and towns on previously undeveloped land at a very low rate of density. As a result consumption of open space and agricultural land is occurring at an alarming rate. Predictions show a continuation of the declining density trend from the current average of 1.4 persons per acre to 1.31 persons per acre over the next 20 years.

With an expected increase of 467,000 people, more than 356,000 acres of land, roughly the size of Davidson County, will be urbanized—mostly for low-density housing outside the urban areas.

The region’s urban areas are showing an increase in density zoning, however, which suggests that desired residential urban infill is beginning to occur. Inside today’s city limits we can expect to see about 71,000 acres of land developed, housing roughly 247,000 people. Inside urban growth boundaries, identified in Tennessee Public Chapter 1101 as future city limits, 247,000 people will use a total of 125,000 acres of new land for housing and jobs. About 94,000 people are expected to locate outside of urban areas on estate and acreage housing in rural areas—causing development that is described as rural residential. This type of development will convert about 160,000 acres of existing farm, forested or natural areas to housing. The problem with rural residential development is that while it takes the most land out of the farm, forest and natural inventory, it accommodates the smallest number of people. Rural residential development is almost six times less efficient than development within existing city limits.

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Stones River National Battlefield, Murfreesboro, Rutherford County

. . . low-density “sprawl” can result in:
- greater capital costs associated with building new infrastructure;
- greater vehicle miles traveled and, consequently, higher levels of automobile emissions;
- more adverse fiscal impacts when annual tax revenues from residential uses are inadequate to cover the annual costs of providing public services;
- higher rates of conversion of prime agricultural lands and lands with fragile environments.

Source: These key findings were synthesized by Axelrad (1998) from three major research investigations: Frank (1989); Duncan (Florida Community Case Studies, 1989); and Burchell (NJ, MI, City of Lexington, Delaware Estuary, South Carolina Studies, 1992-1997).
Commute Patterns

The relationship between lower densities and more driving is well documented. As jobs and households move further apart, more distance must be covered to accommodate daily tasks. Most job growth will continue to be inside the cities and towns of the region and more than half of projected growth will be in areas outside Davidson County. Land use trends described above suggest that density will continue to decrease as development moves outside of urban areas. In 2000, Nashville's daily vehicle-miles-traveled was already the highest in the United States for a metropolitan area its size, 37.5 miles per person per day. If trends continue this will increase to about 39 miles per person per day in 2020 which equates at the very least to more air pollution.

Traffic Congestion

Another disturbing trend is the increase in time lost due to traffic congestion. The amount of time lost per person more than doubled in the last ten years. In 1990, annual traffic delay was 18 hours per person. In 1999, it was 42 hours—that's only six hours short of tripling the 1990 figure. At the same time, the cost of time lost in traffic increased threefold, from $140 million to $455 million.

If congestion continues to increase at the same rate, by 2020 the hours lost would again more than double to 84 hours per person per year—that's the equivalent of more than two work weeks spent sitting in traffic.

Infrastructure Costs

The most serious fiscal impacts come from the large amount of land to be converted to urban uses. For example, the amount of new local roads will increase by 40 percent over the present—an addition of 8,300 miles. This is necessary because of the large amount of new land to be developed. This expansive development translates to almost $10 billion necessary to pay for additional roads and accompanying infrastructure.

Cities and Towns

When cities grow together they almost always lose their distinct identities. Local uniqueness and identity are two traits highly valued by residents of the Cumberland Region. The current separation and uniqueness of the region's communities are highly desired qualities in other parts of the country. In most metropolitan areas, these qualities were lost long ago. If development is to continue as trends suggest, individual cities and towns within the region are likely to grow together and lose their unique identities. Our quality of life within distinct communities will be significantly diminished as a result of this occurrence.

Air and Water

Meeting federal clean air standards is becoming increasingly difficult for the Cumberland Region. The increasing number of miles we are driving is a major factor in worsening air quality. Vehicle use is the single largest contributor to pollution in our area and the reason we can expect to fail the new, more stringent clean air standards about to be imposed by the federal government.

As more land is developed—and covered with buildings and paved surfaces—our water quality and related ecosystems are also threatened. The threat is twofold: first, runoff from paved surfaces carries pollutants from vehicles into our rivers and streams, and second, land covered by impervious surfaces can no longer help filter pollutants out of our water or hold water to control flooding. The Cumberland Region's topography with its rocky substrate encourages flooding. Future development should take into consideration the region's land characteristics and resulting environmental effects.
SUMMARY

In summary, the development patterns depicted by the trends described above are considered textbook urban sprawl. Sprawl causes so many problems for the people of this country, including longer driving distances and time, poorer air quality, more expensive services, limited transportation and housing options, to name a few.

When we consider the values our region holds dear, the Cumberland Region will be adversely affected by this manner of growth. In some cases, this is a result of more people living in the region. It is also exacerbated by our current development practices. We know that with growth comes change. Parks may become more crowded, it may be harder to find parking, and ratepayers may have to spend more money to acquire the additional quantities of water needed. While we cannot control the population growth in general, residents of the Cumberland Region can help shape the future of development in the region by addressing ways in which growth occurs and whether it does or does not ultimately undermine the quality of life that we currently enjoy and value.

REGIONAL INVOLVEMENT

One of the most popular tools in recent years has been the use of workshops or charrettes as a technique for involving citizens in developing solutions to planning problems. This method invites citizens to apply their common sense and local knowledge to find solutions to planning problems in their area. Processes vary widely, but typically participants work in groups on maps of their area. This method is a marriage of GIS modeling techniques and a neighborhood workshop process. Workshops are often popular but the real test is if results can lead to solutions that are useable in developing realistic plans.

CRT’s regional planning workshops were based on a model developed by the Envision Utah Public/Private Partnership. The award-winning Envision Utah process, which has also been employed by the Los Angeles, Austin, TX, and Chicago regions, pioneered the use of workshops in large-scale regional applications. The Envision Utah model is the most effective method by which we can achieve CRT’s goals of understanding desired growth patterns from the region’s residents and then creating consensus to guide future growth and development.

Invitations to the two workshop series were extended to the entire CRT database of constituents, including all elected officials; planning directors and planners; public sector stakeholders including state and local government employees; private sector stakeholders including architects, engineers, educators, students, realtors, developers, builders, farmers, business leaders; regional agencies, community activists, nonprofit leaders, and concerned citizens in our region. Because of the broad backgrounds and perspectives of these regional participants, CRT feels confident that diverse views and opinions are represented in workshop results. Detailed information about the workshop process is available on our website at www.cumberlandregiontomorrow.org.
DEFINING AND PROJECTING THE BASE CASE SCENARIO

To establish a Base Case scenario, the first step was to gather approximately 150 regional leaders in several workshops in May 2001. Workshop participants used regional maps and CRT trend data to forecast where growth and development would most likely occur in the next 20 years. After review of the workshop maps and a compilation of growth estimates by planning professionals, the Base Case map exhibiting trend projections was completed. The resulting Base Case map is the foundation of the Base Case scenario in which growth trends, based on statistical data, are graphically displayed.

Projections of the trends in the Base Case scenario reveal both interesting and troubling patterns. The most prominent trend is that most growth is expected to occur along major transportation routes. Key transportation routes are often linked to the location of new development and are not by necessity good or bad locations for development. This trend is alarming because it suggests that the cities of the Cumberland Region may soon grow together to form one large metropolitan area.

DEVELOPING GUIDING TENETS FOR CUMBERLAND REGION TOMORROW

Following the basic philosophy of CRT, that we can guide our growth by working together to develop new ideas, CRT held a series of public workshops in October 2001. More than 350 citizens worked together to capture ideas on how to grow while maintaining excellent quality of life standards in the Cumberland Region. Part of the workshops’ activity was to bring to light and discuss shared values of the region’s residents which would come to represent a set of guiding tenets for CRT’s future work and activities. When we discuss the future, we will try to consistently use these tenets to evaluate growth choices and consequences of decisions. Working together we can help decide whether our values can be retained or enhanced in the future. The tenets are intended to identify the reasons people enjoy living here, the things they would like to see changed, and the aspects they would like to retain as the region grows and develops.

Each of the following tenets is associated with data that has been analyzed in the public workshop process. CRT will utilize the guiding tenets as an objective measurement tool against which statistical data trends are compared. By comparing projected data with these guiding tenets, we can evaluate future conditions. This is called scenario modeling: creating virtual realities of the region—both as it is today and as it may be tomorrow—and evaluating the results.

These guiding tenets are not written in stone—they are an evolving set based on extensive public input. As more people read and think about regional growth, the guiding tenets will be refined. The guiding tenets will, however, provide a framework to assess the wisdom of land use decisions. CRT believes that the future success and livability of the Cumberland Region depend upon our collective understanding of and agreement about these guiding tenets.
We recognize and support regional vision, collaboration and action as essential to maintaining and developing the region’s economic vitality, beauty and prosperity.

We value the land and open spaces of the Cumberland Region and recognize the economic, cultural and aesthetic importance of greenspace preservation.

We support the coordination of land use policy, regional transportation planning and investments, and greenspace preservation in framing responsible growth and development.

We support revitalization of main streets, town centers, existing neighborhoods and rural communities to retain their unique characteristics and economic vitality while keeping development concentrated around existing community centers.

We seek to preserve the region’s farmlands and strong agricultural heritage.

We support good stewardship practices that protect the environment including air and water, natural habitats, forests and open spaces.

We want all residents and communities to benefit from the region’s prosperity and to have equitable access to community services, good jobs, educational opportunities, quality housing, and sensible and efficient transportation options.

We support economic development, community development and land use that is in concert with housing, transportation and environmental considerations.

We value the diverse and differing views and perspectives of all residents of the region and seek to provide a venue for discussion, learning, and decision making.
DETERMINING THE ALTERNATIVE CASE SCENARIO

During the workshops in October 2001, we asked residents to help in developing different growth scenarios based on current trends and desirable alternatives. Participants used large-scale maps of the region to redistribute such factors as population, development and housing across the region while maintaining the numbers of forecasted growth. This second set of workshops produced three distinct growth scenarios. Each contained alternate growth patterns we would prefer to see in the future to avoid the problems associated with the Base Case scenario.

Three distinct growth scenarios emerged from the October 2001 workshops:

- Seventeen percent of the resulting maps show a “Dispersed Development” pattern — similar to our current growth patterns, but with more concentric growth around cities and more compact land uses. While the overall pattern of development is not different from existing conditions, it uses less land than Base Case trends suggest.

- Thirty-six percent of the maps show “Regional Cities” — two distinct clusters of development in the Nashville-Gallatin-Murfreesboro areas and the Clarksville area. Other cities were developed in a fairly concentric fashion. While some participants placed housing between cities in the greater Nashville area, several others developed density gradients between cities using the “Rural Conservation” development type in order to retain the appearance of countryside between cities. These maps had a strong open-space component, avoiding the Highland Rim and the riparian (river bank) areas near the Cumberland River and local streams and farmland at the edges of the region.

- Forty-seven percent of the maps emphasize “City Centered” development — a distinct pattern of redeveloping city and town centers, concentric growth around cities, separation between cities and open space with results similar to the “Regional Cities” maps.

The following graphic is a compilation of recommendations from the “City Centered” and “Regional Cities” maps, which represents 83 percent of the participants. The assemblage results in the following differences from the Base Case scenario:

1. Uses less land to accommodate projected growth development
2. Provides a greater variety of housing types
3. Locates jobs in existing centers and downtowns
4. Focuses new jobs on transit lines or in new industrial sites

These workshop results define a consensus Alternative that allows more open space, more access to that open space, less automobile traffic, and cities that retain their individual qualities while not growing together. We will refer to this as the Alternative Case scenario in future discussions.
COMPARISON OF THE BASE CASE/ALTERNATIVE CASE SCENARIOS

After the May and October 2001 workshops were completed, the resulting maps were digitized and the map images you see in this report were created. Using computer-imaging software developed for CRT we are able to graphically represent the Base Case scenario and Alternative Case scenario. Base Case represents what would happen in the region over the next 20 years without any changes to current growth management practices. Alternative Case represents what can happen in the region over the next 20 years if different growth patterns and strategies in keeping with the CRT guiding tenets are realized.

Several striking differences between the Base Case scenario and Alternative Case scenario immediately appeared. A point-by-point analysis of each scenario based on the workshop results are described in the following graphics:

A Contrast: Base Case vs. Alternative Case

BASE CASE

Unless things change, this is the way our region will develop over the next 20 years:

- Growth occurs along interstates, contributing to a “leapfrog” development effect.
- Growth uses maximum amount of land.
- Growth results in less open space.
- Growth involves mostly single family houses on large lots.
- Traffic increases because development is more spread out.
- Cities grow together as development occurs along connecting highways and interstates.

ALTERNATIVE CASE

When asked to design a growth pattern using the guiding principles, 83 percent of participants agreed on the following concepts:

- Growth occurs closer to existing population centers.
- Growth uses less land.
- Growth uses as little open space as possible.
- Growth involves greater variety of housing types.
- Traffic is reduced as housing, commercial and employment centers are interspersed.
- Cities maintain unique characteristics and individual qualities as growth occurs in existing population centers and downtowns.

A Comparison: Base Case to Alternative Case

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<tr>
<th>Indicator</th>
<th>Base Case</th>
<th>Alternative Case</th>
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<tr>
<td>Land we will consume</td>
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<td>Infrastructure costs</td>
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<td>Intersections per acre</td>
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<td>New road miles</td>
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<td>Acres of new impervious surfaces</td>
<td>62,444 acres</td>
<td>35,033 acres</td>
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<td>Vehicle Miles of Travel increase</td>
<td>39 miles</td>
<td>35.9 miles</td>
</tr>
<tr>
<td>Density patterns—regionwide</td>
<td>1.13 persons per acre</td>
<td>5.8 persons per acre</td>
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Where will growth occur? Base Case vs. Alternative Case

<table>
<thead>
<tr>
<th>Urban</th>
<th>Urban Growth Boundary*</th>
<th>Rural</th>
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<tr>
<td>Where development will occur</td>
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<td></td>
</tr>
<tr>
<td>Base Case</td>
<td>30%</td>
<td>38%</td>
</tr>
<tr>
<td>Alternative Case</td>
<td>76%</td>
<td>21%</td>
</tr>
<tr>
<td>Where people will live</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base Case</td>
<td>55%</td>
<td>28%</td>
</tr>
<tr>
<td>Alternative Case</td>
<td>95%</td>
<td>4%</td>
</tr>
<tr>
<td>Total land developed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base Case</td>
<td>401,167 acres</td>
<td>223, 259 acres</td>
</tr>
<tr>
<td>Alternative Case</td>
<td>399,446 acres</td>
<td>117, 894 acres</td>
</tr>
</tbody>
</table>

*Urban Growth Boundaries established under PC 1101
GROWTH AND DEVELOPMENT STRATEGIES FOR OUR FUTURE

Through participant input during the workshop sessions, CRT has developed a set of concepts or strategies that encourage the types of growth we would like to see in our region. The concepts embrace the guiding tenets while applying real-world growth planning tools. They also represent CRT’s three areas of emphasis: land use, transportation, and preservation of open space and the distinctive character of the region’s communities.

The workshop concepts include reinvesting in towns and city centers; promoting placement of imminent growth into already developed areas; encouraging concentric growth around existing cities while discouraging leapfrog development; developing a diversity of housing; investing in smart arterial street systems, such as green arterials, boulevards, main roads and couplets; exploring mass transit alternatives such as bus rapid transit; preserving open space; rewarding conservation rural development; and keeping our heritage of agriculture viable in our region.

It should be noted that the strategies are interrelated as they weave together CRT’s three areas of emphasis ensuring desired managed-growth outcomes throughout the region.

Reinventing in Town and City Centers

One of the most significant elements to arise from the workshop process was the emphasis on directing growth to existing cities and towns, focusing on the region’s historic centers and main streets. In the last decade, many inner cities in the country that had been experiencing decline have reversed trends increasing population for the first time in decades—for example, Chicago added 120,000 people and Denver added 90,000. In addition, these cities also experienced strong job growth.

Reversing trends of decline in areas that are the historic cores of communities should be an important regional strategy. Comprehensive approaches such as the national Main Street program have proven highly effective in guiding downtown revitalization efforts during the last two decades. The Main Street program employs a four-point approach in engaging necessary stakeholders in creating vibrant town and city centers in keeping with local architecture, historic properties and community functions for civic, legal, retail and professional services. A vital Main Street area or community center reduces sprawl by concentrating retail and community services in one area and uses community resources wisely, such as infrastructure, tax dollars and land.

Promoting Placement of Imminent Growth into Already Developed Areas

Given that the Cumberland Region is projected to receive an influx of hundreds of thousands of new residents in the next twenty years, the region must think about how it wants to absorb these residents and the homes, businesses, parks, schools, and other land uses their arrival necessitates. Creating policies and incentives that encourage
the placement of growth in already-developed or partially-developed areas makes more efficient and effective use of land, infrastructure, buildings and capital. Rather than building on the periphery of a developed area, which requires funds for new infrastructure and the consumption of additional land, policies such as infill development, brown- or greyfields redevelopment and a general attitude of “re-use and recycle” serve to preserve both “greenspace” and the capital that its development would require.

**Returning to Concentric Growth**

When growth cannot be accommodated within already-developed or partially-developed areas, the policy commitment to return to concentric growth is a strong alternative. “Concentric growth” attempts to develop as close to the city center as possible, instead of jumping ahead of development in a “leapfrog” pattern.

The State of Tennessee has already debated this and provides tools to help concentric growth happen. Public Chapter 1101 requires cities and counties to negotiate urban growth boundaries, within the context of 20 year county-wide growth plans. PC 1101 plans have been adopted by all 10 counties in the Cumberland Region. These county-wide growth plans are an important first step in shaping county level growth policy for they officially designate areas that are intended to experience future growth and areas that are to remain undeveloped.

**Developing Diversity of Housing**

As future growth and development is directed to currently developed areas, it can contain a greater diversity of housing types than found today providing more choices and options for the Region’s residents. New housing could be developed in mixed-use neighborhoods — containing a higher density mixture of housing types organized within walking distance of services such as shops, schools and libraries. This would provide both greater affordability and a better match for many more senior, ethnic and single-person households, many of whom would choose an alternative to single-family homes on large lots if this choice were available to them.

**Designing Innovative Transportation Systems**

Many of the workshop participants relied on freeway improvements to design their growth scenarios. However, excepting Highway 840, there are few new potential freeway routes in the Cumberland Region and fewer dollars for their construction. Even though the Nashville area has some of the highest freeway miles per capita in the country and the highest per capita use of them, time lost to congestion is still rising at a rate greater than most cities.

![Row 8.9n Townhouses, North Nashville, Davidson County](image-url)

![Cross-section of multi-modal street design](image-url)
**Secondary Road System Development**

What is needed is greater attention to the secondary road system, those arterials that run through the region’s business districts. Freeways are a great invention for traveling long distances at high speeds but they tend to become less and less useful if too many people try to access them for local movement at the same time. If short trips (less than 5 miles) were diverted to a practical secondary system, the existing freeway system would function as it was intended. Another advantage to investment in the arterial system is that improvements are in many cases one-tenth to one-fifth the costs of freeway improvements.

**Rapid Transit**

Another idea that was brought up frequently was the use of commuter or light rail transit. This has been a successful strategy in many communities; however, the low-density development of the Cumberland Region indicates that light rail transit may not be feasible outside of the core of Davidson County. Commuter rail, while feasible, is useful mainly for travel to highly concentrated employment centers.

In most of the nation’s communities bus transit is the main public carrier of travelers. While bus systems are often viewed as an option only for those who do not have access to an automobile, the most successful systems attract a large majority of riders who are there by choice—they have access to a car but prefer to use transit for some trips. Often we think only of the trip to and from work when designing a public transit system. In several communities some of the most substantial growth in transit usage has in fact been for non-work or errand trips.

The success of these systems has led to research on providing rubber-tire systems that combine some of the advantages of rail transit with a reduced cost. Called Bus Rapid Transit (BRT), it is currently the subject of much research. Relying on a paved guideway unlike rail transit which enters and operates within the existing travel lanes, BRT systems are not only less expensive to develop, but can also be created much more quickly. The high costs associated with rail transit crossing of intersections can also be avoided. Several such systems are under construction in the United States and are showing great promise.

The need to further develop the secondary highway system and the advantages of Bus Rapid Transit can be combined to provide a more feasible transit grid for the Cumberland Region. Existing roadways can either be retrofitted with BRT or where BRT is not currently feasible, be built with a corridor set aside for its eventual development. This strategy paves the way for a more innovative transportation system design.

**Green Arterials**

In rural areas that are planned to be retained as green space or rural housing, green arterials can be developed as roads with limited access and allow near freeway speeds. They can be landscaped with medians, providing greater safety and allowing for connection to inter-city BRT where and when feasible. In addition to addressing transportation needs, these green arterials also help create the desired physical separation of communities.

**Boulevards**

Where the arterials connect to urban areas, a combination of transportation designs can be used to provide a multi-modal corridor. Rather than many current street examples, boulevards are cross-sections or streetscapes that encourage pedestrian activity and access to the BRT stations. BRT runs in separate guideways. Many fine streets worldwide have a similar design, where through-traffic is separated from local traffic, speeds are generally lower and wide sidewalks and buildings close to the street provide for active main street environments.

![Example of Bus Rapid Transit line](image)

**Main Roads and Couplets**

When the boulevards enter downtowns or other concentrated centers the roads can be split into couplets that provide better movement and access. Couplets are defined as pairs of one-way streets that function as a single high-capacity street. Couplets are usually separated by one city block, allowing travel in opposite directions. Couplets are usually two to four lanes and emphasize roadway capacity. Because all traffic is flowing in the same direction, couplets have fewer movements at intersections and better synchronization between traffic signals. In addition, pedestrian crossing distances are generally less, encouraging a pedestrian-friendly setting. Turning movements are simpler and safer than in two-way arterials, cross-sections can be narrower, and adjacent buildings can be close to wide sidewalks. This style is used in many traditional downtowns and has been selected for some emerging new centers. In these sections BRT would run in dedicated lanes in the street.
Greenspace Preservation

Almost all the workshop maps showed different ideas about where development would happen but there was a great deal of consensus about the retention of open space. There are beautiful natural areas around the Cumberland Region and their preservation is critical to maintaining the region’s common values and quality of life. One of the key strategies for the Cumberland Region could be a comprehensive assessment of the region’s existing open spaces and natural areas, their value, how threatened they are by development, and establishing a method for the protection of the most valuable and most threatened open spaces. Farmland, wildlife habitat and riparian areas would also be considered in this effort.

Conservation Rural Development

Another popular idea in the workshops was the development of rural housing in a manner that retains the desired natural landscape many people move to the country to enjoy. Rather than relying on minimum lot sizes to control density, conservation rural development relies on regulating the number of houses per acre and emphasizes clustering them in order to retain large, natural areas or viable agricultural plots. While popular in other parts of the country, conservation rural development is not permitted in most counties in the Cumberland Region. This concept shows great promise as a method to retain the rural landscape between cities that would otherwise grow together.

Keeping Agriculture Viable

The Tennessee State Seal contains the motto “Agriculture and Commerce.” Keeping the first part of that motto viable in the Cumberland Region was a concern to many. Methods vary, but success has been achieved both locally and nationally to conserve farmlands with the purchase of conservation easements, transferable development rights, and other land protection programs. Limiting the pressures that make agriculture infeasible, such as leapfrog development patterns, is another idea that had much support. Workshop participants explored ways to connect local markets to the agricultural produce of the region through farmers markets and to emphasize the local agricultural products in regional tourism. Both are successful techniques used in other areas of the United States and Europe to make agriculture economically viable. Regional strategies for our area should contain aggressive policies to retain and encourage agriculture as a viable part of the regional landscape.
RECOMMENDATIONS FOR FUTURE ACTION

Cumberland Region Tomorrow’s activities have resulted in a great deal of individual and regional thinking. It is clear that we are linked together in our future as a single region. In addition, most people involved in the process have rejected the Base Case scenario as an acceptable future. With ongoing research and public input, we will continue to validate regional values, confirm our guiding tenets, and advocate for smart growth and development that are in keeping with preferred patterns.

CRT will continue its work to find answers to complex questions about the region’s future. We foresee the following as ways to further advance the region toward consensus and desired growth and development outcomes:

Continue the Discussion

The initial phase of CRT’s work was discovery and research. Now that options are clearer, debate and refinement should continue. More people need to weigh in on the issues raised by the Base Case scenario and consider alternative growth and development scenarios that the region could embrace.

The Alternative Case scenario results show that participants are eager for development that is drastically different from most current types and patterns. New development methods, however, are not currently permitted under existing regulatory systems in most instances. In fact, some regulations actually encourage the sprawling patterns evident in the Base Case Scenario. Leadership and support for changes in local codes and state and regional investment patterns will enable more desirable development patterns to be realized. These changes will not be easy as they reverse policies, regulatory systems and mindsets that have developed over many years. These changes certainly can be accomplished however as different parts of the country have successfully completed similar processes.

Changes in policy and systems in the Cumberland Region will more easily occur as large numbers of people are informed of different growth possibilities, become interested in alternative types of development and request that they are made possible. CRT commits to be a positive catalyst in effecting this change. Through increased awareness, discussion, and partnerships with other interested groups and stakeholders throughout the region, we are confident that new and desirable types of growth and development can occur.
Build Consensus

While the region has not yet achieved consensus about what to do, most believe that we can do better. Many ideas have been recorded and when the future is modeled with these ideas it looks quite a bit better to most of us. The questions we must answer now are “what are the options we should pursue and is it feasible to build a regional consensus for action?”

Provide Resources and Tools

Selecting key ideas for the region while developing a consensus customized to Tennessee and the Cumberland Region will make implementation much more feasible. This could range from city-county cooperative compacts and frameworks to local code updates and new standards for green arterials and local road development.

CRT will work to develop resources and tools for communities within the region that are ready and willing to implement these ideas and strategies. Similar regions across the country have seen smart growth and development ideas advanced by workshops addressing topics such as updated ordinances and programs, strategies for community revitalization and/or new residential development practices. Others have advanced their work through “toolbox” resources, shared technical assistance, and leveraging their work through collaboration with partner agencies.

Recognize and Support Early and Successful Projects

One of the best ways to advance an idea is to turn it into reality. People can experience the idea as a physical reality rather than a concept and decide whether it would be good for their community. Ideas such as conservation developments in rural areas, new villages instead of isolated subdivisions, redevelopment of downtowns and city centers and green arterials have all been widely built in the United States, but few examples exist in the Cumberland Region. Encouraging their development will provide a much better way for the region’s communities to experience the difference and see how these ideas can work here.
Cumberland River Bicentennial Trail, Ashland City, Cheatham County
CONCLUSION

This report is a brief summary of the work of Cumberland Region Tomorrow to date.

We stand today more aware of our region than at any time in the past. This Regional Visioning Process has brought the important issues of growth and planning to the forefront. We see this as an ongoing dialogue that will result in future action.

The people of the towns and cities of the Cumberland Region have been drawn together as a regional community. This community is ready to learn more, advance new ideas, and search for realistic options and strategies to maintain qualities we value while guiding the growth and development that is sure to come. The people of the Cumberland Region now have the opportunity to take control of our destiny and ensure that we leave our grandchildren a place which they will enjoy and be thankful for.

More than 467,000 people are expected to become residents of the Cumberland Region in the next 20 years. Where will they live? How will the character of our towns, neighborhoods and land be changed? What will our roads be like with two million more trips per day? Will our choices of housing, transportation, shopping and recreation be affordable to all residents of our region? Can we control what choices are made in planning for the future so that our region remains economically vibrant and a desirable location for family and corporate investment?

CRT will continue to explore the answers to all of these questions through citizen input, research, education and discussion. If you would like information about becoming a member of CRT or about our ongoing efforts, please check our Web site at www.cumberlandregiontomorrow.org or call us at (615) 986-2698.

Thank you for your interest in this vital topic.
**Source Data**

The data contained in the Report to the Region was gathered from various sources. Listed below are the major sources of data:

- Greater Nashville Regional Council
- Nashville-Davidson Municipal Planning Organization
- State of Tennessee – “GIsource”
- US Census Bureau
- TIGER – “Topologically Integrated Geographic Encoding and Referencing System”
- Middle Tennessee State University – Geography Department
- US Geological Survey
- ESRI
- Bureau of National Transportation Statistics
- FEMA – “Federal Emergency Management Agency”
- US Department of Fish and Wildlife
- US Department of Agriculture
- Smart Growth America
- University of Tennessee Institute for Public Services, and Tennessee Advisory Commission on Intergovernmental Relations
- National Trust for Historic Preservation Main Street Program
- Tennessee Valley Authority

Our technical consultants, Fregonese Calthorpe & Associates, have also compiled a document of the metadata for the GIS files, entitled “Description of GIS Data and Process Employed during the Cumberland Region Tomorrow Project; May 14, 2002,” by Glen Bolen, which is available from CRT, upon request.

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