

CHAPTER 4: ENVIRONMENTAL MITIGATION

4.1 Introduction

The COATS MPO and the Central Midlands region are situated in the middle of South Carolina, halfway between the Appalachian Mountains and the Atlantic Ocean. This central location on the dividing line between the mountains and the sea is characterized by an extremely diverse natural and cultural landscape. A vast network of streams, wetlands, woodlands, and productive agricultural areas extend from the sandhills eco-region south of Lake Murray to the extensive flood plains that provide the backdrop for Congaree National Park, located southeast of the City of Columbia.

The rapid pace of growth and development in the Central Midlands region requires planners and policy makers to develop long term strategies for protecting these unique and biologically diverse ecosystems. The implementation of large scale transportation improvement projects can be particularly detrimental to the viability of these resources. Environmental mitigation measures therefore need to be an essential and ever present component of the long range transportation planning process.

Federal transportation legislation supports and requires the adoption of various environmental mitigation measures by MPOs and other transportation planning agencies. As one of the eight planning principles mandated by SAFETEA-LU, MPOs must:

“consider projects and strategies that protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.”

SAFETEA-LU legislation further defines the environmental mitigation roles and requirements of MPOs by stating in [Sec.450.322(a)(f)(7)] that the LRTP shall:

- Include a discussion of potential environmental mitigation activities and potential areas to carry out these activities including activities that have the greatest potential to restore and maintain environmental functions affected by potential transportation projects
- Focus on policies, programs, or strategies, rather than the project level.

- Develop this discussion in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies

This chapter of the LRTP is intended to comply with each of these requirements by outlining strategies CMCOG is currently undertaking to mitigate against environmental impacts through consultation and coordination, early project screening, and various regional planning initiatives. The chapter also discusses the connection between land use and transportation planning and concludes with a series of recommended objectives and strategies that will help meet the federal legislative requirements and work towards achieving the LRTP goals of Environment and Consultation.

4.2 Consultation and Coordination

To be in compliance with the consultation requirements of SAFETEA-LU, the Planning and Environmental Division of the SCDOT will serve as a primary point of contact between CMCOG and the relevant natural and cultural resource management agencies. Through this process, SCDOT will review the LRTP and solicit input and comments from these other agencies. This consultation will provide the opportunity to evaluate the consistency of the LRTP with the relevant federal, state, and local environmental policies and programs.⁸ Comments received as a result of this process will be incorporated into the document as an official amendment.

In addition to the consultation partnership with SCDOT, CMCOG routinely utilizes an inclusionary, multi-jurisdictional planning process. Most regional projects are governed by a policy committee, a technical committee and in most cases, some type of stakeholder steering committee. Many members of these committees are representatives of other state and local governmental agencies and serve in an advisory capacity during the development of specific planning projects. The consultation role of these committees in relation to the LRTP will be discussed for each of the environmental mitigation strategies described below.

⁸ SCDOT works closely with the major resource agencies and either funds full-time positions or has an interagency agreement with: the South Carolina Department of Archives and History, the United States Army Corps of Engineers, the South Carolina Department of Health and Environmental Control, the US Fish and Wildlife Service and the US Environmental Protection Agency.

4.3 Environmental Mitigation Strategies

The following section describes four primary environmental mitigation strategies engaged in by CMCOG and which are relevant to the long range transportation planning process. These include:

- Environmental Screening
- Green Infrastructure/Open Space Planning
- Wetlands Mitigation Banking
- Coordination of a Regional Air Quality Forum

The scope and intended outcomes of each of these efforts will be summarized below, along with a discussion of their relationship to the LRTP and compliance with SAFETEA-LU environmental mitigation requirements.

4.3.1 Environmental Screening

Early evaluation of the location of proposed projects in relationship to sensitive environmental and cultural features is an essential component of transportation planning and provides the framework for later, more detailed pre-construction project specific analysis that is required by the National Environmental Policy Act (NEPA).

In the state of South Carolina, the primary instrument for conducting early environmental screening for transportation projects is the Advanced Project Planning Process (APPR) developed and implemented by SCDOT.

The APPR is an informational document intended to pro-actively identify potential environmental or social issues that could impact the implementation of road improvement projects proposed in the Long Range Transportation Plan (LRTP). The purpose is to address major problems or “showstoppers” early on in the project development process so that appropriate mitigation activities and/or alternatives can be considered before a project enters the pre-construction phase.

The APPR process facilitates enhanced coordination between agencies, assists in setting realistic cost and construction estimates, and prepares projects for the NEPA review process. The APPR is typically done by

SCDOT and approved by COATS prior to a project moving from the LRTP to the COATS Transportation Improvement Program (TIP).⁹

Typical components of the APPR include:

- Traffic and Accident Analysis
- Discussion of Right of Way requirements
- Socio-economic, Cultural, and Environmental Considerations
- Land Use, Growth, and Development Trends
- Capacity and Design Considerations
- Preliminary Cost Estimates

The APPR process contributes to CMCOG compliance with the consultation and coordination requirements of SAFETEA-LU. Each APPR is prepared by SCDOT in partnership with relevant natural and cultural resource management agencies and is reviewed by COATS staff. The document is then presented to the COATS technical committee, policy committee and board of directors for their approval. Each step in the committee process ensures that the documents are seen and approved by representatives and planning staff of member governments.

4.3.2 Green Infrastructure/Open Space Planning

The CMCOG Open Space Preservation Plan (OSPP) adopted in December 2007 provides a vision for creating a network of protected open spaces within the region. By identifying potential areas for future protection, it is CMCOG's hope that the plan will provide regional guidance for state agencies, environmental organizations and local governments who have a vested interest in protecting and preserving out natural heritage.

The development of the OSPP was administered through CMCOG's Green Infrastructure Steering Committee and included a public participation process. The steering committee and the public provided valuable input and recommendations for the development of the plan.

The open space plan used the green infrastructure approach to preservation, which focuses emphasis on protecting the following

⁹ Project-specific environmental screening is not required by SAFETEA-LU to be included as part of the Long Range Transportation Plan, but SCDOT requires all projects identified in the plan to be subjected to APPR screening prior to inclusion in the TIP.

elements: 1) large **hubs** that anchor the regional system 2) **linkages** that tie the system together, and 3) smaller **sites** that may or may not be linked, but nonetheless provide important open space functions.

Linkages are the key to green infrastructure planning, because they provide the following advantages over traditional open space preservation:

- **Plant and Species Preservation:** Wildlife biologists and ecologists have long recognized that the best way to preserve native plants, animals and ecological processes is to create an interconnected conservation system, to counter habitat fragmentation
- **Maintenance of Ecological Processes:** The strategic connection of different network components – parks, preserves, riparian areas, wetlands, and other green spaces – is critical to maintaining vital ecological processes, such as carrying and filtering stormwater runoff; storing and cleaning fresh water; and cleaning urban air.

The CMCOG Open Space Preservation Plan is an important component of the COATS transportation planning process because it identifies priority conservation areas that can help guide transportation related environmental mitigation measures. The steering committee process also involved engaging a wide range of federal, state, and local environmental stakeholders in discussions about long range plans for protecting the regions natural and cultural resources amidst increasing growth and development pressures.

4.3.3 CMCOG Wetlands Mitigation Bank

Another approach CMCOG is taking to identify specific areas for environmental mitigation is to create a regional wetlands mitigation bank. The intent of this project is to provide developers and property owners with an avenue for stream and wetland conservation that may not otherwise be available.

Since 2003, CMCOG has been working with a consultant to develop a watershed based approach for identifying potential mitigation bank sites within the three major eco-regions of the Columbia metropolitan area. The project is currently in its fourth phase which includes the delineation of aquatic areas, the creation of a conservation plan, the preparation of a revised mitigation banking instrument and the finalizing of conservations easements for the first bank, located in

southern Richland County. The next and final phase of the project will include the restoration, monitoring and basic maintenance of this site in addition to marketing the credits to private developers or public agencies. Once the mitigation bank is operational, credits can potentially be marketed to SCDOT for mitigating the adverse impacts of road infrastructure improvement projects on the regions wetlands and streams.

Each phase of the project has involved input from a variety of federal, state, and local resource management agencies. Relevant stakeholders were particularly involved in the early phases of the project that focused on utilizing a watershed and eco-region approach to identifying specific sites for potential mitigation banks. The CMCOG board has also supported this project by providing the necessary oversight and approvals for its development and implementation.

4.3.4 Regional Air Quality Forum

The COATS MPO region and surrounding areas, while currently in attainment status with National Ambient Air Quality Standards, face the possibility of a non-attainment designation with the March 2008 release of new EPA standards for Ozone and PM2.5. This new designation could be enforced as early as 2010 if appropriate emissions reduction strategies are not successful in improving the regions air quality.

To proactively address these issues, CMCOG has been working with state and local government agencies to bring together a diverse group of public and private stakeholders to collaborate on the development of a regional action plan.

In June 2007, CMCOG hosted an Air Quality Forum expanding the stakeholders from the four-county COATS region to include all of the counties and cities within the seven-county Columbia-Newberry Consolidated Metropolitan Statistical Area (Richland, Lexington, Fairfield, Newberry, Kershaw, Calhoun and Saluda). This meeting led to CMCOG being called upon to develop a regional air quality report that includes a regional policy framework. Since this meeting, CMCOG has hosted five additional air quality forums, which have helped establish a regional vision, guiding principles and action strategies that can be implemented by municipalities, businesses and local citizens. Participants in the forums have included representatives

from local county/city governments, businesses, school districts, health advocates and the general public.¹⁰

Facilitating the Regional Air Quality Forum is important to the long range transportation planning process because it engages a diverse group of public and private stakeholders in discussions related to travel behavior and reducing vehicle emissions. Open discussions about air quality issues in the context of transportation planning also help to emphasize the adverse impacts of non-attainment designation on regional economic development initiatives and federal funding for transportation infrastructure improvements.

4.4 Land Use and Transportation

Many of what are seen as transportation problems are really land use problems. Over the past several decades, traffic and vehicle miles traveled have grown well beyond the rate of population growth. This has been accompanied by increases in both traffic congestion and in obesity among children and adults, air quality issues, and a decline in the time available for leisure and social activities due to the increased time spent traveling.

These changes are rooted in changes in development patterns, demographics, car ownership, and lifestyles that had been emerging since the end of World War II. Prior to then, American towns and cities were characterized by pedestrian-oriented neighborhoods, greater reliance on mass transit, and had a mixture of land uses (commercial, office, education, etc) that allowed shopping, services, employment and schools closer to peoples homes and easier to get to by walking, transit or biking.

A number of planning approaches offer alternatives to development patterns that cause almost total reliance on private automobiles. By strategically mixing land uses and providing safer and higher quality bicycle, pedestrian and transit services, vehicle miles traveled by automobiles can be reduced, and this, in turn, can begin to reverse the negative environmental and lifestyle trends associated with sprawl. Incorporating these practices into the fabric of our region and our communities will require better planning and development regulations which offer developers incentives for creating walkable, transit friendly neighborhoods.

¹⁰ For more information about the region's air quality and a summation of the forums see the *Midlands Air Quality Report*.

This section summarizes some of the principles and practices that can capitalize on the relationship between land use and transportation. The concepts discussed below include: transportation network design, land use planning and community design, and comprehensive planning and policy tools for local governments.

4.4.1 Transportation Network Design Principles

The physical layout of the expressways and arterial streets, which are the principle components of the urban transportation network, can determine the extent to which the transportation system promotes efficiency, safety, and orderly patterns of land development. The following summary of general design principles for the urban roadway network was adapted from Urban Transportation Planning by Roger Creighton.

- **Continuity.** The urban transportation network should promote continuity of movement. Stops, enforced direction changes, and discontinuous roadways should be avoided. Properly applied, the principle of continuity allows arterial roads to connect different parts of the region.
- **Spacing.** The spacing of arterial streets and expressways should reflect the density of trip production, with tighter spacing in dense areas and looser spacing in lower density areas. Spacing should range from ½ mile in dense urban areas to 1 ½ mile in suburban areas with lower traffic volumes. Wider spacing results in excessive travel on local streets.
- **Even Distribution of Investment.** Major roadways should not be crowded together in one area and spaced too far apart in others. Similarly, excessive width of any one roadway at the expense of roadways in other areas should be avoided.
- **Intersections.** Intersections of two arterial streets should be at right angles. There should be no five- or six-way intersections. There should be no jogged or offset intersections. Intersections of arterials with minor streets and collectors should be limited to a maximum of four per mile.
- **Dispersal of Traffic Through the Arterial Network.** Arterial systems should disperse traffic over a system of four-lane roadways. Concentration of traffic on six-lane super arterials

should be avoided. This usually indicates a lack of adequate paralleling arterials.

- **Land Uses Along Arterials.** Arterial streets must provide traffic flow capacity and provide access to major land uses. When possible, uses which require large tracts of land, such as universities, major industries, golf courses, and cemeteries, should be placed along arterials, while single family residences should not front on arterials. The more extensive land uses need only a limited number of driveways spread over a wide area, compared to one driveway every 60 to 100 feet for single family residential uses. Wider spacing of driveways results in more effective use of arterials for traffic flow purposes.
- **The Road Network as a Land Use Determinant.** The major thoroughfare system forms a grid. The area bounded on four sides by major thoroughfares may vary from approximately ½ mile to 1½ mile square, depending on the spacing of the major roads. This area should be viewed as a neighborhood or district and should be planned to accommodate mixed land uses, located in such a way as to minimize auto travel.

Many of these principles are reflected in contemporary planning and facility design strategies being utilized by state, regional and local governments in the development of their transportation plans. Network connectivity, context sensitive design, and complete streets are all concepts that have been nationally recognized as effective design tools for addressing congestion issues. Each of these tools is summarized below.

Network Connectivity

Interconnected transportation systems work best. A fully developed network allows more alternate routes and can reduce total vehicle miles traveled. This is true of the roadway system as well a transit, bike and pedestrian networks. American cities developed around a grid pattern of major arterial streets. One important aspect of this grid system is that it is interconnected and the arterial roads provide continuity---they extend for many miles, linking neighborhoods and different parts of the region together. Spacing of the interconnected roadways is also important. Major thoroughfares should be spaced close enough together (approximately one mile in urban areas) that drivers do not have to “backtrack” excessively to reach their destinations. Streets within the neighborhood form a connected network, which disperses traffic by

providing a variety of pedestrian and vehicular routes to any destination.

A well-defined connected street network provides a variety of routes to destinations, but also provides a variety of routes in cases of an emergency; there are multiple ways for public safety to access areas of distress but also multiple ways for people to evacuate areas. The illustration shows how a street network can enhance mixed use development. At the edge of the neighborhood, there are shops and offices of sufficiently varied types to supply the weekly needs of a household.

Context Sensitive Design

Many Americans have seen first-hand the negative impacts of well intentioned transportation projects on small towns, urban neighborhoods or suburban shopping districts. A five-lane highway, for example, might speed the flow of traffic through a small town, but detract from the character of the town and make in-town trips by local residents more hazardous. The ability to travel safely on foot or bike may also suffer.

Context sensitive design addresses the issues of compatibility and appropriateness of roadway design within the road's local or neighborhood setting. According to the Institute of Traffic Engineers (ITE), context sensitive design is a process that balances the competing needs of diverse stakeholders starting in the earliest stages of project development." The ITE also cites the following tenets of context sensitive design:

- Balance safety, mobility, community and environmental goals in all projects;
- Involve the public and stakeholders early and continuously;
- Use an interdisciplinary design team tailored to project needs;
- Address all modes of travel;
- Apply flexibility inherent in design standards and guidelines; and
- Incorporate aesthetics as an integral part of good design.

The Complete Streets Concept

Roadway networks should be consistently designed with the needs and safety of all users in mind. A road corridor is not just a conduit for motor vehicles, although that is most often its primary purpose. Each corridor must also accommodate pedestrians, bicyclists and wheelchairs, and arterial routes must also be prepared to accommodate transit vehicles and freight carriers. The needs of transportation users vary widely, as well. A significant number of citizens in the COATS planning area either do not or cannot drive. This group includes the very old, the very young, the disabled, the very poor, persons who cannot obtain drivers' licenses, and some individuals who chose not to drive.

While conditions vary depending on context, type of roadway, and user needs, the following are among the primary design elements used in creating complete streets. All of the elements should follow established and current design standards.

- Safe, adequate and appropriate driving lanes for vehicles.
- Sidewalks
- Bicycle lanes
- Intersection and cross-walk designs that are safe for pedestrians
- ADA-compliant curb cuts and street crossings for people in wheelchairs
- Traffic-calming features (example: a pedestrian crossing island in a wide arterial roadway so that pedestrians do not become stranded in oncoming traffic).
- Safe and convenient transit stops

Not all of these elements are always needed on every street. Low volume residential streets usually don't need bike lanes and transit accommodations are only needed on transit routes. Moreover, there are many situations in which costs or availability of right of way may prohibit the installation of bike lanes or sidewalks. The overarching goal, however, is to build an inter-connected, multi-modal network characterized by safe accommodation of all persons, regardless of age or ability.

4.4.2 Land Use and Community Design Principles

In addition to facility and network design, land use planning and community design can have a significant impact on travel demand and network congestion. Mixing different land uses, developing pedestrian

friendly neighborhoods and integrated districts and communities are all land use planning principles that can be effective tools for managing travel demand on the roads.

As a general rule, all planning should be done in the form of complete and integrated neighborhoods, communities, corridors and districts within the region. Neighborhoods should contain housing, shops, work places, schools, parks and civic facilities essential to the daily life of the residents.

Development size should be scaled so that housing, jobs, daily needs and other activities are within easy walking distance to each other. A pedestrian shed is an area defined as the distance that can be traveled from the edge to the center of the area, typically 1,320 feet (1/4 mile). A mix of civic, commercial, and residential uses should be located within the defined pedestrian shed; and design standards enhancing pedestrian access, such as a grid road network, sidewalks, and streetscaping, should also be implemented. As many activities as possible should be located within easy walking distance of transit stops. These characteristics are similar to the ones found in “traditional neighborhood developments.” The illustration below (Figure 4.2) shows the differences between “traditional neighborhood development” and “sprawl development.”

Figure 4.2: Traditional Neighborhood Design



Transit Oriented Development

Transit Oriented Development (TOD) is a good complement to the principles used in designing mixed use, walkable neighborhoods. TOD is a defined area within a ½-mile radius to a transit stop and development within this area is characterized by a mixture of uses, such as civic, office, commercial, and others. Development is also higher in density to take advantage of the proximity to transit services.

Most forms of mass transit depend on having a certain minimum critical mass, or population density, in their service area. Conventional, fixed route bus systems require a specific number of persons per acre in the in the corridor served to be feasible, and approximately 10 units per acre are required to support light rail. Building “transit ready” developments means building more compact, walkable, mixed use neighborhoods that comprise, shopping and employment districts.

Typical components of transit ready design consist of the following:

- Walkable design with pedestrian as the highest priority
- Train station as prominent feature of town center
- A regional node containing a mixture of uses in close proximity including office, residential, retail, and civic uses
- High density, high-quality development within 10-minute walk circle surrounding train station
- Collector support transit systems including trolleys, streetcars, light rail, and buses, etc
- Designed to include the easy use of bicycles, scooters, and rollerblades as daily support transportation systems
- Reduced and managed parking inside 10-minute walk circle around town center

Neighborhood Unit Concept

The neighborhood unit concept is one of the most widely used and accepted practices in urban land use planning. It was developed as a physical and social planning concept by Clarence A. Perry and first described in the Regional Survey for New York and Its Environs published in 1919 by the Russell Sage Foundation.

Perry proposed a neighborhood unit based on an elementary school, with other community facilities located at its center and arterial streets around the perimeter. The distance from school to perimeter was

based on a comfortable walking distance for a school age child. There was to be no through traffic or industrial or commercial uses.

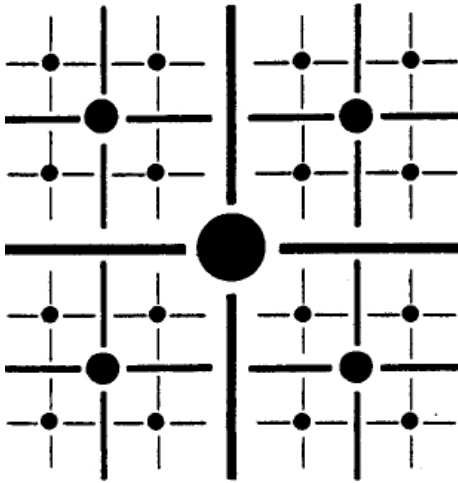
The neighborhood unit concept was converted to operational form by the Committee on the Hygiene of Housing of the American Health Association in 1948 in its publication on Planning the Neighborhood and it became the widely followed and accepted approach to residential planning. Figure 4.3 illustrates the neighborhood. Variations on the Neighborhood Unit Concept are in widespread use and are a key component of New Urbanism.¹¹

The Activity Center Concept

The arrangement and location of public facilities and services to meet human needs in an efficient, economical, safe and functional manner is one of the principal reasons for comprehensive urban planning. In order to meet these needs, people, facilities and services must be brought together. There are two primary mechanisms for bringing people and services together; distribution of facilities and services throughout the urban area and transportation of people to facilities. In other words, services and facilities can be taken to the people, or the people can be transported to the services and facilities. Each method has its advantages; distribution of facilities reduces the need for travel, and therefore, reduces the need for the financial, environmental, and energy costs associated with urban transportation systems. On the other hand, not all facilities can be distributed easily or economically, especially if they must be of a certain minimum size to operate efficiently.

As an alternative to extensive, unsightly strip commercial highways, major commercial, employment and service uses can be used as the core of mixed use town centers (and on a smaller scale, village centers). These centers can be viewed as self contained districts, and should include housing and good pedestrian access to nearby neighborhoods. The town and village centers should be served by transit.

¹¹ Historical Development of American City Planning, The Practice of Local Government Planning, Laurence Conway Gerkins, (Washington, D.C.: International City Managers' Association, 1979), p.40.

Figure 4.3: Schematic Regional Network of Mixed use Activity Centers

4.4.3 Comprehensive Planning and Policy Tools

While each of the above planning and design recommendations are important for regional transportation planning efforts, the implementation of these strategies rests in the hands of the local governments who have the appropriate legislative authority to make such decisions. There exists a number of comprehensive planning and policy tools local governments can utilize to implement some of these strategies. These include coordinating capital improvements, adopting an appropriate land development review process, and conducting local transportation planning.

Coordinating Capital Improvements

Major investments in public facilities, particularly schools, water distribution systems, and sanitary sewer, are some of the factors that drive land development decisions by developers, banks, and local governments. In the Midlands, it is not uncommon to see availability of water and sewer and access to schools serve as catalysts for new residential developments, and related commercial and service establishments. This in turn creates increased demand for roads to serve the new developments. Often, the existing roads are inadequate for the new developments, but there is no funding to improve the roads. Hard Scrabble Road in Northeast Richland County is an example of this phenomenon.

The Priority Investment Act, signed by the Governor in 2007, requires South Carolina's counties and municipalities to prepare transportation elements for their Comprehensive Plans and to contemplate the need for major capital improvements and their funding sources. These new requirements provide a workable mechanism for coordinating plans for land development, public capital improvements, and transportation facilities.

Joint Transportation/Land Development Review

Local governments should consider the impact of each new development on the transportation system. Like most states, South Carolina gives municipal and county elected bodies, and their planning commissions, the authority to regulate land development. These regulatory powers include:

- **Zoning** to control the location, character, timing and extent of development
- **Subdivision Review** to control the division of land into parcels for sale and development. The subdivision ordinance is also intended to make sure that each parcel has adequate utilities, proper drainage and access to roads.
- **Site Plan Review**. By a process similar to subdivision review, development plans for commercial office, multi-family or institutional developments should be reviewed to determine compliance with the development ordinances and to identify potential problems that can be addressed by revisions or conditional approvals.

All of the above are tools for implementation of the locality's comprehensive plan for long-range physical development. CMCOG recommends that county and municipal development review processes should address the following:

- Intersection geometry, to avoid unsafe intersections.
- Access management review to limit excessive curb cuts.
- Site distance reviews to avoid dangerous intersections of roads and major driveways with existing streets.
- Review of adopted plans at the local, state and regional level to make sure that proposed developments do not conflict with or prevent planned road improvements or extensions.
- Right of way preservation for future major thoroughfares.

Continuity of the road network ---are appropriate provisions being made for extensions or connections of roads to adjacent or future developments.

- Traffic impact studies as part of the submission requirements for subdivision and site development plan applications is a common practice for achieving this., The traffic study, prepared by a qualified engineer based on standards promulgated by the local government, analyzes existing traffic and roadway conditions, projects traffic demands generated by the new development, and recommends any improvements need to mitigate problems resulting from the development. Approval of the development is then granted contingent upon installation of the improvements, by the developer, government or both.
- Consideration of the needs of emergency vehicles and schools buses.
- Provision of pedestrian paths, and connections to pedestrian and bicycle facilities beyond the development.
- For higher intensity developments, consideration of transit access.

Local Transportation Planning

The authority to create a comprehensive plan and implement it through development ordinances rests solely at the local level. Councils of Governments, metropolitan planning organizations, and even the state government lack these important tools. Therefore, the goal of unifying development and transportation planning cannot be achieved without adequate transportation system plans at the local government level. The new Priority Investment Act requires a transportation element in county and municipal comprehensive plans. This is an opportunity for each community to determine what transportation facilities and services will be needed to support the community's future growth and development.

CMCOG also provides assistance to local governments through the Sub-Area/Corridor Transportation Planning program. Sub-Area and Corridor plans are intended to strengthen the connection between land use and transportation by facilitating a collaborative, inclusive and transparent planning process. The desired outcome is to provide a long range vision for addressing community transportation issues in relationship to the realities of existing and future land use patterns. The process is intended to provide realistic recommendations for projects that:

- Address congestion issues
- Are multi-modal in nature
- Are context sensitive in design
- Take into account local land use issues
- And revolve around strong public participation

Staff and consultant teams work closely with local jurisdictions and community stakeholders in order to develop these recommendations. The studies are primarily conducted in high growth areas that are expected to experience significant transportation and land use issues over the long range planning period horizon.

Each year, CMCOG conducts one or two of these small area studies. Plans have been completed for the Chapin Columbia Avenue Corridor, the western portion of Lower Richland County, and the White Knoll/Red Bank area of Lexington County. Plans are now underway for the Irmo/Dutch Fork and Elgin areas.

4.5 Objectives and Strategies

1. Encourage regional consultation and coordination with environmental organizations, state agencies and local governments in order to mitigate the environmental impacts of transportation projects, identify potential areas for conservation, and ensure compliance with ongoing conservation initiatives and local land use plans.

- Continue to work with SCDOT to coordinate and consult with relevant environmental organizations on the compatibility of transportation plans with regional conservation goals.
- Continue to work with SCDOT on the APPR process to provide early environmental screening for all priority projects identified in the LRTP.
- Encourage the local implementation of the CMCOG Open Space Preservation Plan.
- Market the Central Midlands Wetlands Mitigation Bank for use by SCDOT in purchasing credits to offset the adverse impacts of transportation projects.

2. Support local and regional air quality initiatives that keep the region in attainment with EPA air quality standards and minimize the use of fossil fuels.

- Continue to facilitate the Regional Air Quality Forum

- Encourage the local adoption of action strategies for conserving energy and reducing air pollution.
- 3. Promote sound growth principles that strengthen the connection between land use and transportation planning by encouraging street connectivity, neo-traditional neighborhood design, transit supportive development and bike and pedestrian accessibility.**
- Identify and encourage the development of land use patterns that improve and support transportation efficiency, increase mobility and support alternative modes of transportation.
 - Work with local governments to integrate these principles into their comprehensive plans and land development regulations.