

The Nuts and Bolts of a Future Land-Use Plan

Prepared for Dorchester County Comprehensive Planning Workshop

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The purpose of this document is to help you identify and label *existing* features and areas in the land-use map and to indicate features and areas suitable for accommodating *future* growth.

I. Four Types of Growth Areas

A. Restricted Growth: characterized by extensive and/or valuable natural and cultural resources, rural enclaves, estates (e.g., for horses), and active high-value agriculture. Circulation is provided by high-speed highways and quiet side roads. Aesthetics include freestanding buildings with deep setbacks and buffering of higher-intensity land uses.

1. *Examples* in the tri-county area include...

- a. The ACE Basin and Francis Beidler Forest
- b. Heirs' property communities (e.g., "Old Joe" on the Cainhoy Peninsula in Berkeley County)
- c. Rockville (at the end of Maybank Highway on Wadmalaw Island)

2. *Tools to implement* Restricted Growth include...

- a. Transfer of development rights and purchase of development rights (which result in conservation easements)
- b. Rural-density residential zoning and strict impervious surface coverage ratios
- c. Ample buffering and setback requirements from important features
- d. Standards for family compounds
- e. Alternative land development standards might allow short dirt or gravel roads and other rural landscape characteristics.
- f. Sanitary sewerage for rural enclaves might be provided by private community systems, as extending sewer lines to distant areas for low-density development is not cost-effective

3. *How to map*: indicate Restricted Growth areas on the map in green. You may choose to draw "rural growth boundaries" by drawing green circles or arcs to delineate Restricted Growth areas. These lines would help indicate buffers.

B. Constrained Growth: natural and cultural resources may be frequent but not pervasive in Constrained Growth areas. These areas may include village-like nodes or neighborhood shopping centers (anchored by a large grocer) amid low-density neighborhoods. Development should occur in pods buffered by belts of wetlands or other green spaces. In addition to neighborhood streets, circulation is

provided by moderate-speed roads with planted medians and bike lanes. Roundabouts may be preferable to wide intersections with stoplights. Village-like nodes should have low-speed streets with parallel parking. Aesthetics include moderate setbacks and buffering with a majority of detached structures, none taller than three stories.

1. *Examples* in the tri-county area might include Crowfield Plantation in Goose Creek, the I'On community in Mt. Pleasant, and perhaps the upcoming Ponds community off 17A.
 2. *Tools to implement Constrained Growth* include...
 - a. Conservation subdivision requirements (a.k.a. clustering), low-density residential zoning, and floor:area ratios (FAR)
 - b. Buffering requirements between neighborhoods (typically along wetlands or other drainage features) as well as buffers between incompatible land uses
 - c. Greenbelts might be accomplished with transfer of development rights, between adjoining parcels, within a Constrained Growth area.
 - d. Road design standards should include sidewalks on at least one side of the street. Shared access easements should be required to reduce curb cuts on thoroughfares. Medians are preferred to two-way left-turn lanes (a.k.a center lanes or suicide lanes). A roundabout should be an option for an intersection.
 3. *How to map*: indicate Constrained Growth areas on the map in beige. Don't get carried away with this category! It won't work if there aren't Managed Growth areas to take the pressure off Constrained Growth areas and protect resources therein. Also, public investment in linear infrastructure here will be inefficient due to low densities.
- C. Managed Growth: land here is typically suitable for development. These areas include moderate- or possibly high-density residential development, shopping centers, and town centers. Circulation is provided by local streets, low-speed collector streets with bike lanes, low-speed mixed-use thoroughfares with parallel parking and wide sidewalks, and moderate-speed boulevards with bike lanes. Aesthetics may be suburban – with moderate setbacks and buffering of shopping centers and other higher-intensity land uses – or town-like – with shops and townhouses built close to the sidewalks.
1. An *example* is Daniel Island. The oldest parts of West Ashley and Hanahan exhibit some positive aspects of growth management (albeit some negative ones, too). Of course, the historic core of Summerville has good lessons for new development in the county.
 2. *Tools to implement Managed Growth* include...
 - a. Flexibility for the developer to mix uses and provide housing substantial enough to support commerce.

- b. Prescriptive design standards should ensure that commercial development fits into the community, especially in any donut holes near historic Summerville. A design review board might be used for large projects, such as shopping centers and apartment complexes.
- c. Civic nodes at the center of neighborhoods and communities where schools and parks are located. Locating elementary and middle schools on major thoroughfares unnecessarily congests them at morning rush hour and makes it unsafe for kids to walk or bike to school.
- d. Numerous vehicle and pedestrian circulation connection points between neighborhoods and communities. The County should not accept street systems that are intentionally laid out inefficiently.
- e. New collector streets that run between existing and planned arterials. These collector streets should be identified on the Future Land-use Map and subsequently delineated on the County's Official Map that includes zoning. Those sections of road on large tracts must then be built by developers of large projects as a requirement for land development approval. Goose Creek is doing something similar to get North Rhett extension built.
- f. Street design standards that prioritize pedestrian and cyclist access and safety over heavy truck mobility. This means well-marked crosswalks, tight intersections, and narrower roadways that make drivers slow down. Only boulevards at community edges should prioritize 18-wheelers.

3. *How to map*: indicate Managed Growth areas in yellow. Most of Summerville and St. George are too highly developed to be anything but Managed Growth areas. Managed Growth must be mapped for areas intended for redevelopment. Managed Growth areas on vacant high ground, away from natural resources, and preferably near infrastructure (esp. highways and sewer... commuter rail too?) are needed; these might be receiving areas in the transfer-of-development-rights program. One reason we need to consider areas within municipalities is that the County's road-building program will greatly impact land use within them.

- D. Employment Growth: land here is suited to industry and wholesale trade due to its access to infrastructure, especially interstate highways and freight rail, and distance from cultural and natural resources. Circulation is provided by moderate- to high-speed wide roads designed for heavy truck mobility and perhaps for busses to transport workers. Aesthetics? well... some industries locate on large tracts with deep buffers or even natural areas under conservation easement (e.g., Nucor Steel in Berkeley County).
 - 1. *Examples* include...
 - a. New Century Industrial Park on US-78 in St. George.
 - b. Tri-county Industrial Park, part of Foreign Trade Zone 21, in Jedburg.
 - 2. *Tools to implement* Employment Growth related to land use include...

- a. Planned infrastructure extensions funded by tax-increment financing, community development block grants, and other sources.
- b. Land-use restrictions that include rural-density residential standards to keep area in industrial land supply.
- c. Deep buffering between Employment Growth areas and adjoining communities.

3. *How to map:* indicate Employment Growth areas in violet. Try to locate these areas such that they have direct access to truck routes and do not detract from communities by directing heavy truck traffic through school zones or other pedestrian zones. Expressway interchanges and railroad crossings near highways are appropriate locations.

II. Four Nodes of Activity

- A. Employment Node: typically a concentration of jobs that generates economic activity in the surrounding area. There are two basic types of Employment Nodes, one of which is offices, either in a large office building or in an office park. The other Employment Node is an individual factory or other business not involved in retail sales and service, but rather industry or wholesale trade. An industrial-type Employment Node differs from an Employment Growth area in that it might be located near a residential area or in a commercial corridor where more opportunities for more industry would seem constrained.
 - 1. *Examples* in the tri-county area might include...
 - a. Bosch on Dorchester Road or Withers Industries (formerly Broyhill) on Lincoln Avenue
 - b. Blackbaud on Daniel Island or Motley-Rice in Mt. Pleasant
 - 2. *Tools to implement* Employment Nodes include...
 - a. Special exception permitting in the County Zoning Ordinance. It's difficult to allow for employment uses outside of Employment Growth Areas, especially near residential areas, without risking illegal spot zoning. A special exception permit that has strict standards for buffering and time of operation, among other conditions to mitigate negative externalities, and is subsequently reviewed by the Board of Zoning Appeals could be placed in a zoning district intended for less intense uses to ensure opportunities for large employers in unexpected locations.
 - b. Mapping in the comprehensive plan. It's useful to identify existing large employers outside of Employment Growth areas, again to safeguard against illegal spot zoning claims.
 - c. Commercial Nodes (next topic). An office-type employment node could locate in a planned Commercial Node. Note that many large office buildings are taller than the standard suburban height limitation of 35 feet. Increasing height limits in at least some, if not all nodes is likely needed to

encourage them to develop as nodes in what would otherwise be a commercial corridor (or strip, see last topic).

3. *How to map:* A site in need of redevelopment might be indicated as appropriate for a large employer. The County might need to partner with that developer for site clean-up. It is otherwise difficult to identify one particular site for a large employer outside of an Employment Growth area. Indicate an Employment Node with a purple circle.
- B. Commercial Node: typically retail, generates significant human and economic activity. Regional malls and “power centers” (anchored by Target or Wal-mart) are large Commercial Nodes, while “neighborhood shopping centers” (anchored by grocery stores) are small Commercial Nodes. Village cores or downtowns are also Commercial Nodes. Commercial Nodes typically occur at the intersections of major roads; when they don’t, you often have a traffic problem. A Commercial Node may also occur around a significant civic institution, like a courthouse. A Commercial Node must have either or both, significant automobile traffic and/or significant pedestrian traffic to succeed.
1. *Examples* in the tri-county area include...
 - a. Northwoods Mall
 - b. Downtown Summerville
 - c. Downtown St. George (US highways 15 and 78)
 - d. Grocers at the intersection of Old Orangeburg Road and Central Ave.
 2. *Tools to implement* Commercial Nodes include...
 - a. Zoning. Dorchester County currently has excess supply of commercially zoned land and inadequate road capacity to handle build-out. (The same is true for single-family residential.) In those areas planned for constrained and Managed Growth, general sales and services should be confined to a certain radius from important intersections. Stretches between nodes will be discussed below, in “corridors.”
 - b. Adequate infrastructure, especially roads and sanitary sewer. In Constrained Growth areas, avoid placing sanitary sewer service along highways that you do not wish to be developed, except at planned Commercial Node locations. In much of the tri-county area, Commercial Nodes form on roads once they are widened to 5-lane highways, whether the local government has planned for it or not.
 - c. If a pedestrian-oriented Commercial Node is desired, on-street parking is a must. With the amount of money Dorchester County is planning to spend on roads in the next few years, this would be a good time to identify pedestrian-oriented nodes and design roads accordingly. Otherwise, they will all be auto-oriented because the 5-lane highway is the default road design.

- d. Road speed and design greatly influence adjacent commercial development. A low-speed road (25-30 mph) that's comfortable to walk along is more likely to get development that serves these pedestrians. A moderate-speed road (35-40 mph) is much safer for intense commercial development than high-speed roads (45+ mph). Businesses will benefit from higher visibility on roads with slower moving traffic. One reason Dorchester County has long commercial strips, rather than nodes or gateways, is that the roads have the same design for their entire lengths. The solution to this is planning and implementation through road design. Remember, DOT employs engineers for the most part, not planners and designers. DOT will not develop a land-use plan for the road for you; that is your job and sole jurisdiction as a local government.
3. *How to map*: indicate Commercial Nodes in red. Commercial Nodes in Managed Growth areas should occur at intervals of a quarter- to a half-mile along arterial roads. This puts them all within walking distance of one another and is a good interval for bus stops. Commercial Nodes in Constrained Growth areas should occur at intervals of a half-mile to a mile. This puts them in convenient driving distance of each other and of surrounding residents. While these nodes should occur at intersections, keep in mind that the County can plan new roads to serve future nodes, where needed.
- C. Civic Node: typically a community gathering point. A Civic Node can be any public place ranging from a park to a school to a courthouse. They don't have to be publicly owned and operated – a community clubhouse might be a Civic node – but such is the norm. In many newly developed areas, neighborhood clubhouses are the only civic facilities in communities. Other civic places, like schools and parks are too often located at community edges, on high-speed highways, where they are not as easily accessed and do not feel like the heart of a community. A Civic Node should be located in a community center, where possible, and preferably on through roads. Civic Nodes with only one way in and out are less desirable, in part due to traffic congestion. Finally, civic places with controlled access (gated, admission charged) are less beneficial as community gathering places without locks.
 1. *Examples* might include...
 - a. Summerville Town Hall. This area doubles as a Civic Node and a Commercial Node, a common condition in the heart of an old town.
 - b. All the town halls, for that matter.
 - c. Azalea Park.
 - d. A school, church, library, or similar facility, especially when located near the center of a community, is a Civic Node. A small private school or church on a 5-lane highway lost in a shuffle of strip malls is not functioning as a Civic Node.
 2. *Tools to implement* Civic Nodes include...

- a. Purchase of land. Obviously, many public entities like school systems and parks commissions purchase sites for their facilities. Dorchester County should pursue more cost-effective options. This land should not be in locations that force other public entities to improve infrastructure systems. This results in a more costly bottom line for taxpayers.
 - b. Donation of land during real estate development. The County should require all large developments to include land for parks and, if the development is large enough, school sites. A formula in the Zoning or Land Development Ordinance is the best way to procure this land. These facilities are best located at the center of new communities, at the intersection of at least one collector road. Some developers will oppose this location because they don't want "cut-through traffic." Dorchester County needs to decide if it wants to continue to accept maintenance responsibility for new roads that further burden its existing system or if it wants to functionally expand its road system.
 - c. Unusually large developments might be required to include a fire station or any other county-operated facility that would be needed to serve the new development exclusively or primarily. Allowing the developer to pay a fee in lieu of building the facility typically makes the provision more palatable to the private sector.
 - d. The County could partner with the school districts to build facilities that would be mutually beneficial and mutually owned and operated, such as an auditorium, athletic facilities, a library, and parking. State law prevents County funds going to classroom construction.
3. *How to map:* Civic Nodes should be indicated with blue circles. New Civic Nodes are best located on large tracts of land that can reasonably be expected to develop, thus triggering a land donation for civic facilities. High schools might be the exception to this because they generate so much traffic. A new high school should probably be located on a thoroughfare rather than in the center of a community. Always consider where new schools and parks are needed in relation to existing facilities when mapping Civic Nodes.
- D. Housing Node: a concentration of medium- to high-density residential development. Typically, these housing units should locate around a Civic or Commercial Node to buffer single-family housing from the increased activity of the node and to supply the node with a market for its services within walking distance. A Housing Node might also be a location targeted for workforce housing, affordable housing, public housing, or the like. Attached housing is beneficial to Dorchester County because it houses singles, empty-nesters, and young professionals, it is more tax efficient (higher tax rate with fewer public services demanded), and it uses less raw land.
1. *Examples* in the tri-county area include...
 - a. Daniel Island. Land around the commercial center is filling in with attached housing development, both townhouses and condominium

apartments. Some apartments are even being sold above shops and offices in the middle of downtown Daniel Island.

- b. Park West, a notably sub-urban community in Mt. Pleasant, is filling in with a few shops that have condominiums built over and around them near the center of the community.

2. *Tools to implement* Housing Nodes include...

- a. Flexible zoning that allows apartments to be constructed in the same building as an office or shop.
- b. Accessory dwelling units. A Housing Node doesn't have to be attached housing. It might be a neighborhood of Charleston single-style houses with mother-in-law suites or garage apartments. Accessory dwelling units provide a place to live for adult children that can't seem to move away from home; they provide rent payments to a homeowner that couldn't otherwise afford the main house; and they offer an alternative to the nursing home for an aging mother or father.
- c. Inclusionary zoning. The County might choose to require large developments to construct and sell, say, 10 percent of homes to households making less than the County median income to house firefighters, teachers, and other needed public servants.
- d. New road standards for attached housing developments. The County does not currently have road design standards for townhouse or apartment communities, only single-family neighborhoods. This is especially unfortunate for townhouse communities that must construct private roads and pass the maintenance costs on to homeowners. A relatively affordable housing type is thus made that much less affordable, and roads that could go to improve the road system now empty onto an existing thoroughfare at one or two points, thus exacerbating traffic congestion.
- e. The County could partner with a school district to construct housing for needed public servants (incl. teachers) on large school sites. The County could set up a housing trust fund, for which the State has recently adopted enabling legislation, to collect money for such a project. Mandatory acreage requirements that led to unnecessarily large school sites were repealed a couple years ago.
- f. Commuter rail station. If commuter rail comes to Dorchester County, there will be two possible site configurations. One has a station surrounded by a sea of parking for commuters. The other has proven to boost ridership. That is a station built into an urban node of development, including high-density housing that takes many would-be motorists. This node could be an Employment Node and a Commercial Node as well as a Housing Node. Parking is provided in decks.

3. *How to map:* An orange circle indicates a Housing Node. In many cases, the orange circle will surround a blue or a red circle – a Civic or Commercial Node. A Housing Node is a MUST around a pedestrian-oriented Commercial

Node to provide the built-in market that the Commercial Node needs to survive. Of course, Housing Nodes should be located near adequate infrastructure to alleviate traffic concerns. A Housing Node might also be located near an environmental amenity (think high-end waterfront condos). This might be advantageous to the environment because the waterfront would be held in common ownership rather than have houses built right up to the water, each with their own dock.

III. There Are Only Two Types of Corridors to Discuss Here...

A. One of them is bad...

1. *Examples?* There are plenty. Let's pick on Trolley Road. An existing 2-lane road experiences increased traffic due to residential developments that feed onto Trolley Road without connecting to one another or to any other through road. Commercial services follow, but in a haphazard manner, with no organization in terms of land use. All the business site plans are auto-oriented because they were built on a rural road without sidewalks. Then the road was widened to a 5-lane highway due to congestion. The road wasn't actually designed – it has the same design for its length – so two stoplights feel too close together and there's no transition into the old part of town. The sidewalks are too close to the road to be comfortable, and the two-way left-turn lane ensures that the remainder of sites fills in with auto-oriented business sites. The road will inevitably be congested again soon.
 2. *Tools to implement?* Zone the entire length of a 5-lane highway with an overly permissive commercial district.
 3. *How to map?* Well, these existing corridors must be recognized. Draw wide red lines alongside these 5-lane highways.
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B. The other is good!

1. An imperfect *example* in the tri-county area is St. Andrews Road in West Ashley. It is lined with offices, personal services, and for the most part, other commercial establishments that do not generate a great deal of traffic, do not need large parking lots, and can be walked to because the goods and services they offer don't require the use of SUVs. St. Andrews Road's on-street parking enables existing houses to be turned over to office use because the user can't fit a parking area on a small residential lot. Note that the road feels much too wide in part due to the center turn lane. The City of Charleston has considered replacing the turn lane with median plantings, which would make the road feel slower and safer, as well as prettier.
2. There are two different roads to construct *to implement* a good commercial corridor. The first is a boulevard, the second a pedestrian avenue.
 - a. A boulevard is a moderate-speed road, usually four lanes, with a planted median. The median is preferably wide enough so that motorists can execute u-turns to reach their destinations more quickly. Rivers Avenue

near the old Navy hospital was a boulevard many years ago; then the median was ripped out and replaced with a center turn lane.

- b. A pedestrian avenue is a 2- or 4-lane road with parallel parking and slow speeds. A two-way left-turn lane is undesirable because it speeds up traffic and makes the road uncomfortably wide to cross. Pedestrian crossings should be available and signalized every 440 feet on average (never more than 1/8 mile) to ensure active pedestrian traffic that can reach services alongside the road.
 - c. Access management is absolutely critical along the pedestrian avenue (and useful along the boulevard) to reduce curb cuts. Curb cuts would otherwise supplant on-street parking and cause too many vehicles stopping in the road to turn, which increases traffic congestion. Access management is achieved by requiring access easements between commercial properties that connect parking areas so that not every business needs its own driveway.
 - d. An alley is ideal parallel to a pedestrian avenue to provide service access to commercial property and perhaps to parking areas, both commercial and residential.
 - e. Zoning. The Commercial corridor should include a variety of personal and professional services, as well as institutions like churches, but not big-box retail, automobile sales and services, or large parking lots. Large retail development should be confined to commercial nodes, automobile sales and services should be located in employment growth areas or in commercial nodes; and large parking areas should be screened from thoroughfares by buffers, ancillary retail in shopping centers, etc.
 - f. Housing. Pedestrian-oriented avenues will benefit from attached housing development, including apartments over businesses, townhomes, and apartment buildings that are built right up to the sidewalk. There's no reason not to allow these on boulevards, but they're more likely to occur in communities that access the boulevard rather than be constructed on the roadside itself.
3. *How to map:*
- a. *In Managed Growth areas:* Good commercial corridors should be indicated between commercial nodes on arterial roads with thick pink lines in developing areas. In addition, existing commercial strips might be redeveloped as good commercial corridors if the road is redesigned or improved as a boulevard or pedestrian avenue.
 - b. *In Constrained Growth areas:* There won't be any bad commercial corridors in Constrained Growth areas; it's too late for that area to be constrained if it has a lot of strip commercial development. Good commercial corridors should extend from Commercial Nodes along arterial roads. They'll all have to be boulevards once they are widened,

because there won't be a population to support a pedestrian-oriented avenue. Commercial corridors should be confined to communities in Constrained Growth areas and should not extend into green belts.

- c. *Should the corridor be a boulevard or an avenue?* This will be studied as part of a discussion about urban design, which we'll cover in more detail toward the end of the land use discussion. At that time, pedestrian-oriented commercial nodes will be identified as well.