

STATE OF SOUTH CAROLINA )  
 )  
COUNTY OF DORCHESTER )      ORDINANCE NUMBER 19-06

**AN ORDINANCE TO AMEND DORCHESTER COUNTY ZONING AND LAND DEVELOPMENT STANDARDS ORDINANCE NUMBER 04-13, AS PREVIOUSLY AMENDED, TO REVISE ARTICLE XVII, SECTION 17.7 “TRAFFIC STUDY”, AND ARTICLE XVIII, SECTION 18.4 “TRAFFIC STUDY”** (the purpose of this amendment is to revise the standards and process for Traffic Impact Analyses)

WHEREAS, Dorchester County requires Traffic Studies for development meeting certain thresholds as a means to identify and require mitigation for the impact of the increased traffic they generate; and

WHEREAS, Dorchester County is desirous of coordinating efforts with the Town of Summerville regarding said Traffic Studies; and

WHEREAS, Dorchester County desires to have said Traffic Studies prepared by a neutral third party to ensure their accuracy and reliability;

NOW, THEREFORE, BE IT ORDAINED by Dorchester County Council, duly assembled that the Dorchester County Zoning and Land Development Standards Ordinance Number 04-13, as previously amended, is further amended by deleting Article XVII, Section 17.7 “Traffic Study” and Article XVIII, Section 18.4 “Traffic Study”, and substituting in lieu thereof the attached document:

This Ordinance shall be effective upon third and final reading.

Approved and adopted on this 19<sup>th</sup> day of February 2019.

\_\_\_\_\_  
George H. Bailey, Sr. Chairman  
Dorchester County Council

First Reading: \_\_\_\_\_  
Second Reading: \_\_\_\_\_  
Public Hearing: \_\_\_\_\_  
Third Reading: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Tracey L. Langley, Clerk of Council

### **Section 17.7 Traffic Impact Analysis**

- (a) A Traffic Impact Analysis (TIA) shall be required for:
  - (1) All Major Subdivisions; and
  - (2) Any multi-family or non-residential development activity that would generate more than fifty (50) trips during a peak hour, or generate more than five hundred (500) trips during any single day.
  - (3) Change of use: A new TIA will be required if the new use would generate traffic beyond the 50 trips during peak hour threshold

### **Section 18.4 Traffic Impact Analysis**

- (A) All developments shall have a Traffic Impact Analysis, based on Section 17.7, performed by an on-call consultant hired by Dorchester County at the expense of the applicant. This analysis shall be undertaken to ensure that access to all proposed developments and subdivisions is accomplished in a safe manner.
  - (1) The standards in the South Carolina Department of Transportation's Access and Roadside Management Standards Manual shall serve as a guide for this Analysis, which shall include identification of the following:
    - (a) Access improvements that the applicant must install at his or her expense, such as deceleration lanes.
    - (b) The location of any curb cuts based on, but not limited to sight distances, existing roadway infrastructure, opposing driveways locations and shared access.
    - (c) Requirements for adequate driveway design, including but not limited to, turning radius and throat length.
  - (2) The access requirements approved by the County Engineer or designee shall be incorporated on development or subdivision plans prior to their approval.
  - (3) If an applicant is required to provide site-related traffic improvements, the cost of implementing such improvements shall be borne by the applicant and no such costs shall be eligible for a credit or offset from any transportation impact fees.
- (B) Traffic Impact Analysis Plan Preparation
  - (1) The TIA shall be conducted by an engineer registered in South Carolina that is experienced in the conduct of traffic analysis, whom is one of the consultants the County has previously selected for on-call traffic study services.
  - (2) Prior to beginning the traffic impact analysis plan, the applicant shall supply the County with the following:
    - (a) A written narrative describing the proposed land use(s), size and projected opening date of the project and all subsequent phases;
    - (b) A site location map showing surrounding development within a one-half mile of the property under development consideration; and

- (c) A proposed site plan or preliminary subdivision plat illustrating access to public or private roads and connectivity to other contiguous developments.
- (3) The County will rely upon the most current edition ITE trip generation manual or any alternative acceptable to the County, and available information on land use, travel patterns and traffic conditions. After consulting with the SCDOT, the County Engineer or designee will supply to the County's on-call consultant, the parameters to be followed in the study including the directional split of driveway traffic, trip distribution, background traffic growth rate, previously approved but not completed projects and the intersections to be analyzed along with any associated turning movement counts which are available or discussed and approved by the County.
- (4) After determination of the TIA's scope of services, the applicant shall provide a cost estimate of such services to the County for review and concurrence, The applicant shall provide an amount equal to the estimate to the County Engineer or designee, who will deposit the amount in an escrow or special account set up for this purpose before the consultant's services are obtained. Any funds not used shall be returned to the applicant in a timely manner without interest.
- (5) Additional fees for the TIA may be required if: the applicant substantially amends the application; additional meetings involving the consultant are requested by the applicant; the consultant's appearance is requested at Planning Commission or County Council meetings beyond what was initially anticipated; or the consultant's attendance is required at meetings with regional, state, or federal agencies or boards which were not anticipated in the earlier scope of services. The applicant must reimburse the County for these costs prior to the development plan or plat approval.

#### (C) Plan Contents

- (1) All phases of a development are subject to review, and all traffic plans for the entire development shall be integrated with the overall traffic analysis. A traffic impact analysis plan for a specific phase of development shall be applicable to the phase of development under immediate review. However, each phase of development shall expand and provide detailed analysis at the development plan stage beyond the estimates provided for at the concept plan or master plan stage.
- (2) Efficient traffic operations, safety and pedestrian accessibility are to be considered in the development plan. The adequacy of the roads to which the development takes access shall be assessed in the TIA. Recommendations for improvements shall be made where operational or safety concerns exist and installation of these improvements shall be required as a condition of any approval from the County. The relative share of the capacity improvements needed shall be broken down as follows: development share, other developments share, any existing over capacity, and capacity available for future growth.
- (3) The following elements shall be included in a traffic impact analysis plan:
  - (a) Study Area - Description of the study area including surrounding land uses and expected development in the vicinity that would influence future traffic conditions. The study area shall include the intersections immediately adjacent to the development and those identified by the County Engineer. These intersections

may include those not immediately adjacent to the development if significant site traffic could be expected to impact the intersection. If intersections impacted by the development are within a coordinated traffic signal system, then the entire system shall be analyzed. If the signal system is very large, a portion of the system may be analyzed if approved by the County Engineer and SCDOT. A study area site map showing the site location is required.

- (b) Proposed Land Use - Description of the current and proposed land use including characteristics such as the number and type of dwelling units, gross and leasable floor area, number of employees, accompanied with a complete project site plan (with buildings identified as to proposed use). A schedule for construction of the development and proposed development stages should also be included.
- (c) Existing Conditions - Description of existing traffic conditions including existing peak-hour traffic volumes adjacent to the site and levels of service for intersections in the vicinity, which are expected to be impacted. Existing traffic signal timings should be used. In general, AM and PM peak hour counts should be used, but on occasion other peak periods may need to be counted as determined by the County Engineer or designee. In some cases, pedestrian counts will be required. Data should be adjusted for daily and seasonal variations. Existing counts may be used if taken within 12 months of the submittal of the TIS. In most cases, counts should be taken when school is in session unless otherwise determined by the County Engineer or designee. Other information that may be required may include, but not limited to, crash data, stopping sight distances, and 50th and 85th percentile speeds.
- (d) Future Background Growth - Estimate of future background traffic growth. If the planned completion date for the project or the last phase of the project is beyond 1 year of the study an estimate of background traffic growth for the adjacent street network shall be made and included in the analysis. In general, the growth factor will be determined from local or statewide data. Also included, is the state, local, or private transportation improvement projects in the project study area that will be underway in the build-out year and traffic that is generated by other proposed developments in the study area.
- (e) Estimate of trip generation - The site forecasted trips should be based on the most recent edition of the ITE Trip Generation Manual. A table should be provided in the report outlining the categories and quantities of land uses, with the corresponding trip generation rates or equations, and the resulting number of trips. The reason for using the rate or equation should be documented. For large developments that will have multiple phases, the table should be divided based on the trip generation for each phase. Any reductions due to internal trip capture and pass-by trips, transit use, and transportation demand management should be justified and documented. All trip generation and trip reduction calculations and supporting documentation shall be included in the report appendix.
- (f) Trip Distribution and Traffic Assignment - The distribution (inbound versus outbound, left turn versus right turn) of the estimated trip generation to the adjacent street network and nearby intersections shall be included in the report

and the basis should be explained. The distribution percentages with the corresponding volumes should be provided in a graphical format.

- (g) Analysis and Estimate of Impact - A capacity analysis should be performed at each of the study intersections and access intersection locations (signalized and unsignalized) in the vicinity of the development. Intersection analysis shall include LOS determination for all approaches and movements. The levels of service will be based on the procedures in the latest edition of Transportation Research Board's Highway Capacity Manual. Coordination analysis will be required for the signal systems or portion of the signal systems analyzed.
  - (h) Access Management Standards - The report shall include a map and description of the proposed access including any sight distance limitations, adjacent driveways and intersections, and a demonstration that the number of driveways proposed is the fewest necessary and that they provide safe and efficient traffic operations.
  - (i) Traffic signalization: If a traffic signal is being proposed, a signal warrant analysis shall be included in the study. The approval of a traffic signal on projected volumes may be deferred until volumes meet warrants given in the MUTCD, in which the developer shall provide funds for the future signal(s) to the County to deposit in an escrow or special account set up for this purpose. The developer should make any laneage improvements during construction so that if in the horizon year a signal is warranted, one may be installed with little impact to the intersection.
  - (j) Mitigation and alternatives - The traffic impact study should include proposed improvements or access management techniques that will mitigate any significant changes in the levels of service. The County Engineer will be responsible for final determination of mitigation improvements required to be constructed by the applicant.
- (D) Traffic Impact Analysis Plan Review: The County Engineer or designee shall review all traffic impact analysis plans as part of the initial approval for the concept plan or master plan. Final traffic impact analysis plans shall be approved at the development plan phase.
- (E) Action on Traffic Impact Analysis Plan: The County Engineer or designee must first approve the TIA in regard to completeness and accuracy. Following review of the required impact analysis plan, County Engineer or designee shall recommend action as follows:
- (1) Approval of the traffic impact analysis as submitted;
  - (2) Approval of the traffic impact analysis plan with conditions or modifications as part of the development review and approval process. An acceptable traffic impact analysis plan with traffic mitigation measures may include the reduction of the density or intensity of the proposed development; phasing of the proposed development to coincide with state and/or county- programmed transportation improvements; applicant provided transportation improvements; fees in lieu of construction, or any other reasonable measures to ensure that the adopted traffic service level goals are met. If mitigation is required, it shall be required as a condition of any approval from the County.

- (F) Timing of Implementation: If traffic mitigation improvements are part of an approved traffic impact analysis plan, the improvements shall be completed prior to Final Plat approval for major subdivisions, or CO issuance for multi-family and non-residential projects. Off-site improvements must be made in accordance with an approved Traffic Study or as required by the County Engineer. The County Engineer may use his/her best engineering judgement to determine the most effective solution.
- (G) Responsibility for Costs of Improvements: The costs of implementation of an approved mitigation program shall be the responsibility of the applicant. No certificates of zoning compliance or building permits shall be issued unless provisions of the transportation impact analysis are met.
- (H) Traffic Goals: The average stop time delay in seconds per vehicle for each intersection determined to be critical to the traffic impact analysis for the proposed development shall be compared to the County's adopted traffic service level goal of "D" for the average delay for all vehicles at any intersection and all movements and approaches to the intersection during the a.m. and p.m. peak hours. Improvements must ensure that the level of service at final buildout, meets or exceeds the level of service at time of approval of the TIA.
- (I) Function and Safety Improvements: The County Engineer or designee may require improvements to mitigate and improve the safety and function of multiple transportation modes the site traffic may impact. These improvements may not be identified in the TIA, but improvements to benefit the function and safety of the transportation system of the development site. These improvements may include but are not limited to center medians, sidewalks and/or bicycle accommodations, modifications to ingress and egress points, roadside shoulders, pavement markings, traffic calming and other traffic control devices.