

## SIGNAL WARRANT STUDY - ROUTE 15 AND SPINKS FERRY ROAD

In order to satisfy Condition 3B outlined in the conditions of approval for the park: *'The applicant shall complete a traffic study for the Route 15/Spinks Ferry Road intersection and shall include in the study the projected future traffic for the park, including the proposed Phase II uses, and other planned development in the area. In addition, the traffic study shall include counts taken over a seven (7) day (24 hours per day) period. The traffic study shall be submitted by the applicant to VDOT with a request that VDOT determine whether a traffic signal is warranted at the intersection (including an analysis of all applicable warrants)'*, the following sub-tasks will be conducted:

1. **Scoping Document**. Prior to conducting the study, a short scope of study will be prepared consistent with the requirement outlined in the condition of approval (presented above) for the signal warrant study. The scope of study document will be submitted to the County OTS staff. We will proceed with the analysis, once we reach an agreement with the OTS staff on the traffic forecasting assumptions for the study.
2. **Signal Warrant data collection** We will collect turning movement counts at the intersection of Spinks Ferry Road and Route 15 during the AM and PM period (3-hours) for a typical weekday (Tuesday-Thursday) when schools get back in session. In addition to the collection of background traffic, a field inspection will be made of the surrounding area to review the existing traffic flow and traffic control devices. We will also augment our files, as appropriate, with additional information on background developments and road projects in the area. We will also collect 24-hour traffic data for seven (7) days using ATR (Automatic Traffic Recorders) along Route 15 and Spinks Ferry Road. We will collect data consistent with the MUTCD standards as well as Loudoun County standards under existing traffic conditions.
3. **Right Turn lane Analysis** We will conduct a right turn lane warrant analysis (for northbound approach along Route 15) in order to determine whether a right turn lane is required. In addition, a capacity analysis for the intersection will be conducted for future conditions, to evaluate the queuing for the northbound approach, which will help determine the length for the turn lane.
4. **Signal Warrant Analysis Existing/Future Conditions** We will utilize the existing data collected as a baseline for the future conditions analysis. The future analysis will assess the intersection based on existing traffic volumes, trips generated by the proposed White's Ford Park and trips generated by other approved developments in the vicinity of this intersection. The other approved developments in the area will be identified by the County staff and will be documented in the scoping document prior to conducting the study. The future analysis will also be based on the MUTCD standards as well as Loudoun County standards.
5. **Report of Findings** The reports will be prepared in draft form for review by the client team. We will submit two copies of the document to VDOT for their review and subsequent approval