

TRAFFIC STATEMENT
WEST END MOTORS
Annexation Application
August 5, 2019

PROJECT DESCRIPTION:

West End Motors desires to be annexed by the Town of Lovettsville. The annexation will have little effect on traffic. There is little room for expansion on the West End Motors site. Any increase in traffic would be associated with attracting more Lovettsville customers to use the existing facilities and services.

As part of the next round of site improvements, West End Motors agrees to relocate the existing entrance at the intersection of the Berlin Turnpike and Lutheran Church Road approximately 70 feet east on Lutheran Church Road, and to narrow the current entrance on Lutheran Church Road.

The minimal growth in traffic from West End Motors will not impact the adjacent road network. The relocation of the entrance at a street intersection and the narrowing of the entrance on Lutheran Church Road will improve traffic flow and enhance safety.

PROPERTY DESCRIPTION:

West End Motors is owned by Wheeler & Wheeler, Inc., a small family business managed by Ashley Wheeler. They are located on 1.47 acres at 12842 Berlin Turnpike (Route 287) on the southeast corner of the Lutheran Church Road (Rt. 676) intersection. The recently annexed site of the Lovettsville Volunteer Fire & Rescue Company, Station 12 is located just across Berlin Turnpike.

WEST END MOTORS:

West End Motors provides comprehensive automotive services to citizens of Lovettsville and the greater Lovettsville community. These services include fueling, inspections, maintenance and repairs, and rental and sales of cars and trucks. A convenience retail store is associated with the fueling and service functions.

EXISTING CONDITIONS:

Berlin Turnpike (Rt. 287)

Berlin Turnpike is an undivided, 2-lane, rural collector roadway with 10' (+/-) paved lanes in an 80-foot right-of-way with a rural shoulder and ditch section. According to VDOT 2017 traffic counts, this section of roadway carried 7,600 vehicle trips per day (vpd), 97% of which were 2- or 4-wheeled vehicles. The peaking factor (k) was 0.0788, meaning peak hour volume was approximately 592 vehicles per hour. The directional factor (d) was 0.7178, meaning traffic was split 72%-28% northbound-southbound at peak hours depending on the principal direction of commuting.

Lutheran Church Road (Rt. 676)

Lutheran Church Road is an undivided 2-lane rural local roadway with 8' (+/-) paved lanes in a 30-foot prescriptive easement with a rural shoulder and ditch section. According to 2017 traffic

counts by VDOT, the adjoining section of Lutheran Church Road carries 210 vpd. No peaking or directional factors were provided, but such are not considered important on such low-volume roads. Nevertheless, peaking factors on such roads are typically 0.10-0.11, or about 21 to 23 vehicle trips per hour (vph) in this case. The direction split likely reflects that for Berlin Turnpike.

West End Motors

West End Motors currently has three commercial entrances; one on Berlin Turnpike, one on Lutheran Church Road, and one opening onto the intersection these two roads. All appear to be operating in a satisfactory manner, although having an entrance at an intersection is generally undesirable. The entrance on Lutheran Church Road is very wide, approximately 95 feet, and really acts as two entrances.

No traffic study has been conducted and no traffic counts are available for West End Motors. Using the accepted Institute of Traffic Engineers methodology, West End Motors would be anticipated to generate 775 vehicle trips per day. This would account for more than 10% of the trips on Berlin Turnpike, a major collector highway carrying predominantly through traffic. Per the ITE methodology, most of the traffic generated (84%) is attributed to the fuel pumps associated with a convenience store. One of the fuel pumps, however, is a diesel pump for which usage is low, and the standard deviation of the ITE traffic rates is 68.16, meaning the rates are not reliable. Cases used to generate ITE reported rates varying from 90.67 to 299.50 for average daily weekday traffic. At West End Motors, a traffic generation rate at the low end of the range appears to better reflect actual conditions.

PROJECTED CONDITIONS:

West End Motors has little room for expansion. Consequently, only a minor increase in traffic is anticipated, based on growing clientele from the Lovettsville community and through-traffic, and more efficient use of existing facilities.

West End Motors does propose to improve the current entrances:

- 1) The entrance at the intersection of Berlin Turnpike and Lutheran Church Road will be shifted onto Lutheran Church Road to serve the gas pumps.
- 2) The wide entrance further east on Lutheran Church Road will be narrowed and better defined.

This should enhance entrance performance and improve traffic flow and safety.

Development associated with the new Fire & Rescue Station will also improve traffic conditions in the vicinity. They propose moving the existing entrance on Berlin Turnpike 170 feet further south, away from Lutheran Church Road, and about 130 feet south of the entrance to West End Motors. This will reduce the conflicts between these two entrances. The existing fire and rescue station will be converted to commercial use; with the new fire station and all its emergency services traffic another 335 feet to the south.

Neither VDOT, Loudoun County nor the Town of Lovettsville have any plans to improve the subject sections of Berlin Turnpike or Lutheran Church Road; nor have they identified any need to improve these streets.

CONCLUSION:

Traffic conditions on Berlin Turnpike and Lutheran Church Road in the vicinity of West End Motors are acceptable and there are no plans or need for improvements to these roads. The applicant has agreed to remove the entrance at the intersection of these roads, which should improve traffic flow and safety. The other three entrances, one to be relocated, should continue to function well as little increase in traffic is projected.

WEST END MOTORS
PROJECTED TRAFFIC GENERATION
Per Institute of Traffic Engineers (ITE)

USE - Description	ITE Code	Units	Amount	Total Generated Trips - Factors						Total Generated Trips - Amount							
				Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total
New Car Sales	841	1000 SF	0.372	33.34	74%	26%	2.05	39%	61%	2.64	12	1	0	1	0	1	1
Automobile Parts Sales	843	1000 SF	0.5	61.91	51%	49%	2.21	49%	51%	5.98	31	1	1	1	1	2	3
Automobile Care Center	942	1000 SF	4.928	16.25	65%	35%	2.94	50%	50%	3.38	80	9	5	14	8	8	17
Gasoline/Service Station with Convenience Market	945	Fueling Positions	4	162.8	50%	50%	10.06	50%	50%	13.38	651	20	20	40	27	27	54
TOTAL											775	31	26	57	37	37	74