



Lorton Road Improvements Fairfax County, Virginia

The Lorton Road Improvements project involves upgrades to 2.65-miles of Lorton and Furnace Roads in Fairfax County. The roadway is being upgraded from a rural two lane road to an urban four lane divided roadway. The engineering services being provided by ATCS involve the advancement of a conceptual design through preliminary, intermediate and final design stages with the eventual generation of construction documents. Specific services include provided by ATCS include complete roadway design with horizontal and vertical geometric development, typical sections, clear zone protection, safety features, drainage design, erosion and sediment control, etc.

Complete surveying, plats and aerial mapping is also being provided. Other elements include maintenance of traffic plans, a VDOT Traffic Management Plan, sanitary sewer design and grading. The project is also a landmark pilot project for progressive Low Impact Development features to address stormwater quantity and quality control. Complete environmental permitting services are also being provided by the project team along with a thorough public involvement process. The project also features the design of a precast pedestrian culvert crossing and a precast concrete arch for a stream crossing at Giles Run. A complete floodplain study and hydraulic analysis of Giles Run is also being performed.

- Full vertical and horizontal geometric roadway design including superelevation design meeting VDOT standards.
- Full field survey including plats, survey control, existing features and coordination of aerial mapping.
- Incorporation of a 153 foot long underpass to accommodate bicyclists, hikers and horses
- Incorporation of a 164 foot long pre-cast concrete arch for the crossing of a live stream (Giles Run).
- Incorporation of Innovative Low Impact Development facilities for Storm Water management including Bioretention filters, natural dispersion level spreaders, engineered swales, Bioslopes and engineered soil media
- Design of approximately 113 new storm water inlets and associated new storm sewers
- Preparation of a complex sequence of construction and maintenance of traffic design involving plans for 5 distance construction and maintenance of traffic phases with detours and temporary connections
- Preparation of a two Phase Erosion and Sediment control design for each construction phase
- Signing and marking design
- Complete public involvement process including preparing for and leading public meetings with graphics and presentations
- Full Hydrologic & Hydraulic analysis of Giles Run
- Full Environmental permitting
- Sanitary Sewer Design

This project is expected to be under construction in 2011.