

City of Alpharetta Flood Study

Alpharetta, Georgia

Client

City of Alpharetta, Georgia

Scope of Services

GPS Survey of Hydraulic Structures, Channels and Floodplain Cross Sections

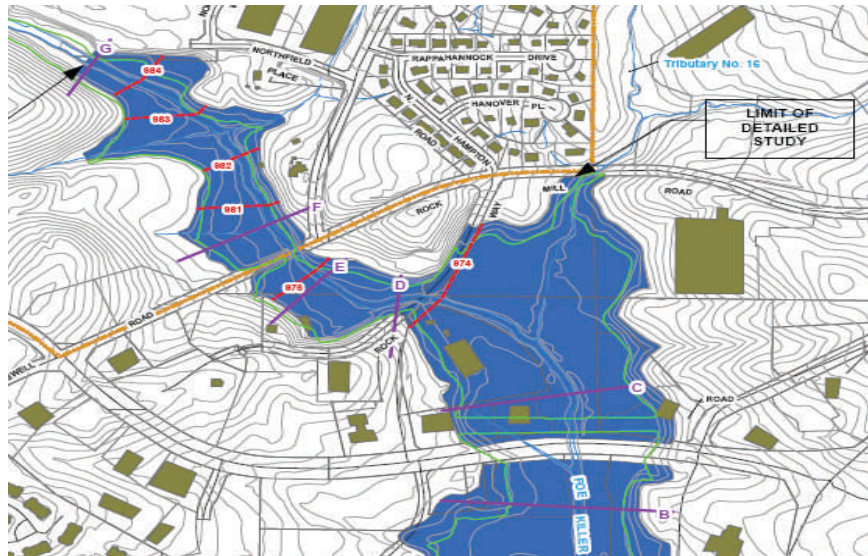
Hydrologic/Hydraulic Analysis and Modeling

Model Calibration

GIS based Floodplain/Floodway Mapping

Project Duration

12/2005 – 03/2006



The City of Alpharetta retained Manhard Consulting to develop regulatory floodplain maps that reflect year 2020 “built-out” conditions of the City. The Metro North Georgia Water Planning District is now requiring municipalities within the 16-County district, in which the City of Alpharetta is a participating municipality, to complete floodplain mapping built-out condition floodplains for all streams with a drainage area greater than 100 acres.

The City has approximately 39 miles of stream with a drainage area of 100 acres or greater. These basins comprise a total of over 96 square miles. All of the City’s streams and tributaries discharge into Big Creek, which ultimately discharges into the Chattahoochee River a few miles south of the City limits.

Manhard developed a HEC-HMS flood hydrograph/hydrologic model with a HEC-GeoHMS ArcView interface to simulate 100-year peak flood discharges along the project’s 39 miles of stream. Of the 39 miles of stream within the study area, approximately 24 miles of streams are currently included within the 1998 ef-

The hydraulic analysis on these streams will incorporate the peak flood discharges into the effective FEMA hydraulic models for the calculation of both the 100-year floodplain and floodway boundaries. Finally, floodplain and floodway delineations using HEC-RAS and HEC-GeoRAS will be completed, and a comprehensive report on the floodplain modeling and mapping effort performed will be provided to the City.

The result of Manhard’s study will be the establishment of regulatory 100-year floodplain limits that are more stringent than the FEMA requirements and will provide communities with flood hazard boundaries. These flood hazard boundaries, based on built-out watershed conditions, will allow reviewing authorities to assess the effects of a proposed development in a “worse case” scenario.