Project Objective:
To Design a site for a 30,000 square foot retail store on 5.2 acres at the intersection of Highway 22 and 431. The goal was to meet all requirements as specified by state and local governments and be as efficient as possible.

Design Requirements:
In designing my site and layout I worked with accordance to the AASHTO manual, MUTCD, ADA, and Martin zoning ordinances.

Survey Review and Corrections:
In my survey review and corrections I obtained a copy of the surveyed plot from our advisor and walked the site to ensure everything was up to date.

Sedimentation Pond
A sedimentation was designed and placed on the left of the site with the drainage network disposing the runoff to it.

Grading
Grading of the site was done by contour elevations. The building elevation was set then spot elevations were placed around the site to maintain maximum slope requirements. The grading is designed to carry water away from the building and away from center islands.

Cut and Fill
Cut and fill volumes were calculated after the final grading was completed. The design requires a fill volume of 22,000 cubic yards.

Drainage
Drainage layouts were based on grading of the site. A piping network was designed and ten catch basins were implemented to ensure efficient disposal of water.

Culvert Design
A culvert was not actually used with the design but an example was used to understand the technique.

Aspects of the design that were not implemented due to time constraints between advisor and student were budgeting, scheduling, pond pack results.