Exercise 2
Grading Slopes and Swales
Due: Tuesday 4/15/2014

Objective:
To review assigning contours to achieve specific slopes and landforms.

Assignment:
A. Using Map B, draw contours that represent the following modifications to the topography:
   1. Create a swale that is 9 feet wide at the top, 1 foot deep, and with 3:1 side slopes, following the existing slope.
   2. In another location, create a swale that roughly averages the above width and depth, but with more character and variety, in some places narrower and with more meandering qualities.
   3. Add at least one pool in the swale that is at least one foot deep. Indicate the depth with a contour and spot elevation.

B. Using Map A, grade the parking lot located on the attached plan using the following information:
   1. Assume that all the parking lot runoff is to be conveyed by swale, except where the water needs to pass under the roadway.
   2. The parking lot will have curb stops instead of full curbs to allow drainage to the swale system.
   3. Swales shall have a minimum slope of 2%.
   4. No slope shall be greater than 3:1.
   5. The design must meet the adjacent road alignment at the spot elevations provided.
   6. The scale of the plan is 1”=40’-0”