# SPD - Site Grading & Site Design Vignettes

**Tips:**

- Approach as a graphical solution rather than a true architectural section.
- About reading the program and drawing it accurately, reading comprehension. No extra credit for designed solutions.
- The vignette on the exam should be similar to the practice exam.
- Practice and become proficient and efficient with the software, and the behaviors of the objects.

## Site Grading

**Tips:**

- Use sketch circles to verify minimum spacing, typically around the building pad.
- Use sketch lines to measure down the centerline of a swales to verify maximum spacing
- Intercept the runoff before it reaches the paved area. Do this with swales…not berms.
- Whenever you modify a grade line you will create a new node.
- No need to over modify contour lines

**Steps:**

1. Write the program requirements
2. Calculate minimum and maximum slope spacing given by program:
   Example:
   2% is a 2'-0" rise for every 100'-0" run.
   100/2 = maximum spacing for 1'0" contours is 50'-0"
   20% is a 20'-0" rise for every 100'-0" run.
   100/20 = minimum spacing for 1'0" contours is 5'-0"
3. Determine the site slope direction
4. Place building pad avoid drip lines and other undisturbed areas as required, in an area that economizes cut and fill,
5. Draw sketch line for proposed swale location, for reference only
6. Adjust the nodes on the contours to create the swales.
7. Adjust the contour at the building pad so that it is adjacent to the building pad.
8. Verify that all modified contours and swales meet the max and min spacing by drawing sketch circles
9. Set elevation of building pad. Refer to program
10. Re-check. Make sure you have diverted water around the building pad, and defined the elevation properly.

# Site Design

**Steps:**

1. Analyze the site first before reading the program. (less than a minute)
    a. Locate all objects (Pond, Easements, Monuments, Building Lines)
    b. Locate the main roads and public walks.
    c. Understand the orientation (North arrow, wind direction)
2. Once the site has been looked over, goto the program window and note down important information (setbacks, views, parking spaces, sun requirements, tree counts, square footage, etc.)
3. Layout the setbacks with the sketch tool. (30')
    a. The circle tool measures the radius
    b. Going 1' to 2' beyond the minimum is always ok.
4. Use the rectangle tool to measure the minimum distance from the intersection for the driveway curb cut. (120')
    This is measured from the center of the intersection.

    Note: There might be other objects that require a setback. Each program will be different. Make sure you read and take note of it.

<u>Setting the Buildings</u>

5. Place the largest building first.
    a. Provide the proper setbacks (distances from the pond, 125' max. and other buildings 210' min.)
    b. Know what the view relationships are (main entry must be visible from Bentlet Avenue.)
6. Consider a location that removes the least amount of trees. Save the trees for later when laying out the drives.
7. Place the last building
    a. Provide the proper setbacks (210' min. from the office)
    b. Know what the view relationships are (view to the pond)

<u>Drive Layout</u>

8. Consider:
    a. Simple layout is key. Keep things at 90 degrees.
    b. Drive must not have dead-ends. Continuous flow is required.
    c. How many curb cuts are allowed?
    d. Distance from the building (5')
    e. Service drive does not need to touch the building.
    f. No parallel parking.
9. Practice how to layout the drives with the rectangle sketch tool. Drives are set at 24'.

<u>Parking Spaces</u>

10. Start with the required ADA spaces (3 spaces @ 12'x18')
    Maintain the required distances to the main entry using sketch circles.(100')
11. Efficiently layout the remaining spaces.

No gaps required for double-loaded parking spaces.

12. Adjust the drives as needed
    5’ space between the parking ends and the drive is recommended (4’ or 3’ is ok)

Layout the SF Program

13. Ensure that the square footage has been met (8,000sf)
    10% more or less is acceptable
14. Consider:
    a. Sun needs to be blocked or allowed. How does the existing trees impact this?
    b. Wind requirements
    c. Views

Tree Placement

15. Know the difference between CONIFEROUS and DECIDUOUS trees.
    CON- short for CONTINUOUS (Evergreen), D- first letter for DIES. (Seasonal)
16. Evaluate which parts of the program requires the wind to be blocked.
    Check if wind encroaches by using the line sketch tool.
17. Evaluate what views need to be blocked (Service entrance must be blocked from Pedestrian Plaza.)

Layout the Pedestrian Path

18. Determine if the “SF Program” is allowed to be used as part of the pedestrian path. (This case it is allowed)
19. Accessible spaces need to have a pathway from the parking space.
    Regular spaces do not need to be connected with a path.
20. Consider:
    a. Efficiency is key
    b. Make sure that the path is continuous. This path must connect to all building main entries, but does not need to touch the building.
    c. Connects to the existing walkway.

Check Your Work

21. Press the “Check” button to see how many trees were taken out. (6 trees max)
    a. Adjust the layout as needed.
    b. Modify the easy items first before the more difficult ones. (pathways, SF program, buildings, driveway)
22. Make sure nothing encroaches any setbacks
23. Ensure that views are maintained
    Tree placement might block views
24. Don’t over think it.