

Site Planning Study Guide: (225 Minutes/3.75 hours)

General Comments:

1. Creativity and beauty are not scored on this exam.
2. Time is a critical factor – don't strive for perfection.
3. Reasons for failure:
 - Miss program elements or don't follow instructions
 - Fail to solve problem
 - Don't finish
 - Don't try to improve program

Section 1:

Site Design Vignette – (90 Minutes/1 Hour 30 minutes): (Only Problem)

1. Review Program and take notes – **10 minutes**
1. Turn on grid
2. Draw restrictions/setbacks
3. Loosely place buildings and scale blocks of elements
4. Calculate parking 1, 2 or 3 rows
 - Block it out
 - Assume all regular size
5. Sketch in roads
6. Design
7. Draw
8. Check – **15 minutes**
 - Ensure program items are not missed!
 - Trees:
 - Shade = Use deciduous trees
 - Wind = Use conifers
 - Keep trucks away from residential
 - Parking:
 - 5/8/8/9'
 - Flow through = allows cars to continuous move past all spaces without leaving the site or backing up.
 - Consider backup safety
 - Passenger side drop offs.

Calculating Parking:

Rough Width of Rows = Total width of all stalls / # of rows (you decide – 2, 3, or 4 typical)
= ((#HC stalls x stall width)+ (# of regular stalls x stall width)) / # of rows

$$\begin{aligned} \text{eg)} &= ((3 \times 12') + (30 \times 9')) / 4 \\ &= 306/4 = 76.5' \end{aligned}$$

Therefore, $76.5/9' = \text{approx } 8 \text{ stalls per row}$. Add $29' \times 2$ to each end to get approximate rectangle size (so $77' + 29 + 29 = 135'$ (actually works out to $132'$ but $135'$ will give you a sense if

it fits).

Drive Through Parking Configurations: (24' drive lanes, 9' x 18' reg stalls, 12' x 18' HC stalls)

	<p>Rough Rectangle:</p> <ul style="list-style-type: none">• 157x107' – 3 row• 157x125' – 4 row <p>Stall Yield:</p> <ul style="list-style-type: none">• 3 row = 33-36• 4 row = 48-49
	<p>Rough Rectangle:</p> <ul style="list-style-type: none">• 198x107' – 3 row• 198x125' – 4 row <p>198' wide by (162' + 36' for 2 end rows)</p> <p>Stall Yield:</p> <ul style="list-style-type: none">• 3 row = 47-50• 4 row = 62-63

	<p>Rough Rectangle:</p> <ul style="list-style-type: none">• 132x107' – 3 row• 132x125' – 4 row <p>Stall Yield:</p> <ul style="list-style-type: none">• 3 row = 24-27• 4 row = 33-36
	<p>Rough Rectangle:</p> <ul style="list-style-type: none">• 168x107' – 3 row• 168x125' – 4 row <p>168' wide by (132' + 36' for 2 end rows)</p> <p>Stall Yield:</p> <ul style="list-style-type: none">• 3 row = 38-41• 4 row = 47-50 <p>Not as efficient as longer rows (2nd diagram)</p>

Parking Widths (18' rows with 24' drives)

15 MINUTE MANDATORY BREAK

Section 2:

Site Zoning – (60 Minutes/1 Hours): (1st Problem)

1. Turn on Grid
2. Separate and copy plan and section information
3. Plan: - ?? **minutes**
 - Zoom in and mark our site improvement areas with sketch lines
 - Use circles along curvy areas
 - Draw secondary construction area
 - Sketch out setbacks or other restrictions
 - Sketch out buildable area
1. Sections:
 - Zoom in and track down sketch lines for contours
 - Draw Grade Line!!!!
 - Erase sketch lines
 - Zoom in and track set backs down
 - Sketch height restrictions
 - Trick don't miss this (i.e. Any portion of bldg below 160' elev shall maintain a 20' setback from property line = notches bottom flors, but shows as buildable area in plan.
 - Draw in buildable area.

Definitions:

Site Improvements = Areas where surface improvements are allowed

Building Construction = Area where buildings are allowed.

Easements = Site improvements typically allowed in easements unless noted otherwise.

Site Grading Vignette – (30 Minutes/1/2 Hour): (2nd Problem)

1. Figure out which scenario applies (see below i.e flat/sloped pad).
2. Draw rough sketch lines for path of water.
3. Adjust contours accordingly.
4. Use circles to check slope but make sure interval is correct i.e.) $\frac{1}{2}$ ', 1', 2', 5'
Eg, 20% = 20/100 Therefore 1/5

Scenarios:

1. Flat Pad:

Bring next lowest elevation around and create swales on both sides – Regrade all around.

- Use circles to check distances
- Look at contour intervals 1, 2, or 5' typ.
- Don't forget to check $\frac{1}{2}$ slope between pad and 1st contour line.

2. Sloped Pad:

Create gulleys around.

Double V at top above pad.

3. Road:

Usually crown in middles with gulleys at sides.
Even intervals to contours (spacing).

Slope and Checking:

1 foot contour intervals:

25% slope $25/100=1/x$ Therefore $x=4$

■ Therefore draw a circle with 4' radius to check.

20% slope $20/100=1/x$ Therefore $x=5$

● Therefore draw a circle with 5' radius to check.

1/2 foot contour intervals:

20% slope $20/100=0.5/x$ Therefore $x=2.5'$

● Therefore draw a circle with 2' 6" radius to check.

Definitions:

Swale = Ditch

Berm/Crown = Bump