

Dan's Helpful Site Planning Hints

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After reading many a post and trying all of the Site Planning Alternates, I thought I would share some Hints on how to quickly and accurately create a Site Planning Solution that will pass. ***Before you Start on these Problems go to the FTP Section of the Site>Site Planning Folder>SP Videos and Watch and Take Notes on How to Make Parking Lots*** (this is a critical item- drawing parking lots with these crude CAD tools is the most time consuming step in these vignettes by far). Once you do a Problem, Post your solution and review as many other solutions as you can (AFTER you try it "blind"). Please take the time to review & make comment on other peoples work- it helps you both.

For those just starting studying for the Site Planning Test Segment, these Hints will give you one way to approach these problems.....**Here is my method;**

1. Go to the "Program" Screen and Note how big the Pedestrian Plaza is to be (8000 SF is common) and How many Parking Spaces in the Parking Lot (33 total is common but might be 36 or 40 perhaps). Got to the "Tree Diagram" page and verify the height of trees (50' is most common)
2. Next hit the space bar to Go to the Drawing Screen and turn on "ORTHO, Full Screen CURSOR", Plop all of the buildings on the Site to the side of the lot lines.
2. Draw a Sketch Rectangle the proper Square Footage for the Pedestrian Plaza and drop it anywhere in the center of the site. (This will allow for quick testing of various layouts)
3. Next, Draw a Sketch Rectangle to represent a prototypical Parking lot of 33 cars (adjust size up for more cars- add about 9' in length for each additional 3 standard stalls the program calls for, assuming 3 rows of cars). I use a 105' x 150' rectangle.
4. Look over the site for Clusters of Trees, Easements, Existing Buildings/Features (ponds, monuments, etc.) and note these in your mind.

Steps 1-4 should only take maybe 3 or 4 minutes at most after you practice

5. Now hit the space bar and Go to the "Program" Screen Again. To avoid having to switch back and forth a million times we will ***make notes on scratch paper of the criteria set forth in the program.*** On the Scratch Paper make a hand drawn grid with 5 Columns labeled "Building/Site Improvement, Height/Area, Close To, View Of/To, Other Criteria".

6. Next Label the Rows of this chart with the names of the required Buildings or Site Improvements. For Example they might be "Office Tower, Restaurant, 8000 SF Pedestrian Plaza, 33 car Parking Lot, Other Misc. Items". (I use the last category as a catch all for whatever doesn't quite fit)

7. Now carefully fill in the Heights, Square Footages, Required Views, Shade/Sun Requirements, and Proximity Requirements for each Building or Site Improvement. On the Left Side I draw an arrow connecting the buildings/areas which must be connected by a sidewalk and noting if the Pedestrian Plaza is or Is Not allowed to be used as part of the Circulation System.

8. Double Check the Written Program and make absolutely certain you haven't missed ANY item listed. *This Step is CRITICAL so don't rush it... on the other hand with some practice it takes about 8-10 minutes max to do this step at a comfortable pace.*

9. Now Hit the Space Bar and go to the Drawing Page. Look at the relative scale of the buildings, parking lot, and plaza and the various site constraints. Next I ***sketch on the Scratch Paper Two “quickie” Parti/thumbnail layouts***. I try to have the parking lot located in a different area and entry drive come from different street/area if possible. These little sketches will have rectangles for the buildings/plaza/parking and arrows for Sun/Shade/Wind directions. (Some People may be quite happy just doing the same thing directly on the computer screen-but I think better with a pencil in hand).

10. After reading your “*Program/Chart*” you made previously, select the Parti which seems to work best from the standpoint of: Compact, minimum # of trees killed, works with Sun/Shade Criteria, minimizes area of parking lot and driveways, respects setbacks to ponds, etc. *This step (#9&10) should take maybe 3-4 minutes to complete, but is obviously important so as not to be “trapped” into a poor/inefficient layout once you actually start to draw.*

11. Now the Drawing Starts.....

First, Draw in Site Restrictions: Start by Drawing Sketch Circles with a Radius = to setback in feet (this might be 30 foot setback from a pond, stream, monument, etc.). Click on the feature to setback from at regular intervals (maybe every 10’ o.c.). For a Lake edge click the center of sketch circle on the edge and move along the entire perimeter of the feature where it fronts the site. Next Draw a Sketch Circle at the Intersection of the Two Roads with the radius equal to the minimum distance to the curb cut for your driveway (often 120 feet). Then Draw 2 Sketch Circles with a Radius equal to the Building Separation requirement (often 20’). Click on two Corners of one of the buildings (you can move them around later to test building clearance), Finally, draw 6-8 small circles with a Radius equal the Separation between the Buildings and Parking/Driveways (often 5’). <<I find Radius are much easier to draw than diameter and easier to place as well>>. Lastly draw two sketch lines from the Base of the wind direction arrow thru the tip and extended all the way across the site. Drag it to the side and draw a second identical line. These will be used to test for wind protection of the Plaza (if the Programs requires same- most do).

12. Now that the restrictions are in place, refer to the Parti Sketch you liked the best and ***Position the Buildings and sketched rectangles which represent the Pedestrian Plaza and Parking Areas***. Test your driveway access to your proposed parking lot with a sketch rectangle 24’ wide by x’ long. Now Look at your “*Program/Chart*” you made earlier and verify that your layout will work as you have layed it out. Use the “move/adjust” tool to “fine tune the layout” as needed. Now, (*if* a Maximum Distance to Handicap Stalls is stipulated by the program), add a sketch circle with a 100 foot radius (or the distance as stipulated) with its center on the Entry of the Larger Building. Make sure that when you add handicap stalls to your basic parking lot they will *Completely* fall within the 100’ distance. You may have to “move/adjust” the angle of the building and or exact position of the parking lot to meet this criteria. Now move the sketch circles to be positioned on the edge of the building corners to test for proper clearance between buildings and between building and parking lot/driveways. Turn on the “CHECK” Tool

to make sure you have not killed to many trees (visually count the number of trees that will be killed when you actually draw your Pedestrian Plaza and Parking Lot/Drive. While my Explanation is long the actual time to do Steps 11 & 12 won't take more than 3-5 minutes.

13. After you have “fine tuned” your layout, the next task is to **Draw the Parking Lot**. Make sure you have watched every video on how to draw a parking lot using sketch rectangles; so I won't repeat the steps here- practice drawing parking lots of different layouts until your speed is “up to snuff” and you can draw them with driveways entering from different directions. Anyway, draw the parking lot with a “stub” of a driveway sticking out in the direction the entry drive will connect in to the parking lot. Next, use the “move group” tool to select the entire parking lot “assembly” with stalls, drive, H.C. Stalls. Then move it into the proper position to allow for proper proximities. Lastly, Add you Main Driveway Starting from the Centerline of the street and moving into the site perpendicular to the street (usually must be for 20' distance); make sure “ortho” is turned on for the first 20' or as required, before making any “jogs” that may be required to get around trees, etc. Next, Add in the Service Drive(s) (if required in the program) from the driveway to the loading dock/service entry of the building(s). Lastly, Add a Walkway from the Head of ALL the Handicap Stalls to connect to the Plaza. Step 13 is the most tedious process because of the very primitive CAD tools available and lack of adjustment ability- it is often easier to erase a poorly drawn driveway than to adjust it! The entire Driveway/Parking Lot process (step 13) will likely take about 15-18 minutes depending upon how convoluted you must make it. (simple is better)

14. Now your are on the Home Stretch! First, Complete your Sidewalk Network (typically connecting the Public Sidewalk with your Building entry's, Plaza, & Handicap Stalls. Next, Move those sketch lines into position to test the extent of wind blockage of your plaza by your buildings (if any) and add Conifers as needed to block the wind. Now (if the program requires it) Add Deciduous Trees to Shade the Plaza or Building Entry as required (Note the Height of Trees will usually be the length of shadow cast-if 45 deg. Solar angle stipulated) This step will likely take about only about 2-3 minutes

15. LAST STEP is to Carefully check each and every Criteria on your ‘Program/Chart’ you made at the beginning against what you have drawn. Focus on Required Clearances (buildings from each other and parking/drives), Required Proximities (entry to Handicap Stall distances for example), Required Shade, Required Sun (often at noon), Required Protection from the Wind (note the Wind never varies direction in NCARB Land!!)

The Entire Method outlined Above should take about 30-40 minutes LEAVING you with 50 to 60 minutes to Compulsively Reread and Recheck your Solution (if your like me) or just relax prior to the next segment.

With Practice and Carefully Studying other peoples posts you should Speed Up by a huge factor in just a short time (I tripled my speed by the end over the first time I tried a Problem with know knowledge of the Crude CAD tools, etc.) GOOD LUCK and Don't Stress To Hard- think of this test as a overpriced video game!