



Date Assigned: Wednesday, 11.06.13, 2:45pm (Week 11)

Date Due: Wednesday, 11.20.13, 12:00pm (Week 13)

Weighted Value: 10 points

Estimated Workload: 4 - 6 hours

OVERVIEW

Trimble SketchUp is a 3D modeling program for design professions intended to be easier to use than other 3D programs. *SketchUp* was developed by startup company @Last Software, co-founded by Brad Schell and Joe Esch in 1999. It was first released in 2000 as a general purpose 3D content creation tool, with the tagline "3D for Everyone". Google acquired @Last Software in 2006, and then released *Google SketchUp*, a freely-downloadable version of *SketchUp*. The freeware version was not as capable as *SketchUp Pro*, but it included integrated tools for uploading content to *Google Earth*. On September 1, 2010, *SketchUp 8* was released. On June 1, 2012, Trimble Navigation, Ltd. acquired *SketchUp* from Google. On May 21, 2013, Trimble announced the release of *SketchUp Pro 2013*.

ASSIGNMENT

Follow the attached step-by-step instructions.

LEARNING OBJECTIVES

- The ability to use *Google Maps* to view a site in street view.
- The ability to use *Google Earth* to view a site.
- The ability to use *Trimble SketchUp* to create a 3D model of a building at an existing site.
- The ability to place the model in *Google Earth*.
- The ability to provide an analysis of visual impact relative to context.

ITEMS OF CONSIDERATION

- There will be technical glitches during this exercise.
- There are thousands of features and applications for *Google Earth*, *Google Maps* and *Trimble SketchUp*, which are ever-changing with the release of each updated version. No one person knows them all. If any student is aware of a feature or application that may be of interest to the class, please speak up and share.
- Be aware of the different software versions (and any compatibility issues) being used in the SELE 2249 computer lab (version 8.0), CUPPA computer lab (version 8.0), and your personal computer.

- Save your work document intermittently while working on it. At some point, the computer may crash, and you do not want to lose your work progress.
- Use the help menu command for *SketchUp*.
- There is only one way to learn software ... trial and error. Time will be given after each step to experiment with other features and options, as part of the learning process.

DELIVERABLES

- Students are to submit **two** print copies of their summary report to the instructor at the start of class on assignment's due date, one of which will be returned with grade and review comments.
- *Format: letter report (short version)*, refer to Purdue OWL > Subject Specific Writing > Professional, Technical Writing > [Basic Business Letters](#), and 'Letter Report (short version)' example posted on Bb.

Address the report to your client, which in this case is the West Loop Neighborhood Association, from yourself, as a planning consultant.

- *Structure:* letter report format to include heading, opening (introduction and purpose), overview of visualization application / technique, analysis of visual impact relative to surrounding neighborhood context, and summary (*not* to include recommendation), and closing. Visualization to include student name, position title, organization, date, visualization title and caption.
- *Particulars:* Summary report and attached visualization (color, portrait or landscape orientation) each to be 1 page, 8.5" x 11".

EVALUATION CRITERIA

- *Comprehension:* student demonstrated ability to follow step-by-step instructions for creating a *Trimble SketchUp* visualization, including use of *Google Maps* and *Google Earth*.
- *Analysis:* student demonstrated ability to assess and communicate visual impact of provided scenario.
- *Completeness:* deliverables were submitted in a complete and orderly manner.
- *Timeliness:* deliverables were submitted by due date.

“Visualization is the process of taking abstract ideas or data and translating them into easily understood and interpreted images to enhance planning, urban design and decision-making processes.”

Julie Herman (Steiner and Butler 2007, p. 336)

HW-10: Trimble SketchUp > Assignment Instructions

Scenario: While supportive of a previous 22-story high-rise development at the south-east corner of Madison and Green streets (see attached article), the West Loop Community Organization (WLCO) is opposed to high-rise buildings exceeding 300 feet in height, as being incompatible with existing neighborhood scale. This is contrary to the [The Chicago Central Area Plan](#) (2003), which calls for expanding the loop westward. The site across from CUPPA Hall is ideal, in the eyes of some developers, for a residential tower similar to [Skybridge](#)¹, with retail and parking on the bottom floors.

In this assignment, you have been contracted as a planning consultant by WLCO to create a visualization of a proposed high-rise development on this site. The intent of the visualization is to demonstrate the potentially adverse visual impact of a residential tower similar to Skybridge, relative to the existing surrounding neighborhood context.

View Google Maps Street View

1. Open *Google Chrome*.
2. Go to www.maps.google.com
3. Type in “401 S. Peoria St., Chicago, IL” to view the site.
4. Try out “Street View” (the orange person icon)
5. Move and look around site.
 - How many stories is CUPPA Hall?
 - How much does a ‘sausage biscuit’ cost at 7-Eleven (one block east on Van Buren)?
 - When is the ‘image date’?

Open SketchUp for later use

1. What version is it?

View Site using Google Earth

2. Open *Google Earth*.
 - *Installed computer program: Start > Programs*
 - *What version is it? Help > About Google Earth*
3. Type in 401 S. Peoria St., Chicago, IL
 - *The zoom in upon a particular location is a great way to start a presentation, before everyone starts doing it and it becomes cliché.*
4. Look around.
5. Return to view in which you look straight down on lots across from CUPPA Hall

¹ Skybridge is a high-rise luxury condominium building located at 1 N. Halsted Ave. The building is 38 stories, with the base of the building occupied by a Dominick's grocery store. The top two stories are penthouses, with the 36th floor a workout facility for tenants and a roof-top garden space. Designed by Perkins+Will, this is the tallest building West of the Dan Ryan Expressway.

Import *Google Earth* view into *SketchUp*

1. Leave *Google Earth* open, with view of lots across from CUPPA Hall as above.
2. In *SketchUp*, select 'Add Location' tool (map with yellow arrow down).
3. Type in 401 S. Peoria St., Chicago, IL.
4. Choose an area around building site, and select 'Select Region'
5. View area in *SketchUp* from top view by selecting the sequence "Camera" > "Standard View" > "Top".
6. Create a zero lot line building footprint by selecting 'Rectangle' tool (brown rectangle), clicking one corner of lot and clicking opposite corner of lot. Building footprint to be entire site across the street from CUPPA Hall (north UIC Parking Lot 8, Downtown Cleaners & Laundry building, south private parking lot), along S. Peoria St., from W. Van Buren St. to Expressway.
7. Use 'Orbit' tool (two spherical arrows) for $\frac{3}{4}$ view.
 - $\frac{3}{4}$ view or $\frac{3}{4}$ perspective is used to describe a graphical projection which is halfway between a frontal view and a side view. This type of auxiliary view is a view at an angle used to give deeper insight into the actual shape of the object, as opposed to a primary view from an orthographic projection.
8. Extrude building to height of 380 feet by selecting 'Push/Pull' tool (brown box with red arrow up). Click on rectangle and extrude until the height in the box in the lower left is right, or just enter the height you want.
 - **Creating a Volume:** the Push/Pull tool is used to expand or decrease the volume of geometry in your models.
 - **Pushing and Pulling Precisely:** The displacement of a push/pull operation is displayed in the Measurements Toolbar (lower right corner). You can specify an exact push/pull value either during or immediately after your push/pull operation. Negative values will perform the push/pull in the opposite direction.
 - Try measuring the height of your building with **Tape Measure** menu tool.

Export *SketchUp* building into *Google Earth*

1. In *SketchUp*, select 'Preview Model in Google Earth' (globe with orange arrow up).
2. Be amazed.
3. Look around in *Google Earth*.

Create textures in building

1. In *SketchUp*, select 'Paint Bucket' (paint bucket with yellow paint).
 - From the pull-down menu of the 'Materials' display, select an exterior building material category (Concrete, Stone, Metal, Brick and Cladding, Translucent, etc.).
2. Choose a specific material type from your selected category.
3. Click 'Paint Bucket' on all sides of building, using the 'Orbit' tool to move around building.

- Experiment with **Edit** tab in the 'Materials' display.
4. Export into *Google Earth* with the 'Preview Model in Google Earth' tool (globe and orange arrow up) again, as above.

Add a photo to a surface of the building

1. Get photo of Skybridge from *Google Maps* Street View, or better yet, find a photo from an orthographic projection by googling 'Skybridge' and selecting 'images' from the top menu.
 - a. Open *Google Maps*.
 - b. Select address of 700 W. Washington Blvd., Chicago, IL.
 - c. Select "Street View".
 - d. Get good view of Skybridge.
 - e. Crop out parking and/or bottom floor(s), as so desired.
 - f. Hit "Print Screen" Key.
 - g. Open *PowerPoint*.
 - h. Make blank unformatted slide (via Home > Slides >Layout).
 - i. Paste (or "Control V") to copy Skybridge image into *PowerPoint* slide.
 - j. Crop Picture to extents of building.
 - i. "View" "Toolbar" "Picture" to get crop tool.
 - ii. Select crop tool.
 - iii. Crop Picture to extents of building.
 - k. Save slide of Skybridge image to desktop as JPEG (.jpg).
2. Paste picture to building in *SketchUp*.
 - a. In *SketchUp*, orbit to good view of building façade surface you want to paint.
 - b. Use 'Select' tool (black arrow) to select the façade surface that you want to paint.
 - c. Select 'File' > 'Import'.
 - d. Select image file you want.
 - e. Select '**Use as Texture**' toggle option on the right side.
 - f. Select 'Open'.
 - g. Click once in lower-left corner of the face you want to paint (watch for green dot).
 - h. Click on the upper-right corner of the face you want to paint (watch for green dot).
3. Stretch Image to fit (for skewed image perspectives).
 - a. With 'Select' tool, click the face with the texture you want to edit.

- b. Choose 'Edit' > 'Face' > 'Texture' > 'Position'.
- c. Right-click texture and deselect the Fixed Points option.
- d. Click a pin to pick it up.
- e. Place the pin in the corner of the building in your photography by clicking once.
- f. Click and drag the pin you just moved to the corresponding corner of the face you are working on.
- g. Repeat steps for each of the three remaining points.
- h. Press 'Enter' on keyboard to exit 'Texture Edit Mode'.

Save

Export into *Google Earth*

Items of Consideration

1. Select appropriate view(s) for your visualization. Review purpose of your contract with WLNA and your visualization ('Scenario', page 3).

Choose a visualization that best demonstrates the potentially adverse visual impact of a residential tower similar to Skybridge, relative to the existing surrounding neighborhood context. You may select more than one view, as long as all views fit on one page.

2. Toggle off unnecessary map labels / icons displayed on *Google Earth*.
3. Provide a caption for the visualization, such as the following example;

Proposed high-rise building at 401 S. Peoria St., Chicago, IL, 2013
(view looking northeast)

visualization by (name / organization), (date). Google Earth imagery date: (date)

Print as your assignment submittal: color, portrait or landscape orientation.

Note: *SketchUp* and *Google Earth* are useful in Visual Preference Techniques

More fun with *SketchUp* (optional, for purpose of advanced learning only)

1. Add More Shapes

- a. Peaked roof
 - i. Create a rectangular building.
 - ii. Add a line with the pencil tool from midpoint of one side to midpoint of opposite side.
 - iii. Use move tool (four arrows) to click on line and move up to raise the peak.

2. Add Guidelines

- a. Use tape measure tool in guidelines mode.
- b. Click on a line.
- c. Move in a distance (may enter distance directly) and click.
- d. A guideline parallel to the first line is created.
- e. These can be hidden from edit menu or deleted.

3. Add Components

- a. Choose “Window” “Components”.
- b. Add a window.
- c. Add a tree.

4. Create Shadows

- a. Choose “Window” “Shadows”.
- b. Adjust and view.

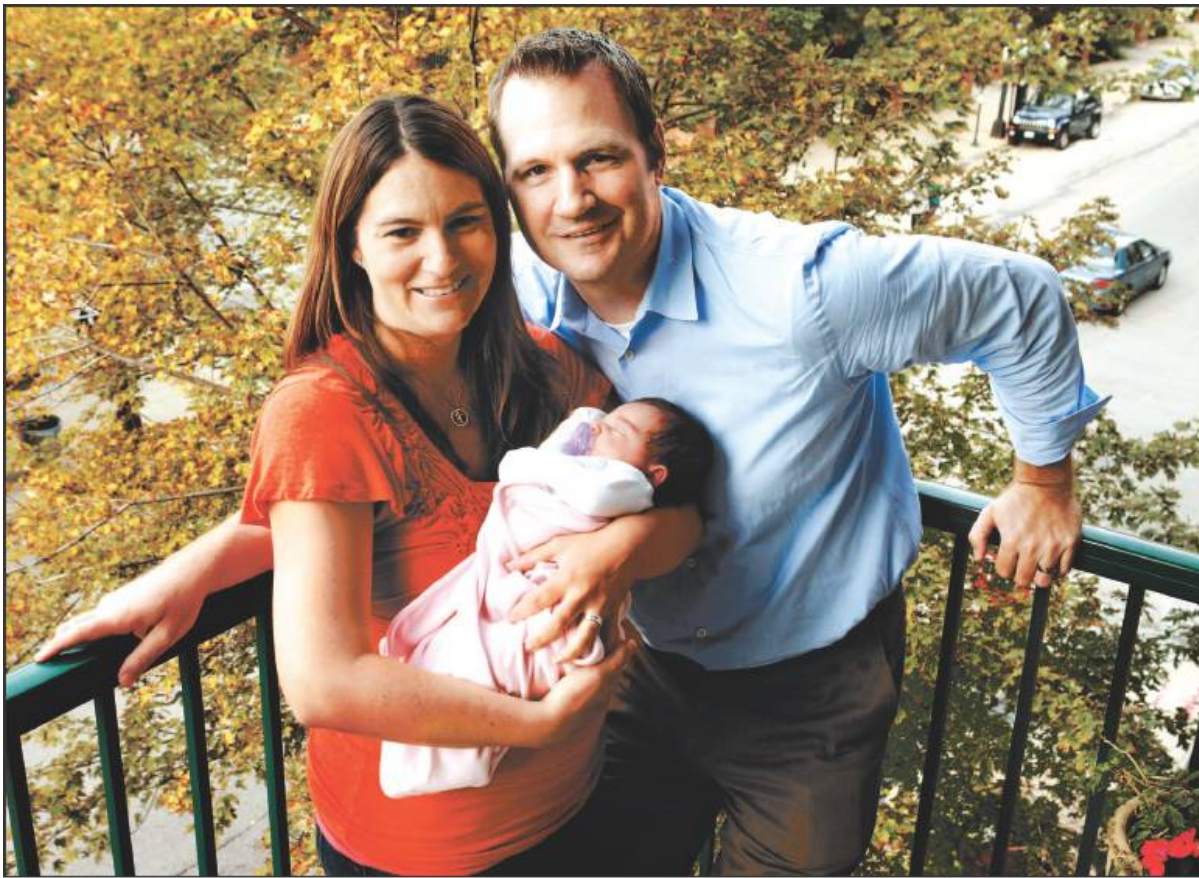
5. Create a View and Animate

- a. “Window” “Scene”.
- b. Plus sign at first view.
- c. Move to second view and hit Plus Sign.
- d. Move to third view and hit Plus Sign.
- e. Select tab for first view.
- f. Right click and Select “Play Animation”.

6. Organize your Work

- a. Groups
 - i. Glue together geometry.
 - ii. “Edit” “Make Group”.

- b. Work with Components
 - i. Like groups, but can make multiple copies of thing and change all by changing one.
 - ii. “Edit” “Make Component”.
 - iii. “Windows” “Components”.
- c. Use the Outliner
 - i. List of Groups and Components, including nesting.
 - ii. “Window” “Outliner”.
- d. Create a Layer
 - i. Keep like elements together.
 - ii. “Window” “Layers”.
 - iii. Always do your work in the 0 layer (You can save in another layer).



NUCCIO DINUZZO/TRIBUNE PHOTO

Jim Dore, with his wife, Bridget, and daughter, Anna, has been fighting development of a hotel near his West Loop condominium. He says the project would upset the peaceful city neighborhood.

West Loop project building discontent

Business owners, residents at odds over plan for mixed-use development in peaceful neighborhood

BY ALEJANDRA CANCINO
Tribune reporter

After work, James Dore heads home along Monroe Street from his 23-story office building in the heart of the Loop.

His 20-minute walk is a straight shot west, over the Kennedy Expressway and into his West Loop neighborhood, which features trendy restaurants, lofts, young couples with pets or strollers and a view of the downtown skyline.

In recent years, the West Loop has become a magnet for young professionals like Dore who like a balance

between urban convenience and peaceful suburbs.

But as Dore reached an empty parking lot on the southeast corner of Madison and Green streets, he glared at what he and his neighbors fear will be the end of their peaceful lifestyle — a parking lot that soon could be the site of a 22-story hotel.

“I’m just disappointed,” said Dore, who earlier this year became the reluctant leader of a group of neighbors who fought a losing battle against the high-rise. The first phase of the project, a three-story retail building anchored by a Mariano’s Fresh Market grocery store, is expected



ANTONIO PEREZ/TRIBUNE PHOTO

The West Loop, with its restaurants and lofts, has attracted residents who can live near their jobs downtown.

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Discontent building up in the West Loop

Continued from Page 1

to break ground next month.

Their arguments that the project will block views, increase traffic and change the neighborhood's dynamic have been made by residents in up-and-coming locations for years. As neighborhoods like the West Loop, the South Loop or the Near North Side grow, residents can be at odds with business owners, developers and city officials over the kind of development they want in their communities.

Joseph Antunovich, president of Antunovich Associates, the designer of the project, said the area west of Halsted Street is "very emerging." Over the past 10 to 15 years, he said, it has been developed into a desirable area.

Ald. Walter Burnett, 27th, said the area's silent majority has supported the project, called Gateway to the West Loop, because it would create more than 200 construction jobs immediately and more jobs when the retail stores and the hotel open.

The developer, CD-EB/EP Retail JV, is asking the city for \$7 million in tax increment financing to help pay for the first phase of the project, estimated to cost about \$41.8 million.

The outlay needs approval from the City Council, though that is likely with Burnett's endorsement. There is no financing in place for the second phase of the project, which includes the hotel.

Sy Taxman, one of the developers, said he is in conversations with two companies interested in developing a corporate hotel at the site. But, he said, construction isn't expected

to start until the first phase is substantially completed.

After a year without new hotel developments downtown, there are at least three on the way, and the city is likely to see more, said Adam McGaughey, executive vice president of Jones Lang LaSalle Hotels, a unit of the Chicago-based real estate firm with the same name.

That's the kind of traffic Dore wants to keep from his neighborhood. As it is, he said, cabs speed past stop signs. With a hotel next door, he fears traffic will get worse.

Dore's involvement started in January when he attended a community meeting about a project that would redevelop the area across the street from his condo.

In the last half decade or so, the land was used as a parking lot.

His wife, Bridget, attended a previous meeting where developers proposed a 30-plus story building mixed with condos and hotel rooms.

By January, the size of the project had been significantly reduced. Still, Dore said, he didn't support it because of the traffic and noise it would create. He and others expressed their concerns, so he said he was satisfied that this was among the first steps in a long process.

In July, a letter informed area residents of a zoning hearing on the project before the city's Plan Commission. It had been scaled down to a 22-story building at Green and Madison streets. But a three-story commercial building with 95,125 square feet of retail space and 220 parking spaces would face his condominium on Monroe.

Dore was mystified:



The proposed Gateway to the West Loop development could add a high-rise mix of condos and hotel rooms along with a grocery and other retail stores. It has the backing of the area's alderman, Walter Burnett, and some business owners.



ANTONIO PEREZ/TRIBUNE PHOTO

A sign notifies residents of the proposed development at Halsted and Monroe streets in the West Loop. The project has garnered the support of area business owners.

"How is it going to zoning if there were no more meetings with the neighborhood?"

Approval of the hotel, Dore feared, would create a precedent and allow other developers to build their skyscrapers west of Halsted.

In the days before the hearing, Dore and some neighbors started an email

campaign asking the alderman to postpone the zoning meeting. Dore went to a nearby park to collect signatures from people opposed to the project.

At the meeting, Dore's wife and a few neighbors voiced their concerns. But Burnett said community and business organizations supported the project. The Plan Commission unani-

mously approved it.

Greektown Chamber of Commerce President Yanni Theoharis, owner of Meli Cafe and Juice Bar at Halsted and Jackson Boulevard, said a high-end hotel would help increase sales, and "as a businessman, I welcome that."

Martha Goldstein, executive director of the West Loop Community Organization, said a proposal for a high-rise in the community was a long time coming. Many residents, she said, want only midrise buildings between Halsted and Ashland Avenue, but the community also needs more retail, and this project would create just that.

"Has there been a shift (in opinion)? Yes and no," she said. "People would like to see more things in the neighborhood, and they have a difference in opinion in how they view their neighborhood."

Taxman said he worked with the community for more than three years and

scaled down the project to about half its original size. He said he is disappointed to still hear complaints about the height of the building.

"We did everything possible not to be an intrusion in the community," Taxman said.

Dore and his wife, who moved to their three-bedroom condo in May 2009, say they are disappointed. Two years ago, they thought they had found a neighborhood close to the Loop that was also an ideal place to raise a family. Five weeks ago, their daughter, Anna, was born. But they are not sure they will stay in the West Loop.

"I would love to stay here. I have no plan to move, but if I felt that this type of development starts to take over the neighborhood, absolutely I would move," he said.

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