

Practice exercise**Evaluate a site for design potential**

In this exercise you will evaluate the site at 311 East McDaniel St., Springfield, MO, U.S.A. and explore it both within Forma Site Design and by using available visual data.

Learning objectives:

- Describe the factors that can impact site design.
- Build and assess the visual data created by Forma Site Design.
- Create clear, complete articulations and explanations of site issues. For instance, “wind” is not a site issue; understanding and explaining how wind might behave *is* a site issue.

1. At the location **311 East McDaniel St., Springfield, MO, U.S.A.**, describe what you believe will be the three most important Macro site factors and explain why.

Note, this will take more of an effort than simply listing: “temperature,” for example. You will need to dig just a bit to define why temperature may be a critical macro site factor. Provide your answer with one to two sentences in your explanation. Your list of options should include, but are not necessarily limited to, the following macro factors: Sun, annual precipitation, humidity, wind, temperature, seasonal changes, particle count, atmospheric pressure.

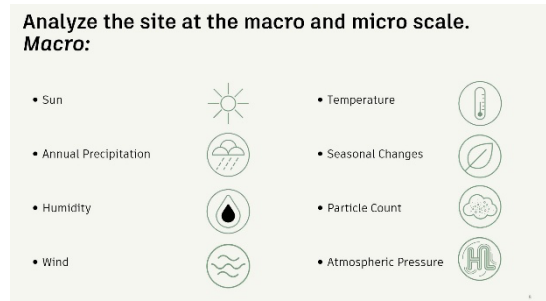


Figure 1. Macro Site Elements.

2. Define what you believe will be the three most important Micro site factors. Understanding micro on any site is going to require keen observation skills and some extensive visual exploration.

Solar shading, terrain, vegetation, water, physical density, wildlife, albedo, and safety is only an initial list. For instance, wind acts on the macro scale in terms of direction, but also operates on the micro scale by how it might move around a building.

Leveraging all sources available to you, select and define three micro factors and explain your decision in one to two sentences.



Figure 2. Micro Site Elements.

3. To explore the intuitive side of the design, draw a diagram (using either analog or digital tools) to explore one of the following items:

- Draw a schematic street elevation from Jubilee Park to Patton Alley. Understand basic building heights, window sizes and floor to floor heights.
- Draw a diagram focusing on site circulation analyzing pedestrian flow, vehicular traffic, and personal transportation devices (bikes, scooters, etc.).

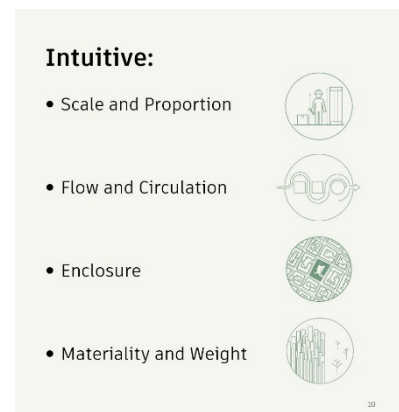


Figure 3. Intuitive site layout issues..

- Draw a figure ground diagram that helps analyze both pattern and enclosure on the site.
- Create an image collage (at least 10 images) of the materials, patterns, and building types around the 311 E McDaniel site.

Submit your drawings of one or more of the above to your instructor.

Grading rubric:

	Advanced	Proficient	Basic	Emerging
Questions resolved	Well thought out response connecting design intent with data	Correct answers not implicitly tied to the design ideas.	Answers completed, but little to no application to the design	Answers are incomplete and/or incorrect
Imagery and drawing relevance and quality	Images are clear in their presentation, relevant, and have a contextual connection to the assignment	Completed, correct	Minor errors or missed interpretations	The images are not completed, or not available
Explanations provided with clarity	Design ideas and design data are presented clearly and creatively	Clear responses and graphics	The information and graphics are presented, but not connected or composed	Incomplete or not legible
Creativity in the presentation	The presentation is innovative and insightful with new ideas informed by the data created in Forma Site Design	There is quality to the presentation, but the connection to the simulation data is not clear	Quality presentation, but there does not appear to be connections to the data created by Forma	The presentation does not meet or resolve the questions proposed in the Challenge assignment.

Voice-over for the answer key video:

For this practice exercise the answers are somewhat open ended, so this solutions video is more about guidance, than absolutes.

When listing Macro site factors, the sun is key in the Midwest – sunlight is needed in the winter months to warm things up, and needs to be blocked in the summer as high temps are a regular part weather pattern. If you noticed, I actually mentioned three factors in that one listing of sun/solar, temps and seasonal changes can both be moderated by controlling the solar design – it is really critical to a site like this. The other major factor on this site will be wind. Understanding how it can be utilized to keep the outdoor spaces comfortable during high levels of humidity is crucial.

In terms of the localized micro factors, terrain, wildlife, water and vegetation are pretty much non-issues in this location. Solar shading from (and to) the adjacent buildings are very relevant in denser urban settings as adjacent buildings, and your design can impact access to the solar envelope. Density is going to both create, and expose the project users to environmental and spatial conditions. And finally, site lines – and a strong balance of public and private space for the residential component can create a sense of safety, openness, and security.

The drawing exercises should be quick study sketches – building an understanding of scale, proportion, and density by taking the time (even if only five minutes) to slow down and study these key instinctual design elements.