university of Oregon – school of architecture and allied arts – department of architecture arch4/585 advanced architectural design – winter 2016 – prof. nancy cheng

PLACEMAKING WITH NATURE

Assignment 1

What is the role of Nature in your project? How will your project contribute to a more sustainable future?

> Grey and Green networks at Village Homes, Davis, illustrated by http://greenwayneighborhoods.net/

I. PRE-DESIGN: for Wed 1/6

Work with your classmates...

A. Constraints and Opportunities:

Critique relevant urban designs for your site & share site analyses. Be ready to summarize:

- What are the most important site forces?
- How do they shape design criteria?

Use them to define or design the future massing context for your building.

- Illustrate **code** requirements: setbacks, height limits, easements and other no-build areas.

B. Check fit of Program size to Site: Show how large your program area would be at 2 or more stories by drawing rectangles to scale. Use Gross Area multiplier for non-programmed space (<u>http://www.assetinsights.net/Glossary/G_Net_Floor_Area.html</u>) and discuss the ideal FAR. Try overlaying the footprint of Lawrence Hall or typical Portland blocks to scale your site plan.

C. Assess your project development and revise booklet.

Your project statement should succinctly explain:

<u>Inquiry:</u> What problem are you addressing and why is it important? <u>Program and Site:</u> How do these fit the inquiry? Can they be better tuned? <u>Precedents:</u> What lessons can be learned from excellent models?

D. Network. Identify three people who could help you on your project. Who could benefit from your ideas who shares your values? Clean up your blog posts and share them with these people.

II. SITE DESIGN: A. Site Model images & B. Diagrams due Mon 1/11

Cities consist of Grey built systems and Green natural systems. Identifying Grey and Green patterns and conflicts can help generate environmental designs that are more sensitive to humans and wildlife. Work with classmates to brainstorm metaphors for Grey & Green relationships such as weaving, branches, families, considering:

- communication and movement networks
- nutrient and waste resource flows
- shelter from or energy utilization of sun, wind and water

<u>A. Create a Site Model toolkit</u>

With your classmates, create a model base at a workable scale. Create blocks and use strings for circulation. Define design objectives, constraints and conceptual metaphors to explore how to organize the program on the site. **Photograph massing alternatives** for discussion.





Nataly Gattegno & Jason K Johnson's Energy Farm http://www.future-cities-lab.net/

<u>B. Diagram</u>: Show major program chunks and most relevant factors such as circulation, private/public, sunny/shady, wet/dry, man-made / green divisions.

C. Break to do Biomimicry (Assignment 2)

<u>D. Run Solar and Wind Analysis on 3 variations:</u> What areas receive sun, shade, wind, noise? (more to follow)

E. Revise design for the REVIEW:

- Site model
- Site plan
- Site sections
- Analysis images: before and after
- Imagined perspective sketches of life in the space

SCHEDULE

Mon Jan 4	Hand-out, work on Pre-Design and Site Model Toolkits
Wed Jan 6	Pre-design due, Work on Site Design
Fri Jan 8	GH Bootcamp
Mon Jan 11	Model images & diagrams due
Wed Jan 13	PINUP Biomimicry, Model images & diagrams
Fri Jan 15	GH Ladybug & Flow design lesson, create digital models
Mon Jan 18	Work on Site design analysis
Wed Jan 20	Work on Site design revision
Fri Jan 22	GH Ladybug and FlowDesign work session
Mon Jan 25	Review Site Design & Design with Nature

READINGS:

- Green Loop PDX competition: http://2016.designweekportland.com/competition
- Trancik, Roger, Finding Lost Space: Theories of Urban Design, Ch.4 NA9031.T73 1986
- Cynthia Girling and Ron Kellett's Skinny Streets and Green Neighborhoods. HT167 .G57 2005 See also Elements database: http://elementsdb.sala.ubc.ca/

RECOMMENDED:

- Jie Hu, TsingHua Urban Design and Planning Institute, *Shan-Shui City* [Ian McHarg mapping meets Chinese Feng-shui design.]

- Edward T. White, *Site Analysis*. Types of site information, example of analysis diagrams paired with design diagrams NA2540.5.W48 1983

- Kevin Lynch *Site Planning*. How urban forms and elements shape experience NA9031 .L94 1971

- Urban Design Compendium by Llewelyn Davies for English Partnerships http://www.rudi.net/books/12260 (available on course folder)

Key Aspects of Urban Design From Llewelyn-Davies' Urban Design Compendium

Places for People

For places to be well-used and well-loved, they must be safe, comfortable, varied andattractive. They also need to be distinctive, and offer variety, choice and fun. Vibrant places offer opportunities for meeting people, playing in the street and watching the world go by.

Enrich the Existing

New development should enrich the qualities of existing urban places. This means encouraging a distinctive response that arises from and complements its setting. This applies at every scale - the region, the city, the town, the neigbourhood, and the street.

Make Connections

Places need to be easy to get to and be integrated physically and visually with their surroundings. This requires attention to how to get around by foot, bicycle, public transport and the car - and in that order.

Work with the Landscape

Places that strike a balance between the natural and man-made environment and utilise each site's intrinsic resources - the climate, landform, landscape and ecology - to maximise energy conservation and amenity.

Mix Uses and Forms

Stimulating, enjoyable and convenient places meet a variety of demands from the widest possible range of users, amenities and social groups. They also weave together different building forms, uses, tenures and densities.

Manage the Investment

For projects to be developable and well cared for they must be economically viable, well managed and maintained. This means understanding the market considerations of developers, ensuring long term commitment from the community and the local authority, defining appropriate delivery mechanisms and seeing this as part of the design process.

Design for Change

New development needs to be flexible enough to respond to future changes in use, lifestyle and demography. This means designing for energy and resource efficiency; creating flexibility in the use of property, public spaces and the service infrastructure and introducing new approaches to transportation, traffic management and parking.