DUE: 8th Week

1 Comprehensive architectural program, project details, list of spaces (served, servant, etc), and ordering determinants. To be derived from contrasting previous typological analysis with the above criteria, and working towards establishing usable / concrete building functions, sq footages, or other researched factors helping to define your speculative thesis project.

3. Programming Criteria (spatial, environmental, perceptual)

Develop and use a consistent format throughout the Research Document. Provide references and document sources for all information cited using the American Psychological Association (APA) format…

SPATIAL:

INTENT: Programming is a pre-schematic design research activity (an “information gathering process”) that establishes building requirements in a systematic and organized way allowing for a clear understanding of the nature of the problems associated with a particular building typology. The program identifies functional, operational, and equipment requirements along with spatial adjacency relationships including physical and cultural site factors. Programming can describe spatial, environmental, and perceptual criteria as well.

DESCRIPTION: This exercise is the first part of preparing a Building Program for use during the schematic design process. Your Program, a critical component of your research, should address the following content: functional needs, area / volume requirements, equipment, furnishings, building operations, special systems, site requirements and services. Include maps, charts, sketches and drawings, photographs, analytical bubble diagrams and matrices as necessary to communicate a complete understanding of the functional and spatial requirements for both building and site.

CONTENT: Prepare a building program addressing the following:

• Site Requirements
  Access / Parking
  Service / Fire / Other

• Spatial Requirements
  Size / Area
  Volumetric Analysis

• Spatial Requirements
  Public / Private Relationships
  Interior / Exterior Relationships
  Space Adjacency Relationships
  Special Functional Needs
  Fire Safety / Accessibility

• Graphics
  Lists / Flow Charts / Matrixes
  Bubble Diagrams
  Zoning / Stacking Diagrams
  Circulation / Exiting

Provide north arrows, graphic scales, legends, titles, and photo / sketch orientation references necessary to communicate data clearly. Summarize information in graphic and text format for the categories referenced above.

“I believe the architect’s first act is to take the program that comes to him and change it. Not to satisfy it, but to put it into the realm of architecture, which is to put it into the realm of spaces. It is the duty of the architect to find what is a thoughtful realm of spaces…Spaces which form themselves into a harmony good for the use to which the building is to be put.”

Louis I. Kahn

“Architecture goes beyond utilitarian needs…. Passion can create drama out of inert stone.”

Le Corbusier

USEFUL SOURCES:

Architectural License Seminars Pre-Design 3
Lesson Four: Diagramming Space Adjacency Information

Space Adjacency Analysis
Edward F. White

Architectural Programming: Information Management for Design
Donna P. Duark

Programming for Design: From Theory to Practice
Edith Cherry
ENVIRONMENTAL:

INTENT: Environmental Criteria identifies the sustainable characteristics you deem essential to your thesis establishing energy conservation techniques, and sustainable considerations as part of your design process.

DESCRIPTION: Identify how the proposed design will respond to the following:

1. **Sustainable Design Intent:** Describe how the thesis embraces ecological circumstances or seeks to steward natural resources
2. **Regional / Community Design:** Identify how the thesis recognizes unique cultural and natural character
3. **Land Use / Site Ecology:** Describe how the thesis responds to its ecological context
4. **Bioclimatic Design:** Identify how the thesis recognizes natural flows and cycles through passive design strategies
5. **Materials and Construction:** Develop criteria for selecting sustainable products, materials, assemblies, and systems.

Directions at this stage regarding "form, space, and materials" will impact how site-conscious your project can become. Geometry, orientation, circulation, and massing all influence opportunities to harvest solar and wind energy, incorporate daylighting and natural ventilation, apply energy and water conservation techniques, and incorporate on-site energy production.

FORMAT: The essence of this exercise is to incorporate sustainable design measures in your conceptual response to both site and program. The project should incorporate text, drawings, diagrams, and examples as necessary to communicate your design intentions.

"Architects have a vital role as advocates of sustainable design solutions. Sustainability requires us to think holistically: the location and function of a building; its flexibility and life-span; its orientation; its form and structure; its heating and ventilation systems, and the materials used, all impact upon the amount of energy used to build, run and maintain it."
Norman Foster

"The very purpose and nature of learning should evolve from what is largely a celebration of human intelligence toward a sensibility that seeks to replace dominion over nature with a more fulfilling relationship between humanity and the natural world."
William McDonough

"The design of buildings and landscape is thought to have little or nothing to do with the process of learning or the quality of scholarship that occurs in a particular place. But in fact, buildings and landscapes reflect a hidden curriculum that powerfully influences the learning process. The curriculum embedded in any building instructs as fully and as powerfully as any course taught in it."
David Orr

USEFUL SOURCES:

- Design with Nature, Ian McHarg
- Design with Climate, Victor Olgyay
- Cradle-to-Cradle, William McDonough
- The Making of Green Knowledge, Andrew Jamison
- Reshaping the Built Environment, Charles Kilbert
- The Nature of Design, David Orr
- Heating, Cooling, and Lighting, Norbert Lechmer
- Ritual House, Ralph Knowles
- Architecture in a Climate of Change, Peter Smith
- High-Performance Buildings, Vidar Lerum
PERCEPTUAL:

INTENT:

Perceptual Criteria characterizes experiential qualities and aesthetic character reflected in the nature of your building. Understanding how people perceive and experience spaces (rooms, buildings, groups of building, sites, plazas, streets, urban space) is crucial to understanding architecture as a “sensual social art responsive to real human desires and feelings.”

This project will focus on “the senses considered as a perceptual system.” Examining sensory systems during programming assists in establishing criteria for creating spaces that go beyond mere construction, spaces that “touch my heart.”

DESCRIPTION:

Addressing the aesthetic experience of the built environment allows us to understand the “meaning of things” through sensory knowing (versus cognitive knowing) leading to a more holistic sense of awareness by expanding our “schema” or understanding of the world.

CONTENT:

Although primarily graphic in nature, this project can rely on cultural information, or text in the form of prose or poetry in conjunction with graphic images, to express the qualities your design might elicit within the user. Examine multiple connections through trans-disciplinary research. Investigate and apply techniques from related art disciplines such as painting, sculpture, and literature in the form of assemblage, collage, and abstract processes to express the desired experiential character of your building.

Graphics may include original drawings, paintings, models, and collage and constructs in the form of “architectural embryos” to describe the mood and feeling of your spaces and in turn give meaning to the lives and shape the experiences of the building users.

“You employ stone, wood and concrete, and with these materials you build houses and palaces; that is construction. But suddenly you touch my heart…and I say: ‘This is beautiful.’ That is architecture.”

Le Corbusier

“We believe that until we can begin to understand how buildings affect individuals and communities emotionally, how they provide people with a sense of joy, identity, and place, there is no way to distinguish architecture from any everyday act of construction.”

Kent C. Bloomer and Charles Moore

USEFUL SOURCES:

Creating Architectural Theory
Jon Lang

American Building, Environmental Forces That Shape It
James Marston Fitch

The Meaning of the Built Environment
Amira Rapoport

An Architectural Notebook
Simon Unwin

Elements of Architecture
Piets von Meda

Sensory Design
Joy Monic Mahn and Frank Vodvarka

Eyes of the Skin: Architecture and the Senses
Juhani Pallasmaa

Architecture and the Body
Ed. Scott Marbin

Environmental Psychology for Designers
David Kropesc

The Sensory Considered as a Perceptual System
James J. Gibson

The Poetics of Space
Gaston Bachelard