

# CAMPUS PLANNING

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**Abstract-** aim of this paper is about campus planning and how it can be deal with planning principles. As we have to implement planning principles for campus planning, it will give us a tremendous result in terms of function, economy, and aesthetic value and also enhance microclimate. The purpose of master plan or campus plan document is to form a basis for the architectural character, composition, and typology of future buildings, groups of buildings and exterior spaces on the campus.

**Key words-** Planning principles, design principles, microclimate, campus, connectivity, pedestrian friendly, context, etc

## Introduction-

The Master Plan is the physical expression of the values by the campus community and its neighbors. It restores the pastoral character of the campus, creates a walkable campus, and Concentrates buildings at the campus core to foster a sense of community.

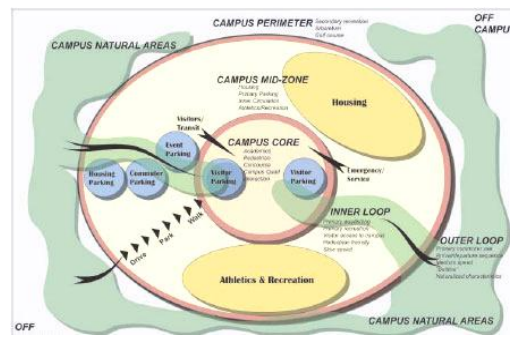
The purpose of campus designing

- A well designed campus environment contributes significantly to the learning, working and social experiences for users and visitors.
- Another important benefit of an attractive campus is its positive impact in recruitment. And also creating positive energy.
- Microclimate enhancement
- Unique and inspiring space to work
- Positive work environment.

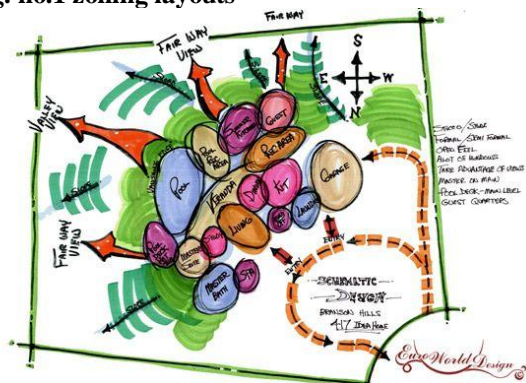
Benninger’s work deals with indoor and outdoor relationships, what he called ‘fabrics of construction’ and their interpretations in to complex cluster.

He employs positive –negative units of built up masses and open courtyards, and structural systems that connect or continue between buildings.

## THE GUIDELINES



**Fig. no.1 zoning layouts**



**Fig. no.2 zoning layouts with connectivity and circulation**

### • Site layout

- a) Clustering of development within the campus core and loop road is encouraged to promote workability, provide a variety of usable open spaces, and preserve perimeter lands for future potential opportunities.
- b) The campus should look for opportunities to establish vehicular and pedestrian connections with adjacent properties to encourage convenience, amenities, and positive synergies for its end user.
- c) Develop a comprehensive network of varied open spaces that facilitate both formal and informal interactions.
- d) Design human-scaled spaces with spatial sensibilities that relate to the mass, proportion, and size of surrounding buildings.
- e) Make the campus inviting and transparent with a strong sense of arrival.

- **Pedestrian and Public Spaces**

- Pedestrian-friendly design elements should be incorporated throughout the campus, including its surrounding parking lots and street crossings. Varying scales of plazas, formal and informal gathering spaces, and amenities catering towards pedestrians are encouraged to facilitate spontaneous interactions and a sense of community.
- Pedestrian paths should be *safe*, attractive, and *inviting* and should provide *direct connections* between places.
- Informal, visible, and accessible plazas, courtyards, and *outdoor gathering areas* should be provided in between buildings.
- All street furniture (including benches, lighting, bollards, and waste receptacles) should be *consistent and complementary* with the architectural style and quality of the campus buildings.
- Water features* are encouraged in visually prominent and “special” locations as they contribute to campus character and its sustainability.
- Sculptural elements* are encouraged in appropriate public areas as they enhance the building and site design and also work as a memory point.

- **Gateways and Entrances**

- Entry features may include vertical elements, architectural details, and artistic statements as appropriate to the *scale and architectural style* of the adjacent buildings.
- Features should be appropriately scaled, well designed, and constructed of *high-quality materials* (such as natural stone or architectural metals)
- Treatment of the gateway must distinguish its prominence from other entrances.

- **Way finding/ signage**

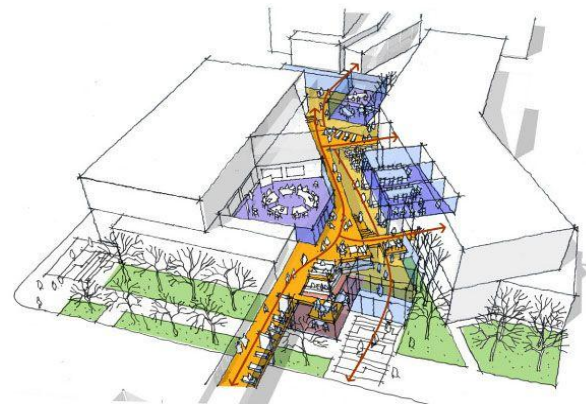
- All campus signage is encouraged to follow established campus identity standards to ensure a *visually cohesive environment* that reflects. The signage program should provide a framework for clear, effective, visible, safe, and aesthetically pleasing identification and directional communication.
- Directional signage for vehicles and pedestrians, entry signage, and building identification should be horizontal in format and installed lower to the ground in order to improve readability and minimize visual impact to the surroundings.
- All signage should be designed to complement the *architectural style and setting* of its adjacent structure.
- Sign letters and materials should be professionally designed and fabricated.
- Permanent signs should be constructed using *high-quality materials* such as metal, stone, or wood.
- Roof signs should not be permitted.

- **Campus Landscape Goals**

Landscape is the fabric that ties the campus together.

- incorporate more sustainable landscapes Place making* —

*Interconnectedness* — an *interconnected hierarchy of green spaces* at a variety of scales including major spaces, courtyards, walks, corridors, narrow corridors, and



**Fig. no.3 interlinking courtyards of campus**

and recreational landscapes that provide users with opportunity for a range of scales of gathering.

- Pedestrian-Oriented* — provide a *pedestrian-friendly campus* that is shaded and easily navigable.

- **Contextual**

- While creating a unique environment that has a strong and distinctive *sense of place*, establishing a coherent yet identifiable landscape design of the campus as a whole.
- Edges* — *define the edges of the campus* as a whole, along with the perimeter of the core campus, through planting of trees and other landscapes.
- Entry* — should seek to *enhance the sense of arrival* on campus through clearly articulated drifts of planting that frame the entry.

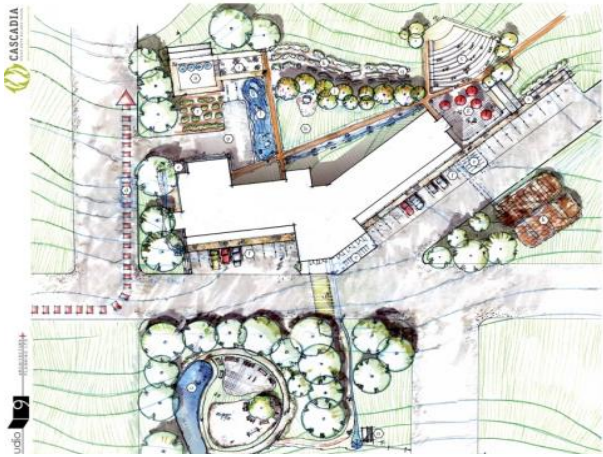
- **Major Spaces**

- Interdisciplinary Plaza* — should locate at the heart of the campus, over the footprint the Plaza is envisaged as the *primary landscape space on campus*. The plaza will be ringed by buildings and may be ringed by a series of shade structures.
- Green Weave* — The Green Weave *major cross campus landscape move* that provides shade, seating, and recreational opportunities, and promotes a strong sense of space and campus way finding.
- Parking Lots* — Parking lots provide a nucleus of activity for the campus community and reinforce the sense of arrival. When the opportunity arises to address the existing parking lots, these should be designed to promote *clear way finding* from individual parking stalls to the core academic campus, and should be planted with a minimum of 1 tree per 10 stalls in order to reduce reflective heat, provide enhanced shade of pedestrian walkways and parking stalls, and promote a clear path from vehicle to front door. Lighting may be incorporated to promote *safety of pedestrian and vehicular movement*.

- **Landscape Elements**

- Lighting* — Light fixtures should provide consistency across the campus as a whole and be located to enhance design of landscapes on the campus, with Emphasis placed on high-use areas and those bounded by greater building mass.

Principles including:



- Manage light pollution through installing cut-off light fixtures that direct light down and are less than 26 feet in height.
- Manage energy usage through selection of light fixtures that accept low wattage bulb options and offer a balanced light spectrum.
- Manage operational hours of light fixtures to provide safe lighting levels during hours of operation of the adjacent facilities.
- b) **Site Furniture** — Site furniture should be selected and provided to promote a *unified sense of community and public gathering*. These should be selected, where necessary and desirable, to be *complementary to the campus landscape* as a whole.
- **Proper orientation**
  - a) Proper orientation of buildings in relation to the sun can have a significant impact on a building's energy use. The ideal orientation is on an east-west axis with rectangular proportion of 1(east-west) to between 1.5 and 2 (north south)
  - b) *Visual connection to the exterior* for building occupants should be a core design element for future projects. On average, south facing glass should be 10-25% of the floor area of each building.
  - c) *Maximize south-facing glazing* with sun screens can reduce solar heat gain and increase day lighting and glare control.
  - d) The use of skylights (e.g. adjustable, conventional or tubular), view windows, clerestories, light shelves and controlled lighting all contribute positively. The *Harvesting of solar energy* through photovoltaics can help the campus to achieve this goal. These can be utilized integrally in shade structures, as glazing screens, or be self supported on the rooftops of future buildings and parking lots located throughout the campus.

“In the coming decades, the survival of humanity will depend on our ecological literacy - our ability to understand the basic principles of ecology and to live accordingly...” (Fritjof Capra – Founder - Centre for Ecolitracy, Berkeley, California)

- Open space with ecological emphasis: - Existing forest spaces with distinctive vegetation cover of native and naturalized species, in the form of dense forest, undisturbed water body or bird habitats, etc., to be protected and enhanced; and - Spaces along the boundary which can be planted with dense forest type vegetation as buffer zones, and would thus become environmentally beneficial in the long run.

- Open space for linkage and community use: - Low maintenance spaces for community and recreational use in residential as well as in the vicinity of working areas, to be developed and improved for linked landscape structure, using their existing features, e.g. tree-groves, sloping land, etc.; and - Closely associated with the above, small spaces for seating, recreation, to serve as retreat within, but relatively open and not too densely planted, so as to ensure safe use by all age groups.
- Land-mark space: - Relatively high maintenance park-like spaces in the institutional / academic part of the campus which can be recognized as potential ‘landmark’ spaces especially those located strategically between residential areas and academic zones, and also at intersections.

### CONCLUSION-

While planning campus we should follow urban planning principles like as vista, sky line, view points, path, edges, and landmarks.Etc. So, with the help of these principles we can create aesthetically good looking, functional, economical and pleasant campus. Celebrate the distinctive elements of the campus environment with imaginative ideas, technologies, and processes. It also Assure the development of a comprehensive program and the integration of design aesthetics, functionality and flexibility, capital and life-cycle costs, and sustainability.

- plan for growth and unpredictable change
- On the other hand, their interest in designing for flexibility and growth, communication networks,
- Integrate present and future needs and build into the existing fabric sensitively
- Promote a pedestrian friendly campus;
- Maintain the green character of the campus;
- Maintain identify of campus neighborhoods and promote sense of community.
- Build in an environmentally responsible manner.

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