

Planning the Campus Environment



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Today's Discussion

Basic Principles

Buildings

Grounds

Movement

Trends/Good Practices




The Campus

Unit/Campus

Unit Needs

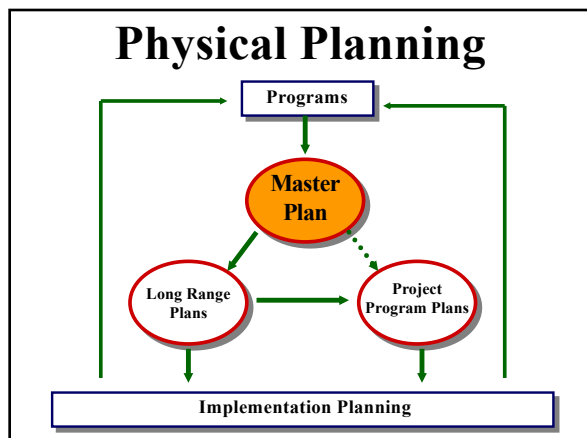
Unit/Campus



The Above Grade Needs

Scores






Master Plan

- Drives All Other Plans**
- Never Implement From Here**
- Looks Beyond "Window"**
- Goals and Objectives**
- Design Principles**
- The "Foundation"**


A Campus Foundation

- Must Exist**
- Base to all Urban Design Decisions**
- Perpetual Existence**
- Can NOT be Compromised**

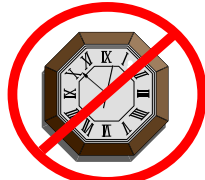
Planning Windows



Facilities




Academics



Scores





Academic Areas

Sports/Recreation

Support

Service

Administrative

Residential

Retail

Natural Areas

Parking

Research

Scores

Operations and Function
Neighborhoods

Quality Issues

- Image
- Safety
- Security
- Modernization
- Deferred Maintenance
- Impact on Program
- Building vs. Site Audits
- Infrastructure Issues
- Historic Values

Scores



Implementing the Master Plan - Project Planning

- Capital Planning
- "Fit" into Campus
- Starchitects
- Fix vs. New
- Life Cycle Issues


Scores




Open Space

- Quadrangles/Lawns
- Walkways
- Athletic/Recreation Fields
- Plazas (hardscapes)
- Surface Parking Lots
- Streets/Service Routes
- Special Events




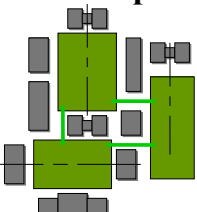


Open Space

- Campus
- Edges/Gateways
- Fields/Parks
- Lakes/Ponds
- Conversation Spaces
- Gardens/Arboretums
- Paths
- Vistas
- Instructional Spaces
- Other

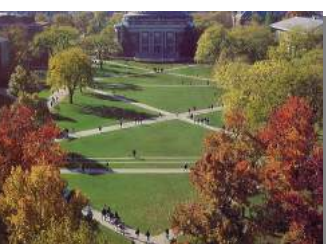
Open Space/Framework Concepts

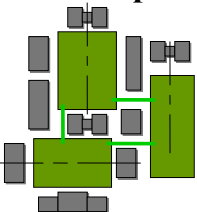




Yards



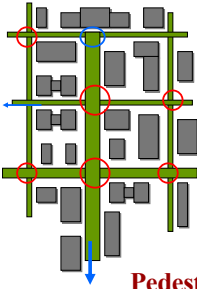
Open Space/Framework Concepts





Quadrangles

Open Space/Framework Concepts



Pedestrian Corridors

Scores



Landscape

Scale of Open Space



Landscape


Scale of Open Space
Vegetation
Site Furniture
Signage
Wayfinding
Art
Lighting
Architectural Décor
Landmarks

Scores


Landscape Concepts



Neighborhood Parks




Regional Character



Strategic View Planes



Layering Concepts



Campus Edges

Link to Community

Identity/Image

Gateways

Access Points

Varying Circulation Systems

Informal/Formal

Scores

Site Furniture

Usable

Consistency

Help Architecture

Durability/Vandalism

Cost

Low Maintenance

Attractiveness



Waste Disposal



- Trash Receptacles
- Smoking Urns
- Dumpsters and Compactors
- Waste Sites

Scores


- Installation
- Design and Integration
 - Gardens
 - Single Elements
- Permanent/Temporary
- Other Benefits
 - Wayfinding
 - Space Definition/Interest
 - Education/Legacy
- Maintenance
 - Funding
 - Repair
 - Vandalism

Art in Public Places



- Installation
- Design and Integration
 - Gardens
 - Single Elements
- Permanent/Temporary
- Other Benefits
 - Wayfinding
 - Space Definition/Interest
 - Education/Legacy
- Maintenance
 - Funding
 - Repair
 - Vandalism

Art in Public Places



Vehicular Circulation

Vehicular

Public

Service

Commercial

Mass Transit

Bus


Train/Light

Rails/Subways

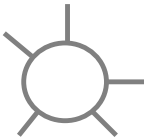
Shuttles

Other

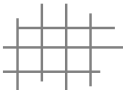
Carts




Vehicular Circulation Concepts




Ring Roads




Grids




You Name it



Formal vs. Informal




Superwalk



Penetrations

Bikeways



Types of Routes

Paths

Lanes

Routes

Dismount Zones

Connectivity w/ Community

Signage

Rules and Regulations

Bikeway Concepts

Bike Route



Bike Lanes

Bike Paths

Scores



Pedestrian Ways

Arteries
Plazas
People Highways
Bike Share



Pedestrian Ways

Collectors
Pedestrian Ways
Main Walks



Pedestrian Ways

Pathways

Small Walks

Entries



Accessibility

Mobility Impaired

Dimensions

Audio Impaired

Visually Impaired

Sensory Clues

Other Issues

Relationship to the
Americans with
Disabilities Act (ADA)

Universal Accessibility

Scores



Parking

Faculty, Staff,
Students

Public

Mobility Impaired

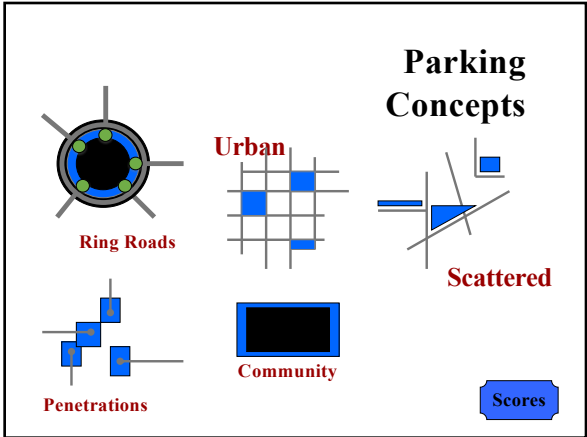
Service Vehicles

Commercial
Vehicles

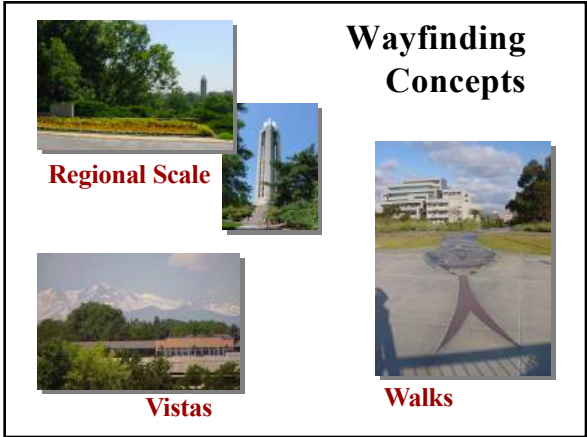
Bicycles


Mass Transit














Campus Identity



Art/
Focal Points



Signage




Scores
Architecture

Architecture/Buildings

Landmarks
Design Guidelines
Signature Buildings
Pallet of Materials
As Urban Design Tool
Space Planing

FMO
Flexibility, Maintainable, Operable



Lighting

Function

Roadway
Pedestrian
Athletic Fields
Landscape
Architectural
Security

Aesthetics
Direct/Indirect
Building/Site
Costs





Competitive Icons



Architecture/Building Concepts



Consistent Design



100 Year Shells



Open Space Backgrounds



Neighborhoods

Scores

Building and Space Use




How our buildings operate should drive our environment.

Seamless integration between inside and outside

Quit thinking "buildings and land"


Scores

Density




Reduces


- Travel Time
- Utility Distribution
- Development Costs
- Operational Costs
- Maintenance Costs
- Less Land Required
- Better Use of Open Space
- Reduces Pollution
- More Sustainable
- Improved Climate Control




Scores




Building Life Spans



Mixing the old and new



History vs. Contemporary




Temporary Facilities

Program Changes
10-12 Year Capital Value (Operating)

Scores

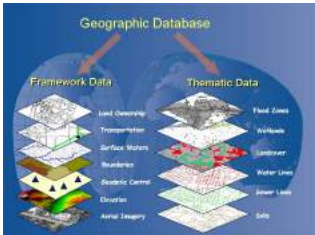
Utilities



Chilled Water
Compressed Air
Electric
Power
Lighting
Natural Gas
Sanitary Sewer
Steam
Storm Sewer
Telecommunications
Copper
Fiber
Wireless
Water
Irrigation
Potable

Scores

Mapping and GIS



3-D Mapping/Printing
Building Data
Space Data
Qualitative Data
Link All Data Systems
Course Scheduling
Planning Scenarios

Scores

New Transportation Issues



Scores

New Parking Trends







New Parking Trends



Scores

Sustainability Issues



Roof scape

Landscape areas

Building materials



Renewable energies

Building energy use

Utility distribution

Scores

Technology



Bluetooth Capabilities

Personalization (Classes)

Real World Simulations


Increase in PPP

Collaborations

Use of Vehicles

Uncommon Visitations

Technology



Mobile Devices

Accessibility

Wireless Sight Lines

Digital Campuses

iPavement

Scores

Project Date Inflation Factor Construction Cost Study Period		UNC West Campus Housing Study, McCowan Hall 12/12/2004 5% \$11,280,278 30 years						
Facility Subsystem	Useful Life Chosen	Range	% of Opt. Cost	Current Replace Cost	Provision for Renewal w/o Inflation	FV factor 5%	Total Replace Cost with Inflation	Total Annual Provision for PV Renewal
Foundation/structure	25	15-40	20%	\$413,570	\$413,570	2.653	\$1,095,410	\$44,770
Roofing	25	15-40	20%	\$37,500	\$37,500	2.653	\$993,410	\$38,095
Exterior Cladding	50	25-100	30%	\$62,514	\$62,514	4.322	\$2,701,185	\$81,080
Interior Partitions	10	5-15	10%	\$62,514	\$62,514	2.079	\$1,299,466	\$116,947
Interior Finishing	10	5-15	10%	\$62,514	\$62,514	2.079	\$1,299,466	\$116,947
Elevators	40	25-60	30%	\$37,500	\$37,500	4.322	\$1,638,711	\$48,054
Plumbing	30	20-40	40%	\$75,017	\$75,017	7.000	\$5,251,177	\$118,805
HVAC - moving	15	15-25	15%	\$90,022	\$90,022	2.079	\$1,871,148	\$124,743
HVAC - static	30	20-75	50%	\$360,044	\$360,044	11.467	\$4,124,141	\$287,702
Electrical - moving	35	20-90	25%	\$33,759	\$33,759	3.380	\$1,142,897	\$45,712
Electrical - static	30	20-75	40%	\$90,022	\$90,022	7.000	\$6,301,557	\$158,404
Fire Protection	30	20-100	40%	\$250,066	\$250,066	7.000	\$1,750,466	\$158,404
Special Equip/Info	30	15-50	20%	\$62,514	\$62,514	2.653	\$1,668,149	\$74,617
TOTALS			100%	\$1,128,028	\$1,128,028		\$48,318,369	\$1,434,776

Note: Foundation and Structural Costs usually decline when a building has met its useful life and should be read. These figures can be ignored when considering a major repair and replacement costs for a facility, unless special circumstances dictate otherwise.

Scores		Life Cycle Issue	
<p>UNC West Campus Housing Study, McCowan Hall</p> <p>12/12/2004</p> <p>OPERATION COST ANALYSIS</p> <p>Operational Costs (in \$ per GGD)</p> <p>Electricity - (annual)</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Water</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Maintenance</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Control</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Environmental Health & Insurance</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>LOCAL</p> <p>Pro 100 3.32</p>		<p>UNC West Campus Housing Study, McCowan Hall</p> <p>12/12/2004</p> <p>OPERATION COST ANALYSIS</p> <p>Operational Costs (in \$ per GGD)</p> <p>Electricity - (annual)</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Water</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Maintenance</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Control</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>Environmental Health & Insurance</p> <p>1: 0.174 \$ 47,800 (GBP 0.1)</p> <p>2: 0.174 \$ 47,800 (GBP 0.1)</p> <p>LOCAL</p> <p>Pro 100 3.32</p>	

Final Jeopardy

Frozen Sports

A portrait of the Jeopardy! host, a man with grey hair wearing a dark suit and a striped tie, standing against a blue and orange background.

**What school
won the 2015
NCAA Hockey
Championship?**

A group of hockey players in black and white uniforms celebrating on the ice, with one player raising his stick.

**Providence
Friars**

Final Scores

The logo for the Providence Friars, featuring a black silhouette of a friar's head and the word "PROVIDENCE" in a stylized font with "FRIARS" underneath.

Two men in suits standing behind a podium with the "JEOPARDY!" logo.

**So Long
Everyone
and.....**

**Congrats to
the Champs**

Students

A cartoon drawing of a boy with brown hair, wearing a green shirt and blue pants, with his arms raised in celebration.

