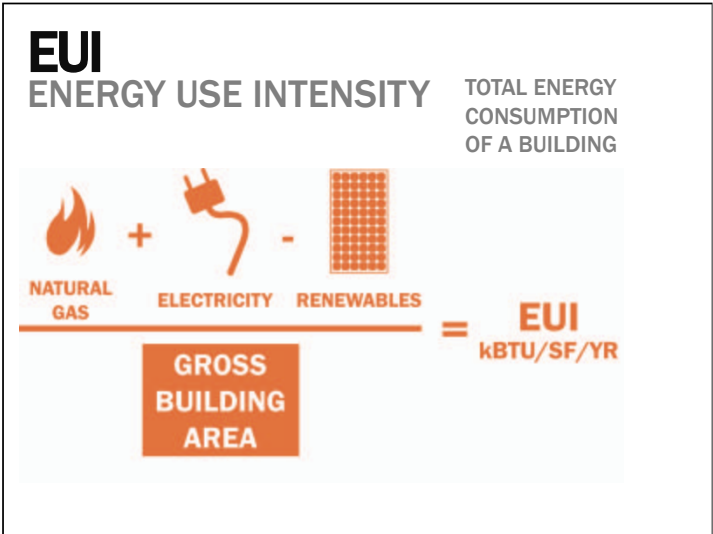
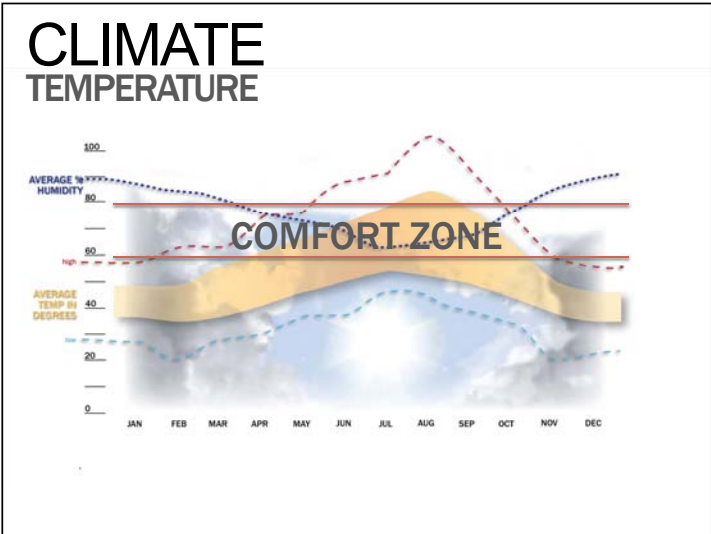
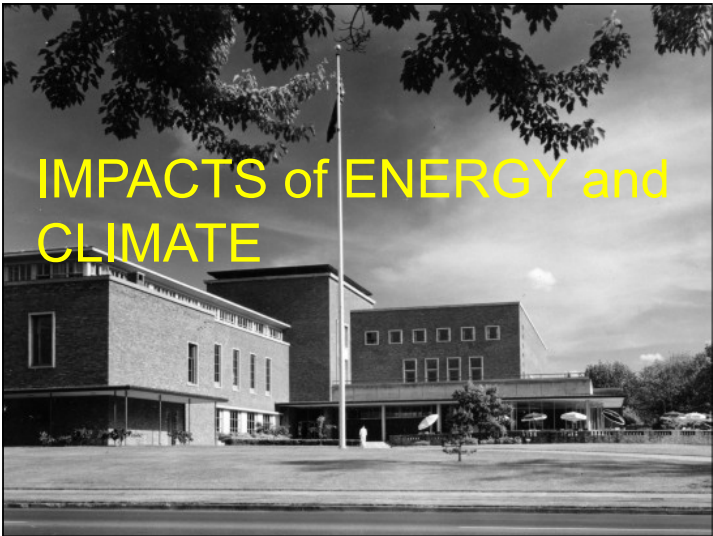
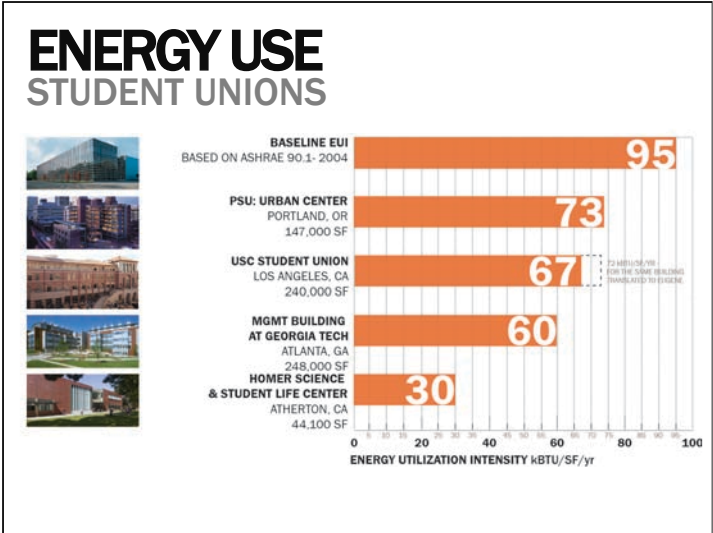
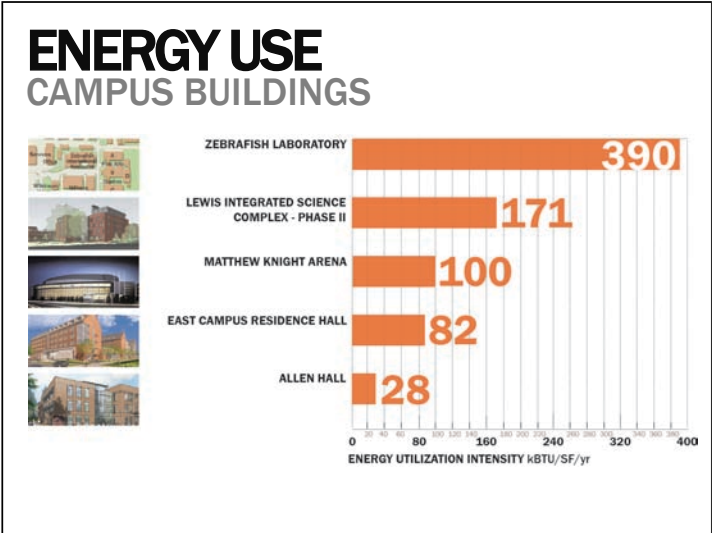


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WELCOME



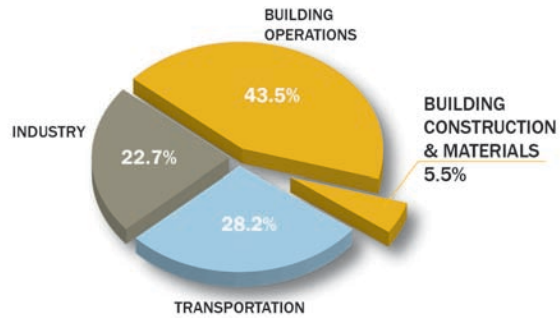
EUI for our Building

Category	%	Area (sq ft)	Program EUI (kBTU/SF/yr)	Envelope EUI (kBTU/SF/yr)	MAINT EUI (kBTU/SF/yr)
FOOD SERVICES/ PUB	16%	302	182-212	106-121	90
RETAIL	4%	72	43-48	25-29	18
UNION SERVICES	17%	86	52-61	30-34	21
CONFERENCE SERVICES	19%	90	54-63	31-36	22
PERFORMANCE CENTER	14%	94	57-66	32-38	21
STUDENT ACTIVITIES	26%	86	51-60	29-34	20
SEATING	16%	52	36-42	24-27	19
TOTAL PROGRAM	100%	90	54-63	30-36	22
EXISTING BUILDING	100%	74	-	-	-

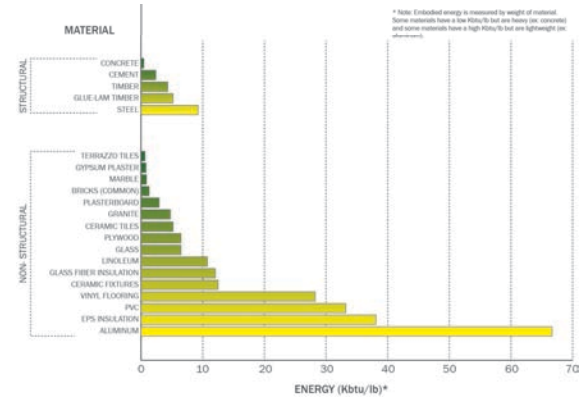
ENERGY REDUCTION STRATEGIES

- Understand your Context
 - Climate
 - Base building typical energy use
- Load Reductions
 - Passive Systems
 - Daylighting
 - Building Envelop
- Right Sizing / Dual Use
 - Target Key Systems/ Reduce Load
 - Active Mechanical Solutions
- Occupant Engagement
- Apply Renewables

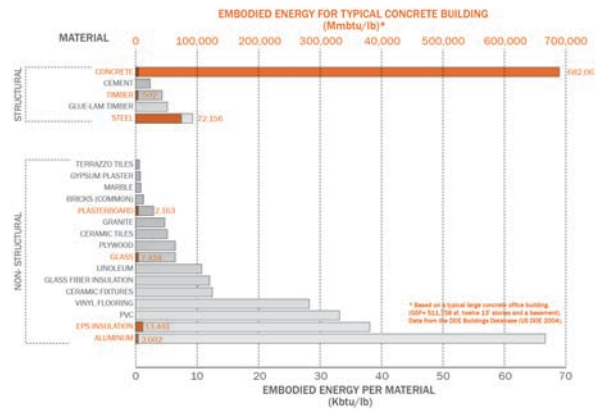
EMBODIED ENERGY



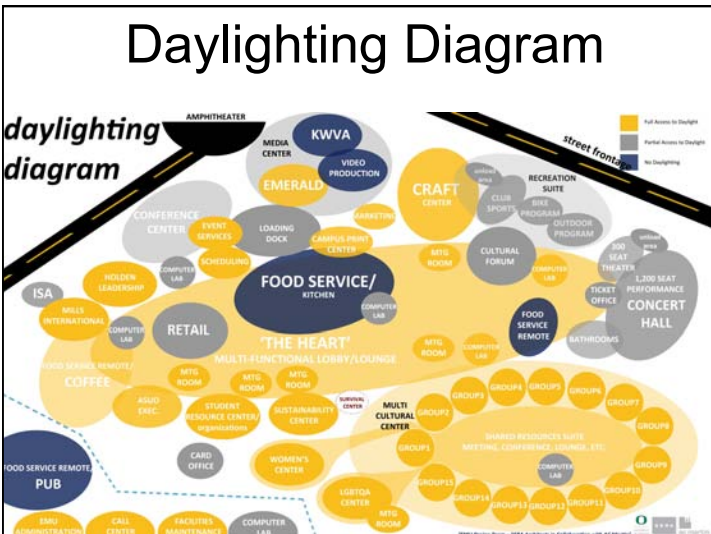
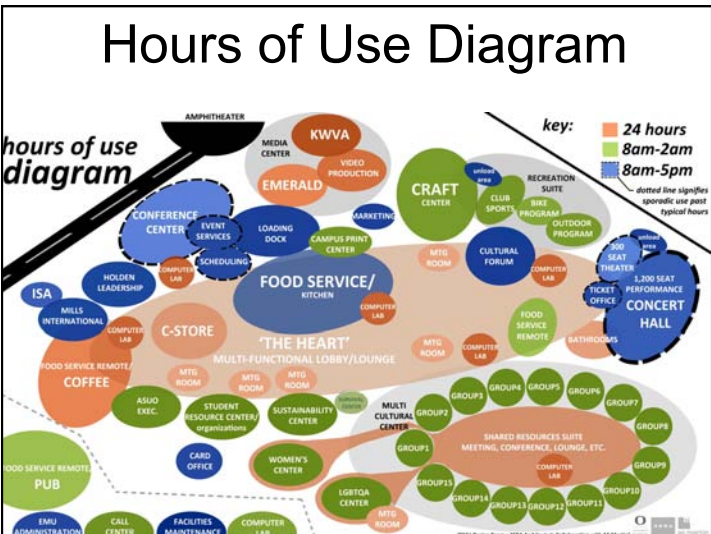
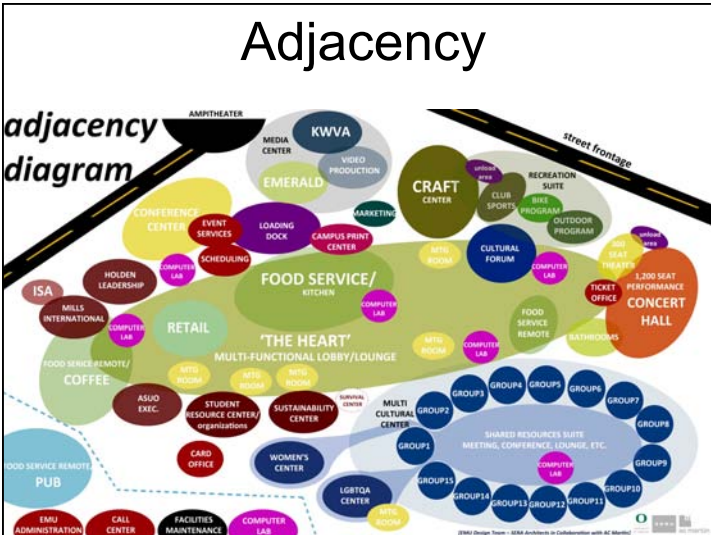
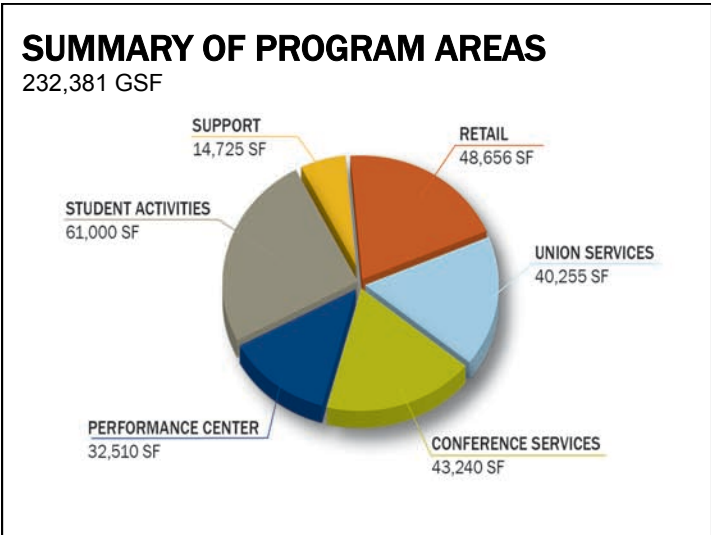
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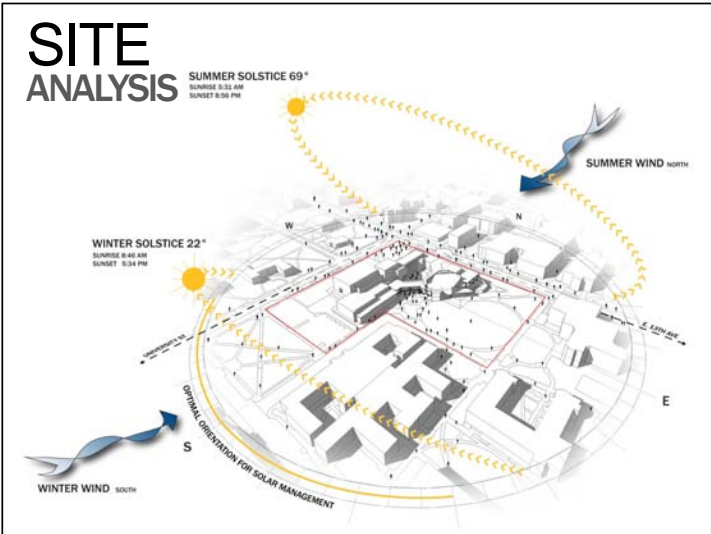
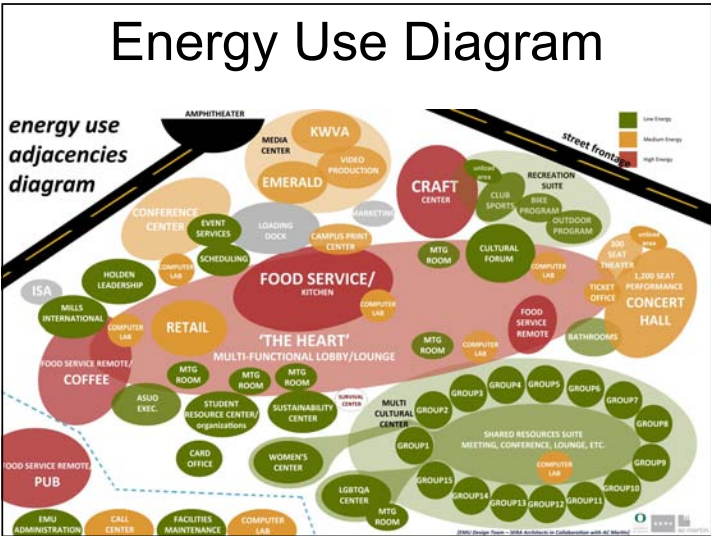


EMBODIED ENERGY



PROGRAM AREAS

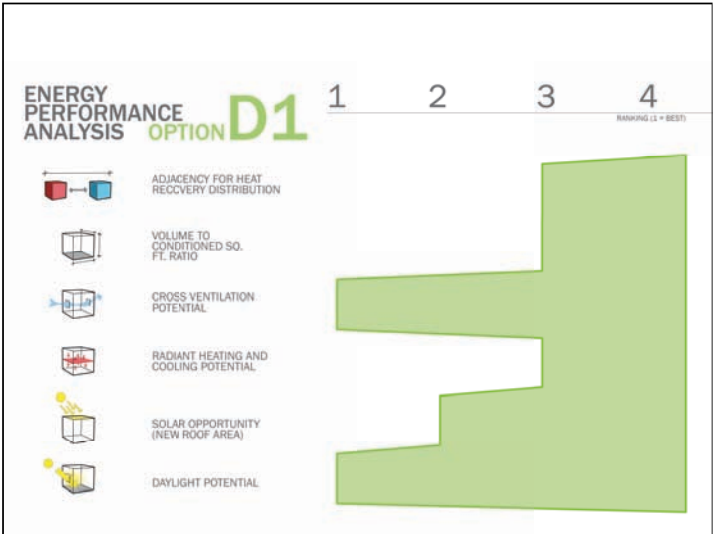


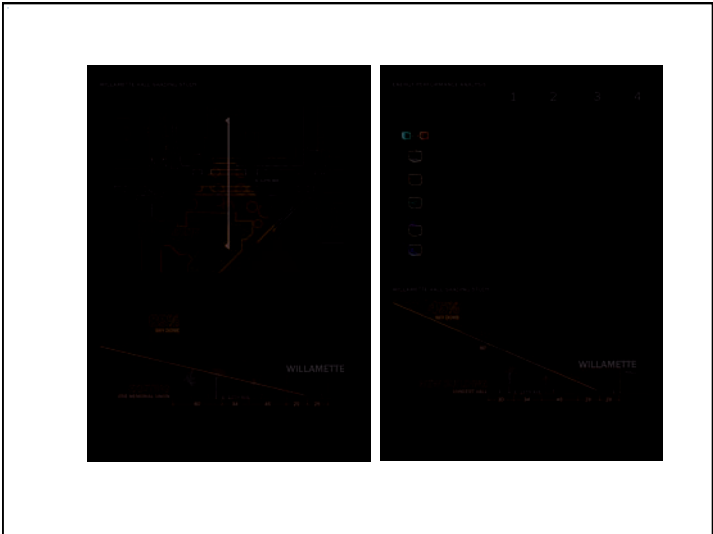
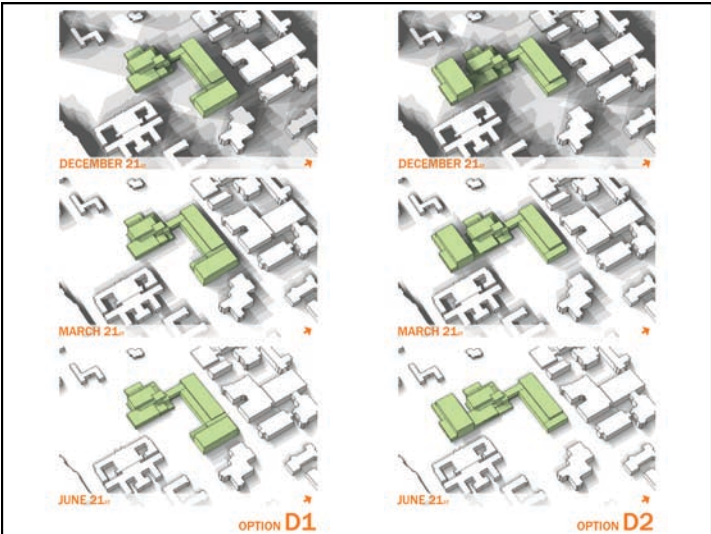
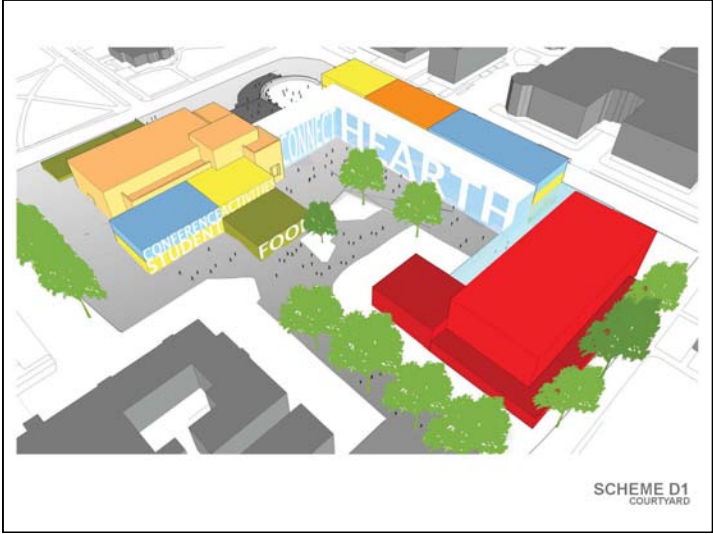
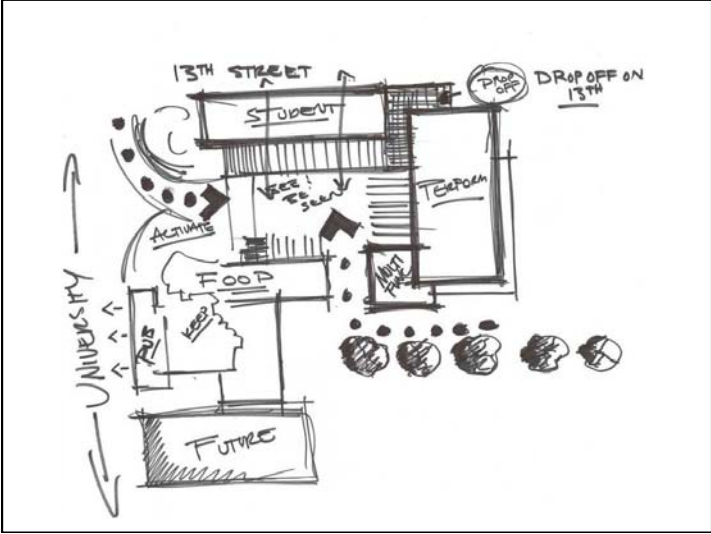


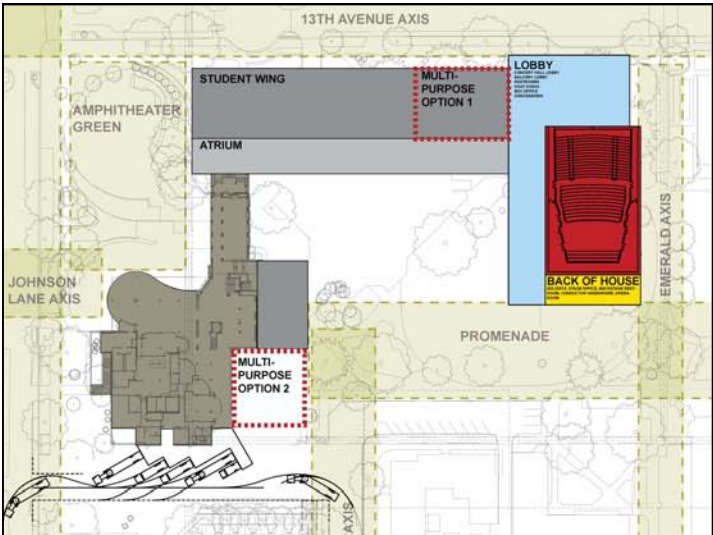
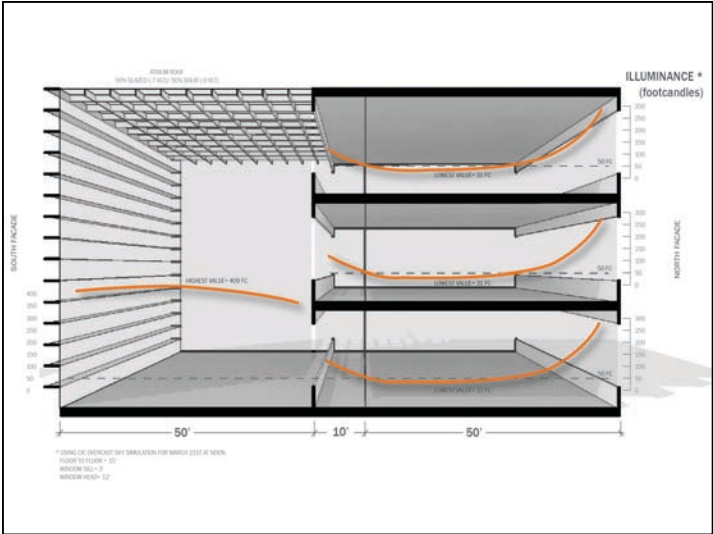
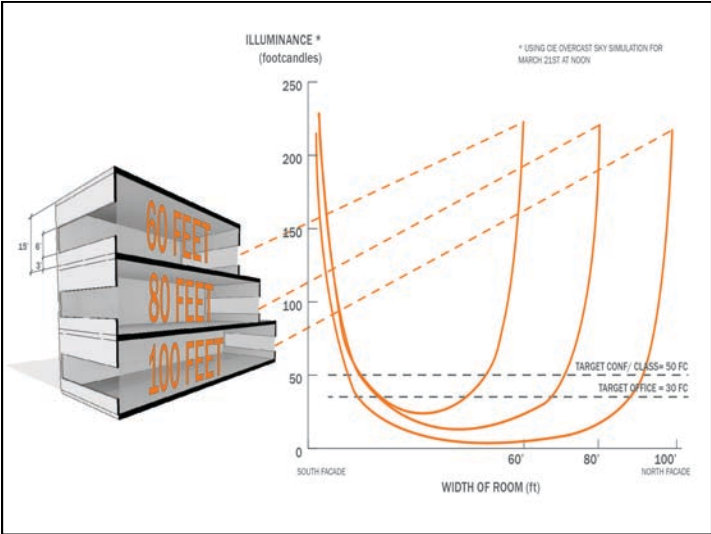
CAMPUS-WIDE PATTERNS

- Welcoming to All**
- Outdoor Classroom
- Campus Trees
- Good Neighbor
- Open University
- Paths and Goals
- Road Crossings
- Pedestrian Pathways
- Spillover Parking
- Shielded Parking and Service Areas
- Quiet Spaces**
- Main Building Entrance**
- Building Complex**
- Connected Buildings**
- Access to Water
- Sitting Walls
- Seal Spots
- Tree Places
- Waste Quality
- Accessible Green
- Local Sports
- Public Outdoor Room
- Small Public Squares
- Activity Nodes
- Arcades
- Operable Windows**
- Flexibility and Longevity**
- Future Expansion**
- Pools of Light**
- Wholeness of Project**
- Wings of Light**
- Quality of Light**
- Building Health**
- Office Connections
- Public Gradient
- Classroom Distribution
- Fabric of Departments
- No Signs Needed
- Faculty-Student Mix
- Places to Wait
- Enough Storage

Scheme Development







FRAMEWORKS FOR SUSTAINABLE DESIGN

BACKCASTING VISIONING THE FUTURE

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THE SERA FRAMEWORK

THE 4 SYSTEMS CONDITIONS

TAKE
Can the earth replace what I take?

MAKE
Am I poisoning the earth, air or water?

RESPECT
Do I respect the biodiversity of flora and fauna?

CHOOSE
Are the choices I make fair and equitable?

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FRAMEWORKS

The Oregon Model for Sustainable Development

Adopted July 2011
Campus Planning and Real Estate - July 6, 2011

- ENERGY** Net Zero Increase in Campus Energy Use from New Development
- WATER** Improved Quality of Stormwater
- PEOPLE** Sustained Campus Habits
- LEED** Gold Certification for All New Development

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SETTING YOUR SUSTAINABLE DESIGN GOALS

SUSTAINABILITY VISION

FROM USER GROUP #3

1 Use Resources in the “right” way

- Is durable and enduring
- Utilizes low tech strategies rather than high tech
- Utilizes timeless strategies not quick gimmicks
- Incorporates effective and cost efficient measures

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SUSTAINABILITY VISION

FROM USER GROUP #3

1 Use Resources in the “right” way

- Is durable and enduring
- Utilizes low tech strategies rather than high tech
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SUSTAINABILITY VISION

FROM USER GROUP #3

2 Is elegantly green

- Informs / educates visitors about building systems
- Provides tangible feedback
- Celebrates sustainability
- Components serve multiple functions

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SUSTAINABILITY VISION

FROM USER GROUP #3

3 Strengthens and Inspires the community

- Reflects U of O culture and place
- Transforms occupant behavior
- Encourages a healthy lifestyle
- Becomes a template for others
- Sets a trend for sustainable development
- Supports recruitment of students

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DESIGN DRIVERS

FROM USER GROUP #1

- Recruiting best students & faculty
- Timeless
- Intuitive
- Multi-functional (efficient use of resources)
- Subtle, graceful, elegant (nothing is inferior) (equality)
- Simple and enduring approaches to sustainability – not tech based
- Building should teach & integrate natural processes
- Simplicity
- Most needed – daylight & heat

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ENERGY / HEALTH

RELATED SUSTAINABLE DESIGN GOALS

- **Performance metric around energy use**
 - Oregon Model min. (35% better than OR code)
 - 45% better than OR Code
 - Additional 10 to 15% from occupant engagement
- Provide daylighting for all student offices and views for 90% of regularly occupied spaces
- **Solar Thermal**
- **PV Ready** (investigate third party funding of demonstration PV array.)

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MATERIALS

SUSTAINABLE DESIGN GOALS

- **Reuse most of materials from the demolished building in the new student union**
- **Recycle 90-95% of construction debris**
- **Prioritize sourcing products locally**
- **Minimize use of non-toxic products**
- **Local, Salvage then FSC certified wood**

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EQUITY

SUSTAINABLE DESIGN GOALS

- **Maintain access for daylighting for surrounding buildings**
- **Create a universally accessible design**
- **Incorporate and embrace diversity**

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WATER

SUSTAINABLE DESIGN GOALS

why should we CARE ABOUT WATER USE IN PACIFIC NORTHWEST?

- **Meet Oregon Model for Storm water management**
- **35-40% reduction in water use from fixtures and fittings**
- **50-60% reduction in water use**

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CAMPUS SCALE SYSTEMS

SITE RELATED SUSTAINABILITY GOALS

- **Repair / reinforce campus connections**
- **District ready for future incorporation into a larger network**
- **Provide locations for edible landscape**

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DESIGN PROCESS (BEAUTY)

SUSTAINABLE DESIGN GOALS

- **A Student Union that inspires its occupants to live their lives in a more sustainable way**

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FRAMING SUSTAINABILITY

FROM USER GROUP #1



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QUESTIONS?



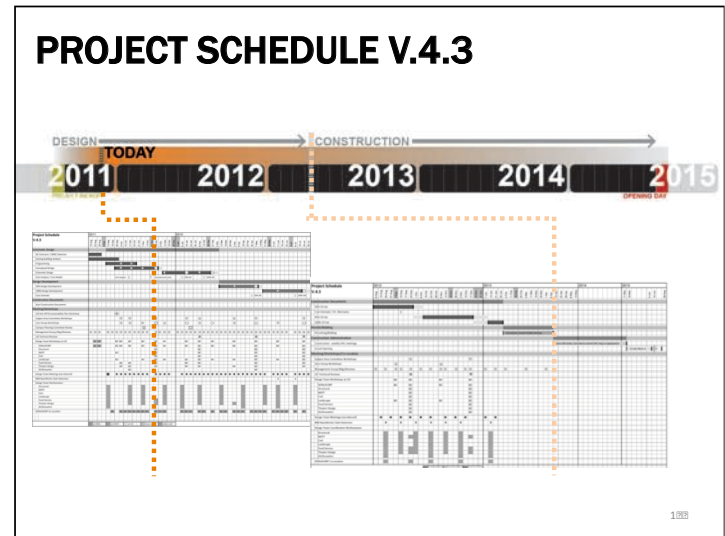
University of Oregon

Erb Memorial Union Expansion & Renovation
 SERA Architects in association with AC Martin - November 29, 2011

SCHEDULE



PROJECT SCHEDULE V.4.3



DESIGN **TODAY** CONSTRUCTION

2011 2012 2013 2014 2015

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