Design Advisory Panel
Meeting July 15, 2009   3:00 pm - 5:45  pm
IT Building and Holmes Hall

Attending:
   DAP members:
   Eric Crispin
   Kiersten Faulkner
   Steve Meder
   Sanford Murata
   Peter Vincent
   Juli Walters
   (Clark Llewellyn, absent)

   UHM faculty and staff:
   Peter Crouch, Dean of College of Engineering
   Janet Gillmar, Campus Planning Office
   David Hafner, Associate Vice Chancellor for Campus Services
   Cheryl Sato Ishii, Asst. Spec., College of Engineering, Dean’s office
   David Lassner, VP of Information Technology and Chief Information Officer
   Eileen Ellis, UH Sea Grant
   Vassilis Syrmos, Associate Vice Chancellor for Research and Graduate Education

   Ferraro Choi:
   Bill Brooks, ______
   Joe Ferraro, partner in charge
   Sharon Williams, project architect
   Christopher _____, project manager

A. Information Technology Building

Presentation

Joe Ferraro:
   • Functions - consolidate operations scattered in 9 locations, provide emergency response center, IT help desk, conference center for distance learning, etc.
   • Very energy-intensive program but must be LEED certified
   • At 90% of design development phase for Bilger site, analyzed 4 alternate sites for future buildings on LRDP for footprint and height fit, existing infrastructure and costs: Spalding, Korean Studies, Sinclair and Bachman.
   • Result was settled back on original Bilger site. Eric Crispin and David Lassner: Briefly alternate sites had appeared to offer reduced costs, better campus organization, less obtrusive height but these advantages evaporated
due to parking replacement costs and restricted land area. Cost at different sites differed by $7M, from $43.6M to $50.8M

- For flood protection, ground floor raised 3 feet at lower, Correa Road end
- Set backs on restricted site: 6-8 feet from Bilger Addition on west side to assure its ventilation and accommodate projecting lip, avoids major storm drain on east side, accommodates major walkway by Correa Road
- Includes LRDP requirement for covered walkways (Eric: key for sun and rain protection).
- 1st floor: double height entry lobby, conference room, computer room, IT Help Desk.
- 2nd floor seminar rooms, cores repeat themselves on each floor against Bilger Addition, staff space, emergency operations.
- 2nd and 3rd floors "hardened" for earthquake and category 3 hurricane resistance.
- 3rd floor: data center 7,000 sq ft (?) servers, core, AC units along side.
- 4th floor: core, open office area to allow for daylighting during work day, closed offices on one side, small patio space for gathering.
- 7th floor: open office landscape layout again.
- Roof – cooling tower, emergency generator, possible wind turbines and PV.
- Daylight-driven in rest of building to counterbalance heavy energy load; fins on building for light shelves
- Consistent "high performance" envelope of window and shading framework, with spacing of fixed horizontal fins adjusted for exposure to sun on N,S,E sides
- Windows easily washed (Eric?) using perimeter catwalks
- Fins also provide railing for window-washing catwalks
- No glare (Kiersten?) despite at least 25 foot candles on office floor work surfaces, which eliminates daytime need to turn on lights in offices, (Bill: also have blinds)
- Aluminum Kevlar panels on hardened floor perimeter are interchangeable with glass for future flexibility of use in building
- Savings via use of cutting edge new chilled beams a/c system--analogous to traditional radiators but cool rather than hot; condensation problem solved; chilled beam AC requires 18” less height for each story, making total height of building less than with traditional HVAC; move less air around making it more efficient; remove humidity separately; smaller air ducts.
- Office floors 30-40% >efficiency than average for offices

Bill Brooks:
- Pursuing power purchase agreement for wind turbine, PV array (not in budget), best if can add PVs to Bilger roof so get mega-watt scale which vendors like.
Questions and comments

- **How can cost be reduced from $44M to $32M?** Will explore reducing data center, removing an office floor, leaving out some infrastructure or deferring occupancy of whole building; central chiller plant more efficient but not in budget.

- **How does ITC relate to rest of campus buildings?**
  - Everyone sees UH as a hodge-podge of buildings only saved by trees
  - How does a high-tech ITC relate to the more 'humble' signature Bachman? Yet thinks forcing the Architecture building to relate to historic Quad buildings was a failure, so better for each building to successfully express its use
  - If future buildings go with ITC exterior, have a new leitmotif, like C-MORE
  - Bilger Addition so ugly, the ITC would help screen it

- **Need crane to service equipment in Penthouse. High cost to maintain; concern with fenestration; building envelop leaks. Need better maintenance plan to achieve efficiency – that's for another meeting.**

- **Fuel for generator?**

- **Only removing temporary structures? Yes.**

- **Energy efficiency very important for data center.**

- **Why aren't other sites still in consideration since budget cut? Parking issue $3M difference. Could change site and eliminate parking.**

- **ITC a 5lb. building in a 3 lb. space, wish building were smaller, its scale relative to its site sets a dangerous precedent.**

- **How can size, visual intrusion, appearance of hardened? (Yes) Can Penthouse be improved? Might put on Bilger Addition roof; will try to improve appearance**

- **1st 2 floor important for pedestrian view, need a 'base' commensurate with such a large building--columns seem too spindly, arcades not successfully incorporated**

- **Would like unifying element; Fins/pigeon issue**

- **Building is a bit monotonous**

- **Data Center unlikely to get smaller in future, could articulate its hardened character**

- **Could articulate double-height lobby also**

- **Considered putting hardened 'bunker in sky' data center underground? Below grade difficult for mechanical equipment, try to avoid it. Below grade mechanical or parking more expensive**

- **How does this building relate to Bachman? And how does it affect other buildings around it?**

- **It articulates its use rather than trying to pretend its something else**

- **Hawaii sense of place? Don't know the answer to that. Need coherence and sense of history but at the same time be functional. It's doing what it needs but it's large.**
Third floor can look different; reflect what it is; opportunity to change that floor.
Lanai is maintenance issue.
Consider future Correa Road changes; agree that gingerbread Hawaii style only fashion. The scale of this building is a problem – we are setting a dangerous precedent.
Building is rather harsh; Landscape architect hasn’t yet done much with trees along Correa and mall
Landscape Advisory Committee concerned about large circular plaza and ADA ramp blocking foot traffic flow along mall between Correa Road and McCarthy Mall
Circle on ground softens building but too big and close to building
Alternatively, circle could be enlarged to make it more of a node for the campus, but parking is in the way. And we need the turn-around for vehicles.
Don’t forget drainage canal will be enlarged in future – don’t invest too much in landscaping over it.
Design team wants to people to hang out, put coffee shop off lobby
Expand study area for relocated circle to include adjacent open space (parking lot in front of Physical Science) on other side of mall?
Since no general vehicular traffic is planned to go beyond Kennedy parking structure and theater expansion project, envision needing parking lot in front of Physical Science for a turn-around
Where do bicycles go? Along Correa Road, bike parking in front of ITC
They’ll go on the new mall, too

Summary
Daylighting and sun shade-window washing catwalk approach is good
Construction cost, energy saving and floor height reduction with new chilled beam a/c system is promising
Size of building as a whole relative to site and neighbors, including the size and appearance of penthouse are problems
Try to relocate penthouse to Bilger Addition roof
Unresolved weak relationship of building to arcades and ground (large mass over spindly posts)
Building facade rather monotonous
Might give up future flexibility in exterior wall panels around data center in exchange for expressing its hardened character
Though have problem of a hodge podge of campus buildings, better to have a building cleanly express its use than be forced into relating too much to neighboring buildings
Efforts to encourage people to hang out on the ground level by the ITC are laudable but scale and location of the circular plaza needs more study relative to adjacent cross-campus travel and future turnaround.
B. Holmes Hall Infill Project

Presentation

Peter Crouch:

- Motivated by potential funds from National Institute of Standards and Technology (NIST) Recovery Act for new or expanded research building space.
- Connected to NIST concern about decaying civil infrastructure (roads, bridges).
- Will involve batteries, thin films and 're-manufacturing' (higher form of recycling) -- 'material flow' important to Hawaii sustainability.
- Also water research -- Gary Ostrander concerned about this.
- Would be a fulcrum for research workforce related to sustainability.
- Engineering research already leveraging science at UH; joint project with SOEST.
- Includes linkage with community college technology programs.
- Wants to meld projects with Navy shipyard.
- Proposal due August 10.
- Infill at Holmes not a new idea, got BOR approval to plan but no funding.
- Designs started by Will Chee planning.
- Holmes is 3 'pillars' of laboratories with faculty offices on Dole St. side.
- Would fill in both courtyards and open lanai space along courtyard on floors above ground on the Dole St. side, only; lanai infill would not block ventilation to offices.

Questions and comments:

- Can add footings in courtyards to support infill without disturbing existing building? Informal study by local engineering firm indicates yes.
- Need extra HVAC? Holmes has lots of HVAC capacity, says Blake Araki of UH Facilities, but electrical capacity uncertain. Faculty looking at what research would go on and energy needs.
- Is proposal unique enough to be competitive for funding? Rich Rocheleau's labs connected to Dept. of Energy strengthen standing. Thinks have an interesting proposal, with lots of buttons to push if needed. Have no more faculty space, looking ahead to rejuvenate faculty.
- How usefully is existing faculty space occupied? Maybe 60%, but difficult to extract space from faculty.
- Every faculty member sees lots of wasted space at Holmes.
- So much inefficiency in the wasted space it's amazing the design was built (Eric) “H4 Freeway hallways”.
- Ask UH to strengthen 'utilization of space'.
- Holmes' architectural character is 'brutalism', but concept for daylighting and air flow is good.
• Courtyard planting? Originally mainly octopus trees, overgrown and removed, one courtyard replanted with special variety of bamboo used for structural purposes
• Engineering needs “backyard” space near building for work.
• Consider natural ventilation? Some types of research don’t allow for it.
• The cores themselves did not have windows anyway. Symmetry theme. Don’t want to add extension to side. Do you want to change what’s already there?

Filling in courtyards:
• Better to infill than add new structure
• View through open courtyards important for pedestrians
• Precedent
• Open courtyards reflects 1970s vintage of building
• Ground level space especially valued by faculty because no concern about loads
• Chance to do something – support and make it innovative, state of the art cooling system; still have H4 but capture green areas to make internal gardens.

Summary
• Infill as a general approach is supported with caveat that keeps open across ground floor of courtyards.
• Study how efficiently space is currently being used at Holmes -- also space utilization across campus (tackle sociological problems).