University of Colorado
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University of Colorado Design Review Board
Meeting Notes

Date: Thursday, January 10, 2019
Time: 12:00 – 4:30 p.m.
Location: First Floor Conference Room, 1800 Grant Street, Denver, CO

DRB members present: Don Brandes; Sarah Brown; Chris Shears, Mike Winters; Cheri Gerou (ex officio); Carolyn Fox, campus DRB member for the University of Colorado Colorado Springs campus ("CU Colorado Springs"); and Bill Haverly, campus DRB member for the University of Colorado Boulder campus ("CU Boulder"). Victor Olgyay was hoping to join by phone but was unable to participate due to a scheduling conflict.

Others in attendance not otherwise noted:
Linda Money, CU Real Estate Services, CU System employee / DRB note taker.

Don Brandes, Chair, determined a quorum and called the meeting of the Design Review Board to order at 12:15 p.m.

12:00 – 1:00 p.m. **Work Session/Lunch – Board Only**

The Board met to briefly to discuss the items on the agenda for this date prior to convening the public portion of the meeting.

1:00 – 2:30 p.m. **VaPA Set Shop – *CU Colorado Springs***
Design Development (Action Required)

Architects:
Semple Brown Design, Denver, Colorado
Davis Partnership Architects, Denver, Colorado
NV5 Colorado Springs, Colorado

Presenters:
Bryan Schmidt, Architect, AIA, LEED AP-BD+C, Vice President, Semple Brown Design
James Atchison, Landscape Architect, Davis Partnership Architects
Taylor Roberts, Building Performance Engineer, Group 14 Engineering
Chelsea Wade, Semple Brown Design

UCCS Campus Presenter:
Carolyn Fox, Executive Director, Construction & Planning, University Architect, UCCS Campus Planning & Facilities Management

Description:

Design Development ("DD") submittal regarding a small scene shop of approximately 3,000 SF near the Ent Center for the Arts

A/E Presentation:

Although remaining present, Sarah Brown recused herself from participating in this meeting according to DRB policy since her firm, Semple Brown, is the Architect of Record for the project.

Bryan Schmidt and Taylor Roberts presented the materials for the DD submittal. Carolyn Fox addressed specific project, site, and campus questions, and James Atchison responded to questions regarding the landscaping.

DRB Comments:

A. Site and Landscape Architecture

- Study eliminating the small landscape planter at the SE corner of the Set Shop.
- Study the potential relocation of the future mechanical unit with the possibility of a large landscape planter in this location in Phase I. The addition of a second tree in this location would help break the East Elevation of the building.

B. Architecture

No Comments

C. Energy and Sustainability:

Responses to comments submitted by Victor Olgyay prior to the meeting:

- Last DRB meeting spent looking at the energy analysis.
- Focus in preparation for DD presentation has been on comfort analysis and ventilation analysis.
- Comfort analysis model was completed for winter and summer to fine-tune the set-point for the winter and comfort analysis for the summer and swing season.
- Analysis conducted for how much ventilation could be provided for the building.
- Net-zero readiness for the building: need about 25 KW of solar which can be accommodated on the roof with the skylights as designed.
    - Please note: the structural requirements to compensate for the uplift of the solar panels due to wind velocity on this site makes an increased structural reinforcement not economically feasible at this time. There is currently some investigation into an alternative anchoring system for the panels that would alleviate the need for the increased structural reinforcement.

- Daylighting provided vs. the lighting provided: the daylighting analysis completed looked at foot-candles (not the more advanced study that Victor referenced). Automatic daylighting controlled will be turning lights off during the day when ample sunlight is present – it is acknowledged the work performed is not to the level Victor preferred. When you are providing very little heating for a building (in this instance), it is very difficult to get the paybacks.

In reference to Page 71 – comfort analysis:

- Psychrometric Chart: how engineers like to look at air properties at any time during the day. A general explanation of analysis was given. A discussion of the heating impact of radiant heat gain, air change rates, and glass types were included with the explanation.

DRB Action:

Chris Shears moved to approve the Design Development submittal incorporating the comments as noted below. Mike Winters seconded the motion which passed unanimously, excluding Sarah Brown who was recused from voting.

Notes for Future Development (if feasible):

- Explore moving the mechanical unit to the north side, or east location as shown in the DD submittal adjacent to the future storage addition of the building and away from the view of the performing arts building. A small classroom rooftop location with screenwall could be studied as a possible alternative as well.

- Study relocation of the louvers on exterior of building away from the west wall and balancing east louver.

- Further discussions may be held between Taylor Roberts, Building Performance Engineer, and Victor Olgyay, DRB Member.

2:30 – 4:00 p.m. **Multi-Site Solar Project – *CU Boulder***
Pre-Design (No Action Required)

Architects:
Hord Coplan Macht, Inc., Denver, Colorado

Presenter:
Jennifer Cordes, AIA, LEEP AP, Principal, CPSO, Hord Coplan Macht

CU Boulder Campus Presenter:
Richelle Reilly, Facilities Planner/Landscape Architect, Facilities Planning

Others Present:
Travis Bostic, Design Principal, Hord Coplan Macht
Carol Fletcher, Project Manager, Hord Coplan Macht

Other CU Boulder Campus Representatives Present:
Tom Goodhew, Assistant Director and Planning Manager, Facilities Planning
Bill Haverly, Campus Architect and Director of Planning, Design and Construction

Description:
Pre-Design ("PD") submittal/discussion of design of potential solar carports on the Boulder Campus

A/E Presentation:

Richelle Reilly, Jennifer Cordes, and Travis Bostic presented the materials for the PD submittal. Other specific project, site, and campus questions were addressed by various campus staff present for the meeting.

No specific sites have been identified. The intent of the assisgnment is to develop planning and design standards for parking carports and related structures that can accept photovoltaic (PV) solar panels, excluding any improvements on the CU Main Campus. The planning, design and placement of the future structures should accomplish several goals and objectives that the A/E firm is further defining and will present at Concept Design.

HCM has been hired for the design of these structures. Jennifer Cordes will the Principal in Charge, Travis Bostic will be the design lead, and Carol Fletcher will be the project manager. Internal sustainability consultant from HCM will be utilized as well as a Max Krueger, in-house technical specialist, a sustainability consultant, a structural engineer and an in-house landscape architect (in coordination with Richelle Reilly at CU Boulder) with HCM will also participate. Site criterion, potential locations, and design of the potential photovoltaic ("PV") parking structures will be studied carefully throughout the DRB review and approval process.

Surface, carports facilities will be the subject of this planning and design assignment without any specific site selection currently intended. As noted, the CU Main Campus is not included or considered for these installations. The current area of consideration is the East Campus.

Planning and design considerations discussed at the Pre-Design meeting included:

- Solution needs to be consistent with the campus aesthetic (What would Klauder have done?)
- Be suitable from Boulder's environmental climate
- It needs to be replicable and adaptable to different sites on campus
- It needs to be serviceable (lighting and snowloads)
- Designed to be integrated with the planting and landscape architecture
- Designed for disassembly and reassembly
- Sensitive to views (can it be used to cover ugly things and don't cover up the beautiful)
- Outline a set of guidelines

Project parameters discussed included:

- Coverage of parking lots
- Sun angles and heights of structure
- Snow load and wind uplift of structure
- Screening of structure
- Infrastructure of structure (lighting)
- Maintenance of solar panels
- Drainage of structure and parking lots

Bill Haverly, Campus Architect, noted that there will be a related and ongoing planning effort that will take place in 2019 to create a comprehenisive Strategic Energy Management Plan that will address campus-wide energy, sustainability, and resiliency. This RFQ/RFP planning and research effort will be released later this year will relate to the energy portion of future PV projects on the campus.

DRB Comments:

A. Site & Landscape Architecture:

- Please expand and clarify the project planning goals, objectives, and desired outcomes early in the planning process. As much as practical, please suggest measurable objectives that the A/E team would consider to be a successful planning and design effort. What project objectives (technical/PV/innovation, design/aesthic/materials, and cost-effective/maintenance/re-use) are we trying to achieve in this work effort?

- With the selected "energy provider," please present and evaluate the cost benefit, life-cycle analysis of the structure alternatives in their re-use and adaptability, including the energy per unit and KW payback. As one of the "early" energy and sustainability efforts --though limited and modest--please demonstrate how these site improvements make a measured difference.

- Please continue to explore emerging methods, models, and technologies for the PV application to parking carports and structures.

B. Architecture:

- Consider the adaptability in the structures….perhaps they can be used for something other than solar panels. The future of cars is an important consideration in designing these structures.

- Explore the idea of "delight" in the structure.

- Should the structures all be the same or should there be some instances of site-specific installations?

- DRB encourages flexibility of roof angles of structures.

- Study the designs such that they are not prescriptive in form and shape to provide for an opportunity for design.

- Explore the durability of the structures without the heaviness or clunkiness of the practical.

- DRB appreciates the emphasis on lighting within the structure to provide safety and interest without taking away from the surrounding buildings.

- Explore coverage in design (walkways?) while integrating daylighting and avoiding the sameness of structure.

- Embrace an exploration of an entirely different form rather than designing something more "Klauderesque". A simple, straight-forward solution may be the best.

- Explore the freedom to design these structures that will not result in the predictability of the typical. Consider a grid or a patchwork of something of interest.

- Consider the orientation of the structures as the parking layout changes direction.

C. Energy and Sustainability:

- To be addressed in sustainability study in process.

- Concentrate on the study of the emerging technology and the fact that PV may be on the lower-end of energy possibilities viewed in terms of the larger picture.

- Consider if there is some kind of real time display as an educational opportunity to show the energy benefits of the installations.

DRB Action:

No action is required at the Pre-Design phase. However, in additions to the comments provided above, the DRB encourages the Campus Architects and Landscape Architects in concert with the A/E consultants to carefully re-evaluate and more clearly articulate the project planning and design goals and objectives.

There being no further business, the public meeting of the Design Review Board was adjourned at 3:30 p.m.