UNIVERSITY OF COLORADO AT BOULDER

BOULDER CAMPUS PLANNING COMMISSION

Minutes of the Meeting of March 11, 2008

The Boulder Campus Planning Commission (BCPC) met on Tuesday, March 11, 2008, in the Discovery Learning Center, Room 1B70.

Members present were: Maren Additon, Noel Cummings, Larry Hill, Steve Jones, Bill Kaempfer, Paul Leef, Michael Lightner, Gregg Lundgren, Keith Maskus, Steve McNally, Phil Simpson, Robin Suitts, and Karen Lorimer. Members absent were: Matthew Beres, Steve Bruns, Deb Coffin, Charles Gilford, Evan Litvin, Russ Moore, Joseph Rosse, Cindy White and Richard Wobbekind.

Guests present were: Penina Axelrad, Aerospace Engineering; Mindy Davine, Leo A. Daly; Robert H. Davis, College of Engineering & Applied Science; Kin DuBois, Klipp Architects; Carlos Garcia, University Memorial Center; Kim Glasscock, *Silver & Gold;* Thomas Goodhew, Planning, Facilities Management; Barbara Johnson, Facilities Management; Casey Jones, Parking and Transportation Services; Tom McGann, Athletics; Richelle Reilly, Planning, Facilities Management; Steve Schonberger, AR7 Architects; Bob Sievers, Environmental Program; John Stevensen, Graduate School; Pamela Topping, Geosciences Environmental Program; Jim White, INSTAAR; and JoAnn Zelasko, College of Engineering & Applied Sciences.

1. **MINUTES –** Jones presided in Coffin's absence. He asked for a motion to approve the minutes of February 14, 2008. It was moved by Lightner to approve the February minutes; McNally seconded the motion and it was unanimously approved.

2. **CHAIR'S REPORT –** Jones did not have anything new to report. He introduced Phil Simpson to present the Aerospace and Energy Systems Building Program Plan.

3. **Aerospace and Energy Systems Building Program Plan –** Simpson introduced Noel Cummings, the co-planner, Rob Davis, and JoAnn Zelasko from the College of Engineering and Applied Science and Steve Schonberger, an architect from AR7 Architects.

   Davis gave an introduction to the program plan. He said that the Discovery Learning Center (DLC) was built as the first phase of growth in the north-east corner of the complex. This expansion of the aerospace wing is the next phase and will be built on the north side of DLC. The proposed 77,000 sq ft building will be a "hands on" learning center. The Department of Aerospace Engineering Sciences has one of the strongest programs campus-wide and is ranked number one in NASA funding for public universities, trailing only Purdue University.

   Aerospace is a very important field to our campus; it will increase project-based learning at the graduate level. The building will also house part of the energy program, which is becoming increasingly important. ConocoPhillips purchased the Louisville Storage Technology property as a hub for research and development for renewable and alternative energy and high-tech carbon fuels recovery.

   Simpson gave a PowerPoint presentation of the Aerospace and Energy Systems Building Program Plan. The University of Colorado at Boulder (UCB) and Colorado are strongly positioned in aerospace, science and engineering and are leaders in energy systems and sustainability. UCB is a

premier institution for hands-on learning fostering partnerships with industry and entrepreneurs. Enrollment growth is driving this project.

Aerospace and Energy systems have local resources. The Laboratory for Atmospheric and Space Physics (LASP) conducts research in planetary, atmospheric, solar influences, and space sciences. LASP is currently flying four satellites and has operated eight spacecrafts – more than any other university laboratory. The Center for Astrophysics and Space Astronomy (CASA) conducts research in solar physics, stars, interstellar and intergalactic matter, extragalactic astronomy, and high energy astrophysics. National Renewable Energy Laboratory (NREL) manages $209M for research development in twelve main programs: solar energy, geothermal, biomass, vehicle technologies, hydrogen fuel cells, wind, and hydropower. The Center for Research and Education in Wind Energy (CREW) of the Colorado Renewable Energy Colloraboratory is a partner of UCB, CSU, CSM, and NREL to research wind energy & related operational issues. The Colorado Center for Power Electronics (CoPEC) is an industry-sponsored research and educational effort in power management, converter technologies, and integrated circuits.

Included will be the Space Systems Science & Engineering (S^3E) Initiative. S^3E will affirm UCB as the premier institution for research and engineering of space systems. S^3E will expand hands-on education of in-space flight systems for students, develop the new workforce needed to replace Apollo lunar-era retirees, leverage the unique combination of space scientists and space engineers to expand research, and foster industrial partnerships and entrepreneurial start-ups, developing new technologies for space systems.

The Energy Systems & Sustainability (ES&S) Initiative will foster education and research in storage, control, and conservation of electromagnetic (solar) and mechanical (wind) sources, they will investigate wind energy issues through the new Center for Research and Education in Wind (CREW), expanding the industry-sponsored Colorado Power Electronics Center (CoPEC), to support teaching and research in lighting systems, heating, ventilation, and control and building management.

The building will support undergraduate and graduate majors in three programs: Aerospace Engineering Sciences (AES), Electrical & Computer Engineering (ECE), and Civil, Environmental & Architectural Engineering (CEAE). Enrollment in these programs has been held below the demand due to the limitation of existing space to house the additional applicants to these programs. The availability of space to accommodate enrollment, coupled with the demand for these programs, is expected to increase enrollment to 2,109 students by fall 2013.

Design will be compatible with the main campus and Engineering Center with a significant new architectural gateway at the corner of Colorado Avenue and Regent Drive; the entry will be clear and welcoming.

The $39.7M building is proposed to be funded via the state, the university, and private sector partnership with a 60/40 split between state and cash. The campus is committed to raising $10M and the remaining balance will be funded with university cash funds, with long-term financing by the CU Treasurer, if needed.

Lundgren moved to approve the Aerospace Building Program Plan; it was seconded and unanimously approved.

4. **Geosciences Building Program Plan –** Simpson introduced Jim White, Chair of the Geosciences Building Committee and Director of INSTAAR, Bob Sievers, Graduate School, Environmental

Program, John Stevenson, Associate Vice Chancellor for Research & Dean of the Graduate School, Kim DuBois, Klipp Architecture and Pam Topping, Geosciences Environmental Program.

White, from the environment and energy group gave a brief introduction. He said that the new building includes an energy initiative with an interdisciplinary group that represents the broader environmental sciences called Colorado Center for Bio Refining & Bio Fuels ($C^2B^{2)}$; Environmental Science is ranked third in the country by NSF in all federal research spending. It includes geosciences, earth, and ocean sciences. It is number one in the United States with $90M grants for environmental sciences per year. The co-location will breed new ideas, and new research groups with NOAA, NIST, USGS, and NCAR located close to ConocoPhillips. The new geosciences building will be built next to the US West/McAllister building.

Simpson presented the PowerPoint introducing the Environment and Energy Group (EEG). The EEG includes:

- Department of Atmospheric & Oceanic Sciences (ATOC) – examines the dynamic, physical, and chemical processes that occur in the atmosphere and ocean.
- Center of the American West (CAW) – identifies and addresses crucial issues of multiculturalism, community building, fire policy, and land, water, and energy use in the West.
- Cooperative Institute for Research in Environmental Sciences (CIRES) – internationally recognized leader in innovative earth systems science research.
- The Energy Initiative (EI) – works to enable a successful transition from an economy based on fossil fuels to one based on renewable and sustainable energy.
- Institute for Arctic & Alpine Research (INSTAAR) – strives for excellence in research, education, & outreach related to Earth System Science and Global Change in high-latitude, alpine, and other environments.

The need for collaboration and urgency in addressing environmental issues is greater today than any prior moment in our history. Without common spaces for encounters and conversations across the disparate disciplinary languages, the development of new ideas, new technologies, and new policies will be impeded. The EEG mission is to create an interdisciplinary approach to environmental problem solving, to train students to take advantage of other disciplines' knowledge and skill sets, to create rigorous interdisciplinary curricula, exploring new ways of teaching effectively across disciplines, to foster interdisciplinary research, and to maximize cross boundary synergies by co-location, bridging organizational barriers between academic disciplines, research institutes, and professional schools & colleges.

There is an immediate need for a wet lab building; lack of wet labs could compromise graduate education and make it difficult to retain faculty. Facility and program alternative options present many problems like compromising competitiveness and ability to secure partnerships with the private sector. Laboratory space is already condensed, with less than optimum efficiency, at times raising safety concerns. Off-site delivery is unlikely due to laboratory requirements for exhaust, vibration, humidity and management, storage, and handling of sensitive materials.

The new geosciences building is proposed to be four stories with stepped massing and roof forms and slopes consistent with the main campus – 100,000 GSF – 54,683 ASF, which is driven by the amount of lab space needed. Flexible, adaptable laboratory modules with office support are planned. The site location is Pod D in the Research Park with the possibility of expanding to the north. Based on EPA's experience, the potential for reducing energy use at federal laboratories can be as high as 60%, and energy cost savings of $200M to $800M annually may be possible. The

typical laboratory uses far more energy and water per square foot than the typical office building due to intensive ventilation requirements and other health and safety concerns.

76% of the current building systems are in need of repair in some of the buildings currently occupied by component programming so the deferred maintenance is bigger than the planned project. Direct enrollment growth will be affected considerably without a new building with wet lab spaces. The high standards set for this building is to attain USGBC LEED Gold, possibly Platinum, and EPA Labs21.

Funding is to come from state, university & private sector partnerships. $59.5M is proposed to be split 60/40 between state & cash funds. The campus is committed to raising $12M; with short-term financing by the CU Treasurer, if needed. The remaining balance will be funded with university funds, with long-term financing by the CU Treasurer, if needed. It will be on the same track as the aerospace building.

Kaempfer inquired about the provision of space for vending machines, the revenue of which funds scholarships. Simpson said as a small area for coffee is planned. Kaempfer asked what the word "temporary" refers to on page 21. He commented that "Litman is scheduled for demolition in 1990" can be used but he would like "temporary" to be deleted. A commitment of space to a campus program was deleted from the text. Maskus asked if they were looking at the backfill of vacated space. Simpson said they haven't looked at this. Lightner inquired about options for dry lab space and what portions of programs are slated to move.

The principal beneficiaries are INSTAAR and ATOC. 10% of undergraduates and 10% of graduates are in fields related to the environment. ENVS has 400 square feet; they need more. They will make the program plan stronger by being as specific as they can. White said that the EEG group has a common vision of six programs. Kaempfer inquired about the vision. Sievers said that how they integrate everything is a challenge – it is truly a logistics issue. Maskus commented that he would like to get more clarity on the portions of programs moving. White said the ATOC, ENVS, INSTAAR, NS/BC, Center for American West, C^2B^2, Environmental Studies and a part of CIRES and the Center for Science and Technology are included in the plan to move. White said the intention is to look at space needs and program needs to determine the best occupants. Kaempfer said they need to keep in contact regarding space needs and keep it inclusive. Jones suggested that Maskus of Arts and Sciences should meet with the group as a part of understanding the program plan. Jones said that Jeff Lipton had sent seven questions regarding East Campus and they will be incorporated in the program plan. Lightner asked what the potential impact of dealing with Lipton's questions would be. Simpson said they primarily will have to figure out the cost of land and how they will pay for its use. This could be a lump sum payment or annual lease payments.

Maskus asked that the first sentence on page 22 of the program plan be omitted. White agreed to strike this sentence. An amendment that the building committee will meet regularly with arts and sciences and academic affairs to look at space needs and program needs to get more clarity and specificity would be added to the program plan. They would also modify the language to quantify the back fill issues, and adequately address issues and be more specific where they can.

It was moved by Lightner and seconded by McNally to approve the Geosciences Building Program Plan with the following contingencies:

- The building committee will meet regularly with Arts & Sciences and Academic Affairs to clarify and specify space needs and program needs.

- Make language modifications - strike the word "temporary" on page 21 and strike the first sentence on page 22.
- Quantify back fill issues to make sure they are adequately addressed.
- Address and incorporate Jeff Lipton's seven questions regarding east campus in the program plan.

The motion passed unanimously.

5. **FY 09-10 Capital Construction Request –** Leef distributed the proposed request. He said Systems Biotechnology is requesting funding in 09/10. UCB will address replacing major building systems and fire and life safety issues in the classroom building capital renewal which will include Hellems and Guggenheim. Kaempfer asked if they were wrapping Hellems into Guggenheim. Simpson said it is combined for funding purposes. Additon asked if UCB can go back and ask for money for a building that has been constructed and paid for with student fees. Simpson said the state is less receptive now; they do not anticipate more money. Jones said the BCPC's responsibility is only to look at the order of projects and last year. Jones asked for a motion to approve the rank order of the capital construction request, which consists of adding this year's projects ranking to the end of last year's rank order of projects. Leef said there is a $25M state request and they are giving a slot to each campus. The funding for VAC, Ketchum, and Ekeley is complete; they will add Aerospace and Geosciences. Maskus moved to accept the order, Hill seconded the motion and it was unanimously approved.

6. **Other Items from Members –** Lightner would like to bring a discussion about land in the Research Park. He would like to talk about moving every dormitory to East Campus and use the dorms that are currently on campus as classrooms and research space. He recommended that this might be a good discussion for the master plan. Maskus commented that the Facilities Task Force 2030 is investigating this prospect.

   Jones added an item for the record; he said the subcommittee, HRAC, deals with historic issues. They need to identify faculty members and enlist one member to the HRAC subcommittee. Simpson said HRAC could have input on the master plan and the potential to expand the historic district to include the 13 Klauder buildings. The Mountain Research Station is the last surviving logging camp and could be eligible for gaming funds; HRAC could have a positive impact.

   Jones asked for a motion to adjourn. Lundgren moved and the meeting was adjourned. Minutes submitted by Karen Lorimer.