

UNIVERSITY OF COLORADO AT BOULDER
BOULDER CAMPUS PLANNING COMMISSION

Minutes of the Meeting of May 10, 2007

The Boulder Campus Planning Commission (BCPC) met on Thursday, May 10, 2007, in Regent 302.

Members present: Maren Additon, Jon Bennett for Joyce Nielsen, Deb Coffin, Bill Kaempfer, Lisa Lucio, Steve McNally, Robin Newsome-Suitts, Joyce Nielsen, Phil Simpson, Moe Tabrizi, Cindy White for Mel Cundiff, Richard Wobbekind, and Karen Lorimer. Members absent: Andy Aitchison, Noel Cummings, Steve Jones, Gary Gaile, Chris Green, Amy Harris, Michael Lightner, Evan Litvin, Keith Maskus, Russ Moore, and Mary Ann Myer.

Guests present: Steve Cundiff, JILA; Jeff Dodge, *Silver & Gold Record*; George Galida, Facilities Planning; Steve Glenn, Anderson Mason Dale Architects; Casey Jones, Parking Services; Dick Monson, Power House; David Nesbitt, JILA; and Richelle Reilly, Facilities Planning; Doug Reisbeck, Anderson Mason Dale Architects; Dennis Whitney, Burns & McDonnell.

1. **MINUTES** – Kaempfer presided and established that there was a quorum, Lucio moved to approve the minutes of March 8, 2007, Coffin seconded the motion and the minutes were approved.
2. **CHAIR'S REPORT** – Kaempfer turned the meeting over to Simpson to give a campus funding report. Simpson said that funding is very good this year for the campus. The Long Bill passed the Visual Arts Complex Construction Phase and eight controlled maintenance projects. Senate Bill 222 and 263 will fund the Ekeley Chemistry Renovation, Ketchum Arts and Sciences Capital Renewal, and one more controlled maintenance project; Norlin Library will be cash funded. Kaempfer asked what new projects will cause the need for surge space. Simpson answered that the Art and Art History will move into Fleming when the Business School moves into their new building. Ketchum will need to move into space that is not yet identified.

Newsome-Suitts introduced Moe Tabrizi, who assumed Steve Thweatt's place, as the Interim Director of Planning, Design, and Construction in Facilities Management.

3. **POWER – CENTRAL HEATING & COOLING PLANT PROGRAM PLAN** – Kaempfer introduced Galida, the Planning Phase Manager for the project who then introduced the project team: John Morris, Director of Facilities Operations, Dick Monson, Director of Utilities Generation and Distribution, Paul Caldera, Utilities Distribution Manager, Dennis Whitney, Burns & McDonnell, Program Plan Consultant, Joe Bilotta, JBA Inc., Program Plan Consultant, and Tim Habben, Luis O Acosta Architects, Program Plan Consultant.

Galida gave a background on the Power Plant. It began as a coal fired plant in 1909 located at the edge of campus. Built to serve only a handful of buildings, it has been renovated several times and is now filled with equipment to serve a campus with over 9.2 M sq. ft. of building space. As a result of campus growth, it is now in the center of the academic corridor amidst academic and research buildings. The controls were upgraded in 1996 when there was a boiler "puff" incident that ignited gas and started a fire, caused by the outdated system. It has limited equipment space and capacity which presents operational challenges, safety, noise, and vibration issues, and the core campus location obstructs pedestrian and vehicle traffic, creating conflicts with service vehicles. Currently the Power Plant provides steam for 6.7M sq. ft. and chilled water for 1.5M sq. ft. Two 50 year old boilers provide steam. Two combustion turbine generators provide electricity with waste heat being used to generate steam. An overhaul is due in 2008 and 2009 at a cost of \$10M.

There are three absorption chillers which are 15 years. Old. Steam is used to produce heat, electricity, and chilled water.

The project conforms to the *Campus Master Plan* which calls for projects to provide for high-quality facilities to meet institutional needs, to acquire and use land wisely, to design campus systems (infrastructure) to ensure an efficient, pleasing and safe campus for many years to come. The goals and objectives of the new plant are utilities generation and distribution to serve present and future needs with safe, reliable, economical, and environmentally responsible operations; to subscribe to the industry wide standards of “redundancy” in equipment design, operation, and maintenance; to plan and manage spare production capacity to serve both short term and longer term demands; and to strategically plan to take advantage of emerging technologies in balancing safety, reliability, economic, and environmental concerns.

The existing plant is at capacity – maintaining it would not be cost effective or efficient. Any new buildings would have to provide their own heating and cooling. McNally asked if studies are shown in the plan. Galida answered that studies are shown in the Program Plan Appendix. None of the alternatives would meet the *Campus Master Plan* guidelines. Lightner asked if the *Campus Master Plan* allows for a third feeder from Xcel Energy. Galida said yes and that co-generation is still possible when economically feasible.

This Program Plan proposes to construct a plant to a central heating and cooling plant and associated distribution system at a cost of approximately \$75 million. With the assistance of consultants and Master Plan studies, a building site just to the northeast of the Coors Event Center has been selected for a new plant. The plan includes the decommissioning of the present plant and equipment. The current site and the 14,988 GSF building could be returned to academic uses. McNally asked if the \$75 million includes decommissioning the current building. Monson said it does include remediation. Lucio asked how far the \$75 million is projected into the future. Galida said the \$75 million includes escalation; Simpson added that if you project too high, the reasonability will be questioned. Tabrizi asked what the inflation factor would be; Monson said it was 6%.

The new two-story structure will house new boilers and chillers and associated control, maintenance, and administrative functions requiring approximately 74,164 GSF. This plant will provide capacity for services to current and planned buildings. Another major component of this Program Plan is the improved and expanded distribution system for steam and chilled water. This will consist of renovations or new portions of steam and chilled water pipes either in tunnels or directly buried that circle around and through the main campus.

There are two conceptual two level schemes shown that will need more study if chosen. The plan also includes a conference room and a smart classroom. Lightner pointed out that this new location will be the first thing people see when entering the campus and asked that they keep this in mind when designing it. Simpson said it will not be a Klauer building. Lightner asked how many people work at the current power plant. Monson said there are twenty-five people on a twenty-four hour shift – round the clock and over night. Tabrizi asked why the square footage needs to be increased from 14,000 to 74,000 GSF. Monson said that much of the present plant is outside and not included in the GSF. The new plant will have everything inside. There will be three boilers with expansion capability; we now have two boilers and three chillers. Monson said that the main chiller is forty years old. Kaempfer asked what the footprint is; Galida said it is about 35,000 sq. ft. Wobbekind asked if the recycling plant will be located near the new power plant. Simpson said they are now looking at East campus for the recycling plant. Lightner commented that currently Regent Drive is congested twice a day and asked if there is a plan to deal with parking during

construction. Galida said he doesn't think large truck traffic and pedestrian traffic will impact campus any more than now. Lightner asked that they be careful of the load put on Regent during and after construction. Kaempfer added that deliveries will be on weekends and nights. Monson said fuel trucks may have to use Regent Drive and could come sporadically; delivery points are planned so traffic will not be affected. Shift changes are very early in the morning and late at night so will not affect traffic. Kaempfer mentioned that there will be improvements and a pedestrian underpass on Regent Drive at Kittredge. Lightner asked that consideration be given to the Engineering crossing and what impact the exhaust plume will have on the observatory. Galida said studies are planned to mitigate the observatory obstructions. Monson said that they are doing a study of the analysis of the thermal signature – CO²NOX, water vapor, and temperature. There will be some distortions in one direction because of the plume. 28th Street is a state highway and cooling mist could drift and affect 28th Street. Lightner said before construction begins the community should be notified of what is coming and what to expect. Monson said that they will need construction and storm water permits and the permitting effort will take place with the design effort, which will keep the community apprised of the construction plans.

Lightner asked if there is a cap on bonds. Kaempfer said debt run up would be significant. Simpson said that the Treasurer's Office has looked at all projects on the five-year Capital Improvement Plans. They said we currently have debt capacity. Coffin asked if any repairs or refurbishment to the current tunnel system are included. Whitney said that just some pipes will be refurbished. Monson said that some tunnels are in good shape and some are in bad shape. This project will not substantially renovate or overhaul existing tunnels. Coffin asked what it will do to the rates. She said that chilled water rates should go down with usage; including renewal and replacement of the R & R fund rates that are being paid now. Lightner asked if there is a common energy cost model. Monson said inputs would be the same. Monson pointed out that if Housing were not to be involved in this project, the project would not be feasible. The only way to make it reasonable and efficient is for everyone, especially Housing to use it. Galida added that 700,000 sq. ft. of chilled water could be brought on to the system as Housing air conditions the residence halls. Kaempfer stated that occupants and users of buildings do not make the decisions about power. Monson said the new Law School and the new Business School will be hooked in to the new system using chillers that are already at the Law building. Law and Business will be used for emergency back-up and redundancy. Norlin and Ketchum have absorber chillers that will be decommissioned. Tabrizi asked if work has been done to expand the distribution system. Lucio asked what the options were if the project was denied. Monson said that any of the other option would cost a lot more money, use more energy, have higher operating costs, and take up more space right in the middle of campus. He also said that any time you are burning fossil fuel there is a potential for accidents. This Program Plan is the best, most cost effective option to use. Newsome-Suitts said that there was much discussion in the Vice Chancellor's office with the staff and students of the environmental center and members of the Boulder community who expressed support for the use of photovoltaic panels on the roof of the plant. Does the Program Plan include this option? Galida said photovoltaic panels would not provide the capacity to operate the plant but it could be added as a demonstration project.

Lucio moved to approve the Program Plan for a new power plant, Lightner seconded the motion with the provision that designers are cognizant that this will be what campus visitors will see when they first enter campus. The motion was unanimously approved.

- 3. ANDREWS, SMITH & BUCKINGHAM HALLS RENOVATION PROGRAM PLAN** – Galida introduced this Program Plan to renovate the entire Kittredge Complex. He introduced the design team of Anderson, Mason & Dale Architects, Steve Glenn and Doug Reisbeck, Managing Architects. He also mentioned the building committee from Housing and Dining Services: Deb

Coffin, Executive Director, Kambiz Khalili, Deputy Director, Lori Lander, Assistant Director of Residence Life, Debbie Cook, Director, Conference Services, Curt Huetson, Director of Facilities Services, and Steve Hecht, Manager of Design and Projects Group.

Kittredge was built in 1960; the stone was layered vertically, reminiscent of Tuscan architecture. The *Campus Master Plan* includes renovating Kittredge to accommodate future demands for a living and learning environment. Existing conditions were built into the *Residential Campus 2020 Plan* which identifies the Kittredge community as the first neighborhood to be renovated in Housing beginning in 2007, with estimated completion in 2012. New academic spaces for classes, seminars, faculty offices and tutoring are planned along with upgrading the aged infrastructure, fire, life, safety improvements, ADA accessibility, addition of air conditioning, and more amenities attractive to non-freshmen students.

Andrews Hall will be the first to be renovated as part of this plan at an estimated cost of \$13.7 million, Galida said. The bed count will go from 269 to 230 to accommodate more bathrooms and other additions. A year later, Smith Hall will be renovated, at a cost of \$13.3 million will; the bed count will go from 242 to 206. Buckingham Hall renovation will follow the following year at a cost of \$14.3 million; bed count will go from 256 to 228. Funding will come from bond sale proceeds repaid through room and board increases.

McNally asked if buildings would be closed during construction. Coffin said buildings would be closed during renovation and rates for students would be raised in renovated buildings. Wobbekind asked if faculty apartments will be included. Coffin said they will and it will depend on the program and what faculty and directors are requesting; Reisbeck added that it will vary from building to building. Lightner commented that air conditioning will help attract attendees for summer conferences. He asked if any income would come from the Residential Academic Program (RAP) program. Coffin said campus is receptive to looking at that possibility. Lightner asked about freshman rates and rules and if upperclassmen could stay the entire year in the facility. He is concerned about students having to move out at Christmas break. Coffin said they are turning away more than half of the students. Staffing issues over winter break, and the small number of students who stay, are the reasons all of the dorms are closed over the break. They are agreeable to keeping the dorms open if it is feasible. Tabrizi asked how much inflation has been built in; Galida said 6% per year. Simpson said 6% is adequate and appropriate right now. Galida added that Arnett Hall, the first to be renovated, is right on budget. It can be used as a barometer for future projects.

Tabrizi commented that due to a lack of enough sinks in current buildings, students are discouraged from washing their hands. Galida said renovation includes more bathroom facilities. Lucio asked if renovation includes smart classrooms; Coffin said there will be smart classrooms.

Wobbekind moved to approve the Kittredge renovation Program Plan, Coffin seconded the motion, and it was unanimously approved.

4. **INSTITUTE OF BEHAVIORAL SCIENCE (IBS) PROGRAM PLAN** – Galida introduced the building committee from IBS: Jane Menken, Director, Richard Jessor, Professor, and Robert Graham, Administrator. He also introduced the architectural team from Anderson Mason Dale: Paul Haack, Principal, and Stephen Glenn, Project Manager. IBS is one of the leading institutes in its field, including faculty from ten University departments. It has doubled its grants within the last ten years from \$20 M to over \$40 M. IBS has five programs that conduct research on population, political and economic change, environment and society, problem behavior programs and health and society programs, involving them in international work, such as research on the HIV/AIDS epidemic in Africa.

IBS is currently housed in nine different buildings, eight in Grandview Terrace and two floors of leased office space in downtown Boulder, which presents many challenges and building deficiencies. The multiple Grandview buildings are circa 1920's with inefficient and inadequate spaces, sizes, and configuration, inadequate heating and cooling, insufficient power, general, and task lighting, old and failing roofs, windows, doors, minimal insulation and fire protection, and inadequate accessibility at entries, public circulation, restrooms, doorways, and vertical circulation.

The goals and objectives in the *Campus Master Plan* for IBS include providing high-quality facilities to meet needs, to preserve and enhance the traditional beauty of campus, acquire and use land wisely and efficiently with a safe infrastructure, to accommodate projected enrollment growth while facilitating increased graduate student enrollment, and to retain a ten minute class change time. IBS is committed to cutting edge interdisciplinary collaborative research on problems of societal concern, dissemination of information about research to undergraduate, and pre- and post doctoral students, formal training to supplement students with advanced degrees in Certificate Programs, in Demography, and Applied Behavior and to impart knowledge across a comprehensive range of disciplines – CIRES, Behavioral Genetics, UCDHSC, SURF, UROP, and Honors.

The proposed new facilities will function to support all goals and objectives, be cost effective when compared to leasing and be an efficient use of campus land resources. The proposed new four level building located on 15th Street behind the Continuing Education building on will house all of IBS in one building to enhance the interaction and productivity of the many programs. The campus recognizes the desirability of housing this extraordinarily successful research institute together in one building. The new 45,930 GSF building, estimated to cost \$13.9 million, will be funded from rent applied to a University loan. Lightner asked how many faculty and students IBS will have on campus. Galida said currently IBS has about 50 PhD staff members, 40 professional and support staff and 36 graduate and undergraduate students; a careful analysis of projected growth over the next few years indicates that IBS will likely reach 151 total staff. Simpson added that in the long term, the soft sciences community will gravitate to Grandview and hard sciences will be moving to East Campus.

Additon commented that the cost of the new building seems low in comparison to other buildings. Simpson said that the design is an easier building type (office), efficient, and there is no site cost. Galida said that the escalation factor is different; a box shaped building is very efficient and the atrium in the center will bring light into the building. Other considerations will be chilled water and parking. Lightner asked what the cost of tying into main campus power would be. Galida said it would not tie into the main steam or chiller loop at this time.

Galida said that other buildings will be demolished on Grandview which will allow for parking at IBS. Kaempfer added that there are 10 other lots in Grandview Terrace that will absorb parking. Jones said Parking Services could only provide minimum short term parking. Newsome-Suits asked about parking under the building. Simpson said the project was scaled down to save money, which removed parking considerations. Jones said it is hard to utilize integrated parking.

Lightner asked if Research Building System (RBS) space is under utilized; Simpson answered yes it is. Lightner asked who is funding campus cash overhead. He also asked who would fill the buildings. Simpson said there are big demands from Arts and Sciences – they have 100 faculties coming and no space for them.

Additon asked if a standardized cost amount is used and wondered why there was a variation between projects. Simpson said a complex model is used based on the costs of different spaces. Kaempfer added that the cash-funded donation is \$4 million. The General Fund pays for rent and cash reserves may be used to pay the rest. Lightner requested that detail regarding cost, cash, and funding be added to the plan. There needs to be details like how many faculty and students there are – to get a sense of what is going on, to justify building a new building. Galida commented that the Program Plan does include such details of students or faculty schedules or frequency of meetings. Simpson said the Treasurer's office prepares the funding plans separately.

Lightner moved to approve the Program Plan. Tabrizi seconded the motion and it was unanimously passed.

5. **JILA PROGRAM PLAN** – Simpson summarized JILA, a joint institute between the University of Colorado and the National Institute of Standards and Technology (NIST) collaborating on astrophysics, atomic molecular and optical physics, and related subjects. The vision and spirit that launched JILA have proven to be highly successful in both research and education and have brought significant benefits to both parent organizations, as evidenced by the current JILA Fellows. JILA is physically located on the CU Boulder main campus in the Duane Physical Sciences complex. The current building has shortages in office, laboratory, and technical space that threaten JILA's ability to retain current Fellows and attract the best and brightest in the future.

The Program Plan defines an addition to the JILA building that will provide a new generation of JILA scientists with the opportunity to continue the Institute's success. The new addition will be designed to create and reclaim formal and informal collaborative space to promote interaction and the exchange of ideas, provide flexible state-of-the-art laboratory and technical space to meet the research parameters of current and future JILA scientists, and include office space to alleviate a shortage that threatens to restrict the projected growth in the research groups of young JILA Fellows. The total assignable space of the JILA building addition is approximately 35,000 square feet. The selected site affords the only opportunity to accommodate the addition of both office and laboratory space and provide a direct connection with the existing JILA facilities on all floors.

The total project cost is estimated to be \$27.5 million with anticipated occupancy in late 2010. NIST has recognized that the continued success of JILA requires additional space and has offered to include a request for \$22 million in funding in their 2009 and 2010 Federal budget requests. The University is committed to taking on the responsibility for securing the remaining funds; they assume that the project cost will be primarily funded by the Federal grant.

Tabrizi asked how construction will affect pedestrian traffic. Simpson said that construction will be in the middle of summer; they are working through construction impacts with Housing and Music. Lightner asked why they didn't choose East campus to build the new JILA building. Simpson said they considered that possibility. The link to the University is imperative because they work with other CU departments. Lucio expressed her concern for faculty and staff during construction. Simpson said that some disruption is inevitable because the center of campus is in urban renewal.

McNally moved to approve the Program Plan. Coffin seconded the motion and it was unanimously approved.

There being no further business, the meeting was adjourned. Minutes submitted by Karen Lorimer.