



Precinct Planning Update Meetings

MEETING NOTES - May 21, 2010

Office of the Architect for the University

Constituent Invitees:

James Aylor
Dean of the School of Engineering and Applied Sciences

Bill Thurneck
Associate Dean of the School of Engineering and Applied Sciences

Richard Myers
Senior Associate Dean for Administration and Planning

Anna Towns
Director of Space Planning & Management, College of Arts & Sciences

Mark Hampton
Associate Dean for Management and Finance, Curry School of Education

Bill Cannaday
Dean of the School of Continuing and Professional Studies

Christina Morrell
Associate Vice President for Student Affairs

Craig K. Littlepage
Director of Athletic Programs

Ed Rivers
Director Intermural Sports

Rich Kovatch
Associate Vice President for Business Operations

Brent Beringer
Director of Dining Services

Mark Doherty
Chief Housing Officer

Kevin Fox
Medical Center Facilities Planning & Capital Development

Donald E. Sundgren
Chief Facilities Officer

Michael Coleman
UVa Police Department

Technical Invitees:

Cheryl Gomez
Director of Energy and Utilities
Facilities Management

Rebecca White
Director of Parking & Transportation

Richard Minturn
Senior Academic Facility Planner, Provost's Office

Andrew Greene, LEED AP
Sustainability Planner

Mary Hughes, FASLA, LEED AP
University Landscape Architect

Julia Monteith, AICP, LEED AP
Senior Land Use Planner

David J. Neuman, FAIA, LEED AP
Architect for the University

Summary: West Grounds Precinct Planning Update

Meeting Agenda

- Introduction and Objectives, by David J. Neuman, Architect for the University
- Current Projects/Capital Planning by noted constituents of the West Grounds Precinct
- Review of the Grounds Plan, Precinct Planning and Infrastructure Planning by Julia Monteith, Senior Land Use Planner, Office of the Architect, Scott Martin, Systems Development and Integration Manager, Facilities Management and David J. Neuman, Architect for the University
- Overview of Sustainability Efforts Related to West Grounds by Andrew Greene, Sustainability Planner, Office of the Architect

Presentation Summaries

Introduction and Objectives, by David J. Neuman, Architect for the University

Mr. Neuman began the meeting with general introductions followed by a short overview of recent planning efforts for the UVa. He also stated that this is the second of three precinct planning updates that the Office of the Architect will hold. In January a similar meeting was held for the North Grounds precinct, with an update on sustainability planning. In the fall, the final precinct update meeting will be held for the Central Grounds.

Current Projects/Capital Planning in the West Grounds Precinct

A representative from each constituent group in the West Grounds provided a presentation on their current projects and facility planning currently underway.

Richard Myers, Senior Associate Dean for Administration and Planning for the College of Arts and Sciences was the first to present. He informed the group that approximately 3/4 of undergraduate enrollment at the University is in the College of Arts and Sciences. The School's desired student/faculty ratio is 15:1, but currently the ratio is 17:1. This points to a need for additional faculty, even if the student population does not grow.

In the West Grounds, much of the space that the College of Arts and Sciences occupies is devoted to the sciences, and is a mix of classroom and laboratory space. The College of Arts and Sciences Research Building is a 100,000 square foot laboratory building being constructed directly behind the Chemistry Building and will be completed in fall of 2011. At that point, a significant amount of research activities located in Gilmer Hall and the Chemistry Building will be relocated to the new building. Once that lab

space is moved, Gilmer Hall and the Chemistry Buildings will be renovated. While it is understood that a mechanical renovation on both buildings is needed, the planning study for Gilmer Hall will explore changing the program from research lab space to teaching lab space. Another A&S building in the precinct is the Physics Building, which needs renewal. The current plan is to relocate the research lab space and create additional teaching space.

In conclusion, if the College of Arts and Sciences grows by 1,500 students, they would need 100 new faculty. Forty of these will be in the experimental sciences, which would equate to the need for an additional building the size of the new College of Arts and Sciences building (100,000 GSF) to house these new faculty.

James Aylor, Dean of the School of Engineering and Applied Sciences (SEAS) started with an update on two current capital projects. The first is Rice Hall, which is under construction and located between Olsson Hall and Whitehead Road. Rice Hall will be 100,000 gross square feet and will house Computer Sciences and Computer Engineering offices and labs. It will also contain an auditorium, small seminar rooms, a cafe and an entry atrium with display space. When complete in late 2011, it will be the largest SEAS building on Grounds. SEAS is also planning the construction of a student projects building to provide shop space for students project work. Interestingly, SEAS is going to develop this buildings jointly with Facilities Management, which is also in need of shop space. Built into a hillside across the street from Slaughter Recreation Center, the new facility top two floors are for SEAS and the bottom two floors would be used by Facilities Management. The SEAS portion of the building will be funded by a donor gift. There are no immediate plans for major renovation projects, though the 1st floor of Olsson is in need of some work.

Looking ahead, SEAS plans to grow faculty by 55 to have 200 members and expand from the current number of 2300 students to 3000 students. Doing this will put the School at a size that is on par with the size of other top engineering schools. The student/faculty ratio would also drop to 14:1 from its current ratio of 17:1. The main space concern for SEAS is that there is a lack of classroom space in the precinct. Specifically, the School has a need for larger classrooms and teaching labs. Currently, there are only 2 classrooms in the School that can seat more than 150 students. If a similar need for teaching space is shown for the Sciences, there may opportunities to develop the needed space jointly with the College of Arts and Sciences.

The Dean concluded his presentation with an overview of sustainability initiatives at SEAS. Besides being LEED certified, Rice Hall will also be a showcase for sustainability initiatives by students and faculty. The 3rd floor of the building will be a systems lab, where electricity, heating and cooling and water usage for the building can be studied and tested to design optimal mechanical systems. The School is actively pursuing corporate research partnerships to develop sustainable technologies. The construction of the SEAS student projects building will provide students with space to construct projects related to sustainability such as the EcoMod research effort that is ongoing with the School of Architecture. Finally, the School is exploring the creation of a Sustainability Minor, as well as expanding the number of courses that are related to sustainability in general.

Mark Hampton, Associate Dean for Management and Finance, Curry School of Education gave an update on their two main capital projects: Bavaro Hall and Ruffner Hall. Bavaro Hall will be completed and occupied in August 2010. The ground floor will contain clinical space for speech, reading, clinical psychology and counseling. The first floor will house the student affairs office, the Dean's office and meeting space. The 2nd and 3rd floors will contain office space for faculty and staff. A clinical coordinator has been hired to manage visitor traffic in and out of the clinics.

Even with the completion of Bavaro Hall, there will still be a number of Curry School functions that lease space in the Charlottesville area. The School would like to eventually be able to house everyone on Grounds, in order to promote collaboration and a sense of belonging to the School. A renovation of Ruffner Hall would be required to accomplish this goal. To date, a pre-planning study including a space stacking study and preliminary MEP analysis has been completed. To minimize displacement of personnel, a two-phase renovation that only requires vacating 50% of the building at a time is recommended. When complete, the ground floor will be devoted to classroom space and the first floor will be reconfigured to accommodate administrative and classroom functions by creating a more open and acoustically quiet design. The overall goals of the renovation are to complete asbestos abatement in the building, update HVAC/electrical/plumbing systems, achieve ADA compliance, and create better space utilization in the building. The renovation will require state funding before work can proceed, but the design will be advanced to the 50% point while waiting for the allocation. This project is estimated to cost \$20-22 million.

Cheryl Gomez, Director of Energy and Utilities, Facilities Management gave a short report on the status of the

infrastructure systems in the West Grounds precinct. Most of the buildings in the precinct are served by the central heat plant. The heat plant has enough capacity to service future development on Grounds but additional tunnels to convey steam and hot water will need to be built. West Grounds is served by the McCormick Road chilled water loop. This loop currently has a capacity of 10,500 tons and consists of chillers located at Olsson Hall, the Chemistry Building addition and the Aquatic and Fitness Center. This chilled water loop serves the academic buildings in the precinct, O-Hill Dining Hall, Scott Stadium and the AFC. This loop is in need of additional capacity because the Alderman Road Dormitory replacement project will use all the available capacity. Thus, if a new building is proposed, additional chilled water capacity will be needed. There are other, smaller chilled water systems that service Hereford College and Gooch-Dillard Housing because they are outside of the range of the McCormick Road loop.

The University purchases its electricity from Dominion Virginia Power and most of the West Grounds is serviced by the Alderman Road substation. There is enough electrical capacity at the Alderman Road substation for all future development scenarios in the West Grounds envisioned in the 2008 Grounds Plan. Domestic water capacity is also good, but there are capacity issues associated with the sanitary sewer system and the stormwater system that need to be addressed if future development in the precinct is to occur. Upgrades to these systems require close coordination with the local governments and service authorities.

Ed Rivers, Director of Intramural Sports gave an update of current plans to renovate and expand their facilities. Since it is located in West Grounds, Mr. Rivers focused on the redevelopment plan for Slaughter Recreation Center. Beginning in August 2009, IM-Rec worked with The Office of the Architect and Cannon Design to assess the need and program for new recreation facilities. The consultant has proposed a phased expansion and renovation starting with North Grounds, then moving on to Slaughter and Memorial Gym. The Slaughter project will include the addition of 2 courts built into the hillside to the west and a permanent facility for the Outdoor Recreation Center. Within the existing building, the fitness and multipurpose rooms, and the squash and racquetball courts will be redone while the rest of the facility will receive a face lift. IM-Rec would like to complete this project between 2014-2016 with a budget of \$16-19 million. Once complete, it is possible that varsity volleyball and wrestling will move to Slaughter from Memorial Gym and that space in Memorial Gym will be converted to more fitness and weight use.

Craig Littlepage, Director of Athletics then gave an update on the Intercollegiate Athletics programs and facilities on Grounds. He began by highlighting the tremendous improvement to the facilities since 1990 and that UVa is now one of the top 3 or 4 ACC schools in terms of facilities, although several facility needs for the Department remain. The highest priority for the Department is to create a new Track and Field facility that would enable UVa to host the ACC championship meet. The current facility lacks the lighting, space for field events and spectator seating to host the meet. It is estimated that it would cost \$7-9 million to redo the current track. Another project that is underway is the construction of two sand volleyball courts near Memorial Gym. The courts are being funded by donors and will help UVa with its volleyball recruiting efforts.

The final planning update was given by **Rich Kovatch**, Associate Vice President for Business Operations. Business Operations has four main interests in the area: 1) dining operations, 2) student housing, 3) parking and transportation (P & T), and 4) UVa cemetery and columbarium. O-Hill dining hall is the primary dining area in the precinct, but Runk dining hall, the Poolside Cafe and other retail dining locations in the precinct are popular as well. Rice Hall will feature an Einstein Bagels dining concept. The population of the precinct is well served by the dining options in the area. However, continued redevelopment of the Alderman Road Housing Area could lead to capacity issues at O-Hill dining hall after Phase IV is completed.

Two thirds of the student housing at UVa are located in West Grounds. This includes the McCormick Road dorms, the Alderman Road dorms, Gooch-Dillard Housing and Hereford College. In addition, the Piedmont Housing area, located between Stadium Road and Fontaine Avenue, contains faculty and staff housing. Currently the Alderman Road Housing area is undergoing a multi-phase replacement program. The first phase was completed with the construction of Kellogg House -- a 210 bed, 5-story dormitory with ground level student program space. This residence hall has received very positive user reviews. Phase II is underway with demolition of Balz, Dobie and Watson Houses and construction of two new dorms and a student commons building. This phase should be complete in the spring of 2011. Phase III will begin next and will see the demolition of Maupin and Webb Houses and the construction of two more dorms. Phase IV will begin around 2013 and will consist of a single residence hall and will contain classroom space as well. After Phase IV, the program will "turn the corner" and begin to replace the dorms that face Alderman Road, but planning for this phase is still in the early phases. When the entire redevelopment is complete there will 800-1000 new beds in the Alderman Road Housing area.

Gooch-Dillard, which has traditionally been an upper class housing area, began recently to house first years due to the construction of the Alderman Road Dorms. Feedback from these residents has been positive, so housing plans to continue placing first-years there, as needed. As swing space is needed due to the construction of the new dorms, Hereford College will also house first year students along with its continuing function as a residential college.

Parking and Transportation has an important presence in the precinct. There are approximately 3,200 parking spaces in the precinct, located mostly at Scott Stadium, so while there is ample parking it is not always located in the most desired places. This has been further compounded by the loss of parking due to the CAS and Rice Hall building projects. Currently P & T and the Office of the Architect are supporting the continued development of the transportation demand management (TDM) plan with a goal of reducing the number of single occupancy vehicles that are driven and parked on Grounds. TDM strategies will help to address some of the parking issues in the precinct.

Business Operations also manages the UVa Cemetery and Columbarium, which is located on the northeast corner of the Alderman and McCormick Road intersection. The cemetery is 79,000 square feet and contains 1,100 plots. There are two columbarium with 360 vaults. There is a cemetery expansion plan that would add 41,000 square feet to the cemetery and 340 double depth vaults to the columbarium. The expansion would create a Presidents' area and additional traditional plots and urn-in-ground plots. A timeline for completing the expansion was not given.

This concluded the constituent presentations.

Review of the 2008 Grounds Plan, Precinct Planning and Infrastructure Planning by Julia Monteith, Senior Land Use Planner, and David J. Neuman, Architect for the University

The 2008 Grounds Plan established a planning framework of the University over the long range planning horizons of 2015 and 2025. The Plan channels future growth into 'redevelopment zones' that were identified and evaluated during the course of the Plan's development. The zones were developed to promote infill development and allow the University to grow in a **sustainable** manner. The Plan focuses on five principles of sustainability that are inherently related to the University: Preservation, Community Context, Multi-Disciplinary Learning, Connectivity and Environment. Also defined in the Grounds Plan are **precincts** of the University Grounds: West, Central, and North Grounds. The precincts are defined geographically and acknowledge the variation in academic function. Both academic and residential redevelopment zones exist in each precinct. The redevelopment zones have been tested to ensure that they provide adequate space for the University to grow within its current developed boundaries.

Under the umbrella of the 2008 Grounds Plan, the precinct plans for Central, West and North Grounds provide for more detailed physical planning analyses of these areas. The precinct plans take a holistic approach to address the current and future physical form of each precinct. This includes addressing building form, views, circulation, servicing, parking and other aspects of built form. In addition to the three precinct plans, the Office of the Architect has developed a 2010 Health System Area Plan. This plan was developed for the unique needs of the Health System district, and is separate from the precinct planning effort. In the future, district plans may be developed in a similar fashion as the Health System Area Plan for other areas of the University as needed (such as for Athletics.) The fieldwork for the precinct plans was completed primarily by a series of interns (from the Planning Department of the Architecture School) over the course of the last year and a half.

The precinct plans apply a form-based planning approach to the Grounds Plan redevelopment zones. This is a departure from traditional campus planning, where sites are often programmed for specific uses. In the case of form-based planning, the desired building envelope and related open space within the redevelopment zone are established, while the exact use and footprint are left open. This approach allows for flexibility of use in the face of changing future academic needs.

For each of the three precincts, a set of five maps has been created to convey the information developed in the precinct planning. The first three of these maps, Natural Systems, Linkages, and Green Space, document existing conditions in each precinct and are the result of extensive fieldwork and GIS analysis. The final two maps, Proposed Green Space and Linkages and Development Volumes, define the general physical character of future development within the precincts.

The intent of these maps is to identify key defining characteristics and the quality of space to be retained or achieved. They provide guidance on a number of basic but important matters, such as the location of primary

building facades and service areas. They also address how a building should respond to its context in regard to green space, circulation and views. Reinforcing the principles of the Grounds Plan, buildings of historic significance are identified and protected due to their distinguished character and contribution to the campus at-large. The proposed condition maps illustrate the interrelationship of proposed landscape and circulation initiatives to building development within the precincts.

These maps form the basis of the precinct plan reports. The report contains a set of composite maps that show all three precincts to provide an overview of the ideas and concepts of the precinct plans. Following the composite maps, each precinct is presented individually and the unique opportunities and constraints in this precinct are highlighted. The last section of the precinct plans provides examples of enhanced visualization for the planned redevelopment zones. Using GIS and Sketchup software, a selection of redevelopment zones are visualized in 3-D, showing their existing conditions and the proposed future conditions. The 3-D visualization of Alderman Road Housing Area and Whitehead Road are highlighted to show how the areas might look in the future as the general recommendations for the precinct plans are implemented.

Much planning and construction has occurred in the West Grounds precinct in the last 5 years. The major projects that have been completed in the area include Wilsdorf Hall, in 2006, and the Snyder Translational Research Building and Kellogg House first year housing in 2008. In addition, there are a number of notable construction projects in the precinct. Bavaro Hall (Curry School), will be completed in the summer of 2010. In the spring of 2011 Phase II of the Alderman Road Housing replacement project will be complete, followed by the College of Arts and Sciences Research Building and Rice Hall in the summer of 2011. There have been nearly 20 recent landscape projects in West Grounds that range in size from the Dell landscape and stormwater management improvements, to a student-initiated community garden at the corner of Alderman and McCormick Road. Other landscape projects of note are the construction of the Observatory Hill Ellipse Green in front of O-Hill dining hall and construction of the Hereford Drive extension road to connect it with McCormick Road and create a loop that greatly enhances the bus service offered in the precinct. Some of the smaller landscape projects in the precinct are the Chemistry Building plaza landscape renewal, the Hereford College farm garden, Darden Court at Thornton Hall and the Leake Building bus stop stairs and path. These last two projects were completed using Grounds Improvement Funds (GIF), which is a recent program at the University that helps to pay for smaller landscape and public amenity projects across Grounds.

Overview of Sustainability and UVa's Environmental Footprint Reduction Plan by Andrew Greene, Sustainability Planner, Office of the Architect

Mr. Greene began the presentation with a short overview and timeline of sustainability initiatives at UVa since 2005. These include the 2006 Sustainability Assessment, the adoption by the BOV in 2007 of a commitment to Leadership in Energy and Environmental Design (LEED) Green Building Rating System certification for all new and renovation building projects, the creation of Sustainability Advisory Panel, the completion of a greenhouse gas emissions inventory at UVa, the creation of the Presidential Committee on Sustainability and the current development of the Environmental Footprint Reduction Plan, parts 1-4.

The President's Committee on Sustainability was created in Fall 2008 to advise President Casteen and Executive Vice President and Chief Operating Officer Sandridge on all matters related to the overall quality, diligence, and progress of the University's commitment to sustainability. The committee consists of 18 members. These 18 members also sit on subcommittees that focus on 1) School and Department Initiatives, 2) Policies and Procedures, 3) Community Outreach and Communications, and 4) Environmental Impacts. Each of these sub-committees plays an important role in achieving the overall goals of the Committee on Sustainability.

The draft Environmental Footprint Reduction Plan (EFRP), under development by the President's Committee on Sustainability, seeks to establish carbon, water, waste and nitrogen reduction goals for University and outline a path for achieving these goals. The draft EFRP has three main objectives: 1) to show UVa leadership in sustainability 2) to define realistic goals for the University and 3) Detail specific strategies for meeting the defined goals. The plan is divided into four areas of resource use that require reduction. They are 1: Greenhouse Gas Emissions (GHG), 2: Water, 3: Waste, and 4: Nitrogen.

In developing the EFRP plan, GHG emissions from University operations have been categorized into one of three scopes. Scope 1 emissions include direct emissions generated by University-owned equipment and activities. Examples include the heat plant, fleet, University Transit Service, UVa jet, fertilizer application and refrigerants. Scope 2 emissions are generated by the electricity purchased by the University; and Scope 3 emissions are created by UVa related activities such as commuting to and from work and as-yet unquantified activities like air travel,

procured goods and services and construction activities.

The Office of Environmental Health and Safety, along with Environmental Sciences students, catalogued the University's emissions for years 2000-2008. They found that in 2008, Scope 1 emissions accounted for 27% and Scope 2 accounted for 56% of the University's carbon output. Not all of the Scope 3 emissions are known, but they accounted for at least 17% of the total GHG emissions of the University. In looking at emission sources, approximately 87% of all University GHG emissions are related to building operations.

The EFRP proposes 3 strategies for reducing GHGs: 1) Minimize and mitigate emission's growth from new construction 2) Catalyze efficiency and conservation efforts and 3) Increase renewable energy generation and use. Using a combination of these three strategies, the proposed University goal will be to reduce GHG emissions to 20% less than the 2008 level by the year 2020.

Several examples show how the strategies in the EFRP could be implemented. The University has made a commitment to achieving LEED certification for all new and major renovation (defined as >\$1 million) building projects. Currently, there are 28 buildings across Grounds that are seeking to achieve LEED certification. A potential strategy in the case of new construction, would be for GHG carbon emissions from a new building to be mitigated through implementing energy efficiency technologies in existing buildings and/or using more renewable energy. For strategy 2, the Ivy-Emmet Street parking garage was highlighted. Recently, the lighting in this garage was retrofitted for more efficient lighting. This one change resulted in a large reduction (336 metric tons annually) in carbon emissions and had a relatively short payback of two years. The "Delta Force" program instituted by FM Energy and Utilities is also an effective way of improving the energy efficiency of buildings. This program starts by conducting an energy audit for a building and then retro-commissioning that building. The program began by starting with high-energy-use buildings and installs energy efficient technologies in these buildings. The upgrades also include recycling and water conservation efforts, and the Delta Force team works with building occupants to promote behavior change. To date, MR-4 has been completed and Jordan Hall is underway. So far, their work has reduced the University's emissions by 2,000 metric tons per year. While buildings account for a large portion of UVA's carbon footprint, 10% of the footprint comes from UVA students, faculty and staff driving to and from Grounds. In an effort to promote alternatives to single occupancy vehicles, the University is developing a transportation demand management plan. The plan recommends a mix of programs that would promote carpooling, and the use of transit. Implementing this plan could reduce GHG emissions by 1,600 metric tons annually. The final strategy involves reducing the amount of fossil fuels we use. On Grounds, one initiative underway is to use more biodiesel in the UTS bus fleet. Outside of the University, as energy companies continue to add renewable energy to their portfolio, UVA's emissions per kWh or purchased electricity will decrease. Complementing this strategy, UVA should also pursue the long-term goal of installing renewable energy generation on Grounds to further increase the amount of renewable energy in our energy portfolio. Overall, the EFRP sets a goal to reduce greenhouse gas emissions 20% below 2008 by 2020.

