



University Senate TRANSMITTAL FORM

Senate Document #:	09-10-24
PCC ID #:	N/A
Title:	Report of the Senate Ad Hoc Committee on Site Selection Processes
Presenter:	Gerald Miller, Chair of the Site Selection Processes Committee
Date of SEC Review:	April 6, 2010 & April 14, 2010
Date of Senate Review:	April 22, 2010
Voting (highlight one):	<ol style="list-style-type: none"> 1. On resolutions or recommendations one by one, or 2. In a single vote 3. To endorse entire report
Statement of Issue:	The goal of this report is to make recommendations for improving the University's site selection processes, particularly with regard to environmental matters.
Relevant Policy # & URL:	N/A
Recommendation:	<p>The Site Selection Processes Committee recognizes that the University is in a <u>new</u> era of environmental regulations, goals, expectations, and values. We have concluded that the processes for site selection and related facilities development have to take a corresponding step up to meet the University's environmental responsibilities. Our principal recommendation, Rec. 2, is that the University transform the current Architectural Design Standards Board (ADSB), an 11-member committee that now has four independent members, into an independent Facilities Review Committee (FRC) with a majority of the members being independent expert campus faculty and staff. It should integrate the current review functions of the ADSB with the responsibility for reviewing site selection proposals before they are added to the Facilities Master Plan and before they are put forward for capital funding or construction with non-State funds. Their review criteria should include the University's teaching, research, and service missions in our Strategic Plan and the University's adopted policies, standards, and practices. The FRC review process should be a regular continuing process with published agendas</p>

	<p>and opportunities for public input. The University is in the process of issuing a contract for the 2011 revision of the Facilities Master Plan for Board of Regents adoption in Sept. 2011. We recommend that the environmental consultants hired for this revision designate environmentally sensitive areas of the campus, prepare a set of review standards for initial siting proposals, a set of review standards to be met before projects are approved for State or other funding, and standards to be met for building in environmentally sensitive areas. These sets of standards will form a basis for the FRC project reviews. The SSPC also recommends the adoption of other “best practices” to further improve the development of University facilities, development efforts that have already changed our campus in many positive ways.</p>
Committee Work:	<p>The Ad Hoc Site Selection Processes Committee (SSPC) was formed in November 2009 and met for the first time on November 30th, 2009 to discuss their charge. In the months of December 2009 and January 2010 the SSPC reviewed all the testimony submitted to the Senate’s Campus Affairs Committee regarding the “wooded hillock” issue, reviewed the Facilities Master Plan, and met with a number of the administrators, staff, and members of various committees involved with the siting and the development of new facilities. On February 15th, 2010 the SSPC met with five of the most active members of the environmental group opposed to the siting of facilities at the “wooded hillock” location. On March 25th, 2010 the Committee held an open forum for members of the campus community to provide input on the Committee’s draft report. The SSPC incorporated comments and suggestions from this forum (or communicated by people who couldn’t attend the forum) into their final draft of the report. The Committee completed its work in early April 2010.</p>
Alternatives:	<p>The University’s site selection processes would remain as they are.</p>
Risks:	<p>The University’s site selection processes may not consistently meet environmental standards outlined in the University’s 2008 Strategic Plan and its Climate Action Plan.</p>
Financial Implications:	<p>There are no financial implications.</p>
Further Approvals Required:	<p>Senate Approval, Presidential Approval</p>

REPORT OF THE SENATE
AD HOC COMMITTEE ON SITE SELECTION PROCESSES

Prof. Matthew Bell, Mr. Willie Brown, Ms. Amanda Berger,
Mr. Brent Finagin, Prof. Emeritus Gerald Miller (Chair)
April 2nd, 2010

THE COMMITTEE'S CHARGE

The Committee was appointed by the University Senate following the concerns expressed to it about the decision to relocate service facilities from the part of the campus east of Route 1 to the site between the Comcast Center and University Boulevard known as “the wooded hillock.” The developer of the proposed East Campus Redevelopment Project, a new town center for College Park to be built with student housing, shops, and other facilities, had decided with the University’s assent to clear about ten acres of forest on the chosen site for the motor pool and other service facilities. The University Senate charged the Committee to make recommendations for improving the University’s site selection processes, particularly with regard to environmental matters, and to consider recommending changes in the composition of review committees. The full charge to the Committee is contained in Appendix A.

While the University has apparently solved the immediate problem of finding a place to relocate these facilities by purchasing the Washington Post Printing Plant and its surrounding land for these facilities, the University’s need for improved processes and the Committee’s charge remain.

THE COMMITTEE'S PROCESS

At the Committee’s first meeting, we reviewed our Charge, recognized the need to stick close to that Charge, and set our focus on reviewing the site selection and related facilities development processes in the light of the “best practices” available. The Committee has received and reviewed all the testimony submitted to the Senate’s Campus Affairs Committee that considered the wooded hillock issues before the appointment of our ad hoc Committee. We met first with a number of the administrators, staff, and members of various committees responsible for aspects of the development of new facilities and the siting of these facilities. We invited seven of the most active members of the environmental group opposed to the removal of trees from the wooded hillock and the siting of facilities in that location and five were able to accept our invitation and meet with us. A list of those who met with us is contained in Appendix B.

We have reviewed the Facilities Master Plan of 2001 and the 2007 - 2020 Facilities Master Plan Update (internally revised but not Board of Regents approved), which taken together we will refer to as the FMP. The FMP is the principal document governing the University’s facilities development and it provides a framework for the growth of the University’s facilities. The FMP and its processes are challenged by unanticipated opportunities for new facilities, by projects whose siting requirements have not yet been completely reviewed and approved (like the East Campus Redevelopment Project), or by gifts of external funding for facilities. We have discussed the FMP, its updating, and its processes with a number of the principal administrators responsible for carrying out these Plans. We have also reviewed the documents shared with the Committee by the members of the University community with whom we have met.

THE UNIVERSITY'S ENVIRONMENTAL COMMITMENTS

There is a striking and commendable “green” commitment shown in the FMP, quite clearly updated in coordination with the University’s 2008 Strategic Plan.

In May 2007, President Mote signed the **American College & University Presidents Climate Commitment**, a commitment that has now been signed by the Presidents of all the University System of Maryland (USM) campuses. The collaboration of the Office of Sustainability, the Center for Integrative Environmental Research, and the Department of Environmental Science & Technology has led to an evaluation of our current greenhouse gas emissions and a set of strategies for reducing these emissions as reported in the **Campus Sustainability Report 2008**. We have reviewed this Report, which begins by quoting the University Strategic Plan, 2008, p. 36,

“The University of Maryland will be widely recognized as a national model for a Green University. In ten years time, the University will have made substantial progress towards addressing energy issues. It will have slashed energy use, expanded green spaces, dramatically reduced its carbon footprint, and built and retrofitted buildings to strict environmental standards. The University will complement these concrete actions with its teaching, research, and development efforts in energy science and policy, smart growth, environmental mapping, sustainable agriculture, and other fields. As the third largest “city” in the State, the University will have a significant impact as a leader and showcase for environmental sustainability.”

On October 1st, 2009, President Mote announced to the University that the University Senate had endorsed the University’s first **Climate Action Plan** and that he had created a new **University Sustainability Council** to monitor and support the Climate Action Plan. This Council is chaired by the Vice President for Administrative Affairs, Prof. Ann Wylie.

THE SITE PLANNING PROCESS & RELATED PROCESSES: THE IMPORTANT PROCESS ISSUES

The precipitating issue for the creation of our Committee and our charge to recommend improvements in site selection processes was the selection of the wooded hillock site for the relocation of the motor pool and other service facilities from the East Campus Redevelopment area, a siting which would require the clearing of about 10 acres of forest. Members of the University community protested this selection and the planned destruction of part of this forest. They noted that this forest was used for teaching students about forests and about the many aspects of the regeneration of this forest following the tornado that hit the campus a decade ago. Their survey of the forest showed them its many ecological values.

There are two categories of site selections for University facilities, both essentially under the control of the **Facilities Council** (FC). The Facilities Council is chaired by the Senior Vice President for Academic Affairs and Provost (hereinafter abbreviated to “Provost”) and the FC makes recommendations to and reports to the President on facility development matters.

The majority of site selections involve facility development projects that are proposed to the Provost, considered by a variety of sub-groups of the FC and by the Facilities Management staff in Administrative Affairs, approved by the FC and recommended to the President for incorporation into the Facilities Master Plan (FMP). (Appendix C gives a short summary of the number, size, and in some categories the estimated cost, of many of the projects included in the FMP.) This process takes some time, the time taken is variable, and not all initiatives survive. The FMP is periodically revised and has its own approval process through the President and the Board of Regents (BOR). The next major revision of the FMP is about to begin – and the plans incorporate an extensive array of public announcements and opportunities for public input. A prospective site is almost always associated with a proposed facility when it is added to the FMP. After it is incorporated in the FMP, changing the site requires the same approvals above the campus level. While the FMP incorporates anticipated time frames for the various projects in its lists, the President works with the USM and the Board of

Regents in prioritizing the annual requests for capital funding of new facilities. Priorities for pending projects can and do change from year to year.

The second category of site selections encompasses projects that are not in the Facilities Master Plan or for which the concept is in the FMP but the details, including siting, are missing or significantly incomplete. The East Campus Redevelopment Plan to create a new town center for College Park with shops and student housing and other non-industrial facilities is an example where the concept appears in the BOR-approved 2001 FMP but many details including siting of the facilities to be relocated from the East Campus are not present. The current project involving the routing of the proposed Purple Line through the campus is an example of a major project which appears nowhere in the BOR-approved FMP. These projects do not have the advantage of the usually long period of study that the normal projects go through. The site selection and related processes for these projects that do not have site selection completed, approved, and incorporated in the Board of Regents-approved FMP are and have been *ad hoc* processes. They make some use of the experience, expertise, and knowledge of the administrators, staff, and committees involved in the normal class of projects that are in the FMP. The goal of re-developing the East Campus area as just described may have some opponents, but that goal has received very much support and the goal does not really impinge on our charge. Where the problem lies is with the selection process for siting of facilities.

Issue 1: The important issues in the University's site selection and related facilities development processes require deep and thorough review very early in these processes.

The decision to offer the site containing the wooded hillock along with several other sites to the East Campus project developers for relocating the current facilities in the East Campus area was made in September 2006 by Vice Presidents Destler and Duncan. On May 3, 2007, the FC approved three of the four specific sites for relocation of East Campus facilities. Alternative relocation sites for Shuttle-UM were requested. On January 24, 2008, the FC approved the Lot 4i site for the relocation of Shuttle-UM and the Department of Public Safety. The first environmental study of the use of the selected wooded hillock site for facility relocation was done in March, 2009, two and a half years after the offer to the developers and more than a year after the FC approval of the fourth of the four relocation sites.

We have reviewed the brief rationale prepared by the University that resulted in this 2006 offer to the developers. The rationale is not based on a deep and thorough review, including environmental review, of all the sites offered to the developer. The rationale does reflect the facts that

- our University has very many reasons and pressures for growth in facilities,
- the land available for new facilities is limited,
- there are many conflicting considerations that arise in site planning, and
- in virtually all such cases, there is not a perfect solution with no negative consequences.

Our Committee recognizes that the President has the responsibility to make these difficult decisions and that many, perhaps most of these decisions will be hard decisions that cannot satisfy all legitimate concerns.

The East Campus Redevelopment Project, including its relocation of facilities, has not been the only large project where significant siting work had to be done without the benefit of the processes normally embedded in the development of the project and the project's inclusion in the FMP. The siting of the Clarice Smith Performing Arts Center (CSPAC) came about through the offer of significant financial support from Prince Georges County, contingent on its location being visible

from University Boulevard, as well as by a visit to the University by Governor Schaefer, who likewise showed interest in supporting the project and in its site location. As it neared completion, the Smith family showed significant interest in the project and contributed significantly to its enhancement. Our Committee learned that at one time the siting of CSPAC was to be on the site recently chosen by the developer for the motor pool and related facilities, very visible from University Boulevard. A chance meeting with President Kirwan of a well-prepared faculty member with site-planning expertise led to a reconsideration of that CSPAC siting. The site on which it was built does fulfill the County requirement and spared the wooded site. The *ad hoc* site selection process for the Clarice Smith Center, too, clearly had its problems.

A current project not present in the FMP involves running the proposed Purple Line (an above-ground light rail public transportation system) through the campus. This project, too, has many siting and related facility development issues – and the Committee is aware of a variety of serious concerns with how these siting issues are to be resolved. As in the case of CSPAC, significant governmental entities outside the University are involved, making siting decisions and related facility development issues more complicated than just resolving internal issues would be.

Conclusion 1: The University needs review standards and a well-structured review process that it employs from the beginning of facility development projects, including standards and a process for site selection. These processes must recognize and address the important University needs, opportunities, concerns, and commitments, including the environmental and sustainability concerns and commitments on which the University has taken a strong leadership position. These processes must be utilized for ALL University facility projects, the FMP projects and the non-FMP projects alike. The projects already in the Facilities Master Plan should be periodically reviewed with regard to these criteria and updated.

Issue 2: The University’s site selection and related facilities development processes require a broad and effective review that ensures that the University’s missions in teaching, research, and service are considered carefully and are seen to be considered carefully by the faculty, staff, and students of the University.

We have examined the composition of the various committees that are, or should be, involved in developing and siting new facilities. The principal high-level body involved in facilities issues is the Facilities Council. The FC works with its sub-groups,

- The Facilities Advisory Committee (FAC),
- a set of District Committees that are concerned with facilities development in the various geographical districts of the campus, and
- the Architectural Design Standards Board.

The Facilities Management staff in Administrative Affairs works on facilities development and supports the work of the FC and its sub-groups. These committees and their memberships are shown below.

The **Facilities Council** (FC) is chaired by the Provost. It is the body that makes the recommendations concerning facilities to the President of the University.

Facilities Council Membership:

Provost Nariman Farvardin (Chair)
VP Administration Ann Wylie
VP Research Melvin Bernstein

Director Brenda Testa (Facilities Planning)
Assoc. VP Frank Brewer (Facilities Management)
Director Carlo Colella (Capital Projects)

VP Student Affairs Linda Clement
VP University Relations Brodie Remington
VP Information Tech Jeffrey Huskamp
Prof. Steve Hurtt (Architecture)

Asst. VP Administration Julie Phelps
Attorney Edward Maginnis (Legal Affairs)
Dean Jennifer Preece (Council of Deans)
Prof. Linda Mabbs (Senate Chair-elect)

The **Facilities Advisory Committee (FAC)**. Frank Brewer stated that they take a “University Viewpoint” on projects and their siting.

This large committee is composed of representatives of all the colleges and divisions, usually assistant deans and assistant vice presidents. It also includes a representative of Intercollegiate Athletics and of the Student Government Association. Finally it includes a number of Facility Management directors. Frank Brewer chairs this committee. It is a sub-committee of the FC and it advises the FC. While this committee discusses a variety of facilities matters, its primary focus is on building renovation projects and new capital construction projects. All renovation projects seeking Facilities Council (FC) funding first come to this committee for discussion and vetting. The committee recommends (or not) projects to the FC for funding. Further it reviews, discusses and advises the FC with regard to the University's annual Capital Budget Request. Any new project which is proposed to be added to this Request, first comes to FAC for review and discussion. FAC then advises the FC in this regard.

District Committees. The East Campus District Committee is the committee that has been involved in the East Campus Redevelopment Project. The district committees are led by and involve a variety of Facilities Management staff and they include stakeholders in that geographical area of the campus. They work on facility planning issues in their assigned area of the campus and advise the FC.

East Campus District Subcommittee (ECDS) membership

Frank Brewer (Chair)	Pat Mielke (Student Affairs)
Jack Baker (Operations & Maintenance)	Joe Nagro (City Manager, College Park)
Karen Breen (Business Services)	Andrew Rose (SGA President)
Carlo Colella (Architecture, Engr., & Construction)	Terry Schum (College Park Planning Director)
Ken Krouse (Police)	Brenda Testa (Facilities Planning)
Vicky Levy (Academic Affairs)	

The **Architectural Design Standards Board (ADSB)** is an eleven-member Board composed mostly of architects, landscape architects, and engineers from across the campus. It is their responsibility to review the schematic design proposals for all new campus buildings. They are also charged with reviewing any proposed change to campus buildings and grounds which will alter the external appearance of the campus. This would include: signage, lighting, site furniture, etc. Their job is to help manage the exterior appearance of the campus to insure that there is a coherent and thoughtful approach to its development which is consistent both with its history and its aspirations. Frank Brewer chairs the Board and it is a subcommittee of the Facilities Council. Historically the FC has shown considerable deference to the opinion of ADSB when determining whether to approve the schematic design of a new campus building or building addition.

Architectural Design Standards Board (ADSB) Membership

Frank Brewer, Assoc. VP, Fac. Management (Chair)	Brian Kelly, Assoc. Prof. (Architecture)
Carlo Colella, Director, Capital Projects	William Mallari, FM, Coordinator, Campus Develop.
Louis Fisher, Asst. Dir., FM, Arch., Engr., & Const.	John Sullivan, Assoc. Prof. (Plant Sci. & Land. Arch.)
Gay Gullickson, Prof. (History)	Brenda Testa, FM, Director of Facilities Planning
Steve Hurtt, Prof. (Architecture)	Jocelyn Joiner-Fleming, FM, Manager, Arch., Engr., & Const.
Jack Baker, Dir., Operations & Maintenance	

The **Sustainability Council** was created in the Fall of 2009 by President Mote. It is not part of or a sub-group of the Facilities Council, and it reports to the Vice President for Administrative Affairs.

Sustainability Council Membership

Ann Wylie, VP Administrative Affairs (Chair)	Monette Bailey, Sen. Writer/Ed., Univ. Relations
Sally Koblinsky, Asst. President & Chief of Staff	Allen Davis, Prof., Civil & Env. Engr. (2-yr. term)

Linda Clement, VP Student Affairs
Mahlon Straszheim, Assoc. Provost
Mary Ann Ottinger, Assoc. VP for Research
John Farley, Asst. VP for Admin. Affairs
Chris Arkell, Assoc. Director, OIT
Scott Lupin, Assoc. Dir., Env. Safety & Director
of the Sustainability Office

Bruce James, Prof. & Dir., Env. Sci. & Policy (2-yr. term)
Karen Lips, Assoc. Prof, Biology (2-yr. term)
Joanna Calabrese, UG Student, Env. Sci. & Policy (1-yr. term)
Ramy Serour, G Student, Marine-Estuarine Env. Sci. (1-yr. term)
Joan Kowal, Energy Manager, FM
Matthias Ruth, Prof., Public Policy, & Director, Center for
Integrative Environmental Research

The **Facilities Council** is a very high-level administrative committee as evidenced by its composition. Its composition looks more like a committee devoted to implementation than to the breadth of review. Given the low representation of “outsiders” – those without implementation responsibilities – it appears that it would be difficult for an “outsider” to sway the Facilities Council on an issue. We have received that view in our interviews.

For the Facilities Council and its sub-groups, many of the same University administrators and other employees appear repeatedly. This is a natural consequence of the current structure and appears to be an effort to coordinate implementation, itself a very worthy goal in a large University. But it does rely heavily on a small group of key people.

The **Facilities Advisory Committee** is a large committee with an extensive list of members of the administrative staff of the colleges and other divisions. We do not under-rate their input into the review process for which the Facilities Council is responsible, but we do note that this, too, is input primarily from administrators with little input directly from students and, apparently, no input from non-administrative faculty members.

The **East Campus District Subcommittee** does wisely include the College Park City Manager and the College Park Planning Director. The Provost’s facilities staff person and the SGA President also sit on this subcommittee with other important administrators, primarily from Facilities Management.

The **Architectural Design Standards Board** does have four of its eleven members from academic departments, each having appropriate knowledge, experience, and expertise. This is the broadest of the sub-groups of the Facilities Council. From our interviews, it is evident that the original intent of ADSB was to draw up design standards for the University, but that it has evolved more as a review board itself. It also seems clear from our interviews that the matters referred to ADSB are discretionary to an extent and that the University could benefit by ADSB review being an integral part of the University’s site selection and related facility development processes.

The **Sustainability Council** has a broad mandate that extends well into many kinds of program operations throughout the University as well as being an advisory body that needs to be utilized in site selection and related facility development processes. There is a lack of design expertise in architecture and landscape on the Sustainability Council, valuable expertise for comprehensive advice on many sustainability issues on the campus – including those associated with site planning and facility development. The appointment of the Vice President of Administrative Affairs as chair of this Council clearly reflects the importance of the University’s sustainability initiative. At this time, there is no direct reporting responsibility of the Sustainability Council to the **Facilities Council**. For siting and facility development processes, the Council needs to have a direct reporting responsibility to the Facilities Council as well as the other reporting responsibilities the President assigns to the Council.

In our discussion with the leadership of Facilities Management about these siting and related processes and about the responses to the siting of the motor pool and related facilities on the wooded hillock, they said that they were quite surprised by the reaction of the University community. It is also evident that public awareness of the decisions and the siting options available were slow in

coming. But when public awareness did come, the plans for the utilization of one-third of this site were well advanced.

Conclusion 2: The University needs a broader and more effective review process for site selection and related facilities development processes.

- a. The University does make good use of a very limited number of experts outside Facilities Management in the University in its site selection and related facilities development processes, but it has much more expertise available that could be utilized in improving these processes.**
- b. The Sustainability Council should advise the Facilities Council on site planning and related facility development projects and the Sustainability Council's membership should include design expertise in architecture and landscape architecture.**
- c. The perception of the current site selection and related facilities development processes is that the University community is not kept broadly informed. It is clearly desirable that the public be invited to become informed and to communicate their concerns in a timely manner that would avoid discovery of significant issues late in these processes.**

While our Committee did not have the resources or the time to do a comprehensive survey of site selection and related facility development processes at American universities, we have learned about different models to address the concerns listed above. One model is the "University or Campus Architect," usually appointed at a very senior level in the university and charged with providing both short-term and long-term professional leadership in setting high-quality standards for all scales of design from renovation and new construction projects to campus master plans. This mode of operation varies according to the institution. For example, Princeton University, world famous for the outstanding quality of its academic programs, is also very well known for its excellence in campus planning and building design. At Princeton, the University Architect advises the President directly on design matters. Georgetown University has a University Architect who advises both the President and the Director of Facilities. At George Mason University, the University Architect reports to the Director of Facilities who reports to a campus Vice President. George Mason also recently established a sustainability coordinator, educated as a landscape architect, to work on campus building and master planning projects.

Conclusion 3: Greater advocacy for excellence in design at all scales of the site selection and planning process should be supported, both within the current facilities staff and via the current project review and approval structure on the campus. This may be pursued via the establishment of a University or Campus Architect position or within the current operational structure.

THE U. S. DEPARTMENT OF ENERGY PROCESSES: "BEST PRACTICES"

All large organizations face similar issues in developing new facilities and choosing their sites wisely. We were fortunate that the U.S. Department of Energy's Office of Science is located in nearby Germantown, MD, that they have a very highly regarded project assessment program, and that we could learn about their project assessment program and methods. A more detailed description of how and why they do their assessments the way they do is contained in Appendix D, together with "DOE Best Practices" that we have found in their methods.

The DOE process can't be "photocopied" and put into place at College Park because of the considerable differences in structure, funding, and governance of our University relative to those of

DOE. But the DOE process does embody sound planning principles and Best Practices that the University should adopt. We base our Recommendations on the University's needs and, in part, on these sound planning principles and "Best Practices."

DOE Best Practices:

- A. Use independent experts, individuals without a stake in or job responsibility for the project, to review the important aspects of proposed projects.
- B. Do necessary contingency planning and have contingency funds in reserve or plan for contingency cuts to meet budget.
- C. Adopt and use a good checklist of responsibilities. The owner has many responsibilities including the responsibility of determining the site of a proposed project.
- D. Consideration of the environmental aspects of a project is and must be an integral part of the initial planning for a new facility and its siting – and a continuing responsibility through project completion.

The Application of Best Practices to the University's Site Selection and Related Facilities Development Processes

Best Practices, A: The University not only "could" but SHOULD utilize independent experts, individuals without a stake in or job responsibility for the project, in independent reviews of University projects, benefitting from the wealth of environmental science, architectural, engineering, landscape design, and management talent already present in our University.

Best Practices, B: The University needs to do contingency planning and have contingency funds in reserve or contingency cuts ready for a facility's development program.

In the relocation of East Campus facilities, the developer's final estimated value of \$40,000,000 for the East Campus land to be cleared was the limit allowed for the construction and relocation of the motor pool and other facilities. That was not enough to build the facilities desired. To stay within the \$40,000,000 budget for relocation, the developer planned large asphalt parking areas rather than a parking structure, for example. Some comments our Committee received indicated that the \$40,000,000 budget was much too low for building the relocated facilities the University should have.

Best Practices, C: Adopt and use a good checklist of responsibilities. At or near the top of the list should be, "It is the owner's responsibility to site the project."

DOE uses **Characteristics of Successful Megaprojects**, published by the National Research Council of the National Academy of Sciences in 2000, and produced by NRC under contract with DOE. This booklet has a checklist with 92 items for use by owners, contractors, supervisors, and assessment personnel. The very first checklist item is:

Project sponsors know what they need and can afford, where they want to locate the project, and when it must be ready for use or otherwise completed. The project has a purpose, and the benefits are clearly defined and understood by all participants.

In the siting of the relocated facilities on the wooded hillock, the developer was given the option of choosing that location from among several sites offered by the University. two and a half years before the University did an environmental assessment of the wooded hillock. University approval of the developer-selected sites was completed a year before the University's environmental assessment.

The DOE/NRC checklist is extensive and covers many other aspects besides siting and related development processes, but there are useful checklist items for the University's use for our siting and

facilities development processes.

Best Practices, D: Consideration of the environmental aspects of a project are and must be an integral part of the University's initial planning for a new facility and its siting.

That wasn't a necessity, at least to the degree required now, decades ago, or maybe even at the dawn of this century. But it certainly is now. The President of the University has recognized this increased responsibility through his forceful actions on the Climate Action Plan and on the creation of the Sustainability Council.

We learned that usually the University relies on the contractor and/or sub-contractors to comply with environmental requirements and to obtain the necessary permits for a project. Obtaining construction permits is a normal contractor responsibility, but taking ownership of the environmental issues is the University's stewardship responsibility.

FINDINGS

The Committee found the administrative staff with whom we talked to be open and direct in these discussions of matters of some controversy. All expressed genuine interest in improving the design and review processes on campus and in pursuing excellence in the design of much-needed University facilities. It is clear that the University has dedicated and committed professionals with constructive attitudes and approaches to problem solving. We also recognize that the University has made and continues to make significant progress in campus planning and providing better facilities with less than optimum funding through the efforts of our own facilities staff and those of a relatively small number of faculty members who participate in key committees.

The Committee also had constructive discussions with the members of the University community who opposed the siting of East Campus facilities on the wooded hillock. They share the "green goals" embodied in the University's Strategic Plan. We recognize that these community members also have some environmental and sustainability concerns about the use of the Washington Post Printing Plant and its site that have been purchased to house the facilities to be relocated. They are looking forward to the utilization of improved processes.

Not only is the University in a relatively new era of high concern for the environment, but as the President said in his message to the University on February 15th, we have become a much better University during the last twelve years and we have become a University with much higher expectations for our performance. We know how hard our Presidents, Vice Presidents, Deans, and Chairs; our staff members in our academic, administrative, and support units; our faculty members; our students; and our external communities including alumni and supporters have worked and contributed to the growth in the quality of our educational efforts in teaching and research and of the University's services provided on campus, within the state, and to the nation and the global community.

Meeting these high expectations of the University community is a challenge for those currently responsible for site selection and related facility development processes but this is a challenge that the University can meet with the University's leadership, talent, and resources. It's true that the University has stumbled on some siting issues, but there is no doubt that the University has the determination to improve its consideration of these issues and will do so.

CONCLUSIONS AND RECOMMENDATIONS

Our recommendations are principled and descriptive, and we are not attempting to give detailed prescriptive recommendations that could be adopted and implemented overnight on the basis of our

short review of the issues in our charge. We present two options for structuring the University's approach to improving the site selection and related facilities development processes.

We also recognize the fact that those charged with leadership from the President on down have their executive responsibilities. They have a need for creating their own administrative teams, implementation committees, and staff structures – and need to continue to do so. Neither a committee such as ours or the Senate should prescribe such essentially administrative details.

We have concluded, in fact, that adding an extra faculty member, staff member, and student (or two) to the Facilities Council or other such administrative body will not change the nature of such a body or provide the needed change in how the University responds to siting and to developing new and needed facilities. Adding a reporting responsibility of the Sustainability Council would be a positive step, but by itself will also not change these processes, or the results of these processes, enough.

In addition to the four Best Practices outlined above, improved site selection and related facilities development processes will require

- a set of standards, including environmental review standards, to be met for placing a site selection in the Facilities Master Plan, and
- a set of standards, including environmental review standards, for advancing a proposed project for State capital funding or for building with other funds.

The University is in the process of undertaking the development of the 2011 FMP – to be approved by the Board of Regents in September, 2011. Part of this effort will involve hiring of appropriate environmental specialists capable of evaluating the environmental issues associated with the various highly developed, partially developed, and undeveloped areas of the campus. The standards for review of environmental issues have risen dramatically over the last decade – as have the University's environmental goals and commitments. Meeting the University's goals and commitments requires the use of current environmental standards which likely will increase during the decade-long life of each FMP.

In the following Recommendations and accompanying discussion, we will use the word “independent” in two related senses. When applied to an individual, “independent” means an individual chosen on the basis that he or she does not have a position which involves a siting or other facilities-related function being reviewed; a landscape architect paid or assigned, full-time or part-time, to campus facilities planning and/or operations in this area is not considered independent while a faculty member whose professional expertise is in landscape architecture and is not paid for or assigned such campus facilities planning or operational functions is independent. When applied to a committee, “independent” means appointed by the President with the advice of the Senate Executive Committee and charged with a well-defined reporting responsibility.

RECOMMENDATION 1:

The University should utilize the experts and the processes of the forthcoming revision of the Facilities Master Plan of 2001 (that will become the Facilities Master Plan of 2011 upon approval by the Board of Regents) to:

- **thoroughly review and describe the environmental issues and considerations involved in facilities siting and development on the campus, paying particular attention to environmentally sensitive areas that should be clearly identified in the Facilities Master Plan,**
- **provide a set of review standards, including environmental review standards, to be met**

for placing a site in the Facilities Master Plan,

- **provide a set of review standards, including environmental review standards, to be met before State funding is requested or, for facilities funded by other funds, before siting is finalized and construction is initiated, and**
- **provide a set of environmental review standards that should be met before sites in areas of the campus designated as environmentally sensitive in the Facilities Master Plan are approved for siting a new facility.**

If the current funding for the revision of the 2001 FMP (reportedly about the same as that devoted to the revision of the 1991 FMP nearly a decade ago) isn't enough to cover this work, then this should be regarded as an example where contingency funding is needed and should be found.

RECOMMENDATION 2: (AS AMENDED)

The University should have an independent Facilities Site Review Committee that reviews site selection and related facility development proposals, policies, practices, and standards and advises the Facilities Council on them. The Committee should make recommendations concerning these proposals to the Facilities Council before they are recommended by the Facilities Council for inclusion in the Facilities Master Plan and before they are recommended for inclusion in the Capital Budget, the System Funded Construction Program or approved for construction with other funds. The Committee should make recommendations to the Facilities Council for updating and improving policies, practices, and standards as the University's needs and goals advance and as applicable regulations change.

The charge to the Committee should require a consistent, transparent, open and public process for considering and for recommending facility siting and other related facility development actions to the Facilities Council for all projects, those in the Facilities Master Plan and those that are not. The Facilities Review Committee's review should be early in the facility development process, so that problems are found and issues resolved before costs mount and changing course becomes very difficult. The criteria used to evaluate the facility siting and related facility development actions must include

- **the missions of teaching, research, and service as stated in the University's current Strategic Plan, and**
- **the policies, practices, and standards adopted by the University, including those policies, practices, and standards pertaining to the environment and sustainability. The Facilities Site Review Committee's review process, its agenda, and the schedule of public hearings should be publicized and public comment should be invited. The Facilities Site Review Committee should keep a written record of its activities and its recommendations.**

The Facilities Site Review Committee should be independent from the Architectural Design Standards Board and have an independent chair. A solid majority of its voting members should also be independent faculty and staff members with appropriate experience and professional expertise. The committee membership should include an independent undergraduate student and an independent graduate student, both with

voting rights. The Director of the Department of Environmental Safety (DES) will also be a voting member of the Facilities Site Review Committee. For facility projects associated with a member's unit, that committee member should absent himself or herself from the committee discussion and from the vote on the Committee's recommendation.

The Facilities Site Review Committee should also provide for appropriate public notice to the University community about projects being considered and the opportunity for public input. As the independent, expert, standing review committee, it is in a position to react quickly when necessary.

On environmental matters, issues can and will arise between conception of the facility and the decision-making necessary to build the facility

- for projects that are already in the FMP (in some cases, perhaps for a decade or longer) and for those projects that are not in the FMP,
- for projects in campus areas with many facilities already present as well as for campus areas with few facilities or none at all,
- for large projects and for small projects, and
- for State-funded projects as well as for projects to be built with other funds.

For these reasons, we strongly recommend that all project proposals be reviewed by the Facilities Site Review Committee.

The composition of the Facilities Site Review Committee is similar to the composition requirement for the Academic Planning Advisory Committee (APAC), which is required to have a majority of its members be non-administrative faculty members. It conforms to the DOE principle of independent review by capable individuals who don't have a stake in the project other than advancing the quality of the campus environment. The requirement for members absenting themselves from discussion of or voting on Facilities Site Review Committee actions involving their own unit is analogous to that followed by members of the Campus Promotion & Tenure Committee when candidates from their academic unit are being considered. (Outside advisory membership for the Committee may be sought if projects being reviewed exclude a significant number of the members with professional expertise.) The membership of the Facilities Site Review Committee should draw on the expertise, experience, and talent of the faculty and staff of our University and should include participation by students.

Similar to those of community planning/zoning boards, the charge to the Facilities Site Review Committee includes requirements for public meetings, written criteria, early review, and written records of actions.

The credibility of the Facilities Site Review Committee will depend upon the quality of the appointments, the independence of the Committee, the openness of the process, the quality of their reviews, and the influence of their reviews in creating the best University facilities and advancing excellence at all scales of design across the campus.

RECOMMENDATION 3:

The University should review the National Research Council - National Academy of Sciences checklist for facilities development, choose the items appropriate for the structure and governance of the University and for the local, state, and federal regulations which apply to the University, modify items as appropriate and necessary, and employ them in the development and review of facility siting and related facility development within all University units involved in such activities.

This task of reviewing checklist items and recommending adoption of appropriate items for our facility siting and related development processes to the Facilities Council fits into the “standards” portion of the charge to the Facilities Review Committee.

RECOMMENDATION 4:

The University should utilize the Sustainability Council, and the Sustainability Office, in the preparation and review of proposals for facility siting and for related facility development.

The Sustainability Council should have an independent representative with professional expertise as a voting member of the Facilities Review Committee.

Conclusion 2, sub-paragraph b, above, strongly suggests augmentation of the design expertise on the Sustainability Council.

RECOMMENDATION 5:

The Senior Vice President for Academic Affairs & Provost should consider adding the independent Chair of the Facilities Review Committee and an independent member of the Sustainability Council with appropriate professional expertise to the Facilities Council.

RECOMMENDATION 6:

The issue of realistic contingency planning and budgeting is a continuing issue for review by appropriate bodies mentioned in this Report. A fresh review by a newly constituted Facilities Review Committee would benefit the University.

The University needs such planning and budgeting to utilize expertise, outside the University if necessary, to verify and validate evaluations and plans provided by outside parties to protect the University’s interests.

ACKNOWLEDGMENTS

We very much appreciate the openness, the frank expression of views, and the constructive advice by all of the members of the University community who were interviewed by the Committee, all those who participated in the Campus Forum, and all those who submitted documents either directly to the Committee or to the Senate’s Campus Affairs Committee that preceded us in considering some of these issues.

We also express our very deep appreciation to Mr. Daniel Lehman of the U.S. Department of Energy for his very helpful advice, perspectives, and publications.

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Appendix A

University Senate Charge

Date: November 23, 2009

To: Gerald Miller, Chair, Ad Hoc Committee on Site Selection Processes

From: Elise Miller-Hooks, Chair, University Senate

Subject: Review of the Decision-Making Process Regarding Site Selection for Construction Projects

Senate Document #: 09-10-24

Deadline: April 2, 2010

The Senate Executive Committee (SEC) requests that the Ad Hoc Committee on Site Selection Processes review the decision-making process regarding the current practice of site selection for construction projects.

Specifically:

1. Review the current status of the overall decision-making process with particular emphasis on environmental concerns.
2. Review whether the decision-making process is conducive to achieving the goals outlined in the University's guiding documents (e.g. Climate Action Plan and the Facilities Master Plan);
3. Review whether all campus constituencies, including faculty, staff, undergraduate and graduate students, are adequately represented on review committees responsible for recommending site selection and comment on whether the membership of these committees should be altered;
4. Review concerns expressed by campus constituencies, pertaining to the current site selection method, by reviewing documentation submitted to the Campus Affairs Committee, meeting with the stakeholders on all sides of the relevant issues and by holding an open forum to hear concerns: and
5. Make recommendations on how to incorporate campus input on these decisions and how to increase transparency during the selection process.

As this matter is time sensitive, we ask that you submit your report and recommendations to the Senate Office no later than April 2, 2010. If you have questions or need assistance, please contact Reka Monfort in the Senate Office, extension 5-5804.

Appendix B

Individuals Interviewed by the Committee

Mr. Frank Brewer, Associate Vice President, Facilities Management
Mr. Carlo Colella, Director, Capital Projects, Facilities Management
Ms. Brenda Testa, Director, Facilities Planning, Facilities Management
Prof. Steven Hurtt, Architecture, Planning, & Preservation, Member, Facilities Council, and Member,
Architectural Design & Standards Board
Mr. Scott Lupin, Associate Director, Environmental Safety, and Director, Sustainability Office
Prof. Marla McIntosh, Plant Sciences & Landscape Architecture
Prof. Stephen Prince, Geography
Assoc. Prof. Michelle Dudash, Biology
Mr. Bob Hayes, ENGR, undergraduate student
Mr. Alex Weissman, ENGR, graduate student

Appendix C

The Facilities Master Plan Projects List, 2011 and after

For the period "2011 and after," the Facilities Master Plan lists include:

19 new Academic Facilities for designated purposes (3 not yet sited) involving 1,790,850 sq. ft., costing \$780,200,000

19 renovations of Academic facilities involving 1,470,949 sq. ft., costing \$372,000,000

7 new Auxiliary Enterprise Facilities involving 877,400 sq. ft., costing \$131,200,000

19 renovations of Auxiliary Enterprise Facilities involving 1,525,716 sq. ft., costing \$223,200,000

38 new Facilities for primarily academic facilities, special facilities, residential facilities, and a parking facility on as yet un-designated sites, involving 3,585,900 sq. ft.

plus

other, generally smaller, groupings of building projects, including the East Campus project as a single item,

57 planned demolitions/removals,

10 Infrastructure Improvements, and

10 Landscape Improvements.

THE DEPARTMENT OF ENERGY PROJECT ASSESSMENT REVIEW PROCESSES

All large organizations face similar issues in developing new facilities and choosing their sites wisely. We were fortunate that the U.S. Department of Energy's Office of Science is located in nearby Germantown, MD and that we could learn about their project assessment program and methods. On January 4th, 2010, Dr. Miller had an extended and very helpful meeting with Mr. Daniel Lehman, P.E., Director of the Office of Project Assessment (OPA) of DOE's Office of Science (SC). Mr. Lehman and his office have a very highly regarded assessment process and they are responsible for the assessment of all facility development activities at the 18 DOE national laboratories, including Oak Ridge, Argonne, Thomas Jefferson, and Brookhaven National Labs. Mr. Lehman provided copies of a number of DOE documents and they have been shared with the Committee.

We were very fortunate that we were able to quickly find an excellent review process in place at DOE. **Independent Review.** One principal key to the success of the DOE assessment process is independent review. They have their Independent Review Handbook (May, 2007) outlining their review process that brings scientific, engineering, management, and construction experts from other national labs, and sometimes from academic institutions, to conduct periodic technical, cost, schedule, and management peer reviews, usually on a semi-annual basis.

"Philosophy: The overall purpose of independent review is to determine, by a non-proponent body, whether the scope of programs, projects, or activities; the underlying assumptions regarding technology and management; the cost and schedule baselines; and the contingency provisions are valid and credible within the budgetary and administrative constraints under which DOE must function."

"Reviews conducted by the OPA are intended to reduce the risk of project failure by identifying existing and potential problems in a timely manner so that adequate resolution is possible. These reviews assist the field in successfully completing the project, as well as identify areas where SC management needs to focus additional resources to be successful. ..."

"Objectives: ... The independent review of a project is to be of sufficient detail, using a graded approach, to permit an objective independent reviewer to reach a supportable conclusion about the project's justification in light of the current mission of the DOE program sponsor."

Contingency Planning. A second key factor in DOE's successful project assessment practices is contingency planning. DOE plans on a 30 - 40% contingency fund based on the estimated cost for high technology projects, a 15 - 20% contingency fund for low technology projects, and as low as a 10% contingency fund for "simple" projects.

Checklists. Mr. Lehman's Office of Project Assessment makes much use of checklists in their project assessment process, relying on **Characteristics of Successful Megaprojects**, published by the National Research Council of the National Academy of Sciences in 2000, and produced by NRC under contract with DOE. This booklet has a checklist with 92 items for use by owners, contractors, supervisors, and assessment personnel. The very first checklist item is, for example:

Project sponsors know what they need and can afford, where they want to locate the project, and when it must be ready for use or otherwise completed. The project has a purpose, and the benefits are clearly defined and understood by all participants.

In addition to

- what is needed,

- what is affordable, and
- where it is to be located,

the checklist items raise issues concerning

- purpose(s),
- who the stakeholders are (not necessarily easy to define in a university community),
- communication (including to the public),
- input from outside the proponents,
- the environment,
- regulatory issues,
- geology,
- user/owner culture and rules, and
- many references to contingencies

Interestingly, a decade after the publication of this NRC booklet devoted to a checklist for building facilities and three weeks after the meeting with Mr. Lehman, ***The Checklist Manifesto: How To Get Things Right***, by Atul Gawande, M.D., hit the best seller list of the New York Times. Dr. Gawande has introduced checklists to radically improve surgical results in the U.S. – and globally through the World Health Organization – but his book discusses the successful and necessary use of checklists in construction, engineering, and in the remarkable landing of a jet plane full of passengers in the Hudson River last year. His central thesis is that “the volume and complexity of what we know has exceeded our individual ability to deliver its benefits correctly, safely, or reliably.” His response is checklists. Checklists are powerful tools. They are available. We need to use them.

Considering Environmental Issues. Environmental issues are required to be addressed early and often in the five-step DOE process. This process begins with the initial consideration of an idea for a new or major renovation of a facility where the initial support comes from the organization considering the project:

<u>Phase</u>	<u>Critical Decision</u>
Pre-conceptual Planning	CD-0, Approve Mission Need
Conceptual Design	CD-1, Approve Alternative Selection & Cost Range
Preliminary Design	CD-2, Approve Performance Baseline (and go to Congress for money)
Final Design	CD-3, Approve Start of Construction
Construction	CD-4, Approve Start of Operations/Project Completion

Before Critical Decision-2 is made, before DOE requests funds from Congress, the environmental review must be completed. In a 2009 project at the Thomas Jefferson Laboratory, the National Environmental Policy Act compliance determination was approved four months before the assessment site visit was made that led to the CD-2 approval for the proposed facility.

Once a DOE project moves forward from this point, Project Directors hold monthly meetings with Environment, Safety and Health and project staff for coordination and integration purposes. “This is considered a best practice.”

The five-step (CD-0 to CD-4) DOE schedule is not part of our recommendations, but setting the proper timing for doing environmental review (and following through as the project progresses) are.

DOE Best Practices:

- A. Use independent experts, individuals without a stake in or job responsibility for the project, to review the important aspects of proposed projects.**
- B. Do necessary contingency planning and have contingency funds in reserve or plan for contingency cuts to meet budget.**
- C. Adopt and use a good checklist of responsibilities. The owner has many responsibilities including the responsibility of determining the site of a proposed project.**
- D. Consideration of the environmental aspects of a project is and must be an integral part of the initial planning for a new facility and its siting – and a continuing responsibility through project completion.**