


Strategic Facilities Planning
For Colleges and Universities

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The concept of Strategic Facilities Planning ("SFP") was first developed for the General Electric Corporation by the author in 1982. The basic concept of Strategic Facilities Planning is that of strategic planning related to facilities and real estate being an extension or component of an organization's periodic business/institutional planning.

An SFP is not a physical plan nor a master plan, though in some instances the SFP might involve pre-design conceptual plans for facility and real estate activities. SFP issues may range from converting, up-dating, demolishing or expanding facilities to building or acquiring new facilities, to acquiring or disposing of real estate. The process for developing an SFP involves determining that proposed and existing facilities and real estate holdings or commitments are financially justified and operationally required.

Colleges and universities usually undertake major planning on an annual cycle. The four main elements of planning related to facilities and real estate are outlined below. They are best done, if feasible, in the sequence listed below.

The above forms of planning are defined on the following pages. See note on Best First Steps in Implementing a Design and Construction Program on page 9.

Strategic Institutional Planning

Strategic institutional planning typically starts with a re-assessment and re-statement of the institution's mission along with its major goals and objectives. This process consists of developing or revising specific plans and budgets for changes in academic program offerings, faculty development, enrollment plans, and other institutional objectives.

Strategic Facilities Planning ("SFP")

Carried out as part of or extension of strategic institutional planning, SFP involves data gathering and/or up-dating financial/funding planning along with gross programming of requirements for facilities and real estate. It will usually be best if strategic facilities planning can be undertaken before strategic institutional planning is completed because the required capital spending and other commitments that may be required for facilities and real estate will very likely affect final decisions in the strategic institutional planning. Sometimes benchmarking and interviews with users and maintainers are brought into this process. As with businesses, SFP for colleges and universities usually will include the disposition of real estate holdings and commitments. It can also include plans to make more efficient use of existing facilities and identify "found" or underutilized space.

Campus Master Planning

A Master Plan for a campus or other educational facilities should be recognized as a "living" plan and usually should be reconsidered prior to the undertaking of major new facility projects or real estate moves. Updating the Master Plan for the campus would logically follow Strategic Institutional and Strategic Facility Planning.

Facility Requirements Programming

Developing the program of requirements ("program") for a new facility or a facility to be remodeled, converted, or expanded is an important pre-design activity. The program not only needs to be developed in concert with facility users, but needs to be developed simultaneously with a detailed total project budget for the new facility and as a consistent extension of the SFP and Master Plan. In most cases, this program of requirements can and should be highly detailed. In preparation for the engagement of architects and engineers as well as for the management of the design and construction programs, it should be in a form such that it can serve as an exhibit to the agreement between the college or university and the architect and/or engineers.

Today many colleges and universities already see strategic facilities and real estate asset planning as an extension of their institution's regular strategic institutional planning. Both facility and real estate investments and commitments can have a significant effect on the institution's success in fulfilling its mission and maintaining a good financial position. However, it should be recognized that the SFP effort will be wasted unless a genuine commitment is made to the process by both senior members of the administration as well as those directly responsible for facilities and real estate.

A college or university should not let outside consultants make the major decisions in this important planning. These decisions are often fundamental to the institution's mission and direction. Both internal insight and collegiate marketplace insight are important in these planning decisions. The appropriate role for a consultant in SFP is to bring the appropriate SFP process, facilitate the communications aspects, assist in data gathering, and guide the client institution through the reviews, analyses and plan approval processes. In most cases, a good approach is to assemble a small analysis and planning team that includes representatives of the institution and the consultant firm. The team would report to the appropriate level in the college or university, obtaining senior administrator's (President/Chancellor, Provost, and Vice President for Administration and Finance) input at the outset and at several interim points.

Sometimes SFP Can Answer a Specific Question
Example: The Medical College of Georgia

Several years ago, with its School of Dentistry needing to grow and there also being a question as to how the College could best meet growing needs for conference and administrative functions, the Medical College of Georgia (Augusta) turned to the SFP procedure. One significant question was: Would it be better to expand the existing School of Dentistry facility, or build a new facility for the School of Dentistry? The existing School of Dentistry building was a good quality 1970's reinforced concrete frame structure with relatively large bays and generous floor-to-floor heights.

The SFP process revealed that not only would acquiring a new facility for the School of Dentistry and using the existing building envelope of the existing School of Dentistry cost less than expanding the existing facility and meeting the other space needs with the existing School of Dentistry building envelope, but that there were school term logistical issues. Other factors not only indicated the new facility was the correct approach, but also indicated that the schedule for its construction had to take into account the projected time of the dental equipment's obsolescence.

The SFP process also revealed that the existing School of Dentistry facility was in a prime location for much needed administrative and college facilities and could easily be modified to meet the growth demands for administrative office space, classrooms, and medium-sized lecture halls.

Further, the SFP process led to the conclusion that the financing of a new Conference Center would need to be achieved through alternative financing methods. Also, some additional income was identified that might help service the alternative financing debt.

Finally, the SFP process caused the College to look at the whole campus and surrounding areas, along with present and projected academic and medical programs for the driving factors, related issues and other needs. Also, real estate issues and there being no excess property and overall institutional planning were all major factors.

Looking Out 10 Years?

Most SFPs are based on at least a 10-year outlook. Yet, the only thing one knows for certain about a ten-year plan is that conditions affecting the plan will change in unexpected ways. Almost certainly ten-year planning data will prove to be off the mark. Assumptions about growth, new academic programs, new directions, new technologies and their effects, along with future real estate acquisitions and commitments and related issues are almost certainly going to turn out to be different than expected. Ten years is an eternity for many organizations as far as business and institutional planning are concerned. Yet, facility and real estate commitments often require more than three to five years to implement, the planning horizons for most businesses and institutions. The fact is that facility and real estate planners and managers must prognosticate out farther than three to five years, typically ten years and beyond.

There is, however, a reasonable way to go about it. Most annual planning produces a very detailed plan for the coming year and a "rolling" three-to-five-year plan. In facility and real estate planning, senior administrators, deans, facility managers, and the SFP team often need to construct a ten-year crystal ball, as best they can, as a guide for facility and real estate decisions and actions during the coming year. Therefore, like the overall institutional plan, it is a good idea for the SFP to have a detailed plan for the coming twelve months, a rolling three-to-five-year plan that is in step with the institution's plan, and some prognostications and strategic thinking which seeks to forecast plans ten years and beyond. The detailed twelve month plan, the rolling three-to-five-year plan, as well as the longer-range prognostications should be updated at the next round of strategic institutional planning. This updating helps provide a "polished" crystal ball for the coming year's facility and real estate decisions and commitments.

Understanding the Driving Factors of Facility Requirements is an Important Technique in Developing the SFP

A good understanding of an institution's mission comes first in developing the strategic facilities planning process. Institutional goals and objectives, collegiate marketplace factors, sources of financing and funding, higher education trends, changing teaching and

research techniques, technology, and external factors need to be reviewed with the appropriate administrators and faculty. After that is accomplished, the major schools and departments of the institution should be individually analyzed. Analysis should lead to the identification of each of the schools' or departments' major operations which are the "driving factors" that both drive and justify facility requirements.

An interview process, however, which is typical to facility requirements programming, is not enough. The strategic facilities planning process must certainly include interviews of deans, department heads, senior administrators, a cross section of middle administrators, support group managers and facility managers as well as the President/Chancellor and Provost. In some cases, it should include key members on the governing board concerned with finances and buildings/grounds. However, interviews are very vulnerable to wish list thinking, or conversely in some cases, to overly conservative estimates. Often, inadequate time is spent on analysis and forecasting by the interviewee. Therefore, interviewing should be combined with the development and analysis of the appropriate driving factors for each major component of the institution.

Enrollment projections may be the first choice for a driving factor because it is easier to identify and quantify than other driving factors. Enrollment projections are, indeed, a driving factor. However, important driving factors for some operations often will be factors other than enrollment projections. An example of enrollment projections not being the appropriate driving factor includes a situation in which the numbers of staff in a particular operation and the amount of space currently being used will not be directly proportional to an increase or decrease in enrollment. The space needs may be more affected by changing technologies, teaching methods or previous investments. Another example would be the adoption of "hoteling" of office usage for junior faculty and research assistants.

Other driving factors might include the plan to build or acquire a particular facility that may have been enabled by a capital campaign's success, grants, stipulated endowments, gifts for specific uses, or gifts of real estate or buildings. This increase in funds available may accelerate a building program to satisfy the program need.

Determination of the need or desirability of non-building facilities such as enhancing pedestrian activity on-campus will be factors. Constraints or opportunities of campus land also might be a driving factor. Reductions in funding annually appropriated by a state government for public colleges and institutions would surely be a driving factor if that should occur.

Process

There is not, and should not be, a standard process for SFP. No two institutions are identical. The form the planning will take and the process used to develop the plan should be individually tailored to the institution. The tailoring of the plan should begin after the

planning team is in place and has gained an up-to-date understanding of the institution's mission, most of its major operations, and the institutional structure.

As mentioned earlier, it is unwise to delegate strategic facilities and real estate planning to a consultant. The recommended approach is to have a small joint team. The joint team should consist of a very senior administrator and one or two faculty and financial support representatives and a relatively small group from a strategic facilities planning consultant. The team would probably report to someone at a high level in the institution, such as the Vice President for Administration and Finance, or the President/Chancellor ("SFP Executive").

Developing The SFP Process

A typical strategic facilities planning process is illustrated in Figure 1 (*page 8*). While the SFP process should be tailored to the institution's requirements, typically it might include the following steps:

1. Form the team.

2. Consultant reviews the college or university's mission and current facility and real estate issues with the institution's SFP Executive.

3. Establish expectations.

4. Conduct visits and general observations of the larger and more critical operating groups that constitute about 80% of the institution.

5. Develop the SFP process and model of the expected end product.

6. Organize "crystal ball" sessions with key senior officials and strategists of the institution as well as appropriate senior operations administrators.

7. Gather data. This process may be the most labor-intensive aspect of a strategic facilities planning process. Data gathering often involves the development or up-dating of the institution's facilities and real estate database.

8. Analyze data and identify key indicators.

9. Conduct appropriate benchmarking studies of facilities and their costs at other comparable institutions.

10. Assess the critical factors in the local real estate market that will influence the ability of the institution to dispose of or acquire additional real estate.

11. Senior administrators review the data gathered and the team's analyses thus far as a reality check.

12. Examine financial, human resource, and collegiate marketplace issues as well as enrollment, faculty and staffing projections, along with operational changes and other issues affecting the driving factors.

13. Develop a description of the institution's current space utilization status and challenges.

14. Develop a first draft of the plan.

15. Conduct "think tank" sessions within the SFP team.

16. Revise the plan as necessary.

17. Review the plan in near-final form with the SFP Executive. More than one work session may be required. Reviews and sign-offs may be required by other key administrators.

18. Review the final pre-publication with the SFP Executive and the most senior administrators.

19. Publication. (Note: A commercial company's SFP is usually a highly confidential document. Procedures are established for control of the document on a need-to-know basis as approved by senior management. Some institutions have similar concerns.)

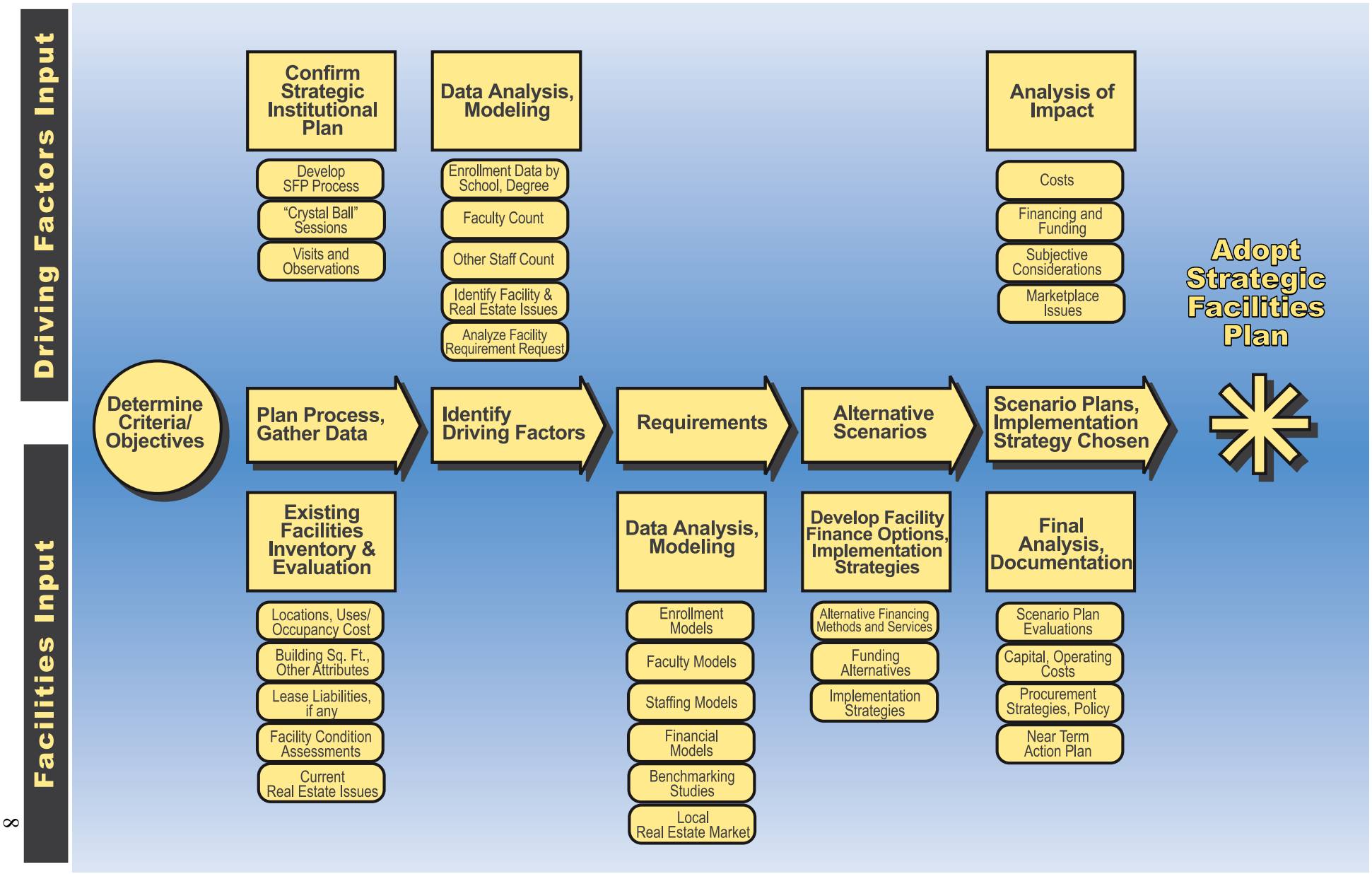
There can be Visual Images and Environmental Aspects in the Strategic Facilities Plan

The primary basis of an SFP for a college or university is educational, financial and operational planning. A basic concept of strategic facilities planning is that operational requirements and financial justifications must exist for each facility and real estate decision, asset and liability.

Some institutions, however, will have important needs in terms of physical arrangements and visual character. Visual and architectural concepts, marketing or market awareness issues, as well as highly visible location(s) or visual aspects of the facilities may be strategic issues in some institutions.

Another factor may be the institution's ability to achieve acceptable reductions in space utilization per person or greater productivity out of facilities. In such cases, some physical planning concepts may be needed as a basic part of the SFP.

Figure 1



Typical Strategic Facilities Planning Process for Colleges and Universities

Environmental aspects can and should affect the SFP. These environmental aspects might range from employee amenities, workspace and classroom conditioning, energy use and sources, program continuity planning and commitments to environmental protection by the institution. In such cases, it may be appropriate to include the following components in the SFP:

- Physical arrangements
- Engineering concepts
- Physical real estate plans
- Technical standards
- Architectural standards or requirements
- Sustainability issues

Financial Modeling and Analysis in Strategic Facilities Planning

More than likely, senior administrators will need to focus on financial implications. Financial modeling and analyses are critical components of communicating and evaluating SFP strategic plan options with key decision makers.

Gathering and Organizing Information That Will be Needed in the Strategic Facilities Planning Process

The following is typical of the data to be gathered:

- Latest institutional strategic plan and campus master plan

- Revenues, expenses, enrollment, and faculty/staff head count for the past 3-5 years for each school, department, and other relevant groups

- Verification of the institution's capital structure including income pledged by endowment funds to cover debt, gifts or grants to build new facilities, or other income such as student housing rents, special student fee income, etc.

- Lease and option synopsis documents, if the institution leases any facilities or has any options to lease or purchase land or facilities

(If the institution doesn't already have an electronic facilities and real estate database for all owned and leased properties, an early step in the SFP may be to create such a resource.)

- Profiles of owned properties off-campus

- Appraisals of owned properties off-campus
- Value of all owned properties off-campus
- Summary of gross and usable square footage for all owned and leased facilities
- Number of beds available for student use in each housing facility
- Summary and synopsis of all other controlled property such as options to purchase, "warehoused" land, etc.

Note: Best First Steps in Implementing a Design and Construction Program

The best first steps in implementing new construction resulting from SFP decisions are typically:

- Appoint internal and/or external Program Manager (PM)
- Decide on project delivery method
- PM determines if program, total budget and schedule are compatible and then uses results and exhibits in preparing project specific agreements between the college or university and the Architect for prior acceptance by architects under consideration before final selection.
- Select Architect or Owner's Design Consultant and authorize commencement of design.

(It may be desirable for the Master Planner to be the Architect or considered apart from the Architects being considered. In that case, there should have been no announcement to the Master Planner by the college or university to the Master Planner as Architect. Instead there should be a separate, arms-length selection process for the project Architect or Owner's Design Consultant.)

Hypothetical SFP Case

Pleasantville State University ("PSU") is one of a number of medium sized colleges and universities in the state college system. This state's system includes eleven institutions, the larger of which are American State University (32,000 students) located in the state's capital city and State Poly (14,000 students) located in the northern part of the state.

PSU currently has 3,200 undergraduates and 580 graduate students for a total of 3,780. It has experienced significant growth in recent years and is expecting about 6% per year growth over the next five years.

During the early spring of 2005, PSU's President and fourteen other members of the faculty and administration carried out their annual strategic institutional planning. As had been their procedure over recent years, the planning process started with the re-statement of PSU's mission along with major goals and objectives. The end product was a detailed up-date of the previous year's strategic institutional plan.

In the late spring of 2005, as an extension of its annual strategic institutional planning, a small team consisting of the Vice President for Administration and Finance, the Director of Facility Planning, the Deans of the two larger schools, the Dean of Students, and three members of an outside consulting firm, developed the Strategic Facilities Plan ("SFP").

Before and during the strategic facilities planning process, with the Vice President for Administration and Finance acting as the SFP Executive, there were several presentations to the President, Provost and the other Deans with feedback received from each.

The SFP was developed as a five-year plan from 2005-2010, with a high level of detail for the first year, and a long range, less detailed, outlook for 2010-2015.

A final draft was circulated to the President, Provost, and other deans for sign-off before publication.

The end product of the SFP effort was a written report including many facility and real estate aspects as well as a detailed funding and financing plans and two charts discussed below. The report had six main sections:

1. First-Year Facilities Action Plan for school year 2005-2006 including specific project planning, gross facility programming, budgets, schedules, and procurement methods.

2. First-Year Real Estate Action Plan for school year 2005-2006. (Typical First-Year Facilities and Real Estate Action Plans have more details, often showing activities by month.)

3. Remainder of the five-year Facilities Plan covering from 2006-2010.

4. Remainder of the five-year Real Estate Plan covering from 2006-2010. (The five-year Facilities and Real Estate Plans included capital financial components of PSU's plans for financing by respective facilities and real estate acquisitions or dispositions.)

5. Remainder of the long range Facilities Plan covering 2010-2015.

6. Remainder of the long range Real Estate Plan covering 2010-2015.

Due to the longer lead-time for project delivery, capital planning was scheduled in advance to prepare for facility development or acquisition or disposition of real estate.

The SFP included a fold-out page illustrating basic planning, design, pre-construction, construction and real estate activities for 10 years. The SFP also included a Schedule of Capital Expenditures for 10 years and a Schedule of Property Dispositions and Leases during the same period. See Figure 2 and 3 (fold-out pages.)

Figure 2

STRATEGIC FACILITIES PLAN Pleasantville State University Plan Adopted May 25, 2005

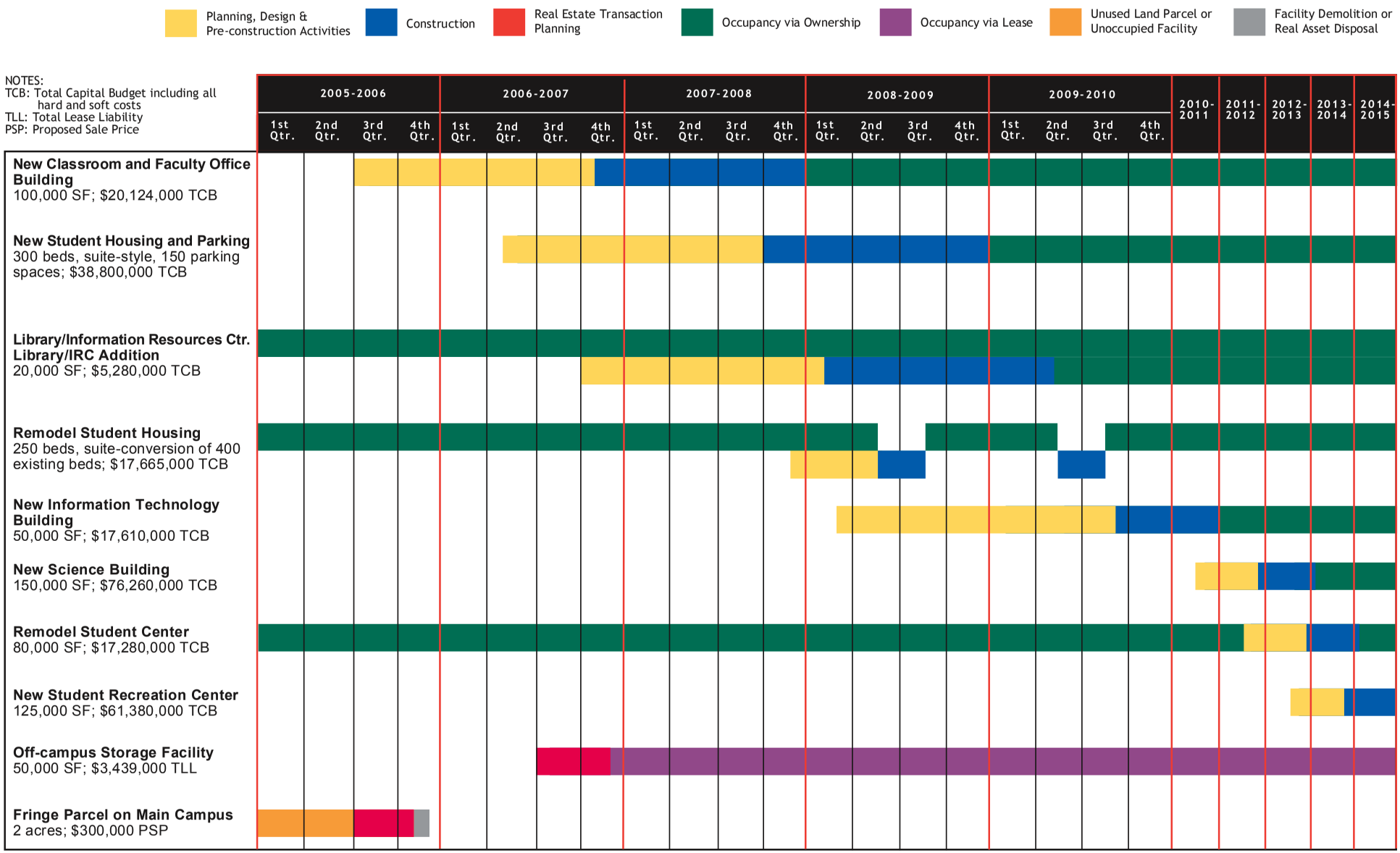


Figure 3

STRATEGIC FACILITIES PLAN Pleasantville State University Plan Adopted May 25, 2005

CAPITAL EXPENDITURES

Project	Total Project Cost *	YEARS 1 - 5																				YEARS 6 - 10				
		2005 - 2006 **				2006 - 2007				2007 - 2008				2008 - 2009				2009 - 2010				2010 - 2011	2011 - 2012	2012 - 2013	2013 - 2014	2014 - 2015
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter					
New Classroom and Faculty Office Building	$20,124,000	$0	$0	$402,480	$402,480	$402,480	$402,480	$402,480	$2,458,003	$3,687,004	$3,687,004	$3,687,004	$3,687,004	$905,580	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Student Housing	$38,800,000	$0	$0	$0	$0	$0	$297,500	$446,250	$446,250	$446,250	$446,250	$1,297,500	$3,919,250	$3,919,250	$3,919,250	$3,919,250	$3,919,250	$978,750	$0	$0	$0	$0	$0	$0	$0	$0
Library Addition	$5,280,000	$0	$0	$0	$0	$0	$0	$0	$105,600	$105,600	$105,600	$105,600	$105,600	$601,920	$902,880	$902,880	$902,880	$902,880	$538,560	$0	$0	$0	$0	$0	$0	$0
Remodel Student Housing	$17,665,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$95,417	$286,250	$286,250	$286,250	$690,833	$2,112,875	$2,112,875	$2,112,875	$2,112,875	$418,500	$0	$0	$0	$0
New Information Technology Building	$17,610,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$103,588	$310,765	$310,765	$310,765	$310,765	$310,765	$1,044,623	$2,823,103	$11,292,413	$792,450	$0	$0	$0
New Science Building	$76,260,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,050,400	$13,269,240	$52,161,840	$7,778,520	$0
Remodel Student Center	$17,280,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$691,200	$3,006,720	$11,819,520	$1,762,560
New Student Recreation Center	$61,380,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,455,200	$10,680,120	$41,983,920
Total	$254,399,000	$0	$0	$402,480	$402,480	$402,480	$699,980	$848,730	$3,009,853	$4,238,854	$4,238,854	$5,090,104	$7,807,271	$5,816,588	$5,419,145	$5,419,145	$5,823,728	$4,305,270	$2,962,200	$3,157,498	$4,935,978	$14,761,313	$14,752,890	$57,623,760	$30,278,160	$43,746,480

PROPERTY DISPOSITIONS AND LEASES

Project	Total Project Cost	2005 - 2006				2006 - 2007				2007 - 2008				2008 - 2009				2009 - 2010				2010 - 2011	2011 - 2012	2012 - 2013	2013 - 2014	2014 - 2015
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter					
Lease Off-Campus Storage Space	$3,439,164	$0	$0	$0	$0	$0	$0	$0	$50,000	$75,000	$75,000	$75,000	$76,500	$77,250	$77,250	$77,250	$78,795	$79,568	$79,568	$79,568	$81,159	$329,457	$339,341	$349,521	$360,007	$370,807
Disposition of Fringe Parcel on Main Campus	($300,000)	$0	$0	$0	($300,000)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

NOTES:

* All expenditures shown above are based on 2005 costs escalated at the rate of 8% for the 2005-2006 school year and at the annual rate of 4% for the remaining years of the plan.

** The fiscal year for Pleasantville State University runs from July 1st to June 30th of the following year.

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