

FACILITIES PLAN OVERVIEW

The Facilities Plan presented here is designed to address the needs expressed in the Educational and Technology Plans. The desire for smart classrooms and a centralized location for the delivery of integrated student services are just two examples of the recommendations from those plans that will impact facilities as they are implemented. The previous plans also pointed to the need for structural and infrastructure enhancements and flexible instructional and support services spaces. These are all addressed in the plan that follows.

The Facilities Plan is an overview of the facilities planning efforts that began in 1997 with the development of the first Facilities Needs Report. This report was developed as part of the planning for a possible bond measure. Planning intensified in 2002 after the passage of Measure E. The facilities planning process began with the appointment of members of a campus-wide Facilities Steering Committee. Committee members worked with tBP/Architecture to develop the original *2002 El Camino College Facilities Master Plan*. This document has since undergone several changes. Beginning in 2003, the Maas Companies forecast for Weekly Student Contact Hours (WSCH) and enrollment growth indicate a need for instructional and support services space for the future. Throughout the process, ECC has provided the necessary guidance, direction for desired outcomes and establishment of boundaries for the scope of work to be undertaken. The results of these collective efforts are outlined in the *2004 Comprehensive Master Plan*.

The Facilities Plan is consistent with the programmatic needs identified through the College's current and future programs of instruction. The plan was refined to be consistent with the fiscal realities of the College. Throughout the development of the plan, the primary goal has been to provide the blueprint for what will be the largest undertaking of the College since its founding.

Throughout the plan's development, a number of factors were taken into consideration. Qualitative data was collected from faculty, staff, and administrators. Quantitative data on the existing program of instruction at the section level was researched and analyzed by an outside consultant team. Productivity and efficiency values were weighted against available space at the College to determine how well existing space is utilized. The space assessment was further quantified with a comparison to the Title 5 standards of the California Education Code, governing space allocations for community colleges. A baseline was then developed, along with several key considerations used as building blocks for forecasting the future space needs of the College, which ultimately defines the building and facilities program.

FACILITY PLANNING ASSUMPTIONS

Facility needs for the future are based on certain planning assumptions. This process began with an assessment of students who are served by the College and use the facilities. Based on the historic trends and characteristics, the following assumptions for the future were cited:

1. Students are attracted to the College for general and transfer education programs, occupational and developmental education programs, contract education programs, and non-credit and not-for-credit education programs.
2. There will be an increase in students who are under-prepared for college level academics in the future. There will also be an increase in students who return to the College after attending some level of college work, including those with degrees.
3. Most students will be working in addition to pursuing an education.

4. Scheduling of courses will improve to guarantee maximum facility utilization. Greater emphasis will be placed on student attraction and recruitment, particularly as it relates to the College's service area demographics.
5. The student services role in student success will expand with the diverse needs of the student population. Tutorial support, supplemental instruction, and the Learning Resource Center will be utilized to improve the student success rate.
6. Instructional delivery methods and educational programs will change to meet the shifting needs of the community. The core curriculum at the College will generally remain devoted to its current purpose and mission.
7. Distance education will grow relative to in-person instruction.
8. Availability and use of technology in the classroom will increase.
9. Delineating between lecture and laboratory hours taught will sometimes be difficult. With computers assisting in delivery of instruction and blended classrooms, both teaching modalities will be required in the future.
10. The growth goals projected will require the College to keep pace with and improve its current 17.97 rate of student participation (e.g., the number of students served per 1,000 population) – to a rate of 21.84 by the year 2020.
11. The College will maintain and improve its current level of productivity relative to credit-WSCH generated for each unduplicated student enrolled. The current credit-WSCH per enrolled student is 10.26.
12. Instructional productivity will improve to meet operational efficiency to generate WSCH, full time equivalent students (FTES) and full time equivalent faculty (FTEF). The College will maximize its operational efficiency to increase state funding.
13. The population within the College's service area will reach 1,718,000 by 2020.
14. Growth within the 7.5-mile service area of the College is projected to be below the state average through 2010. It will remain at slow to modest growth levels through the year 2020.
15. The District will remain a single college district.
16. The College will need to pursue additional sources of state revenue, to augment its successful bond program for a facilities program that includes new construction, reconstruction, renovation, and infrastructure upgrades.

EXISTING FACILITIES ANALYSIS

The following components were reviewed and assessed to determine existing building inventory and use, condition and age of facilities, and current plans for new construction or renovation.

Existing Buildings Inventory and Use

El Camino College is an older campus. Many of the buildings on campus are more than fifty years old. Most of the buildings were built in the 1950s. Recent new construction has been limited to the Police Department Building in 2000, a small building of only 2,528 usable square feet. The newest academic building on campus is the Math and Computer Science (MCS) Building (1969), which is thirty-five years old and has a usable assignable square footage (ASF) inventory of 52,803. The Child Development Center Building, with 5,903 ASF, was

built in 1992. The campus currently has a facilities inventory of just over 750,000 ASF of facility space. Approximately 15,000 ASF or 2% of the current square footage has been constructed within the last eighteen years. Currently the College is reconstructing the Science Complex with an expected completion date of early 2005.

The campus infrastructure is also old. This includes the infrastructure distribution systems, electrical and telecommunications support, heating, ventilation, and air conditioning. Core infrastructure needs for mechanical, electrical, and plumbing are extensive. There is also a need to introduce energy efficient systems into the facilities of the College.

An overall assessment of the condition of current facilities indicates that the College has a sufficient volume of space to meet current, as well as a majority of future space demands. However, much of this space is inefficient. Many of the classroom buildings are oversized for current class sizes. State building guidelines require at least 65% of the gross square footage within a building to be dedicated to lecture, laboratory, office and conference, library, or media/audio/television use to be considered efficient. Currently, 50% of the buildings on campus have ASF to gross square footage ratios that are below the state building requirements for state funding of new construction.

Figure 1 provides a composite view of the existing building inventory on the ECC campus.



Figure - 1
Current Building Analysis

BUILDING	YEAR BUILT	ROOM TOTAL	STATION TOTAL	RM ASF TOTAL	OGFT * TOTAL	% EFFICIENCY
Administration	1950	72	631	40,241	50,358	79.9%
Student Services	1950	129	1,763	56,453	69,350	81.4%
Library	1952	73	94	45,648	71,174	64.1%
Art	1955	152	1,089	58,663	112,006	52.4%
Foundation	1984	7	52	1,200	1,496	80.2%
Natural Sciences	1952	65	624	27,249	46,023	59.2%
Business	1953	32	447	14,309	24,826	57.6%
Music	1955	94	1,381	44,709	82,366	54.3%
Health Center	1955	52	396	46,217	65,227	70.9%
Child Development Center	1992	18	0	5,903	6,688	88.3%
Field House	1949	12	0	5,342	6,377	83.8%
Shops	1949	28	458	46,261	105,908	43.7%
Receiving - Maintenance	1958	44	7	30,541	36,224	84.3%
Humanities	1950	58	937	20,497	36,378	56.3%
Math Engineering	1969	104	1,409	52,803	107,533	49.1%
Chemistry	1656	44	400	17,069	27,910	61.2%
Physics	1956	24	211	11,181	16,034	69.7%
Planetarium	1969	4	77	3,684	3,953	93.2%
Auditorium	1967	34	2,159	40,205	53,591	75.0%
Men's - Gym	1958	40	238	53,098	97,026	54.7%
Technical Arts	1959	73	787	38,272	56,914	67.2%
Social Science	1960	41	1,004	20,441	34,081	60.0%
Communications Center	1962	69	708	22,017	36,950	56.6%
Cafeteria/Bookstore	1974	51	1,017	37,978	53,416	71.1%
Technical Arts	1986	6	0	6,348	6,982	90.9%
Construction Tech	1982	8	67	5,907	11,143	53.0%
Community Education	1980	3	6	1,814	1,800	100.8%
Police Department	2000	11	0	2,528	4,536	55.7%
Totals		1,348	15,962	756,578	1,226,270	61.7%

Source: El Camino Community College District Facility Building Report 17 Summary 2003

* OGFT refers to overall gross square footage

Figure - 2
Five-Year Capital Construction Plan

PROJECT	NET ASF	START DATE	END DATE	ESTIMATED COST	STATE FUNDING
Science Complex *	NA	2003	2004/05	\$15,242,000	\$15,242,000
LRC Addition	15,950	2004	2006/07	\$8,225,000	\$8,225,000
Humanities Complex*	22,045	2004	2007/08	\$23,120,000	\$1,100,000
Electrical Substations	NA	2004	2007/08	\$4,650,000	\$0
Lot H Parking Structure	NA	2004	2006/07	\$8,400,000	\$0
Student Svcs/Activity Center*	4,522	2006	2009/10	\$31,546,000	\$21,522,500
Athletic & Fitness Complex	658	2006	2009/10	\$15,720,000	\$0
Health Occ & Wellness Center	17,052	2007	2010/11	\$12,148,000	\$6,074,000
Bookstore/Cafe. Renovation	22	2008	2010/11	\$6,100,000	0
LRC Remodel and Addition	24,000	2008	2010/11	\$9,180,000	\$4,590,000
Social Science Remodel	459	2009	2011/12	\$7,415,000	\$7,415,000
Architectural Barrier Removal	NA	2010	2012/13	\$2,920,000	\$2,920,000
TOTALS	84,708			\$144,666,000	\$67,088,500

Source: El Camino Community College, 2006 – 2010 Five-Year Capital Construction Plan, dated 5/17/04 Note: 2003 and 2004 start dates are included in the 2006 year plan in order to be in compliance with the Chancellor’s Office format.

* Indicates building replacement or reconstruction

Capacity Load Ratios

The Five-Year Capital Construction Plan is utilized by the State to determine facilities funding qualifications through the assessment of five key elements - space for lecture, laboratory, office, library, and instructional media. Areas that exhibit percentage ratios under 100% are considered as qualifying for state supported funding. Areas that exceed the 100% ratio do not qualify for state supported funding. Presently the College has exceeded the capacity load ratios (the state’s standard for the square footage allowed for a given level of WSCH) for both lecture and office space.

Figure - 3
Capacity Load Ratios

LECTURE	LABORATORY	OFFICE & CONF	LIBRARY	MEDIA/ATV
138%	81%	113%	60%	33%

Source: El Camino Community College, 2006 - 2010 Five-Year Capital Construction Plan, dated 5/17/

ASSESSMENT OF KEY FACILITY PLANNING ELEMENTS

The following key planning elements were used to assess the facility needs of ECC.

1. Sense of Place
2. Access
3. Campus Architecture
4. Land Utilization/Availability
5. Supporting Infrastructure
6. Existing Facilities Utilization

Sense of Place

El Camino College is located in Torrance, California - a growing retail, financial, high tech, and corporate community. The setting for the College is largely reflective of its surrounding environment, which is a culturally diverse area in a friendly community. The campus is located near the ocean, and the climate and quality of the environment are apparent on campus. It is an area that is a great place to call home, whether on or off campus.

The overriding feeling is that of an established college campus. Almost all of the buildings are characterized as mature – ranging from 40 to 55 years old and similar in their design and architectural style. Overall, the College exhibits a good degree of architectural character and presents a comfortable balance between buildings and open space and landscaped areas.

The College presents itself particularly well from three boulevards that border the campus. Each boulevard provides entrance and exit points but do not give the campus a front door appearance from any one boulevard. A redesigned entrance along the Crenshaw corridor has been proposed to create a sense of a front door on the East side of the campus.

From a user's perspective, the College is identified by the majority of its students as a local resource for meeting general education or transfer requirements to a four-year university and workforce training. Secondly, it is viewed as a resource for continuing education. Lastly, the sur-

rounding community recognizes the college as a source for providing cultural enrichment through the art gallery, planetarium, campus theatre, and the Marsee Auditorium.

Observations

1. The main portion of the campus centers around a common area that features interspersed open spaces. Buildings are relationally spaced for function and are compact in relationship to the landscape.
2. This attractive landscaped campus is noted for its beautiful, tall palm trees and a variety of pine and cherry blossom trees that are located throughout the 126-acre campus. In almost all areas of the campus, the landscaping is healthy, mature, and very well maintained.
3. First-time visitors may have difficulty locating buildings on campus. This is particularly true for the Student Services Building, which is situated away from the various street entrances.
4. Exterior lighting on the buildings, grounds, and parking areas needs to be upgraded to illuminate walkways, stairways, and like areas to meet current standards.
5. The community's perception relative to security on campus is generally good. Students seem to feel secure in the environment of the College.

Access

The 2002 El Camino College Facilities Master Plan has recommended the following changes regarding access to the campus:

1. Renovate existing facilities to provide space to accommodate instructional programs.
2. Centralize the Student Services and Student Activities functions in a renovated and expanded Student Center building at the heart of the campus.

3. Enhance campus entries and edges to create welcoming gateways to the College.
4. Develop outdoor plazas to create an appealing campus atmosphere - one that encourages students and the community to spend time on campus.
5. Develop landscaped pedestrian paths to tie the campus together in both the North-South and East-West directions.
6. Reconfigure and expand lots/structures to provide additional parking.
7. Increase overall campus accessibility.

Campus Architecture

The campus architecture and grounds generally present a positive image. The compactness of buildings on the campus gives a feeling of density; open space is used as a linking amenity. Overall, there is a relative sense of order and consistency. The buildings on campus do not have a common architectural theme. They reflect the architectural style from the era during which they were built, primarily the 1950s and 1960s.

The clustering of like academic and support services is apparent, indicative of a plan to create groupings of similar purpose and function. However, growth over the past two decades, has created a disjointed academic environment, where students sometimes travel across the campus to access the lab component of their lecture class. While the majority of Student Service functions are centralized in one building, the departments themselves are disconnected with some services in inappropriate areas. The Student Services Building is centrally located, but not easily identified by the first-time student.

Other architectural challenges include the following:

1. Vocational programs are located in a number of areas and facilities across campus.

2. The Administration Building has both administrative and instructional uses.
3. A large part of the campus is zoned for athletics.
4. The stadium is in poor condition and is in need of reconstruction or replacement to address access and code compliance issues.
5. Most buildings are not discernable from a marked point of ingress and must be accessed on-foot once on campus.

Observations – External Conditions

1. The interior grounds and exterior building facades generally make a positive architectural statement.
2. Because of the diversity in architectural design, the College will be challenged to blend the existing architectural designs with new building construction.
3. The existing structures are old but appear to have good structural integrity. Repairs, renovation, and remodeling will improve the general conditions of the buildings.

Observations – Internal Conditions

1. The current building ratios of ASF to gross square footage are generally below the minimum level (65%) of the statewide guidelines. Instructional space is not well apportioned, tends to be lacking in consistency, and is inefficient.
2. The existing learning environments consist of traditional lecture/laboratory type classrooms that offer faculty limited flexibility for alternative instructional delivery.
3. Not all of the interior academic and meeting spaces are equipped to support a technologically advanced learning environment.

4. Office space is inconsistent in its location on campus. It is not well designed and full utilization of space is poor.

Land Utilization/Availability

To meet the WSCH (394,432) and enrollment (37,516 students) targets of 2020, the College will be required to add 81,767 ASF of new facility space. The existing campus site will accommodate this increased demand, however, growth beyond the enrollment of 37,516 students will require the College to expand its land holdings.

Observations

1. Parking will be a significant concern for the future – it will be the College’s greatest land utilization issue. As enrollment grows from 28,849 students in the fall of 2002 to the projected 2020 level of 37,516 students, the need for additional parking areas will increase.
2. Effective land utilization should also create better physical access to the College. Ingress and egress points, vehicular circulation, and pedestrian flow will be addressed by for all new construction or remodeling projects.
3. Attention will be given to preserving and enhancing the landscaping of the College. It will continue to receive the same degree of importance as the College’s building program. Landscaping will be used as a means to provide visitors with clear arrival and entry points that buffer the campus from surrounding streets. Landscaping will also tie portions of the campus together, improve “way-finding,” meld the architectural styles, and create outdoor areas for student activities

Supporting Infrastructure

Infrastructure is the backbone supporting the College’s building and facilities program. An assessment of the existing infrastructure suggests that the College could easily spend up to

20% of its overall program budget on upgrading its core infrastructure and distribution systems.

Observations

1. Much of the College’s supporting infrastructure is not adequate to meet existing or planned student enrollment up to 2020. Key infrastructure to be considered and addressed include the following:
 - a. New central plant
 - b. New primary electrical service
 - c. Emergency power
 - d. Energy efficiency improvements
 - f. Site lighting
 - g. Fire alarms (campus-wide upgrades)
 - h. Natural gas system
 - i. Security
 - j. Voice/data/signal
 - k. Dedicated domestic water
 - l. Dedicated fire prevention water
 - m. Sanitary sewer
 - n. Storm drainage
2. Technological infrastructure sufficient to meet the needs and demands of the college is a priority. The College needs to be able to communicate and interact via technology both internally and externally.
3. The current program of replacement and repair will need to be augmented to address the replacement of roofs and other on-campus support infrastructure such as lighting and campus walkways.

Existing Facility Utilization

The utilization ratio of ASF compared with WSCH - a measure used by the Chancellor’s Office to determine space needs, indicates that the College currently has more than adequate space on campus to meet current demand. At the same time, there is a perception among faculty that the current space is insufficient. This perception is supported by the fact that on certain

days, and at certain times of the day, it is difficult to find available instructional space.

The following observations were made concerning the gap that exists between actual utilization ratios and perceived needs.

Observations

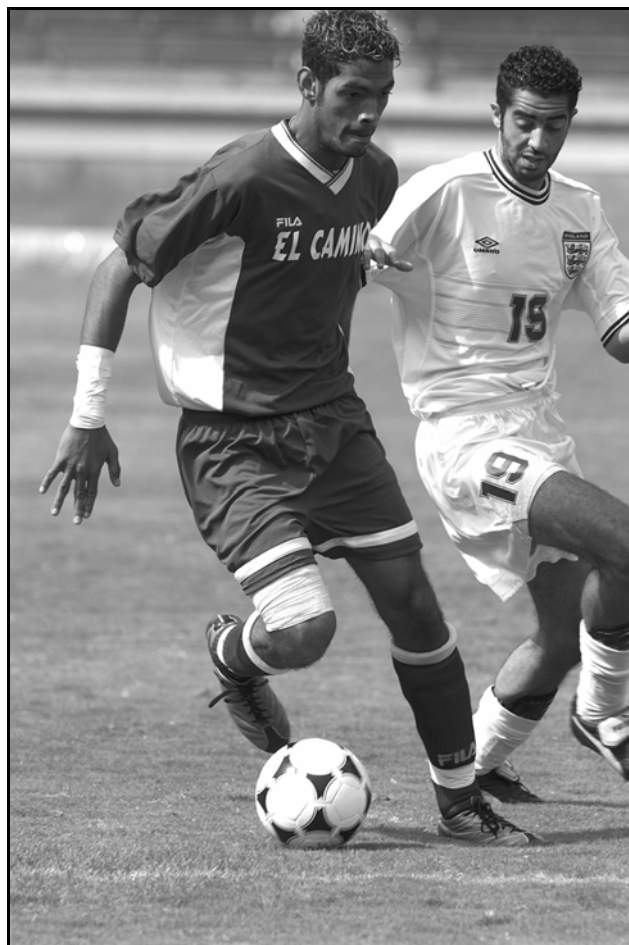
The current class schedule reflects facility availability, but does not delineate between high and low teaching schedule times:

1. Scheduling of classes reflects primarily a four-day (Monday through Thursday) use pattern.
2. The impact of a 16-week semester has compressed the schedule for Monday through Thursday, extending the demand for facilities during prime times but leaving the facilities open for use at other times.
3. There is a gap between the end of afternoon classes and the beginning of evening classes where facilities receive very little use.

Class size data in relationship to room capacities indicates that the College currently operates at a ratio that is 78% of the state standard, which is 27.27 seats per section compared to the State standard of 35 seats per section.

Based on the current analysis of utilization versus capacity, the College will have a need for only 81,778 ASF of new space over the next sixteen years.

Space utilization for student support services, the greatest users of on-campus office space, reflects the impact of the myriad of state mandated programs that the College has been required to provide without the accompanying funds or allowances in space allocations to support such programs. The result is a current 18% overage in the capacity load ratios for office space campuswide.



FACILITY PLANNING ISSUES

Several planning issues were considered in developing the Facilities Plan. Listed below are issues most likely to affect the planning process and the prioritization of facilities.

A Changing Academic Environment

National trends that will influence the development and direction of the instructional and support service programs will also affect the future facilities plans of the College. These trends include:

1. *Reduction in Campus-Centered Activities:* Significant changes in the methods of delivery of instructional programs may mean a decrease in the number of courses and activities utilized by students on campus. Large numbers of classrooms and traditional laboratories may be less important than developing technology-based resource centers.

2. *Learning Resource Center (LRC)*: Future campus needs will include an investment in people, finances, and the development of ways to support alternative instructional delivery. The LRC will augment some of the Library functions at the College in this new approach to learning advancement. The LRC will be a central learning location on campus and the primary site for transmission of distance learning and tutoring.
3. *Facility Flexibility*: Separate lecture and laboratory space needs will diminish. Accordingly, buildings should be constructed to accommodate multiple uses. Planned facilities must be developed with the idea that within ten years they will likely be remodeled. Construction should permit the maximum amount of structural and infrastructure flexibility.

Flexibility should be the primary goal of new construction, reconstruction, or remodeling. Considerations should be given to multiple uses of utility raceways (conduits), non-bearing interior walls, and demountable partitions. Buildings should be exterior shells with interior spaces. The utility infrastructure should be as flexible as possible. It should be available to any area of the building and capable of being added to or deleted from as needs change. Interior rooms, offices, classrooms, and laboratories should be totally changeable. While the development of this construction concept may increase costs at the time of original construction, it can be demonstrated that over the life of the building (and numerous remodels) it will be cost effective and use efficient.

4. *Modular Construction*: Modular construction should be considered in the original design process for permanent buildings so square footage additions and modifications can easily be accommodated. Much has been learned from the modular building industry in terms of designing buildings to be expanded, reconfigured, and even reduced in size. Permanent buildings can similarly be constructed using some of these same tech-

niques, e.g., designs that facilitate major building reconfigurations. As needs change, so can the physical dimensions of buildings. The design concept should be carefully developed with due consideration of all code requirements.

5. *Public/Public and Public/Private Partnerships*: The College should consider entering into partnerships with local business and industry or public agencies to co-produce (joint venture) a facility. Buildings constructed in partnership with area businesses, industry, other educational institutions, or public agencies can offer the College an alternative means of acquiring facilities at a reduced cost.
6. *Extended Use of Facilities*: Changing customer demand and technological improvements require educational sites to be designed to operate twenty-four hours per day, seven days per week, fifty-two weeks per year. These changes present facilities planning and maintenance issues that must be addressed in today's planning environment.

Maintaining the Relationship with the Program of Instruction

Assignable square footage (ASF) requirements generated for the facilities program of the future assume an instructional program similar to that which currently exists at El Camino College, e.g., a blend of general education/transfer occupational/vocational degree and certificate programs. The impact of technology-based instructional delivery could drastically change the way in which these and other on-campus facilities are deployed, utilized, and structured. Decisions related to the planning and delivery of instructional and support services drive the facilities planning process. Therefore, it is essential that instructional and facilities planning are closely coordinated at all stages of the rebuilding process.

Technological Considerations

The following facility-related issues have a definite impact on technology:

1. Classrooms, laboratories, and conference rooms need to be supported with modern technology (e.g., computers, media equipment, and Internet connections). The plans for construction, reconstruction, and remodeling need to address these technological issues as well as how traditional classroom space can be modified to reflect open and blended learning environments.
2. Consideration should be given to the impact of distance learning, learning facilities (classrooms and laboratories), and the allocation of space to house communications hardware supportive of distance learning.
3. If the use of technology as a device for instructional delivery accelerates as anticipated, it may greatly redefine the concept of what a campus looks like in a structural sense. The College should be watchful of these changes and prepare alternative strategies to keep pace with technological opportunities.
4. As the College contemplates new or remodeled facilities, attention should be directed toward the establishment of designs that are adaptive for future technology. While not every technological device can be anticipated, it is possible to provide equipment and other components that will support future technology needs.
5. The challenge for the next decade and beyond will be to constantly monitor the changes that are occurring in instructional delivery and support services delivery and to integrate these changes into a facilities program.

Operational Efficiency Levels of the College

The College's fall 2002 ratios for productivity/efficiency measures - students per class section and WSCH per FTEF - at 476.86 are below the state standard of 525. For the future, the College will need to demonstrate that, in delivering its programs of instruction, it is operating at the performance expectations of the state. Operational efficiency and existing facility utilization will have a direct bearing on the operational monies that the College receives on an annual basis as well as on the prospects of qualifying (in a very competitive atmosphere) for state monies for new construction, reconstruction, or remodeling projects. Available state funds will be awarded to those community colleges demonstrating the greatest utilization of the resources they already have. The College will need to demonstrate that accountable, efficient operation is being achieved.

Balancing Space Needs with Better Space Utilization

The College currently finds itself over the state limits for its capacity load ratios for lecture and office space. At the same time, it has, in its building inventory, a significant amount of aging and inefficient buildings that do not serve the needs of its academic mission. As a result, a considerable amount of focus will need to be placed on reconstruction or remodeling with building efficiency being the prime objective. Design implications for all planned reconstruction or remodeling projects should be held to the same standards of new construction.

Infrastructure

While the College has tried to keep up with the repair and upgrade of utility and support infrastructure, the funds available for this formidable task have been limited. This has caused infrastructure replacement to be mostly reactive in nature - e.g., addressing issues that require immediate attention but never getting ahead of the curve. The importance of backbone infrastructure as a top priority and outcome of the Facilities Plan cannot be stressed enough. Backbone

infrastructure such as water, sewer, electrical, telecommunications, and heating-ventilation and air conditioning are critical to meet health and safety standards on the campus. New building construction, reconstruction, and remodeling must take into account that a substantial percentage of the cost will be devoted to this key component.

Building to the Planning Criteria of the State Chancellor's Office

While the College has funds available via its local bond program, these monies will not be sufficient to meet all the facility needs and demands through the year 2020. It is imperative that the College leverage local bond funds with state funds. Facility construction, reconstruction, and remodeling are subject to California Title 5 Standards. The College's facilities program must realize that securing state funding, projects should meet the following priorities:

1. Resolution of health and safety issues
2. Remodeling for efficiency
3. Remodeling/construction for technological advancement.

Design Integration

With every new building constructed, the College has the opportunity to redefine itself as an institution of higher learning. The College has created architectural guidelines and standards for new construction, reconstruction, remodeling, and landscape treatment for consistency in all projects. These guidelines also reflect the character of the College. Integrating the old with the new – including building exteriors and interiors (offices, classrooms, laboratories, and support facilities) is important to present a unified campus.

Planning For The Implications And Impact Of Construction

Secondary Effects: The College has gone to great lengths to plan for unexpected contingencies that may occur during new or remodeling construction. Displacement, disruption, reuse of

a facility, or reallocation/reassignment of space during construction has all been considered.

Phasing: The success of the College's facilities program is dependent upon identifying a priority list of projects, and how and when those projects will be implemented. Proper phasing of projects has been carefully planned to insure minimal disruption to the campus, include alternate space to accommodate class schedules or support services, and to maintain key utility infrastructure.

Maintenance

The area most often overlooked in the design, construction, reconstruction, or remodeling of facilities is maintenance. After the final walk-through and ribbon cutting ceremonies, newly constructed or remodeled facilities must be maintained. It is often assumed that this need will automatically be met. Facilities maintenance is a critical component of the facilities planning process. The following are key maintenance issues:

1. The adequacy of current and projected maintenance structure to support new or remodeled facilities and changes in instructional delivery.
2. Generation of an overall comprehensive and long-term plan for maintenance.
3. A long-term commitment to funding for maintenance.

THE PROPOSED BUILDING/ FACILITIES PROGRAM

The Five-Year Capital Construction Plan

The Five-Year Capital Construction Plan is the primary planning document that qualifies the College for facilities funding consideration by the state. This plan is updated annually to reflect the changing dynamics and needs of the College. Figure 4 depicts the current planning efforts relative to scheduled capital projects. The College currently has twelve projects in the capital construction queue totaling \$144,666,000. The Science Complex, at

\$15,242,000, is currently in the second phase of its construction schedule.

Long-Term Facilities Needs

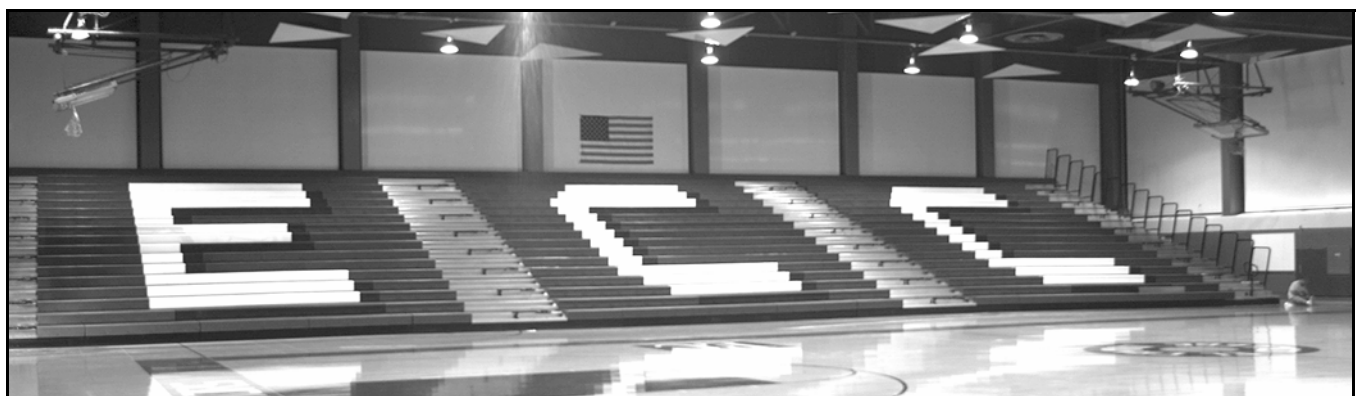
The College is projected to maintain an overall annual growth rate for credit-WSCH of 2.31% and a student enrollment of 2.17% through 2020. In terms of enrollment, the College is pro-

jected to grow from 258,781 credit-WSCH and 25,491 unduplicated students to 394,432 credit-WSCH and 37,516 unduplicated students by the year 2020. To meet this demand, the College must have usable facility space of 838,345 ASF, an overall addition of 81,767 ASF of building space. The specifics of these space needs are outlined in the table below.

**Figure – 4
Total Building Requirements – Year 2020**

SPACE CATEGORY	DESCRIPTION	CURRENT ASF	2020 ASF	DIFFERENTIAL ASF
000	Inactive Area	3,059	0	(3,059)
100	Classroom	116,926	115,237	(1,689)
210-230	Laboratory	201,398	268,932	67,534
235-255	Non Class Lab	323	3,564	3,241
300	Office/Conference	94,996	109,939	14,943
400	Library	38,993	102,695	63,702
520-525	Physical Education (Indoor)	99,904	35,000	(64,904)
530-535	Instructional Media-AV/TV	4,977	33,887	28,910
540-555	Clinic/Demonstration	110	15,006	14,896
580	Greenhouse	400	0	(400)
610-625	Assembly/Exhibition	60,698	37,516	(23,182)
630-635	Food Service	19,820	22,510	2,690
650-655	Lounge/Lounge Service	21,542	8,809	(12,733)
660-665	Merchandise /Bookstore	17,593	26,636	9,043
670-690	Meeting /Recreation	12,133	12,493	360
710-715	Data Processing/Comp	5,938	5,000	(938)
720-740	Physical Plant	55,888	39,921	(15,967)
800	Health Service	1,182	1,200	18
	Other	698	0	(698)
	TOTAL ASF	756,578	838,345	81,767

Source: El Camino Community College District, Space Inventory and Building Facilities Report; Maas Companies Projections



The proposed building/facilities program was developed around the concept of matching space needs with the tolerance thresholds of available time and money. The goal is to produce a viable facilities program within the financial parameters of the local bond, Measure E, and possible allocations from the state. The total construction program is expected to cost 460 million dollars including 394 million dollars from the bond and 66 million from the state and other sources. It is expected that the College will leverage supplemental funds from the state for a portion of the new construction and remodeling projects required. While supplemental state funds will be actively pursued, the only guaranteed revenue is from Measure E bond funds.

The facilities program also addresses Title 5 qualifying criteria defining the parameters for space capacity, utilization, and need determination. Title 5 standards do not address the existing condition of current facilities on campus. Since most of the existing facilities at ECC are 40 to 50 years old, the majority of buildings on campus will need to be reconstructed or remodeled for efficiency. Overall, the College's facility program fall into one of three categories:

1. Renovation or remodeling for greater efficiency
2. Reconstruction to replace existing structures
3. New construction

The majority of the facilities program focuses on categories one and two. Based on the analysis conducted and input received, the following facility needs, surfaced as broad-based considerations for the College's facilities program of the future:

Greatest Overall Needs

1. Infrastructure upgrades and replacement
2. Health, safety, accessibility improvements
3. Site and facility improvements
4. Acquisitions
5. ADA compliance issues

Greatest Academic Needs

1. Replacement of old buildings
2. Renovation or modernization for efficiency of existing buildings
3. Information technology updates / equipment / furnishings
4. Physical education field / support amenities

Greatest Support Services Needs

1. Student services / activities modernization
2. Administrative support services expansion and modernization

Appendices F and G provide a graphic illustration and table that visually define the priorities, timelines, and cost parameters of the Facilities Plan. Appendix H is a site plan conceptualizing the elements of place and location. The illustration and table synthesize all elements of the facilities planning efforts to date and provide bottom line detail. They also translate the facilities program into a working, flexible document that will serve as a roadmap for the College in the next phase of the process – project implementation.

SUMMARY

The Facilities Plan is based upon assumptions that there will be an increase in the number of students served by the College and in the use and availability of technology in the classroom. The District will remain a single college district but will need additional sources of revenue to augment the Measure E facilities bond passed in 2002.

The existing facilities and infrastructure are fairly old and have served the campus well. Many buildings are over fifty years old and the infrastructure designed to support the campus is not energy efficient for 2004 standards. An analysis of the College's Capacity Load Ratios indicate that the campus is overbuilt in lecture and office/conference space and under built in laboratory, library, and media/ATV space. The growth in WSCH to 394,432 and student enrollment to 37,516 by 2020 must be accommodated through the use of current lecture room ASF. An additional 81,767 in ASF will be

added to the campus as laboratory, library, or media/ATV space.

An assessment of the key facility planning elements provided an awareness of the facilities planning issues. The elements of the plan are: Sense of Place – a brief synopsis of the campus and the community; Access - to the campus and the facilities within the campus; Campus Architecture – the style of the facilities and the landscaping; Land Utilization/ Availability – how the college utilizes the land; Supporting Infrastructure – the state of infrastructure and what should be considered in the plan; and Existing Facilities Utilization – ASF compared to WSCH.

Facility utilization and maintenance of new and existing buildings is a key construction consideration, as it will impact the look and the feel of the campus for decades to come.

PLANNING AGENDAS

1. By the year 2020 the College will face a changing academic environment. The College will be less campus-centered due to technological advances and the use of more off-campus facilities. Studies by the planning consultants recommend that the College will need to be flexible in the use of lecture and laboratory space and balance space needs with more efficient space utilization.

2. The classrooms of the future will rely more heavily upon technology-based resources. This technological change may lessen the dependence on large lecture classrooms and laboratories and increase the use of wireless communications and decentralized learning environments. ECC classrooms of the future will need to have a blended lecture/laboratory function.

3. Buildings should be constructed for multiple uses. Facilities that are planned must be developed with the idea that within ten years they will most likely be remodeled. Any reconstruc-

tion or remodeling should be held to the same standards of new construction.

4. Planning for utility and support infrastructure will be crucial in building construction, remodeling, and reconstruction. A substantial amount of funding is needed to pay for construction, remodeling, and reconstruction. At the same time the College needs to minimize construction related disruptions to the campus, students, employees, and the community.

5. Maximizing land utilization is important in order to remain a single college district. Future land utilization plans call for parking structures on the Northern and Southern ends of the campus, improvement of ingress/egress points, improvement of vehicular and pedestrian flow in and around the campus, and the use of landscaping to tie portions of the campus together.

6. The planning consultants recommend that the District build to the Chancellor's Office planning criteria in order to position the College for maximum funding opportunities in the highly competitive arena for state funding. The three key criteria for funding are:

- a. Resolution of Health and Safety Issues,
- b. Remodeling for Efficiency, and
- c. Remodeling or Constructing for Technological Advancement. Planning for compliance with the ADA is crucial to meet student, employee, and community needs, and is less costly for the District if it is included in the development stage of the Facilities Plan.