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ABSTRACT

Prepared for consideration by the administration and Board of Trustees of Pima Community College (PCC), this report presents data on the socioeconomic and educational trends that will affect the college's need for new facilities and offers recommendations for policy formation. Part I establishes the legal basis for facilities planning in Arizona and offers an overview of the development of PCC's facilities between 1965, when planning for the college began, and 1988. In addition to an overview of PCC's current facilities, this section reviews the basic policies on facilities planning set out in the 1986-1991 District Plan. In an effort to inform decision making and policy formation, Part II provides data on: (1) population projections for Pima County for the year 2005; (2) changing student and faculty characteristics; (3) economic trends and business/industrial development; (4) curricular programs offered at PCC; (5) student services; and (6) the special characteristics and needs of modern community colleges. Finally, Part III offers recommendations concerning the optimum size of PCC campuses, the locations of new campuses needed by 2005, and basic educational programs for existing and new campuses. In addition, a list of basic service and facility needs is provided, including an assessment/orientation/advising center, financial aid office, health care office, wellness/fitness center, security/maintenance office, alternative learning/independent study centers, learning resource centers/libraries/media centers, community services center and meeting facility, and associate faculty office. This section concludes with a discussion of the location of special facilities and programs, and projections for four new campuses between 2005 and 2035. (AYC)

THE NEED FOR FACILITIES PLANNING AT PIMA COMMUNITY COLLEGE: A WORKING PAPER

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FEBRUARY, 1988

PIMA COMMUNITY COLLEGE

TUCSON, ARIZONA

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INTRODUCTION

Rapidly growing areas, such as Pima County, demand regular concentrated attention on the changing population patterns, economic development and educational needs of the area--and fairly long range planning for the facilities essential to meet these requirements. Policy regarding future facilities, undoubtedly, is one of the most critical decision areas for an Arizona Community College Board. The current important changes taking place in Pima County make this an especially important area for study and consideration. Thus, this working paper presents basic data and some recommendations for review, discussion and consideration by the administration and Board of Governors of Pima Community College.

The one, single most dramatic factor is the estimate of population growth in Pima County over the next decades from 659,000* in July 1987, to 1,929,000* in 2035, almost three times greater. Using a conservative factor of 3.9% of County population this means 75,200 student "credit" headcount at Pima Community College in 2035. In the immediate eighteen years from July 1987 to 2005 the overall population growth will be from 659,000 (1987) to 1,107,000* (2005). PCC "credit" headcount should grow, conservatively, from 24,866 to 43,200, and extensive additional facilities will be needed to accommodate them.

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*Pima Association of Governments, Population Handbook, 1986, Tucson, Arizona, November 1987, pp. 8, 11, 12.

Legal Basis for Facilities Planning:

The Arizona Revised Statutes do not directly require a community college board to "provide adequate facilities", as is true in some other states. However, the Statutes do include language which clearly provides that "suitable" facilities should be provided for approved programs. The applicable statutory sections are as follows:

Section 15-1466 (E1.) To be eligible for state aid, a district shall:

1. Be equipped with suitable buildings, equipment and campus approved by the state board.

Section 15-1401

3. "Community college" means an educational institution which provides a program not exceeding two years' training in the arts, sciences and humanities beyond the twelfth grade of the public or private high school curriculum or vocational education, including terminal courses of a technical and vocational nature and courses beyond the basic education courses for adults.

Section 15-1424

C. The state board shall determine the location within the district of a community college and purchase, receive, hold, make and take leases of and sell real property for the benefit of this state and for the use of the community colleges under its jurisdiction. Notwithstanding this subsection, the state board may delegate to community college district governing boards the power to lease real property as lessor or as lessee.

D. The state board may enter into long-term lease or lease-purchase agreements for real property, including buildings and improvements to the property.

Section 15-1444. Powers and Duties (of the district board)
A. Except as otherwise provided, the district board shall:
10. Receive, hold, make and take leases of and sell personal property for the benefit of the community colleges under its jurisdiction.

B. The district board may:
2. Lease real property, as lessor or as lessee, if authorized by the state board as provided in Section 15-1424.

In addition, an opinion of the attorney general, No. 78-109, stipulates that "A community college district has no authority, without state board approval, to establish an additional college within its district." However, it is clear from approvals given to other community college districts that a local board of governors can be, and has been, empowered to build several campuses as needed and to purchase in advance sites which are desirable for additional campuses when the necessity arises in future years.

Clearly, the Statutes provide that campuses and future sites for campuses should be planned and equipped in a suitable way in order that the community college district shall be "eligible for state aid" and thus able to function adequately as an educational institution providing the programs specified for Arizona Community Colleges.

Facilities Planning and Development (1965-1988):

Planning for what has become Pima Community College began in 1964, and the people of Pima County approved the formation of Pima County Community College District two years later. Three years later in 1969, Pima Community College began offering college course work and began construction of the first permanent facilities. The two decades since that time have seen major construction activity and the

establishment of extensive facilities. This section of the report will consist of three parts: (1) A brief history of the development of the facilities; (2) Current status of PCC facilities; (3) Facilities plans and policies approved in the 1986-1991 Master Plan.

A brief history of the development of PCC facilities begins with the approval in the Fall of 1967 of a $5.9 million general obligation bond issue to construct college facilities. A campus with eleven buildings was completed in January 1971, the current core of the West Campus. Growth was so rapid that seven relocatable buildings were put up almost immediately. A $9.5 million bond issue was submitted to the voters in 1974 because the enrollments were growing so rapidly. Unfortunately, it was defeated. The Downtown Campus was opened in 1974-75 in renovated space, an outmoded post office. In Spring of 1975 the West Campus and Downtown Campus, together enrolled almost 13,000 students. With almost half of the student body coming from east of Alvernon, an East Education Center was begun. The Community Campus, opened originally in 1972, grew to more than 50 classroom locations in 1975-76, and moved its offices to their current location. By 1976, the Tucson Career Skill Center and the credit-free program of Community Services were incorporated in the college, adding the Skill Center facilities and the widely distributed Community Services temporary classroom arrangements.

By 1977-78 the facilities situation was getting ever more critical and in May 1978 a Citizens Advisory Committee recommended, after extensive study, an extensive facilities program for 1978-81. The grand total recommendation was for a $12 million dollar general

obligation bond election to provide for two new buildings on the West Campus (for Health Sciences and Business Education), for four buildings on an East Campus (Classroom multi-purpose, Science/Technology, Student Center/Library, and Physical Plant), Downtown Campus, one building (General Technology), and for the first time a South Education Center site and one building (Classroom Technology). It was assumed that the Student Center part of the East Campus would be financed by revenue bonds and that one half the cost of the Physical Plant would be financed by state funds. The recommendation for a general obligation bond election was not followed through and no bond election was held.

The East Campus was delayed until 1980 when a site was secured. At a cost of $2.9 million, a 35,000 sq. foot facility was constructed on the East Campus site and was quickly filled to capacity when 3,900 students enrolled in the Fall of 1981. In addition, in 1981 the Skill Center moved to new leased facilities in the Grant Road Industrial Park, consolidating in one location programs that had been in scattered classrooms. Likewise, the Community Services Office was moved to an off-campus location, at 21 E. Speedway. Later, in November 1982, the present site of the Community Services Office was purchased.

In 1982-83, the Roosevelt School, adjacent to the Downtown Campus was purchased from Tucson Unified School District and the current college administrative center was established at 200 N. Stone. These two purchases provided additional space at the West Campus and the Downtown Campus. However, the need for additional facilities was still critical, especially for the rapidly expanding programs in technology and related industrial/business developments. Another bond

issue, for $4.2 million, to construct a high technology/business management building was defeated in 1984. On the positive side, the innovative work of Pima Community College faculty with appropriate state and national officials led to a federal grant to build a technical center for training wastewater technologists. This building was completed and furnished in 1985-86, and in addition provided very limited laboratory facilities at the East Campus for instruction in other sciences. Finally, in the Spring of 1985, the Education Center South was developed in slightly under 2,000 sq. feet of leased space in the El Pueblo Neighborhood Center at Irvington and 6th Ave. No additional PCC facilities have been available since 1985, to date, although credit enrollments jumped close to 10% in 1986-87 and another 8.3% in 1987-88.

The current status of PCC facilities: A current inventory of the lands and buildings of Pima Community College indicates the value of $49 million dollars. The state owned land for campuses totals 332.30 acres--with the West Campus, 260.00 acres; Downtown Campus, 13.82 acres; and the East Campus, 58.48 acres. In addition the College has been authorized to lease instructional/campus space for the Skill Center (35,400 sq. feet), Education Center South (1721 sq. feet), and Aviation Mechanics/Airport Hanger (6400 sq. feet). In addition, PCC owns a commercial restaurant near the Downtown Campus (3506 sq. feet) which is currently leased to a private tenant. This restaurant facility could conceivably be used as part of a food service curricular program with mutual agreement with the tenant and PCC program officials.

The college has an equipment inventory currently valued at over $10 million dollars with additional, non-capital type equipment valued at close to $2 million dollars. Approximately $300,000 per year has been allocated in supplemental funds in the past two years to the academic areas for upgrading educational capital equipment and supplies.

Utilization of the existing campus spaces is heavy at certain times on Monday through Thursday. In addition, there is fairly extensive use of the facilities in the evening and Saturday morning on some campuses. However, in late afternoon hours (2 p.m.-5 p.m. from Monday through Thursday) and all day Friday, a significant number of additional classes might be scheduled. Some of the leased facilities (for example, the Education Center South) are fully used to capacity. Fortunately, a well planned and carried out maintenance program keeps the buildings in usable condition and almost all facilities are available for use all of the time.

Facilities plans and policies approved by the PCC Board of Governors in the 1986-1991 District Plan spell out, in considerable detail, basic policies which directly effect the facilities planning. Some of the most critical are as follows:

- Pima Community College is "one college" with one faculty, one staff, and one student body. The goals of Pima Community College derived from its philosophy and mission "promote quality in all programs and includes several functions: transfer, occupational, general education, community services, and developmental support (page 1).

- Support services for female, minority, and handicapped students, such as child care, should continue to be studied for possible implementation (page 46).
- The college will identify appropriate programs and services that are most appropriately centralized at the District or decentralized at the campuses.
- Investigation should be carried out regarding "facilities capable of meeting present and future needs of southside and northwest area residents" (page 14).
- Each campus in the "one-college", "multi-campus" concept should offer strong liberal arts and sciences, occupational and general interest curriculum (page 14).

In implementing the current board policies and providing quality programs for individual students attending Pima Community College the Board approved "optimal full-time student equivalent parameters" (page 14). The board policy stated that the optimum sizes for campus were not intended to be minimums or maximums, and were not intended to create competition between campuses. The optimum full time student equivalent capacities (exclusive of off-campuses credit enrollments) were established, as follows:

Campus	Optimum FTSE
Community Campus	1500
Downtown Campus	3200
East Campus	2500
West Campus	5500
College Total	12,700

These optimum FTSE figures are important to consider at this time, because the Fall 1987 (45 day) FTSE shows the following:

Campus	Class Location FTSE	Class Responsibility FTSE
Community Campus	2363	2064
Downtown Campus	2480	2739
East Campus	1590	1609
West Campus	5006	5027
College Total	11,439	11,439

Class responsibility FTSE identifies the student enrollments in classes for which the campus has academic scheduling, reporting and fiscal responsibilities. Class location identifies the facilities for those classes in which student enrollments generate FTSE.

Although the various campuses may have some additional classroom scheduling space, the optimum sizes established by the Board of Governors are close to achievement. Accordingly, the future needs detailed in the sections › come clearly require significant expansion of facilities in the near future.

FINDINGS

Planning for facilities for a modern community college requires specific data from a number of varied sources. Major areas of information which are needed include population demographics for the region served, the variety of services and educational programs provided, and the students and staffing involved. As a consequence this section will provide findings and data on the following six topics: (1) Projected population of Pima County, (2) Changing student and faculty characteristics at Pima Community College, (3) Economic trends and business/industrial development, (4) Curricular programs offered by Pima Community College, (5) Student Services provided by Pima Community College, and (6) Special characteristics and needs of modern community colleges. Selected critical information related to each of these six topics will be presented, in order that later recommendations may be made for policy considerations.

Projected Population of Pima County:

Source materials for the projections of Pima County are from the Pima Association of Governments, Population Handbook, 1986, approved in November of 1987 by the organized towns in Pima County and the Arizona Department of Economic Security. The projections recognize that in July 1987 the county had a population of 659,000. The projections also stipulate that by the year 2005 the county will have a population of 1,107,000. In the interim, by the year 1998 (only ten years from now), the county will have a population of 926,400, an

increase of 267,400 in a decade. Estimates for the year 2035 show a population growth almost tripled to 1,929,000.

Using the conservative factor of 3.9% of the county population enrolled for credit coursework at Pima Community College, the projected headcount for the College in 2035 is 75,200. For the year 2005, the projected headcount is 43,200 students enrolled for credit coursework at PCC. Within a decade, using the same factor of 3.9%, PCC credit course enrollment will be 36,100. These figures can all be converted to FTSE based upon recent and anticipated experience, with the following results; for year 1998, 17,300 FTSE; for year 2005, 20,700 FTSE; and for 2035, 36,100 FTSE. These growth figures compare dramatically with the Fall 1987 FTSE of 11,439 on the 45th day. The impact of these growth projections emphasize the challenge which faces Pima County and PCC in funding and building facilities necessary to accommodate future Pima County students.

Fortunately, the details of the projections have been developed at census tract level. The accompanying map (number 1) shows clearly where the residents will be in the urban area of Pima County in the year 2005. In addition, the increase in populations in the ten urban area zones* from the year 1988 to 2005 is outlined on map number 2. The greatest increases will be in zone number 9 (plus 121,665) and in zone 1 (plus 111,274). Significant increases are also found in zone number 6 (plus 56,117) with 33,109 north of Golf Links Road and

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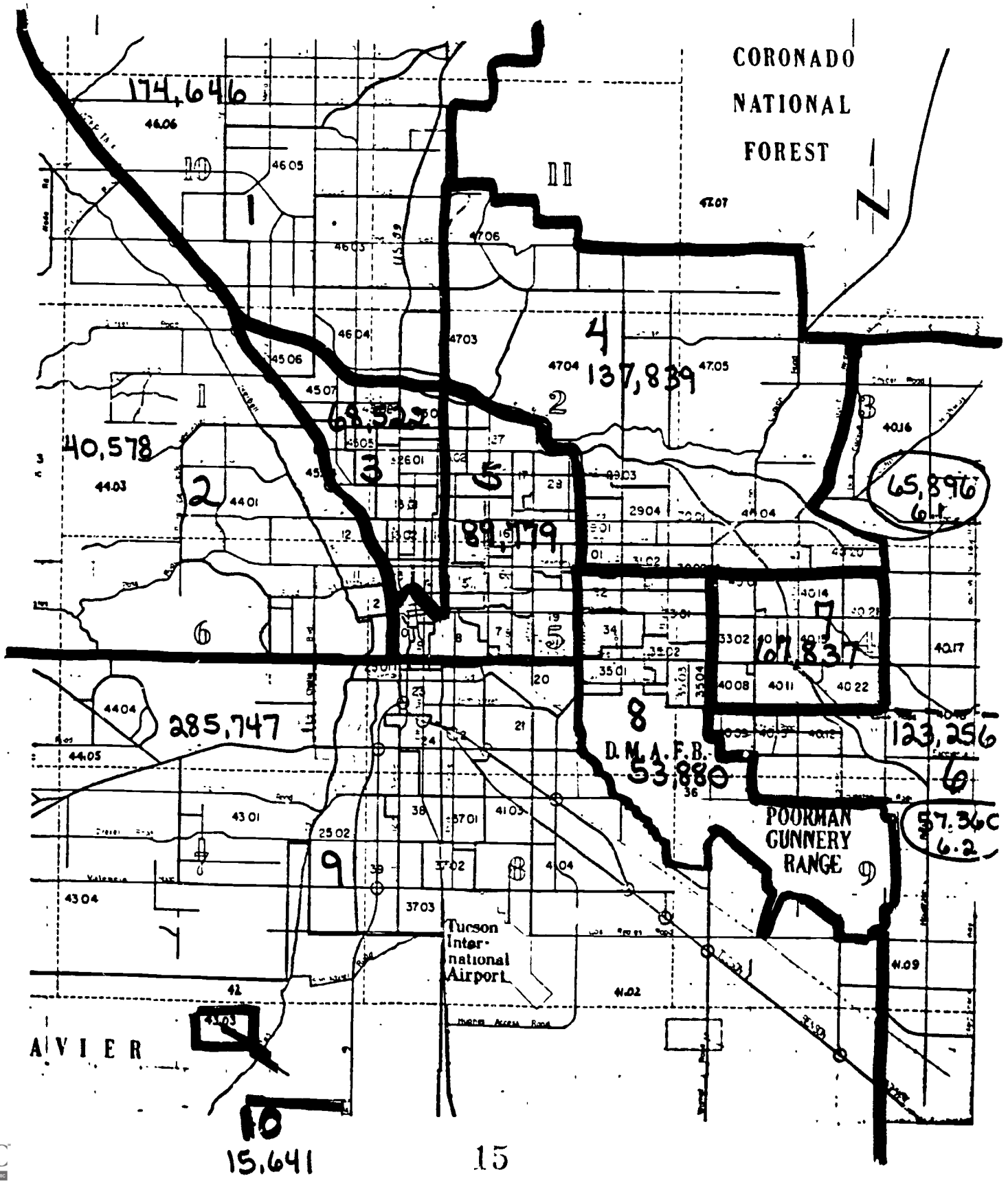
*Tucson Trends 88, published by Valley National Bank, the Arizona Daily Star and the Tucson Citizen.

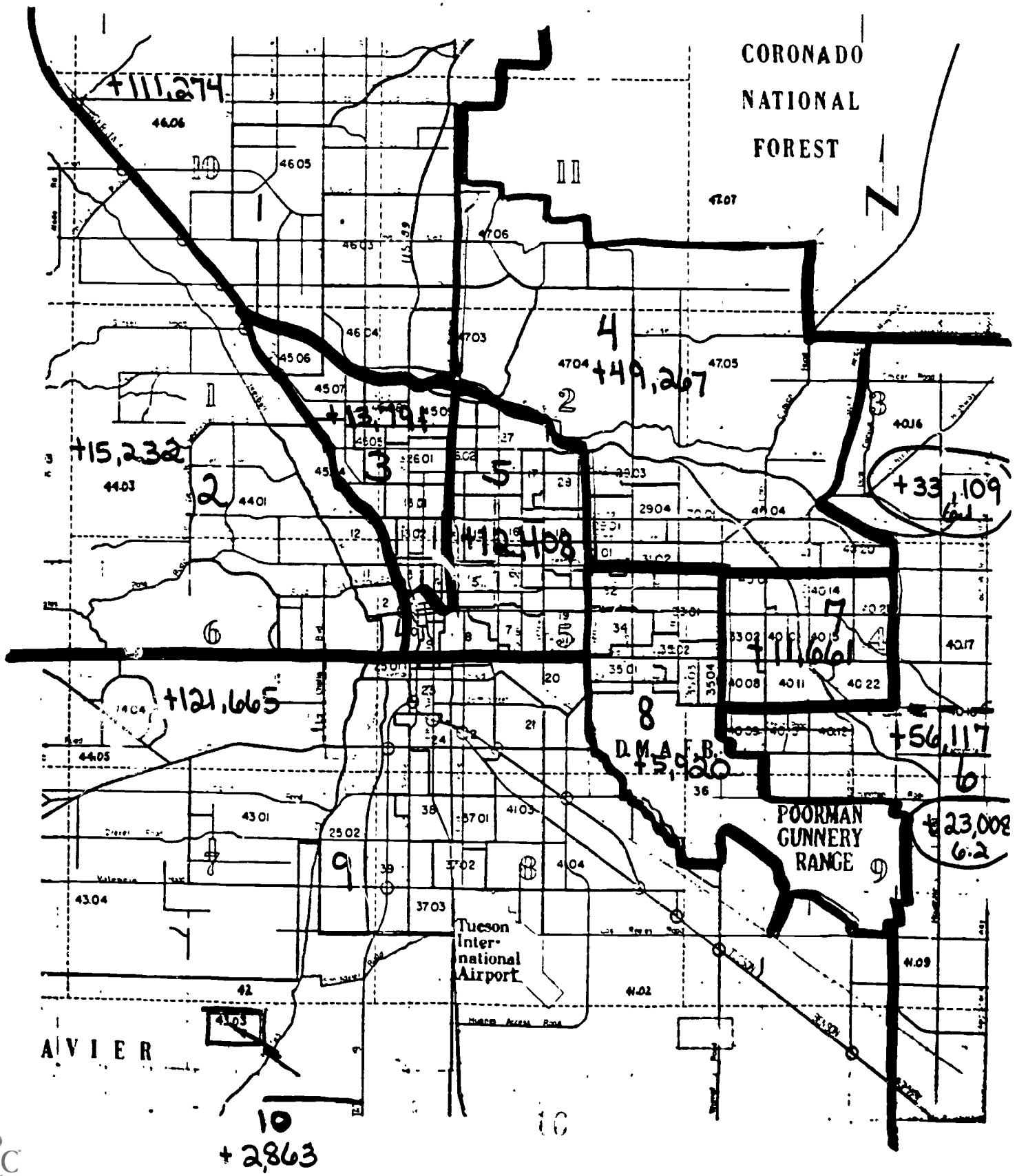
POPLUATION BY ZONE IN THE
TUCSON METROPOLITAN AREA
YEAR 2005

(MAP 1)



POPULATION GROWTH BY ZONE IN THE TUCSON METROPOLITAN AREA YEAR 1988 TO YEAR 2005

(MAP 2)



23,008 south of Golf Links Road. With this growth, Zone 9 population totals 285,747, Zone 1 totals 174,646, and Zone 4 plus Zone 6 north of Golf Links Road totals 203,735. Currently, no campus of Pima Community College is located in any of these immediate service areas.

Changing Student and Faculty Characteristics at Pima Community College:

The average age of students enrolled for credit courses is increasing. In recent years there is a growing proportion of minority students, with an increase in the Hispanic group from 18% to 20% of the total. This is almost exactly equal to the proportion of their population of Pima County. Another significant factor is the number of part-time students, in the Fall of 1987, 78%. The percentage of students enrolled for at least one daytime class has dropped to 62%, with 38% enrolled as extended day students only! Students enrolled in programs for direct employment have dropped to 37%, with 36% in general education programs and 27% in transfer programs to another college or university. Through Fall of 1987, the total unduplicated number of students who have enrolled for credit coursework represent one of three of the current county population. Important changes of this type affect the planning of future facilities, particularly the proportion of part-time students and the larger number of students taking coursework in the extended day program. A significant number of essentially full-time students end up taking portions of their academic program in both daytime and extended day classes--with a need for student services being available during both of these time periods.

The two most important factors related to faculty which affect facilities planning are (1) the proportion of full-time to part-time and (2) the faculty student ratios. On a headcount basis in Fall of 1981 there was a total of 273 full-time faculty including non-classroom faculty. Concurrently, there were 693 part-time associate faculty not otherwise associated with the institution. Thus, on a headcount basis, 28% of the total 1,026 faculty were full-time. Comparable figures for 1987 show 276 full-time faculty including non-classroom, and 964 associate faculty not otherwise associated or employed by the institution. Of these 1240 faculty, only 22% are employed full-time. With regard to the FTSE/FTFE ratio, it remained relatively stable during this time period (20.42, Fall 1981 to 20.10, Fall 1987). Clearly two factors to which those doing facilities planning in the future must be very attentive are the needs of (1) associate faculty and (2) part-time students.

Economic Trends and Business/Industrial Development:

Arizona has been ranked by reputable analysts for the past two years as the state with the most attractive business climate in the United States. Likewise it has ranked first in job creation and in birthrate of new companies. In addition, it ranked third in percentage growth of new companies. Many high technology companies have made the decision to locate in Arizona in the past few years. This is particularly important because small independent businesses account for 50% or more for new jobs created.* An excellent example of the

*From Inc. Magazine, as quoted in the 24th annual economic forecast presented by Valley National Bank of Arizona in the Department of Economics of Arizona State University, December 9, 1987.

developing importance of Tucson and Pima County is the inclusion of Tucson as one of three cities (the others are Los Angeles and Columbus) in a major new experiment by the Export-Import Bank designed to help small companies sell their products abroad. States involved are California, Massachusetts and Maryland. With only three states and three cities involved in the country. The inclusion of Tucson clearly indicates the change that has taken place in the last ten years in its contribution to its economic and business/industry effort in the United States.

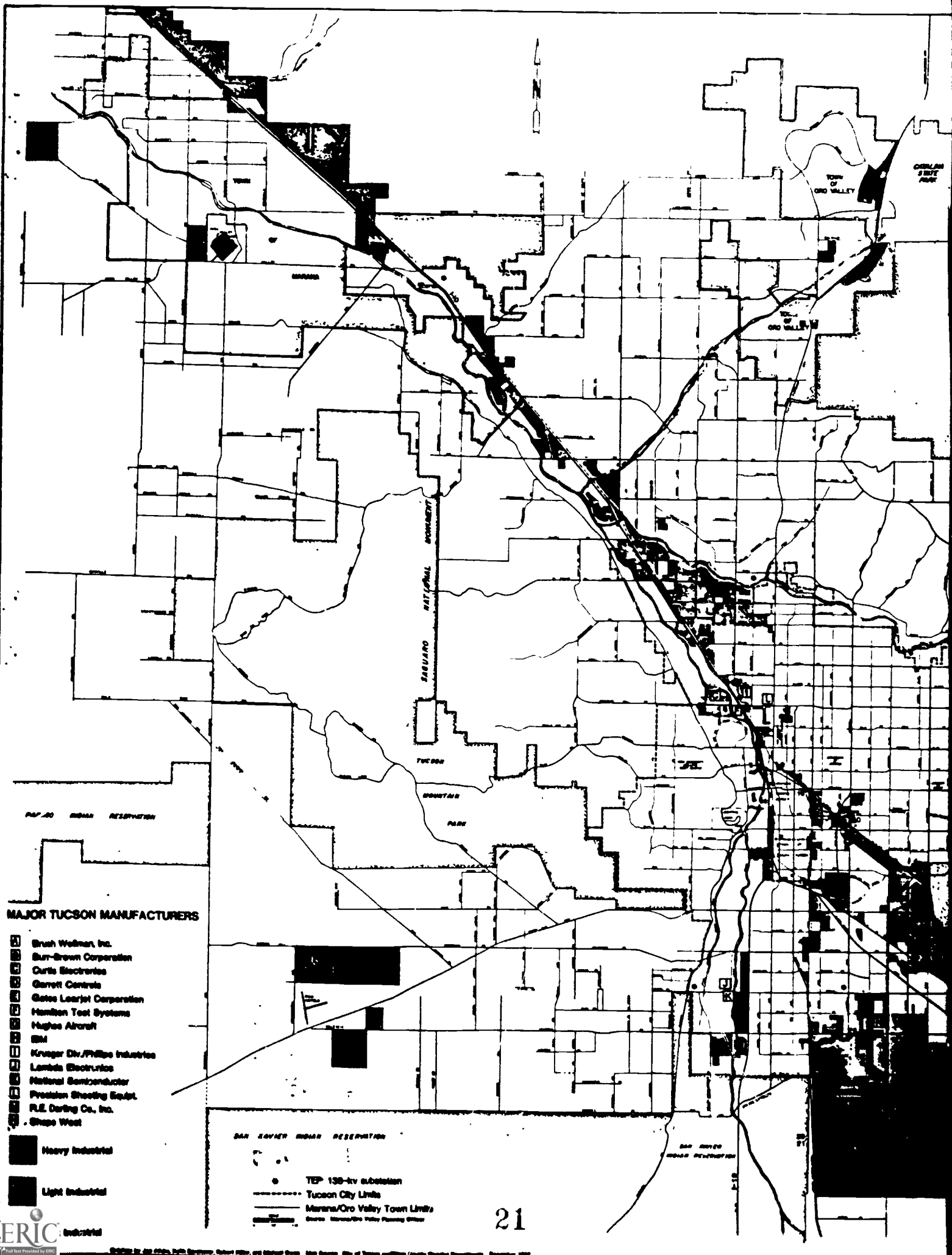
In Pima County economic indicators and business/industrial growth factors are comparable to the state-wide picture. In the past decade retail sales have increased 125.7% and bank deposits increased 189.2%. Certainly over the next 1.5 decades these increases will continue to compound as the business climate in Pima County continues to be favorable compared to the national economy.

The Arizona Labor Information Newsletter of December 1987, published by the Arizona Department of Economic Security, provides the most useful data regarding economic and business indicators through the year 2000. This document shows that Pima County has a seasonally adjusted unemployment rate of only 4.5%, which is well below the national rate. Through the year 2000, the metropolitan areas of which Pima County is a major part will be influenced by the important growth in the service areas which include the health and business fields. As the population ages it will require more medical care. Also, the proliferation of health maintenance organizations is creating additional health service jobs. Business support services such as data

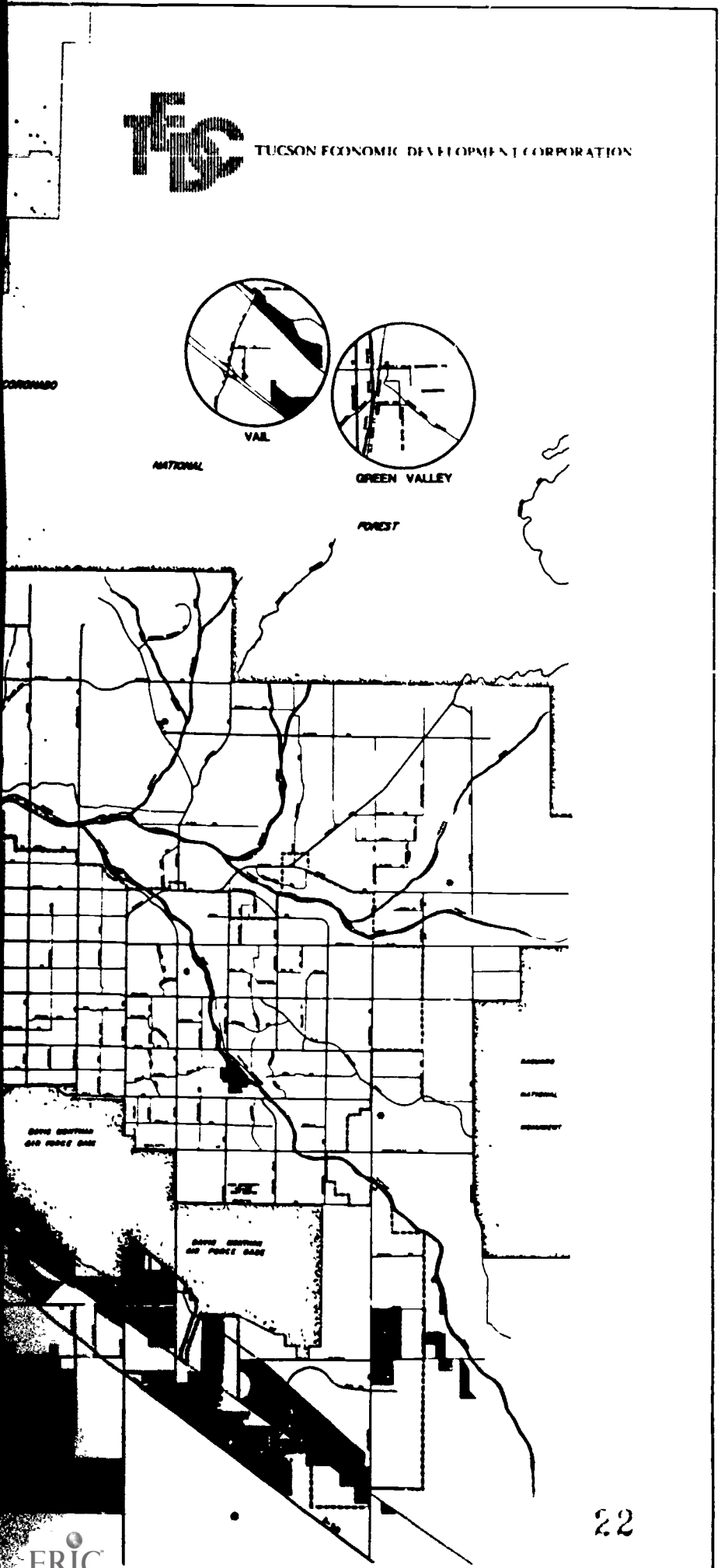
processing, personnel services, and temporary agencies are expected to lead the business industry. In addition to business and health services, household related services will grow as the labor force of women climbs. The service occupations which require the most education will be the fastest growing. In Arizona, service occupations with high growth potential are computer programming, nursing, medical technology, and personnel management. In addition, in Pima County in particular, tourism/travel has grown rapidly with the development of final destination resorts and the almost world wide interest in the Southwest.

In Arizona, and particularly Pima County and Maricopa County, manufacturing employment and its share of total employment are expected to increase through the year 2000. The State's and Pima County's manufacturing strength stems from its large high tech base. About half of the manufacturing employment is in high tech industries, such as computers, aerospace and electronic components. Nearly 150,000 manufacturing jobs will be created in Arizona between now and the year 2000. On a ratio basis, 25%, 37,500 of these created manufacturing jobs will be in Pima County.

The Tucson Economic Development Corporation has prepared a descriptive map of the developing industrial corridors in Pima County. Clearly they follow the major freeways and are a factor which must be considered in future campus locations. Other community colleges in their facilities planning have found that many students working in the major industrial areas will plan to attend classes on their way to and from work. The industrial parks designated on the accompanying map


MAJOR TUCSON MANUFACTURERS
Brush Wellman, Inc.
Burr-Brown Corporation
Curtis Electronics
Garrett Controls
Gates Learjet Corporation
Hamilton Test Systems
Hughes Aircraft
IBM
Kruger Div./Phillips Industries
Lambda Electronics
National Semiconductor
Precision Shooting Equipt.
R.E. Darling Co., Inc.
Shape West
Heavy Industrial
Light Industrial
Industrial
TEP 138-kv substation
Tucson City Limits
Marana/Oro Valley Town Limits
N
SAGUARO NATIONAL MONUMENT
TOWN OF ORO VALLEY
TUCSON MOUNTAIN PARK
PASCUA INDIAN RESERVATION
SAN XAVIER INDIAN RESERVATION

TUCSON INDUSTRIAL PARKS



1. **AERO INDUSTRIAL PARK**
2. **AIRPLANT BUSINESS CENTER**
3. **AIRPORT COMMERCE CENTER**
4. **ALVERNON BUSINESS CENTER**
5. **ALVERNON BUSINESS PARK**
6. **BAY COLONY TECHNOLOGY CENTER**
7. **BRITANNIA BUSINESS CENTER**
8. **BROADBENT INTERSTATE CENTER**
9. **BUTTERFIELD BUSINESS CENTER**
10. **CAYLOR BUSINESS & INDUSTRIAL CENTER**
11. **CAYLOR LITTLETOWN**
12. **CENTURY PARK RESEARCH CENTER**
13. **CONTINENTAL RANCH BUSINESS PARK**
14. **CORONADO POINTE COMMERCE CENTRE**
15. **CORONADO JOINT CORPORATE CENTER**
16. **CUSHING BUSINESS CENTER**
17. **EASTSIDE RESEARCH/COMMERCE CENTER**
18. **EBELSBROCK-AJO BUSINESS PARK**
19. **FAIRFAX INDUSTRIAL PARK**
20. **FOOTHILLS BUSINESS PARK**
21. **FOREIGN TRADE ZONE—#40**
22. **GRANT INTERSTATE CORRIDOR**
23. **GRANT ROAD INDUSTRIAL CENTER**
24. **INTERSTATE BUSINESS PARK**
25. **INTERSTATE CORPORATE PARK**
26. **KINGSTON COMMERCE CENTER**
27. **KITMAN COMMERCE CENTER**
28. **MIDVALE PARK COMMERCE CENTER**
29. **NEW SPAIN INDUSTRIAL PARK**
30. **NORTH TUCSON BUSINESS CENTER**
31. **ORANGE GROVE INDUSTRIAL PARK**
32. **PALO VERDE BUSINESS PARK**
33. **PALO VERDE PARK**
34. **PALO VERDE TECH CENTER**
35. **PARK AVENUE INDUSTRIAL & COMMERCIAL CENTER**
36. **PUSCH RIDGE BUSINESS PARK**
37. **RANCHO VISTOSO INDUSTRIAL PARK**
38. **RITA RANCH**
39. **SAN XAVIER INDUSTRIAL PARK**
40. **SHANNON BUSINESS PARK**
41. **SOUTHPOINT BUSINESS CENTER**
42. **STEAMS BUSINESS PARK**
43. **SUNBELT COMMERCE CENTER**
44. **SUNBELT INDUSTRIAL CENTER**
45. **TUCSON AIRPORT CENTER**
46. **TUCSON AVIATION CENTER**
47. **TUCSON BUSINESS PARK**
48. **TUCSON INDUSTRIAL CENTER**
49. **TUCSON INTERNATIONAL BUSINESS CENTER**
50. **TUCSON TECH CENTER**
51. **VAIL COMMERCE CENTER**
52. **V P COMMERCE CENTER**

provide some data about these major developments. However, it is important to note that a very recently announced major industrial addition, the McCulloch Corporation, will be in place on southeastern location beyond what is on this map. Likewise, existing plans for population growth at the other end of the I-10 industrial corridor in the Marana area currently shows less than 20,000 population by 2035. Although nothing may come of it, a currently publicized effort to develop 6,000 acres in the Marana area describe the possibility of a planned total community of 150,000. It appears that economic development in the Pima County area is at a take off point and a further indication of the current need for indepth facilities planning for Pima Community College.

Curricular Programs Offered by Pima Community College:

In its 17 years of operation, Pima Community College has developed an extensive program of curricular offerings in the transfer, professional/occupational, and general studies area. The accompanying table, Educational Programs at Pima Community College-Fall 1987, is a comprehensive list of educational programs in which a formal award of a certificate or degree can be earned. The table indicates which of the campuses are currently authorized to offer necessary courses and certify the completion of a degree or program.

EDUCATIONAL PROGRAMS AT PIMA COMMUNITY COLLEGE
FALL 1987

PROGRAM	FORMAL AWARDS CERTIFICATE BASIC	CERTIFICATE ADV/TECH	DEGREE	CAMPUS CC	DC	EC	WC
UNIVERSITY TRANSFER							
Anthropology			X				X
Arts, Fine			X				X
Automotive Technology			X		X		
Business Administration			X		X		X
Chemistry			X				X
Corrections			X				X
Criminal Justice			X				X
Drama			X				X
Education (Early Childhood, Pre-Elem., Pre-Secondary)			X				X
Engineering			X				X
Geology			X				X
Liberal Arts and Sciences			X				X
Manufacturing Engineering Technology			X		X		
Mathematics			X				X
Media Communications			X				X
Music			X				X
Physical Education			X				X
Physics			X				X
Public Administration			X				X
Pre-Agriculture			X				X
Pre-Architecture		X					X
Pre-Dental, Medical, Veterinary			X				X
Pre-Medical Technology & Microbiology			X				X
Pre-Pharmacy			X				X
Recreation Education			X				X
Social Services			X				X
Social Services (Substance Abuse)			X				X
Speech			X				X
Youth Care Rehabilitation			X				X

EDUCATIONAL PROGRAMS, FALL 1987 (Continued)

PROGRAM	FORMAL AWARDS			CAMPUS			
	CERTIFICATE						
	BASIC	ADV/TECH	DEGREE	CC	DC	EC	WC
DIRECT EMPLOYMENT (PROFESSIONAL/OCCUPATIONAL)							
BUSINESS							
Accounting		X	X		X		X
Banking			X		X		
Business Administration			X		X		X
Business Administration, Bilingual	X				X		X
Credit Union	X	X	X		X		
Hospitality Education (Fast Foods, Hotel-Motel, House-keeping, Restaurant, Travel Agent, Travel-Tourism)	X	X	X		X		
International Business Communications	X		X				X
Real Estate	X	X	X		X		
Savings Bank	X	X	X		X		
Transportation and Traffic Management	X	X	X	X			
OFFICE EDUCATION							
Administrative Assistant			X		X		X
Clerk-Typist		X			X		X
Receptionist (Medical, Legal, General)		X			X		X
Records Management	X		X				X
Secretary, Bilingual	X	X	X		X		X
Secretary, Executive			X		X		X
Secretary, General			X		X		X
Secretary, Legal			X		X		X
Secretary, Medical			X		X		X
COMPUTER SCIENCE							
Computer Programmer/Analyst			X			X	X
Data Entry Operator	X	X			X		X
Small Business Computer Specialist			X				X
Systems Programmer		X				X	X

EDUCATIONAL PROGRAMS, FALL 1987 (Continued)

PROGRAM	FORMAL AWARDS			CAMPUS			
	CERTIFICATE						
	BASIC	ADV/TECH	DEGREE	CC	DC	EC	WC
HEALTH SCIENCES							
Allied Health Services	X				X		X
Associate Degree Nursing			X				X
Dental Assisting Education		X					X
Dental Laboratory Technology			X				X
Emergency Medical Technology	X	X					X
Nursing Assistant	X				X		
Ophthalmic Dispensing Technology			X				X
Pharmacy Technology	X		X				X
Physical Therapist Assistant			X				X
Practical Nursing		X			X		
Radiologic Technology			X				X
Respiratory Therapy		X	X				X
HOME ECONOMICS							
Home Economics Careers		X	X				X
PUBLIC SERVICES							
Corrections	X		X				X
Criminal Justice			X				X
Early Childhood Education		X	X				X
Fitness Technician		X					X
Institutional Food Service	X	X		X			
Interpreter Training	X		X				X
Legal Assistant			X		X		
Postal Service Management	X	X	X	X			
Public Transportation Maintenance Technology	X	X	X	X			
Recreation			X				X
Social Services	X		X				X
Social Services (Domestic Violence Intervention)	X						X
Social Services (Substance Abuse)	X		X				X
Training for Special Education	X	X	X				X
Youth Care		X	X				X

EDUCATIONAL PROGRAMS, FALL 1987 (Continued)

PROGRAM	FORMAL AWARDS			CAMPUS			
	CERTIFICATE						
	BASIC	ADV/TECH	DEGREE	CC	DC	EC	WC
TECHNOLOGY							
Advertising Art	X	X	X		X		
Air Conditioning	X	X	X		X		
Applied Arts			X				X
Applied Design	X	X	X				X
Apprentice Related Instruction			X		X		
Archaeological Fieldwork	X	X					X
Automotive Technology	X	X	X		X		
Aviation Mechanics	X				X		
Building Technology	X	X	X	X			
Communication Workers Technology	X			X			
Drafting/Construction	X	X	X				X
Drafting/Electro-Mechanical		X	X				X
Drafting/Mechanical		X	X				X
Electronics, Communications			X				X
Electronics, Digital			X				X
Electronics, General	X		X				X
Electronics, Instrumentation and Process Control			X				X
Engineering Construction Technology		X	X	X			
Graphic Technology	X		X		X		
Landscape Technician	X		X				X
Machine Tool Technology	X	X	X		X		
Media Communications	X		X				X
Microelectronic Technician		X	X				X
Production and Inventory Management	X	X	X	X			
Quality Control Technician	X	X	X	X			
Wastewater Technology	X	X	X			X	
Welding	X	X	X		X		
OTHER PROGRAMS							
General Studies			X	X	X	X	X

Additional programs are constantly under review and development as needed by the community. For example, programs are in process of review or being implemented in such fields as Fire Science, Ceramic Manufacturing Technology, Highway Inspection Certification, Credit Management, and Financial Planner Certification. These programs are being developed by the Community Campus which makes a regular effort to assess these developing needs and organize the programs. In at least three specific areas the Community Campus has developed new programs in Wastewater Technology, Landscape Technology, and Microelectronic Technology, which in turn have been delegated or established on the East Campus and the West Campus after the completion of the program development. Future planning for facilities must recognize the specials needs for particular kinds of programs. The Wastewater Technology program, with its new building on the East Campus, illustrates the need for attention to program development in the establishment of plans for adequate facilities at the various campuses.

Another educational factor which must be considered in planning campuses is the general education program. In the Pima Community College catalog, 1987-88, on pages 26-27, the general education requirements for various degrees are specified. Interestingly enough, a number of suggested possible courses to meet general education requirements are in professional/occupational fields and restricted to certain campuses. A listing of basic general education course areas which should be available on any existing or newly established campus should not include these restricted fields.

However, basic courses should be available on each campus for all of the following list of the divisions of knowledge and the academic areas from which they may be selected. The resulting list of major divisions and of academic fields in which each campus should provide coursework is as follows:

Humanities/Fine Arts
- Art
- Drama
- Humanities
- Foreign Languages
- Literature
- Music
- Philosophy

Social/Behavioral Sciences
- Anthropology
- Economics
- History
- Political Science
- Psychology
- Sociology

Science/Mathematics
- Astronomy
- Chemistry
- Earth Science
- Biology
- Mathematics

Communications
- Speech
- Writing

Reading
- Testing/or
- Reading 112

Another unit of Pima Community College, the Skill Center, offers a number of diverse programs and any consideration of future facilities must recognize the past and potential future service to students in this area. In the five year period from 1982 to 1987 the Skill Center offered certificate programs in ten different occupational clusters: (1) Building and Construction, (2) Business and Office, (3) Electronics (From Solderer to Technician), (4) Food Service, (5) Health Services, (6) Printing, (7) Machine Trades, (8) Fire Fighter (pre-employment training), (9) Auto Body, and (10) Automotive Repairer (various and sundry certificates).

Another element worthy of careful consideration in facilities planning for academic programs is the off campus availability of facilities for field work (in such areas as Recreation Administration

and Social Service), for clinical practice (in such areas as Nursing, Emergency Medical Technology and other Allied Health Sciences) and for practicum work of all kinds (in such areas as Special Education, Early Childhood Education, and Elementary Education). The FTSE that may be generated in such off campus laboratory facilities would be considered as the responsibility of the sponsoring campus but would be in addition to any limitation of campus size.

Student Services Provided by Pima Community College:

From its inception Pima Community College has been very heavily student oriented with excellent attention to the needs of individual students. However, due to the commuting nature of the student body, standard, traditional student service areas have been adapted to the special circumstances.

A traditional approach to student services includes everything from initial information and student recruitment to placement and follow up, alumni activities. A fairly complete listing of all these student services includes recruitment, admission, orientation to college, financial aid services, academic advising, testing services (including initial assessment prior to advisement, testing for personal development and testing for academic credit by examination), minority affairs services and support, personal counseling and referral to appropriate mental health community services, student activities programs (including clubs, hobby groups, academic societies and honor groups, student association activities, student newspaper), recreational activities (including intramural sports, recreation programs and intercollegiate athletics), student

housing, student health services, placement services (including on campus part-time work, off campus part-time employment as a student, and career counseling/job placement). Alumni activities after leaving college are sometimes included. Students participating in student activities and using student services have shown greater retention characteristics and are far more likely to complete their programs.

In a community college such as PCC some of these student services are either more important or less important than in residential colleges and/or universities. For example, student housing for an essentially commuting student body is of minimal importance, whereas assessment testing and diagnosis of students of all ages and all backgrounds is exceedingly important. Student activities are often not quite as important to a commuting student body, most of whom work and many of whom are married with children of their own to raise. The responsibility of the community college for taking any Pima County residents over 18 years of age, whatever their background, interest and ability, and providing them with good advising, career understanding and job placement makes this an exceptionally important student service area to be provided, no matter the facility demands and no matter the cost.

The increasing proportion of part-time students and students attending the college during the extended day and Saturday time periods places a special burden on those persons planning campus facilities. These services should be available to all students at all times that the college is open for classes on all physical campuses. Current assessment of these student services by the current accreditation

committee in this area indicates that additional attention needs to be given to this area of college service.

Special characteristics and needs of modern community colleges:

The modern community college serves a very distinctive student body and provides diverse, new resources by which they can learn. Likewise, the nature of the student body, with a high proportion of them earning a living at the same time they attend college, requires that educational opportunity be provided closer to the potential students. Many of them cannot afford to move or to attend on a full-time basis. As a consequence, students take from 2 to 10 years to earn an associate degree, with average at Pima Community College being 3.5 years.

In 1978, the Advisory Committee chaired by Gordon D. Paris found through their surveys that "one or more members in 70% of the households (in the Tucson area) is likely to take at least one Pima Community College course if a facility is located near their home" (page 2). Almost a decade later data secured at the Education Center South showed that over three-fourths of the students attending for the first time would not have attended Pima Community College if the Center was not in its current location. This finding is true in spite of the fact that the facilities are very limited, to one crowded office and two classrooms serving over 400 students. Another major influence on the modern community college and its learning environment is the extensive use of newer learning resources (sometimes called instructional technology) which is available for individual, independent study, small group learning situations, long distance

learning (such as county wide educational television), and for large group instruction. However, learning materials of this type must be kept up to date, often by the local faculty if they have developed unique learning materials. The machines for delivery of the learning materials have to be maintained and kept in good condition to optimize the learning situation. Thus, any instructional cost savings which may ensue as a result of extensive use of associate faculty may be subsumed by the additional costs involved in individualizing instruction and extensive use of modern learning media.

The decentralization of campuses within a one-college approach to organization of a community college places a premium on communications networking. Registration by telephone or computer networking can expedite student communication with the institution. Student advisement and course availability, plus actual registration, can be implemented very satisfactorily by efficient communication systems. Of course, the system must be redundant, with sufficient back up capability for fail-safe operation. Implementation of college-wide policies regarding academic standards, student progress, and similar topics requires high quality communication networks between the campuses, various academic offices and the college administration offices.

This brief statement of characteristics of modern community college clearly indicates the desirability of comprehensive facilities planning. Without such planning on a carefully structured schedule can make it very difficult for students, faculty, administrative officials and Board members to function in an optimum way.

RECOMMENDATIONS FOR POLICY CONSIDERATION

Basic findings related in the previous section coupled with the previous policy determinations by the Pima Community College Board of Governors serve as a basis for a number of suggested recommendations for policy consideration by the current Administration of the College and its Board of Governors. These recommendations will be made in six related but slightly different categories: (1) Basic sizes of campuses, (2) New campus locations (needed by 2005), (3) Basic educational programs for existing and new campuses, (4) Basic services and facilities for new campuses, (5) Location of special facilities and programs, (6) Areas for campus consideration (2005-2035).

Basic Sizes of Campuses:

The 1986-91 district plan approved by the Board of Governors on January 15, 1986, adopted optimum FTSE of 1500 for the Community Campus, 3200 for Downtown Campus, 2500 for the East Campus, 5500 for the West Campus. The adopted policy states further that this is optimum rather minimum or maximum. Optimum sizes of this type reflect very well the individualized, humane approach of Pima Community College to its students. Further, they are designated to "reinforce, not limit, the College's ability to be one College". It is recommended that this approach be continued with very minor modifications. No minimum is necessary, but it is desirable that each campus be established at a range of FTSE with the expectation that the top of the range would serve as a maximum for planning. FTSE credit earned by

students at clinical, practicum, or fieldwork facilities would be in addition to the planning maximum. For existing campuses it is recommended that the Community Campus be an optimum FTSE of 1500, with a planning maximum of 1800; the Downtown Campus be an optimum FTSE of 3200 with a planning maximum of 3500; for the East Campus the optimum FTSE be 3200 with a planning maximum of 3500; the West Campus be an optimum FTSE of 5500, with a planning maximum of 6000. The West Campus already exceeds 5000 FTSE and has a number of specialized college wide special functions involving facilities, in particular, intercollegiate athletics, performing arts center, the college student newspaper, Library Technical Services and the College-wide Computer Center.

The Skill Center operates in a completely different fashion and currently has 35,400 sq. feet for contracted offerings over the last five years in ten different clusters. No FTSE planning guides can be established for the Skill Center. However, this is a long-time integral educational program at Pima Community College and needs to be considered carefully as part of long-term facilities planning.

The enormous population growth anticipated in the next eighteen years requires that new campuses be sited and built in the most rapidly developing zones. It is recommended that new campuses be planned in appropriate zones with an optimum FTSE of 3200 and a planning maximum of 3500. Studies have shown that this is an efficient, cost effective size for a campus--large enough to justify the necessary facilities required for all necessary services and small enough to maintain the individualized personal approach implicit in the past planning of Pima Community College. It is suggested that new

campuses be planned, from a facilities and program point of view on the basis of an initial component for 1,000-1200 FTSE, with a second component at 2300 - 2500 FTSE, as enrollment demands, and a final increment for a maximum of 3500 FTSE.

New Campus Locations (Needed by 2005):

Previously established optimum FTSE for the three physical campuses now in existence totaled 11,200 and the Community Campus with its multiple locations totaled 1500. If the planning maximum FTSE figures proposed above should be adopted as a minor change in policy, it would total 13,000 FTSE, and combined with 1800 at the Community Campus would provide 14,800. The estimated FTSE for the year 2005 would be 20,700 with 17,300 FTSE achieved by 1998. Accordingly, the 17,300 FTSE to be served by 1998 would require 2 additional campuses developed through the first incremental stage--1250 FTSE each. By 2005, each of the two needed new campuses should have been completed and gone beyond the second incremental stage and reached a FTSE totaling 2900-3000 FTSE each. This would provide a total facilities capacity for the College, as a whole, of 20,700 FTSE.

The population increases by zone which have been graphically illustrated earlier demonstrate that one of these new campuses should serve the northwest in Zone 1, based on an increase of 111,274 to a new total 174,646 persons in this zone by 2005. The second of the new campuses should serve the southwest in Zone 9, based on an increase 121,665 to a new total 285,747 persons in this zone by 2005. No other additional new campuses should be required in this time period.

However, the modest increase in Zone 10, the Green Valley area may well justify a small incremental addition to the present educational service center now located in this active area.

Basic Educational Programs for Existing and New Campuses:

The existing educational programs are shown completely in the chart included in this report. The general education requirements as outlined earlier indicate the divisions of knowledge and the academic fields for facilities which should be available on campuses of Pima Community College. It appears that the West Campus and the Downtown Campus can accommodate both the educational programs and the general education requirements which should be available on these campuses. However, the East Campus, even with its additional planned construction, does not have adequate facilities to meet the science requirements area in general education. This is a serious deficiency that has been noted within the past ten years. This campus would be increased to a planning maximum of 3500 FTSE under the previous proposal. Planning for an additional 1,000 FTSE, above the 2500 FTSE already scheduled, with definite attention to the provision of science facilities at the East Campus should be a high priority in the very near future.

Planning for the two new campuses which will be needed in the near future should be based on FTSE for each campus of 1250 FTSE. The first necessity is for students at these new campuses to be able to meet the general educational requirements in each of the divisions of knowledge and the specified academic areas. In addition, the new campuses should have degree programs offered in four academic fields

which are widely needed by many students throughout the entire county. These fields are (1) Business Administration, (2) Office Education, (3) Education, and (4) Computer Science, plus the degree program in General Studies. These four programs are in high demand and are projected to remain so. Initial facilities should provide the limited specialized laboratory spaces needed for these four academic programs and in music, art and science.

Basic Services and Facilities for Campuses:

Of course, each campus requires office spaces for full-time faculty, and the regular academic and student service administration. A special list of these facilities is not necessary in this particular because they have been fairly well established in the West, Downtown and East Campuses.

However, the changing nature of the modern community college and the specialized approaches to instructional and student services as developed at Pima Community College suggest very strongly an additional list of basic facilities needed on each campus. Such a list is here proposed for careful consideration for inclusion on all existing and new campuses. On existing campuses some of these facilities are already available but it would be desireable to carefully assess them to be certain they are totally adequate.

. Assessment/Orientation/Advising Center: Available six days a week, Monday-Friday, 8:00 a.m. - 8:00 p.m. and Saturday 9:00 a.m. - 5:00 p.m., with adequate staffing. This office should be capable of providing testing services as needed and assessing life experience for academic credit.

- Financial Aid Office: Open the same hours as the Assessment Center and located either adjacent to or as close as possible.
- Health Care Office: This should be a minimal facility with rest areas for females and males, special restroom facilities for handicapped students and a consultation room/office for the nurse educator responsible for the office and emergency care service.
- Wellness/Fitness Center: Each campus should have a Wellness/Fitness Center and limited facilities for physical education/recreation activity. Except for the College intercollegiate athletic program, centered at the West Campus, the emphasis at each campus should be on intramural sports and physical education activities which will have a possible lifetime emphasis. Each campus could have such facilities as a "par course", a walking trail, and tennis courts with basketball standards. In some cases the campus can be located near a county or city recreational park with special arrangements made for mutual use of facilities.
- Security/Maintenance Office: These two separate functions can be combined at least in the initial stages of a small campus. Large completed campuses will need two spaces, probably adjoining each other with direct access to the peripheral roads around the campus. Also, there should be 24 hour a day coverage, 7 days a week at this location for emergency/disaster possibilities, and direct constant communication with the central headquarters offices in the College central administration area.

- Alternative Learning Centers, Independent Study Centers, and Learning Resource/Libraries/Media Centers: These varied types of learning centers should be located in a central part of the campus as part of one total facility or distributed as necessary throughout various disciplinary areas on a campus. However, it is desirable that instructors and students be able to deal with these varied learning center in as simple a way as possible. Common administration and physical relationships can improve the service potential for faculty and students. Media production of learning materials should be available on each campus for inexpensive types of materials. A central location for the College should be developed for more expensive media production facilities such as television instruction, and preparation of compact disc or video tape audio visual materials.
- A Community Services Center and Meeting Facility: The campuses distributed to various zones in the county should provide facilities for group meetings of residents in the areas. It should be close to the food services, exterior parking and with the capability to be locked off from the remainder of the campus on nights when it will be one of the few facilities in use.
- Unitary, Associate Faculty Office: This office should have facilities for serving the associate faculty of a given campus, maybe 250-300 individuals. Total space available should be 700-800 sq. feet. The associate faculty office and work room should be close to the offices of the academic administrators of the campuses, and other faculty if possible. There should be a number

of specialized items in this office, including

(1) A cabinet for faculty mail for each individual involved,

(2) Clerical assistance for associate faculty (possibly to include faculty certification and contracts),

(3) There should be two phones, one for the secretary and one for the use of the associate faculty,

(4) Although most of the work should be in a big open office with separate desks and locking drawers for individual faculty members as necessary, 2-3 separate advising rooms should be provided (90-100 sq. feet each),

(5) Copying facilities available in the gang office or nearby,

(6) Typing/Word Processing equipment available for faculty use,

(7) A resource file for records of faculty and syllabi used in classes.

Location of Special Facilities and Programs:

Pima Community College is a one-College institution. Therefore one intercollegiate athletic program and one major performing art center is the extent of its service to the community. Specialized professional/occupational programs, especially those with expensive facilities requirements, are offered only at specified locations and on a limited, policy-determined basis. The current authorized program distribution by campuses has been delineated earlier. It is recommended this same policy approach be followed in the future with individual board approval of specific professional/occupational programs and campus or campuses at which they should be offered.

Zones for Future Campus Consideration (2005-2035):

In the period between 2005 and 2035, the population of the Pima County in projected to increase from 1,107,000 to 1,929,000. A gain of over 800,000. This is at least 20% more than the total population of Pima County in 1988. The needs for additional individualized campuses of 3500 FTSE will be increased materially between years 2005 and 2035. Additional campus sites should be determined at this time-and land purchased or obtained in any other way possible for future campuses. The Nanini Site on the corner of Shannon and Magee is a viable site for the Campus proposed earlier in the northwest zone in the 1988-1998 period. However, four additional sites will be needed for the 2005-2035 period; in the northwest area in the Tangerine Road area; in the northeast area in Zones 4/6; in the Rita Ranch/Vail area; and in the Sahuarita/Green Valley area. It is not too early to start acquiring sites in these areas right now, and provide a good base for planning facilities for the oncoming tidal wave of future students of Pima Community College.