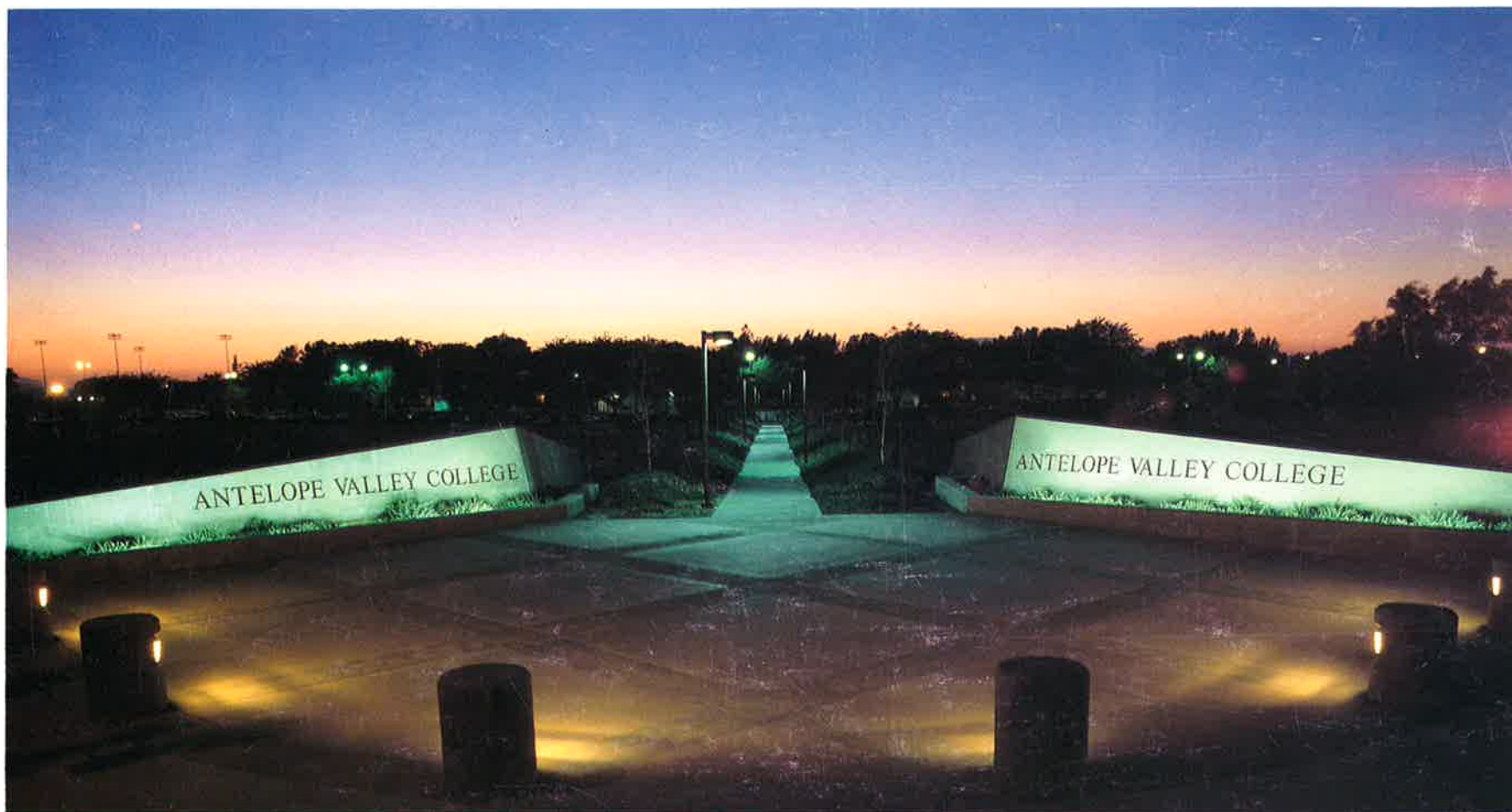




1990 Facilities Master Plan

ANTELOPE VALLEY COLLEGE
Antelope Valley Community College District





1990 Facilities Master Plan

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Antelope Valley Community College District

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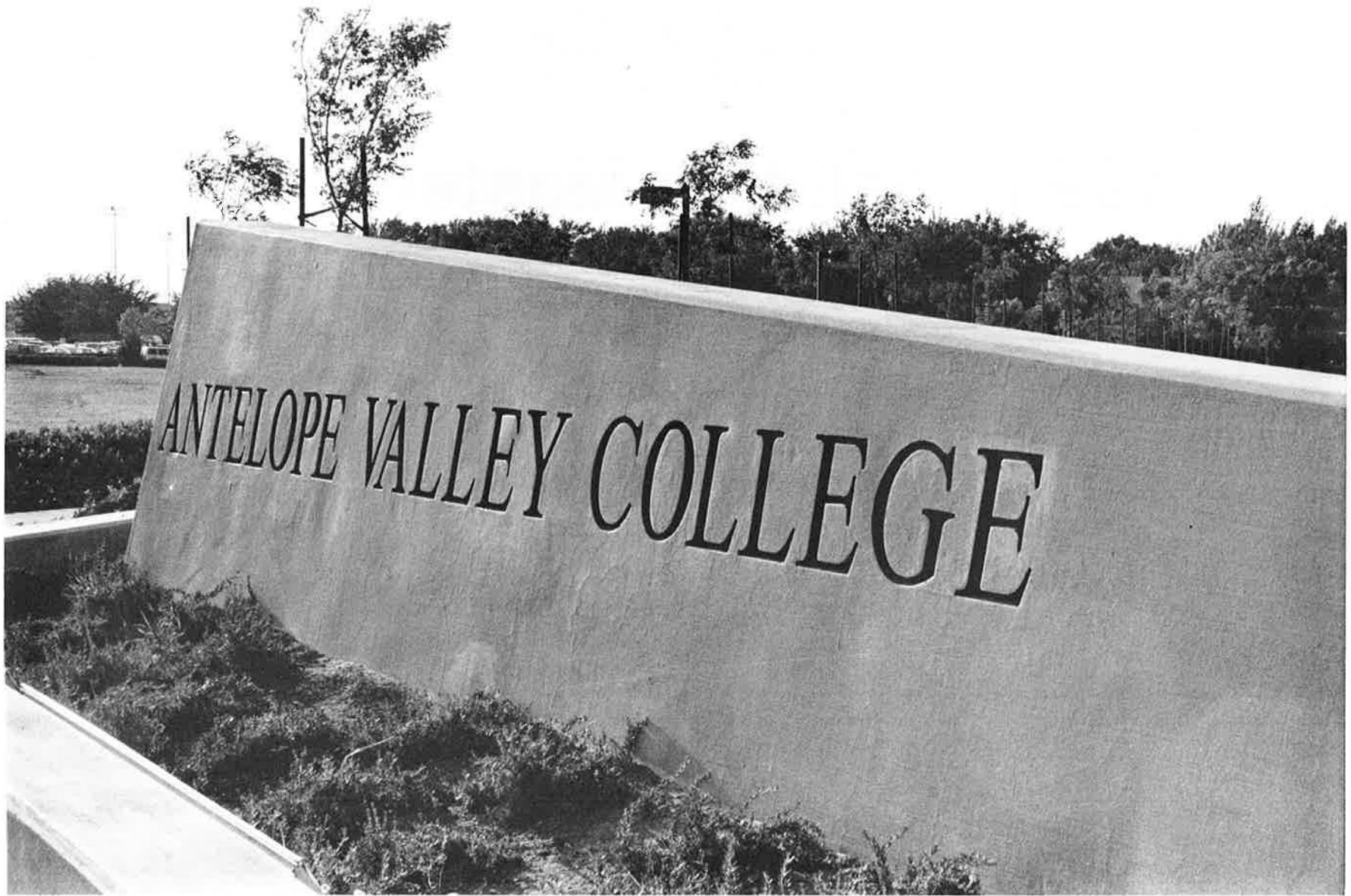
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New Main Entry Monument All Photos © by James G. Spencer, AIA

President's Statement

Planning has always been an important ingredient for successful organizations. Never, however, has long-range planning been more important than it is today. The rate of technical change, the competition for economic resources, and the increased emphasis on accountability have all made systematic planning so very vital.

This document represents Antelope Valley College's comprehensive view of where the College is and the direction in which it would like to go in the future. As with any planning scheme, the document is never really complete. It will need to be continually updated to make certain that the institution is prepared to meet the changing challenges of the future.

I am appreciative of the broad-based staff input that went into preparing this document, and I am particularly appreciative of the leadership role that William Fellers, Assistant Superintendent, Facilities Planning and Campus Development, and Rae Yoshida, Vice President, Academic Affairs have assumed in this planning process.

Dr. Allan W. Kurki,
Superintendent/President

Acknowledgments

More than 20 months of collaboration and planning have gone into the preparation of this Master Plan. The contribution in time and effort by the numerous individuals involved has been invaluable to the planning process and has undoubtedly served to make this document more valid and responsive to the College's needs than it might otherwise have been.

A substantial percentage of the entire college faculty and staff have at one time or another contributed to this effort or the related Five Year Plan, and the author and the planners of this report are truly grateful for their time.

The following are individuals whose names were known to the author as active contributors to this planning effort:

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The Board of Trustees should be recognized for its foresight in commissioning this Master Plan as well as its patience in awaiting its completion. Our special thanks go to Donald Ross for his efforts in trying to attract a theater to the College; Lynda Gloyd, Dr. Herman Kicenski, and Earl Wilson for their inspiration and assistance with the corner entrance monument plaza; Betty Lou Nash for her insight in interpreting enrollment patterns; and James Du Pratt for his efforts to help resolve a difficult decision about the new library location.

Finally, members of the planning team with Spencer / Hoskins associates should be identified:

Sandra K. Atkins, L.N.H.A, *Coauthor & Research*
James G. Spencer, AIA, *Coauthor & Design*
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Special thanks is also directed to Dale A. Fleming, College Facilities Planner for his assistance with this project through the Five Year Plan and other related work.

Spencer / Hoskins associates, 1990

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West Palmdale Looking North, 1988
 --The Antelope Valley Freeway is at right and curves to the left background. Most of the foreground has since been fully developed, and a large regional mall has replaced open space in the background south of the freeway curve.

Executive Summary

Introduction

Antelope Valley College is entering a period of accelerated and long term growth. This is not the first time the College has experienced significant growth, but all indications now point to a period of growth and change that will outstrip anything of the past.

The likelihood of this is not difficult to imagine when one observes the recent dramatic changes which have struck the region served by the College. Public schools within the District area, routinely experiencing 15 to 20% annual growth. To cope with this growth they have adopted year-round school sessions and have expanded in such a way that they are largely housed in portables. The City of Palmdale has for eight years running been one of the fastest growing cities in its size range in California, having grown more than 40 percent in one year alone. Construction is evident nearly everywhere and rush hour traffic is becoming an annoyance previously unknown.

Among the recent contributors to this latest growth surge are younger families seeking affordable homes while still being able to commute to jobs in the L.A. Basin. Another contributor has been a healthy trend toward diversification and growth of the local economy. Perhaps most significant is the fact that the vast undeveloped desert region north of the San Gabriel Mountains, of which Antelope Valley is only a part, seems increasingly to serve as a "relief valve" for the problems of overcrowding, high property costs, and environmental pollution within the L.A. Basin. The region, itself larger in area than the entire L.A. Basin, has in fact been projected by many to be the primary growth direction of the Southern California megalopolis in the coming decades.

On the other hand, how large a population and how much physical growth can this arid region support?

Continued availability of cheap energy, efficient transportation, and, especially, adequate water supplies are vital; the lack any of these may effectively halt growth.

Planning for future facilities is also greatly affected by the nature of the programs to be housed in them. Community colleges are the most innovative institutions of higher learning in California. Antelope Valley College is typical of this innovative spirit. The College is pursuing joint ventures and partnerships, extending hours and days of classes, aiming at students of a variety of ages and educational goals, striving to serve each segment of the community appropriately and creatively. There is an increasing incorporation of high-tech educational delivery systems into all levels and disciplines. The pace of change is increasing in response to internal and local conditions and to state regulation and legislation such as matriculation. The College is also striving to be a major cultural center for the community.

Many of these changes and new emphases will create the need for new offices, labs, library collections, special equipment, meeting rooms, access to computers, off-campus space, and communication systems. The increasing and changing student population will multiply this effect. Devising a master plan to accommodate growth in numbers as well as evolving programs is the challenge addressed by this report.

Summary of the Master Plan

The adult population of the area served by the Antelope Valley College District is growing more rapidly than any other district in the state. Estimates for the ultimate total population of the region range from around 385,000 to 1,850,000, depending on assumptions about continuing availability of water, density of development, and many other factors. The master plan is

based on an average figure within this range, an ultimate population of 1 million.

District Size & Additional Campuses: Assuming that an average of 50 out of every 1,000 people in the region attend the college, the District could eventually expect to serve 50,000 students. The size of the District is too great to expect that outlying areas would be well-served by a single, central campus - especially if traffic congestion becomes a problem. Therefore it is assumed that a number of new campuses and centers will be developed. Suggested locations for these are: a center in the north, near Rosamond and the Antelope Valley Freeway; one in the south near Acton; a campus in the east near the Pearblossom Highway; and a campus in the west near the proposed Lancaster Freeway.

Present Capacity: The physical size of the AVC campus is adequate to serve 20,000 students. To go over that number would involve significant sacrifices in quality. This is almost double its present size.

Concepts for growth: In order to accommodate so many students and yet retain the open beauty of the campus, the plan recommends breaking out of the concentric ring plan to develop linearly toward the north. In addition, it is recommended that the already-developed areas of campus be filled in somewhat to achieve greater density, and that most new buildings be two stories. Most of these multistory buildings should be near the center of campus to keep down the passing time between classes. For the same reason, interdisciplinary functions, such as the library, should be concentrated near the center of campus.

Outdoor areas: The outdoor areas now tend to be underutilized because of their large size and lack of shelter from the extremes of sun and wind. Planned

changes would bring the outdoor spaces together with groups of buildings to create wind-protected quads which would gather people together to encourage individual and group use. The present outdoor corridors, unprotected entries, and low density buildings (with high surface to volume ratios) tend to waste energy. The plan calls for enclosing entrances and adding offices to outdoor corridors, creating new indoor corridors. Multistory buildings will have a lower surface to volume ratio which should optimize efficiency of energy use for heating and cooling.

Visual orientation: A major goal of the plan is to enhance visual orientation from the street and within the campus. On-campus orientation is now quite good because of the low density of development. As the campus extends north and buildings fill in some open spaces, views can become blocked. Creating visual landmarks will be an important element in the architectural design of new buildings.

The main entry monument is a major new landmark on campus whose purpose was aiding visual orientation from the street as well as creating a dynamic image for the community. The master planning process led to the decision to enhance the clarity and attractiveness of this main entrance to the campus.

Vehicular circulation / parking: Traffic congestion at entrances and parking lots should be alleviated by the reconfiguration of entrances and lengthened driveways so that cars no longer enter parking lots directly from the street. Entrances will be limited in number and widened and lengthened to eventually accommodate automatic or "manned" security gates. More stacking space for cars searching for parking will be created so that traffic doesn't back up onto public streets. The campus loop road will be continuous, eliminating the need for those who haven't found parking to exit onto the street and reenter elsewhere. Parking will be greatly expanded - extending up the entire east side of campus and at the north, with other additions near the stadium, theater and new administration building.

Pedestrian circulation: Since the extremes of the campus -- especially the P.E. fields and the planned vocational education complex to the north -- may be outside of the ideal ten-minute walking distance from each other, pedestrian circulation will be extremely important. The major north-south pedestrian mall will run from the Student Center past the new Library and Applied Arts Center north past the new Child Development Center. The present language arts building protrudes about 30' into this corridor and will be truncated to make sure there is adequate width for peak-time pedestrian traffic. The major east-west walkway will run north of the present Administration Building and Student Center, between the Fine Arts quad and Sciences quad to the stadium.

Administration: The new administration building is planned to be placed just inside of the new entry monument at the front corner of the College. It will be served by two parking lots and entrances off 30th Street and Avenue K.

College Services quad: The College Services quad--consisting of the new library, Student Center, student services, and computer/learning assistance center--will surround what should become the main campus focal point. All are interdisciplinary functions used by the majority of students. The outdoor spaces will be organized to a human scale which should encourage students and staff to congregate for discussion, socializing, studying and perhaps even eating.

General expansion: Most areas of campus are slated for expansion. Almost every division already has or can be expected to develop shortages of classrooms, offices and laboratory space. Single functions which are split into different buildings, such as automotive, need to be brought back together. Others such as fine arts and consumer education need to be given independent space. Computer centers will be needed in strategic locations.

The layout of additions and new buildings is planned to create a series of quads where outdoor spaces are used for gathering and studying. It is envisioned that there will be a social sciences quad, humanities quad, human

development quad and sciences quad in addition to the aforementioned fine arts, sciences, and college services quads. Buildings will be oriented to cut off the intense prevailing southwest winds. Other means for wind blockage, such as trees, can be employed where existing buildings create wind tunnels.

Theater / P.E. additions: A major addition to the campus and the community will be the planned 400 seat theater. Sports fans will appreciate the addition of bleachers on the east side of the stadium and around home plate on the baseball field. Other additions in the P.E. realm include new tennis courts (including a tournament court), other outdoor hardcourts, soccer and softball fields, 50 meter pool, and gymnasium extensions which will house additional locker rooms, offices, classrooms an auxiliary gym and a fitness center.

Open / undeveloped space: In spite of all of these changes and additions, there will still be substantial green space left in the center of campus. It will have more of a feeling of collegiality and dynamism because outdoor areas will be more heavily used. The plan will be implemented in phases so that changes may be made to meet unforeseen future needs. A portion of the northeast end of campus which is presently reserved for development of a 4-year college outreach satellite could become a desert preserve if negotiations with public 4-year colleges result in a decision not to develop such an outreach site.

Implementation & review: *This Master Plan is intended to guide the development of the campus for a long time to come. In order to ensure that it is followed and kept alive, the newly-established Academic and Facilities Strategic Planning Committee will oversee its implementation and evolution. The future, as far as can be anticipated given present data, is accommodated. The ability to respond to unforeseen, newly emerging needs is enhanced by the continued availability of open, undeveloped areas. The flexibility of this plan can be expected to make the campus more efficient and effective. Everyone involved in the planning process can be proud of their good stewardship of the College's precious physical resources.*

Background

Master Planning

Master planning is a process by which institutions re-visualize themselves in light of past experience, environmental influences, and future goals.

The main benefit of a master plan is the determination of a logical structure for ordered growth following the general principles of design which are found to be applicable and practical for the individual college. Building designs need to be as flexible as possible in order to accommodate the vicissitudes of educational development and regulations.

Planning proceeds with the assistance of a consultant trained in interpreting the forces which influence physical and programmatic development and able to see the institution "with new eyes." The process involves as many of the constituents of the institution as is possible, including staff, students, community members, governing board members, representatives of regulatory agencies and others.

The analysis proceeds from the general to the specific and from the past, through the present, to a projection of the future. It is particularly important to visualize the college as it relates to all aspects of its environment -- a sort of holistic approach. Both internal and external forces are considered. The relationship of parts to the whole and among the parts is extremely important.

The past is reviewed and analyzed to determine its effect on the present and future. This should include "political" and emotional considerations and the process by which changes have come to be. A master plan can naively recommend an "ideal" future which may be politically or emotionally infeasible. It is better to operate within the realm of the possible to avoid the frustration of a process which leads to an unrealistic

and, therefore, unimplementable, plan. Analysis of data about the past may also reveal demographic and other trends which can be projected to estimate what the future will bring.

The end product of master planning, beyond the benefits of the process itself and the consciousness it has brought, is a set of schematic drawings laying out approximate feasible locations for new buildings and additions, driveways and parking areas, walkways, outdoor focal points, physical education fields, pools, etc. It contains little detail about what goes inside buildings beyond a listing of functions and areas needing expansion. In essence, it shows the "footprint" of buildings, green areas, and paved areas, and their relationship to one another.

Because the vision of the future is always seen through the "lenses" of past experience and present conditions, no master plan can be expected to be static. The most far-reaching conclusions may, in the light of developments unforeseen during the initial stages, be proven wrong. For this reason it is important to see planning as an on-going process. "The Plan" represents an arbitrary cut-off point or "snapshot" of a single point in the process. It is not, nor should it be, gospel. It should be constantly reviewed, revised, and kept alive. Antelope Valley College, has shown its understanding of this reality by recently establishing an Academic and Facilities Strategic Planning Committee to oversee the evolution of this Master Plan.

The nature of master planning is such that there is really never a solid "plan" which remains unchanging and authoritative. Like computer equipment, plans are "obsolete" almost as soon as they are made.

This planning process began in 1988. At that time a number of studies of demographics, enrollments and

space utilization were performed. Since then, enrollments in certain subject areas, such as the sciences, have burgeoned while others, such as automotive, have fallen off. If those trends continue, conclusions presented in this report about the eventual need for new space could need revision. This report contains as much background explanation and detailed analysis of data as possible in order that future decision makers might be able to judge the applicability to the changing needs of the College of the recommendations contained herein.

Purpose of this Report

This report is intended primarily to assist the Antelope Valley College District in planning for the upcoming period of major growth at the Antelope Valley College campus. As a detailed planning study, it is focused on the existing campus; but it does address, in a limited way, consideration for future college sites elsewhere in the District. Detailed planning for these is not a part of this plan.

The Master Plan deals with physical planning and is therefore aimed at those concerned primarily with physical facilities. It has, however, been prepared in response to the educational needs of the District as articulated by the faculty and staff. A recently completed educational master plan, entitled *Master Plan, September 1988*, has largely covered those issues and should be considered a companion to this document.

Original Master Plan

The present campus was constructed in accordance with a master plan, though there apparently was no formal, written document prepared. When the current campus opened in 1961, it was designed to eventually accommodate 5,000 full time equivalent (FTE) students (i.e. total enrollment divided by 15 units). The basic functions were physically grouped into concentric rings with an open park-like space in the center. The park, encircled first by a ring of buildings, then parking and finally physical education, served as the main focal point.

But the concentric-ring planning concept, popular during the period when the College was constructed, can be inflexible. It does not easily provide for growth and change beyond what was originally planned. The plan for 5,000 FTE students also does not appear to have needed the entire 110 acres available, and made little apparent provision to incorporate the extra land area to the north.

The original campus plan and building layout remain today nearly intact. In fact, the physical characteristics of the College have changed little during the last 15 years. But the forecast for substantial growth in the region portends a high likelihood for change in the future.

The original master plan also apparently considered the eventual development of a second campus in Palmdale. The proximity of that campus, potentially less than 10 miles distant, may have been instrumental in limiting the planned size of the Antelope Valley College campus. But California Community Colleges Chancellor's Office guidelines have since recommended that future campuses in non-urban areas be kept considerably more than 10 miles apart, and they discourage development of competing and duplicated facilities. These guidelines as well as other considerations raise questions about planning a second campus so close.

Revised Master Plan

Today, with a total enrollment exceeding 10,000, the College is approaching the 5,000 FTE goal. Projections by the Department of Finance suggest that during the next 10 years the total enrollment will grow by more than 90%. The Palmdale campus has never been realized and there is no current plan to accommodate the growth anywhere but on the present site.

This suggests that the Antelope Valley College campus should be replanned to grow larger than 5,000. Much of the present site, recently increased to 120 acres, is underutilized and able to accommodate more growth. On the other hand, recognizing the huge area of the District (nearly 2,000 square miles), the campus should not be allowed to grow so large as to impair or compete with development of outreach centers or other campuses which would better serve more distant areas.

This Master Plan will therefore help to establish a new maximum capacity for Antelope Valley College while recognizing the probable need for other campus sites in the District.

Principles of Campus Design

As with most general principles, when applied to a specific, already developed locale and social organization, not all can be accomplished simultaneously. One of the main reasons for the intense involvement of staff and other constituents in planning is to analyze how general principles apply to the specific environment and make decisions regarding their relative importance.

1. Most functions need to be within a 10-minute walk from one another.
2. Ideally, every function should be designed to be open ended in order to accommodate possible future expansion.
3. The most interdisciplinary functions should be near the campus center and at ground level:
 - Classrooms & lecture halls
 - Library
 - Student Center & Bookstore
 - Student Services
 - Learning Assistance & Self-Paced Instruction
 - Open, self-paced computer labs
 - Interdisciplinary computer center
4. More specialized functions need not be as close to the campus center nor at ground level:
 - Labs, vocational-technical space
 - Faculty offices
 - Administrative offices
 - Theater
 - P.E.
 - Maintenance facilities
 - Child Development Center

5. Some functions are more convenient near public access:
 - Administrative offices
 - Student services (primarily during peak registration)
 - Theater, Gallery
 - Physical Education
 - Library
6. The Library building needs space around it for planned expansion because unlike most other functions, it needs to remain in one building.
7. If possible, all student parking lots should be equidistant from the campus center or at least to the respective areas they serve.
8. Parking lot expansion should parallel the sites of building expansion.
9. Parking should not be favored over building locations.
10. All parking lots should, if possible, be interconnected by on-campus roads.
11. The design of a campus is defined and perceivable by the shape of its outdoor spaces rather than the shapes of its buildings.
12. Planning should strive to achieve maximum flexibility of room design for changing needs and use by various disciplines. For instance, today most rooms should be designed to accommodate the eventual addition of computers (e.g. outlets, lighting, orientation away from direct sunlight). What will tomorrow bring?

Chancellor's Office Guidelines

The Chancellor's Office has in recent years changed many of its recommended guidelines to reflect the post-Proposition 13 budget constraints and to incorporate lessons learned from the past. The following are some of their informal guidelines, articulated in recent workshops.

The likelihood of a District today receiving funding to construct an entire College in a single construction phase is extremely low. Emphasis now is on establishing outreach centers and satellite campuses as an initial step before establishing a full-service campus or college. This can effectively extend the service area of an existing college with a minimum investment and provides some assurance over time that the new full service campus to follow will be accepted.

District Boundaries no longer define the service area of a particular campus. With the adoption of Free-Flow, students can attend whatever campus meets their needs without special permission or fees. The potential effect of this is to redefine the service area of each campus from traditional political boundaries to other criteria such as driving times, curricula, or programs.

Campuses should not be closer together than 10 miles, and in rural areas can be considerably farther apart. Research has found 20 minutes the ideal maximum and 30 minutes the absolute maximum commuting time, with a noticeable drop-off in enrollments occurring when times are greater. This suggests campuses be spaced at a 40-to-50 minute drive apart. In non-congested rural areas, this means campuses may be spaced as much as 40 to 60 miles apart and still adequately serve the region.

Roughly 40,000 to 45,000 WSCH (weekly student contact hours) seem to form the minimum critical mass to support a full-service campus. Below that figure, there appears to be insufficient enrollment to warrant establishing a governing structure. This is especially true where there is an established campus nearby.

For a satellite center to be considered for capital outlay support, a rough guideline is that it should be capable of generating 500 ADA (average daily attendance, roughly 16,500 WSCH) by the third year of operation. This is not intended to discourage smaller operations which can be accommodated without capital outlay support in temporary rentals or portables.

Where a new full service campus or college is ultimately anticipated, the area of the site should be at least 100 acres. This is actually a decrease from the 125 to 150 acres which used to be recommended. But where large-scale P.E. /athletics programs, space-intensive lab programs such as agriculture, or simply very large enrollments are planned, added space should be considered.

Where a new satellite center is anticipated to remain a satellite operation, the land area should be at least 50 acres if possible. Many full-service campuses in California are this size, which suggests that the option for a full service campus will still remain open.

Where appropriate, existing campuses should be built-out to their maximum capacity as an alternative to establishing new campuses. However, in districts as vast as Antelope Valley CCD, this may be inappropriate as it would lead to under-serving more peripheral areas.

Space Inventory

The Chancellor's Office has applied uniform standards for the many categories of space within a campus since 1967¹. These are enumerated in the *Space Inventory Handbook* available from the Chancellor's Office and comprise specific standards for five categories of space:

- Lecture
- Laboratory
- Office
- Library

¹ Junior College Construction Act of 1967 established uniform standards for all public Community and Junior Colleges in California

- A/V, Radio, TV

Entitlement for space in these categories is ultimately calculated from enrollments. Other commonly-used categories, not currently subject to formulated standards, include:

- Indoor physical education
- Self-paced learning labs and computer facilities
- Student unions and cafeterias
- Bookstores
- District warehouse and shops.

Every community college district in the state is required to submit an annually updated Space Inventory for each campus. This provides the State with a centralized record and serves as a database for future statewide planning as well as justifying comparative need for capital outlay projects.

The space standards have not been updated for more than 20 years and may no longer reflect current needs. In categories such as lecture and office, there is evidence that the allowance for space has become inadequate, and newly emerging uses of space, such as open computer labs, computerized lecture, and self-paced study labs are not specifically addressed. There are also substantial inequities when comparing the community college space standards with those affecting other public institutions of higher learning in California.

In response to these issues, a revamping of the space standards has been announced by the Chancellor's Office. Revision of the standards may have a significant impact on present long-range planning and should be anticipated where possible.

Other Planning Studies

In addition to the College's original master plan, other planning studies have been performed in recent years. Some were the result of annually-required Chancellor's Office submittals and updates, and others were prepared on a more discretionary basis to satisfy special needs.

1987 Accreditation Report

The recent Accreditation Self Study¹ probably was more significant than any other recent document in alerting the District to the need for short and long-range planning. It certainly suggested the need for a new facilities master plan as well as a series of other companion planning studies which have been completed within the last three years following presentation of the accreditation findings.

The accreditation report articulated as its first priorities the following two recommendations:

"The first institution-wide priority is a need for review of facility use. Many programs and services are housed in ways which have evolved over time. Sometimes, overall space allocations are more than adequate, but organization of the space fragments services. At other times, the space allocated is too large or too small. Obviously, a variety of changes will have to be made to meet the needs of the projected student population. However, construction of new on-campus facilities can be minimized by a more rational allocation and use of existing space.

The second institution-wide priority is the completion of an on-going integrated planning effort. Much has been done in individual sectors but no coherent means has emerged for establishing district priorities... On this topic---and this topic

¹ Antelope Valley College Accreditation Self Study, Report of the Institutional Self-Study for Reaffirmation of Accreditation to the Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges, April 1987

alone---the accrediting team strongly recommends that a follow-up report be filed with the Commission, within two years, describing the orderly completion and full implementation of planning efforts at Antelope Valley College."

Space Utilization Report

Also in response to the Accreditation Report, a room-by-room study of space utilization of the instructional facilities on campus was completed for the College in 1988. The Space Utilization Report² determined overall that campus-wide there is currently a modest excess of lecture space (115%) and an extreme shortage of offices (65%), library (63%), and audio visual/TV (14.9%). Aggravating those shortages are enrollments expected to increase on an average of 9% annually over the next 10 years making it a difficult, if not impossible, challenge to keep ahead of the demand for more space.

Five Year Plans

Submitted annually, each Five Year Plan³ represents an annually updated short range plan for the District. In the early 1980s, the plans were prepared by an outside consultant, Robert C. Poolman & Associates. Following that period, the District prepared its own until the 1989-94 Five Year Plan and the year following which have been prepared by Dale A. Fleming, College Facilities Planner working with Spencer / Hoskins associates. Using the Space Utilization Report as an initial resource, followed with more detailed investigation through the master planning process, the Five Year Plan has been extensively revamped and expanded in scope to prepare the District for the upcoming period of major growth.

² Incorporated both the room-by-room Space Utilization Study and the summary Space Utilization Report, 5/3/88 (revised 2/17/89) Findings were based on Fall '86/Spring '86 enrollments projected ahead to 1988.

³ California Education Code, Sec. 81820, a capital construction plan submitted Feb. 1 each year covering a 5 year period following the next funding year & updated each year by adding a successive year.

One area of immediate concern was the fact that enrollment projections¹ were significantly underestimated in the years previous to the 1990-95 Five Year Plan. Because the enrollment projections effectively 'drive' the Five Year Plan, it is crucial that they be as accurate as possible. The low projections had suggested that the College had adequate facilities over the short term and implied a lower overall urgency than was actually the case in dealing with the coming future space shortage. Comparisons with public school district enrollments and utility company and city population growth data, however, uncovered this discrepancy, which was communicated to the Department of Finance. An aerial tour of the District was even conducted for a representative of the Chancellor's Office and led ultimately to a substantial increase in the enrollment projections.

Educational Master Plan

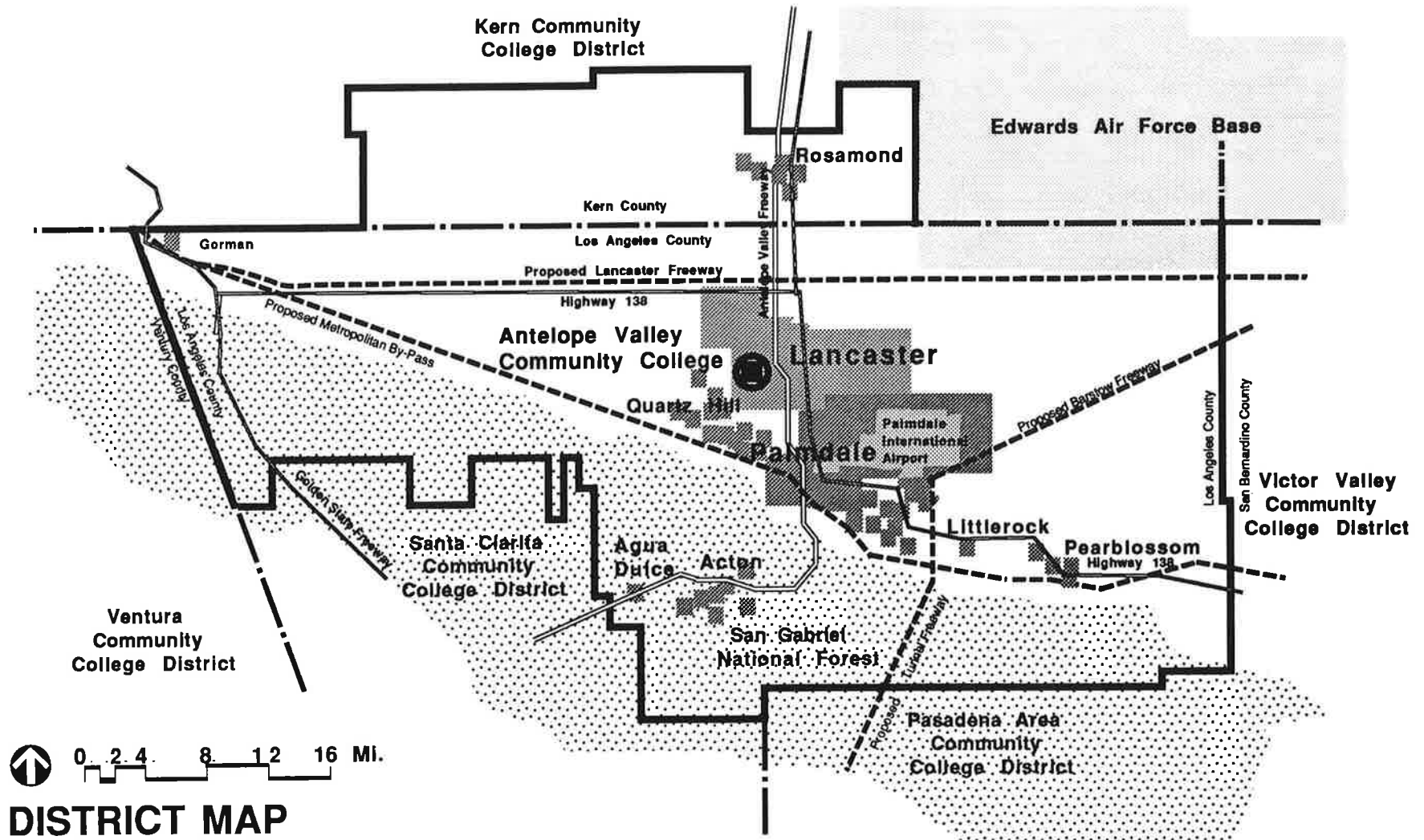
The educational master plan for the District is entitled Master Plan, September 1988. It was prepared concurrently with the early phases of this Facilities Master Plan by district faculty and staff. It projects the District's plans for future educational programs and college as a response to the coming growth and changes in needs. Though not quantifying program growth in specific subjects, it serves to identify potential program directions.

An updated 1991 Educational Master Plan is to be prepared by Dale A. Fleming and will focus on the missing areas of the previous report as well as projecting the educational programs for new college sites being proposed. With these planning studies, the District is preparing for the coming period of growth and has taken prudent steps through these planning studies to anticipate or estimate its impact.



Southeast Palmdale Looking Northwest, 1988--Hwy 138 with single family housing tracts in foreground. Air Force Base and future Palmdale Airport site in background. This easily-developed desert area is rapidly being urbanized with affordable housing.

¹ Ten-Year Community College Capital Outlay Projection, prepared by Population Research Unit, Department of Finance and updated annually



DISTRICT MAP

The College District

Geographic Features

At left is a map of the Antelope Valley College District. The District is 1,945 square miles in area and is approximately 70 miles wide in the east-west direction and 40 miles north-south. Roughly two thirds of the District area comprises the nearly level high desert region known as Antelope Valley, part of the Mojave Desert. The remaining third forms the south boundary and consists largely of small valleys or mountains: Soledad Canyon, Leona and Sierra Pelona Valley and the San Gabriel and Sierra Pelona Mountains.

The northern boundary loosely follows the south slope of the Tehachapi Mountain range lapping over into Kern County for much of the distance. On the east, the line follows the San Bernardino County line; and at the west, it follows the Ventura County Line. An important geologic feature is the San Andreas Fault line which passes barely six miles to the southwest of the existing campus. Farther away to the northwest is the Garlock Fault. Both are highly active.

Climate

The climate of the region is typical of an inland region excluded from coastal marine influence by the San Gabriel Mountains. It can be characterized as being much cooler than the L.A. Basin in the winter and warmer in the summer. It also has high diurnal (day-to-night) temperature swings typical of a climate with a low average relative humidity and a very high percentage (80%) of clear days. It is quite windy, with daily prevailing winds from the west-southwest often exceeding 25 mph.

One would assume that such a desert climate would be dominated by high temperatures and the need for cooling. But it is actually the reverse and dominated on an annual basis by the need for heating (3,200 Annual Heating Degree Days versus 1,500

Annual Cooling Degree Days). This is due to the relatively high elevation at the College (2,400 ft.) and the accentuation of cooling by the prevailing winds which can be quite chilling outdoors.

Of course, the same prevailing winds help in the warm summer months to provide cooling which, in conjunction with a low relative humidity, make the high temperatures more tolerable.

Adjoining Districts

The map at left shows some of the nearest Community College Districts. Although six other districts directly adjoin the Antelope Valley District, three are anticipated to have significance to its long-range planning: Victor Valley, Santa Clarita and the Kern Community College Districts.

Antelope Valley College is well located near the center of its District area. Its service area, according to zip code analysis of enrollments, is overwhelmingly concentrated in the Antelope Valley (over 93%). About 62% are from Lancaster / Quartz Hill, 24% from Palmdale, 8% from Leona Valley, 4% from Rosamond, 3% from Littlerock / Pearblossom, 1.5% from Acton / Agua Dulce, and less than 1% from Lake Hughes.

Only about 0.1% of AVC's students come from Victor Valley and points east. 5% of AVC's students come from Kern County and other points north. There are 230 students from the Edwards Air Force Base area, 174 from Mojave, 116 from Tehachapi and 116 from California City. Reciprocal data from Kern and Victor Valley Community Colleges are not available, so it is impossible to tell whether a significant number of AVC students are attending those colleges. AVC gains 137 students from the Santa Clarita Valley

(including 74 from Saugus, 26 from Canyon Country, and 13 from Castaic). This represents about 1% of the total AVC student population. College of the Canyons gains 161 students from the Antelope Valley or 2.74% of its 5,884 students. These include 66 from Palmdale, 35 from Acton, 26 from Lancaster, 17 from Leona Valley and 12 from Littlerock. In no case do these "exchanges" form a majority of students from the area in question.

Contrary to what had been the belief, almost five times more Acton residents attend AVC than College of the Canyons (167 vs 35). It seems that, rather than responding to some systematic environmental influence, these students are choosing the College of the Canyons for more personal reasons such as specialized course offerings or proximity to a job.

In the Victor Valley, Santa Clarita, and Antelope Valley districts where major growth is most likely, locations of future campuses and centers need to be coordinated because their service areas may overlap. All three Districts are currently undergoing long-range planning using the same consultant team - an ideal opportunity for coordination to determine the best locations for new sites.

Vehicular Access Routes

Illustrated below, major access routes into the valley include the north-south Antelope Valley Freeway, routed through Soledad Canyon and over the Tehachapi Pass, and the east-west Highway 138 from the Cajon Pass to I-5 and the 'Grapevine'. Existing highways with the exception of the Antelope Valley Freeway are generally two lane and narrow. Many do not follow direct routings and are instead routed along old survey section lines. The result is that it is not possible to drive directly in a diagonal direction along the north side of the mountains to follow the areas of greatest develop-

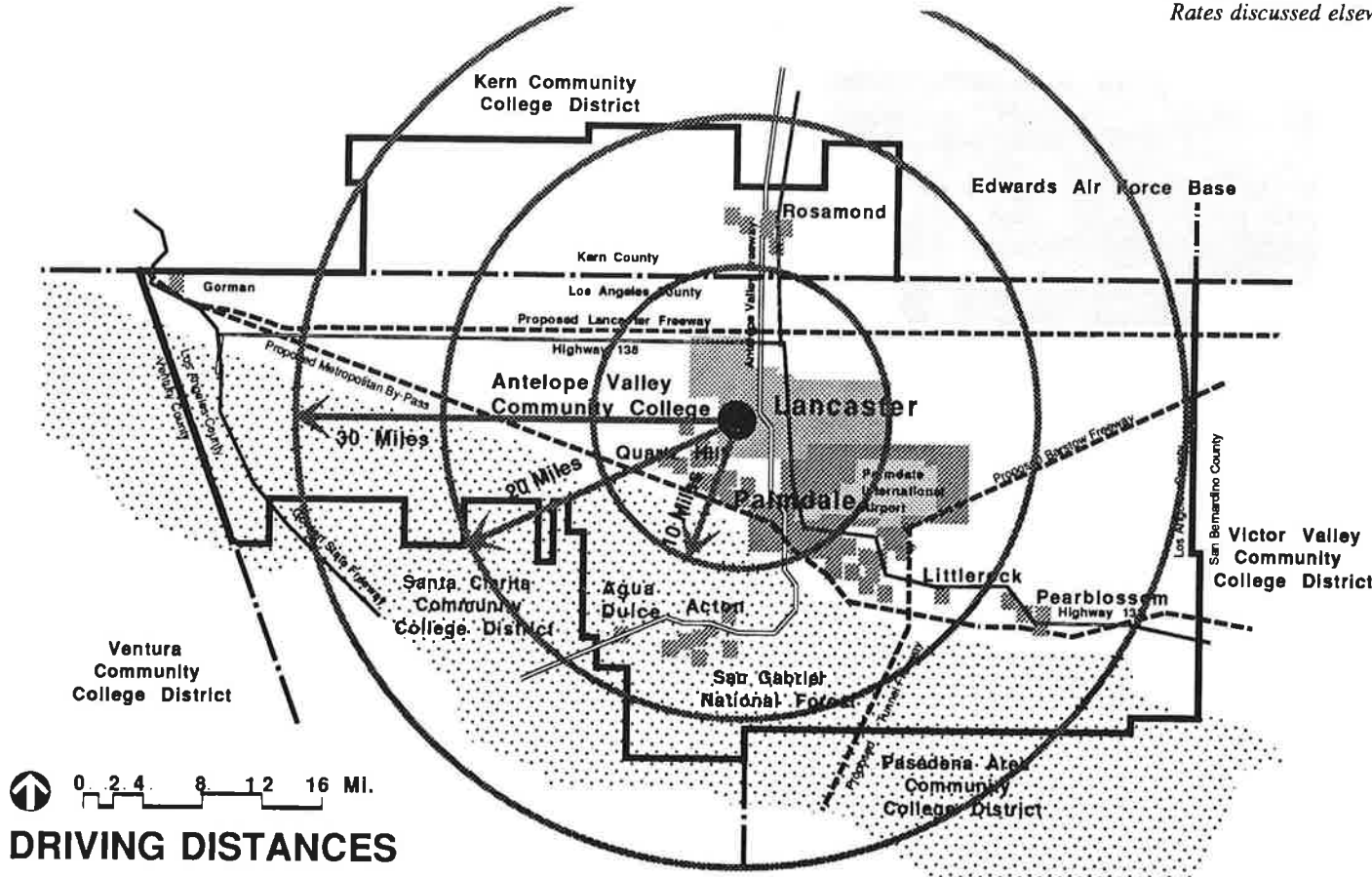
ment. The proposed Metropolitan Bypass Freeway would partially solve this by replacing Highway 138 as the primary southeast-northwest route, but this apparently will not be realized until well in the future. More distant plans include the Lancaster and Barstow Freeways, one of which would connect to the long-proposed Tunnel Freeway which would drill under the San Gabriel Mountains to provide a direct all-weather link to the L.A. Basin.

population is concentrated, most students experience reasonable driving times (under 30 minutes). But this is changing as the fastest growing areas to the east and southeast begin to grow away from the College and generate local traffic congestion. Already AVC students must compete with rush-hour commuters into L.A., resulting in morning driving times to the College exceeding 30 minutes from these areas.

Current Driving Times and Distances

Because Antelope Valley College is so close to the center of its District and near where most of the

The condition of ever increasing driving times will only worsen as growth occurs, and will progressively isolate AVC from its growing population. In fact, this pattern is already evident in the Participation Rates discussed elsewhere in this Report.



DRIVING DISTANCES

Existing & Future Development

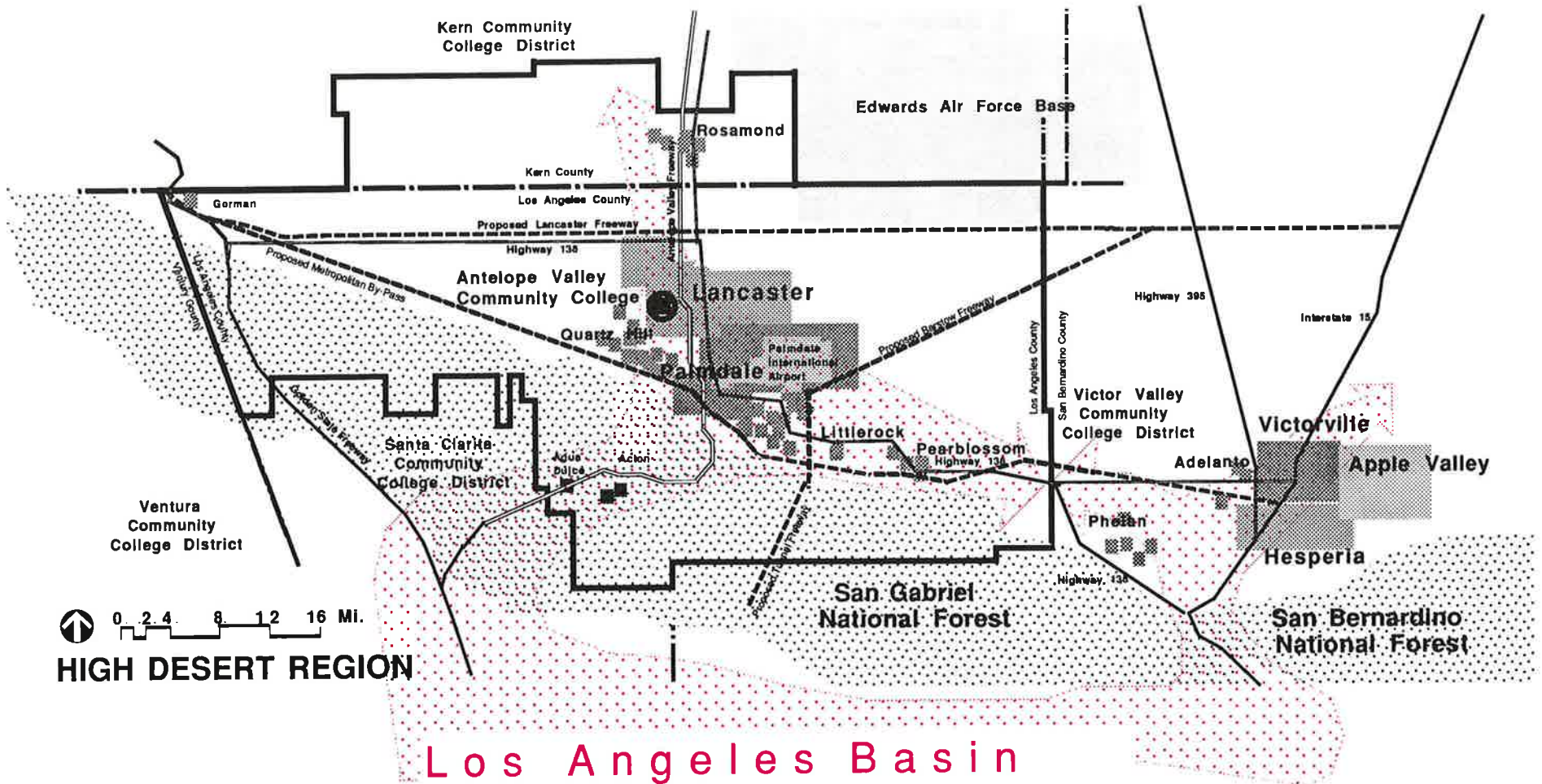
Illustrated below is a District map expanded to include the Cajon Pass and Victorville area. It superimposes the approximate areas of current development in the region and shows the directions where future development is most likely.

Christopher Leinberger, noted real estate analyst with Robert Charles Lesser & Co., observed in the article, "L.A., The Big Doughnut," (*Atlantic Magazine*, January 1988) that, "the 'Big Orange' is really going to look like a big doughnut in a few years as Los

Angeles meets the Mojave Desert—and moves in." He noted, "the air (in L.A.) is only going to get worse and worse until it chokes new development." And the desert is "really no different in climate from the thriving cities in the Southwest..." He observed, "Cities are like tubes of toothpaste. Apply pressure in the form of new jobs and the resulting growth will spurt out." "The San Gabriel Mountains will end up being the 'hole' of the super L.A. doughnut as growth spreads to the hot clean air on their north side. Development will then push to connect Palmdale with Apple Valley and Victorville." He concluded, "This bodes well for

Palmdale, where developers have crapped out on its previous booms and busts. No more, Palmdale is now following the traditional growth pattern of being first a supply of cheap housing...; next it will enjoy retail expansion and finally attract business on its own."

The concept of a mega-city surrounding the San Gabriel Mountains is not all that implausible. Cities do tend to grow toward one another, and with only 40 miles separating the Soledad Canyon and Cajon Pass gateways to the desert, the prediction may not be far from reality.



Kern County

Hi Desert Region

San Bernardino County

Ventura County

Antelope Valley Community College

Antelope Valley Community College District Boundry

College of the Canyons

San Gabriel Mountains

Victor Valley College

Los Angeles County

Moorpark

Mission

L. A. BASIN

Chaffey

San Bernardino Mountains

Santa Monica Mountains

Pierce

Valley

Glendale

Pasadena

Citrus

San Bernardino

Crafton Hills

Santa Monica

LACC

East L.A.

Mt. SAC

Riverside

Riverside County

Trade Tech

West L.A.

So. West

Compton

Rio Hondo

El Camino

Cerritos

Fullerton

Long Beach

Cypress

Orange

Santa Ana

Santa Ana Mountains

Harbor

Golden West

Orange Coast

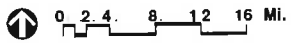
Orange

Irvine Valley

Coast

Orange County

Saddleback



L.A. BASIN / HI-DESERT REGION COMMUNITY COLLEGES

General Growth Trends

In 1988, Los Angeles Mayor Tom Bradley announced the prediction that Antelope Valley will become the primary location for future industrial growth in the southern California region. The most likely location for this would be adjacent to the long-planned Palmdale Regional Airport which he sees as being needed to reduce congestion at the L.A. International Airport.

Easily developed level land and low air pollution will make the high desert region attractive to both industry and families seeking affordable housing. Antelope Valley is projected to be one of the fastest growth areas in California. And its growth rate is likely to be matched in the adjacent Victor Valley and Apple Valley regions.

The percentage of residents who commute to jobs in the L.A. Basin is expected to continue to increase during the near future, as long as reaching jobs in the L.A. Basin is sufficiently easy. In the event of another energy crisis, or if commute times become intolerable due to overcrowded roads, growth could be slowed or stopped. Alternatives such as developing a good long distance public transportation system could become essential to the continuance of the current growth pattern.

Later, however, when the region matures and business and industry move in, the generation of local jobs could reverse the trend toward commuting into L.A. In summary, the growth potential of the region could be limited by traffic congestion along the existing corridors to the L.A. Basin for the short-run; but in the longer range, growth should not be limited by this factor.

Regional Development Density

Existing low-density, suburban-type development is likely to extend throughout the region. Higher density more typical of the L.A. Basin probably cannot be supported unless new large-scale water supplies are developed.

Present close-in development includes subdivisions with large areas of open land remaining between. Outlying areas are small ranches and undeveloped acreage. There are several dry lake beds which cannot support development at all. Even if the open areas are filled in and the outlying areas subdivided, overall area density will likely not be able to be much greater than it is in current developed areas.

Comparison with the L.A. Basin

The map at the left encompasses most of the LA Basin and Orange County regions as well as a portion of the High Desert region. It illustrates that although both regions are comparable in area, there are 33 campuses serving the area shown south of the mountains and only 2 campuses on the north side.

Yes! It is reasonably certain that there will be more campuses serving the High Desert Region -- probably far more than can be reasonably projected in this Report.

Limited Water Supplies

California's population has been growing so fast and the recent drought conditions have been so severe that many areas are suffering from shortages. As part of the statewide system, the Antelope Valley area must also be concerned about the long-term availability of water—locally and throughout the State. Growth can only be sustained if there are sufficient water supplies to accommodate new residents and businesses.

For example, the Palmdale Water District, which supplies water to the greater Palmdale area only, has indicated that available water from local sources in that area including wells and mountain runoff is already insufficient to satisfy demand. State Water Project water is now being used to supplement local supplies and meet growth demands. Because of limitations on the available amount of State Water Project other supplemental sources of water will be needed.

The most pessimistic scenario of regional growth anticipates that, even if supplemental sources are located, overall water supplies in the Antelope Valley region may only permit growth to continue *at the current pace* for a minimum of another ten years. Conservation efforts, reductions in agricultural use, or location of significant new sources in the region or elsewhere would change this projection.

Population Growth Projections Short-Term Projections

According to the Finance Department of the California community college chancellor's office, the adult population of the Antelope Valley College District grew 11% in 1988. This was the highest growth rate in the state. Victor Valley ran a close second at 10.44%. Their relative positions were reversed from 1987. The state average growth rate was 2.23%.

The table below includes population growth projections for the Antelope Valley from five different sources and the average of the five. The sources vary widely in their projections. Without a recent census, the actual population figures can only be estimated. This report will therefore be based on the average growth figures. Also included are the district enrollment projections provided by the Department of Finance.

It should be noted that the projections are limited to Antelope Valley proper and do not account for outlying areas such as Acton and Agua Dulce which are within the District but outside Antelope Valley. The most reasonable estimate of the 1989 current population within the District is 185,000. The annual average growth rate since 1980 is approximately 6.5% and is used in this report to project future population growth.

Long-Term Projections

In order to determine the ultimate College size as well

as the ultimate potential District enrollment, the potential population within the District needs to be calculated. The following are two extreme scenarios for projecting the ultimate population:

Scenario #1 Population Potential Considering Future Developable Areas

Current development covers less than 10% of the total developable area of the District, excluding Edwards Air Force Base. Assuming that the overall density of development will remain low, the total potential population using this criterion would be **1,850,000**.

Scenario #2 Population Potential Considering Limited Water Supplies

If one were to make the pessimistic assumption that present water supplies will only last another 10 years at the current rate of growth which is 6.5%, the current population would rise another 65% from the present 185,000 or to a figure of **340,000**.

There is a rather huge difference (1,510,000) between those figures. Futurists might say that a means of developing a new water source will eventually be created to solve any potential water limitation. A population of 1,850,000 would actually be quite small when compared to the population within an equivalent area in the L.A. Basin.

A more conservative approach might be to consider means such as water conservation to extend the pre-

sent water supply. Conservation of existing water supplies, as well as the decline of local agriculture, could go a long way to increase the region's capacity to accommodate continuing population growth without increasing water supplies. This could also occur statewide and vastly increase potential water supplies.

At this stage, it is only a judgment call to estimate what the actual potential population would be. *But if the population were roughly set at the difference between 1,850,000 and 340,000, it would be slightly less than 1,100,000.*

Public School Enrollments

Another, more immediate measure of coming College enrollments is recent public school enrollment growth within the District. The principle is that those students already exist and will hit college age in a predictable number of years. Combined enrollments of the Antelope Valley Unified High School District and district K-8 public schools grew almost 70% in the five-year period from 1984 to 1989. This was an average annual growth rate of over 11%.

Public School enrollments have been exploding in the last 5 years. It has been estimated that District-wide, a new high school will need to be constructed every 14 months on an average to keep up with the growth. Many of these students will attend AVC and it can be expected that the College will experience growth of a similar proportion since over 90% of its students come from local high schools.

Population Estimates for the District

Source of Projection	1985	1986	1987	1988	1989	1990	1991
General Telephone	113,587	117,018	120,552	124,193	127,193	131,807	135,788
So. Calif. Ass'n. of Governments	134,022	139,240	144,661	150,292	156,143	162,222	168,537
Gobar Associates	169,386	184,460	197,160	209,870	219,000	228,200	241,435
Board of Trade (incl. outlying areas)	154,794	161,354	168,192	175,320	182,750	190,495	198,568
Lancaster Economic Develop. Corp.	176,000	197,000	210,693	225,339	241,002	257,754	275,671
Average of Population Projections	149,558	159,814	168,252	177,003	185,218	194,096	204,000
Average % Increase over Prev. Yr.	15.7%	6.9%	5.3%	5.2%	4.6%	4.8%	5.1%

College Participation Rate

The graph below also shows the participation rates (number of AVC students per 1000 population) for various areas within the College District, based on 1990 enrollment figures and L.A. County Planning Department population estimates. The overall 1990 participation rate of 49:1000 is near the statewide average of 50:1000.

In looking at the geographic distribution of enrollments, however, it becomes obvious that the maxim, "proximity fosters participation," is true of the District. The closer to the College one gets, the higher the participation rates. In fact, the rate for Lancaster / Quartz Hill, 61:1000 is well over the statewide average. It can be expected that adding future satellite campuses would increase the nearby participation rates significantly, thus increasing total District enrollments.

Though the current participation rate is close to the State average of 50:1000, this represents a decline

from the 1980 high of around 73:1000. For some reason, the years from 1981 to 1984 saw a 12% drop in enrollments at the College before they turned up in 1985, from which point they have been increasing rapidly. Another explanation for the fall in participation rates may be that the greatest numbers of new residents have been young families whose children are counted in the population but who will not attend college for a number of years. If this be the case, then college enrollments will jump significantly when this group reaches college age. It is also possible that population growth figures were overestimated. The fact that the high participation rate also coincides with the only year for which actual Census information is available, and the large variance among projections, make this a credible explanation.

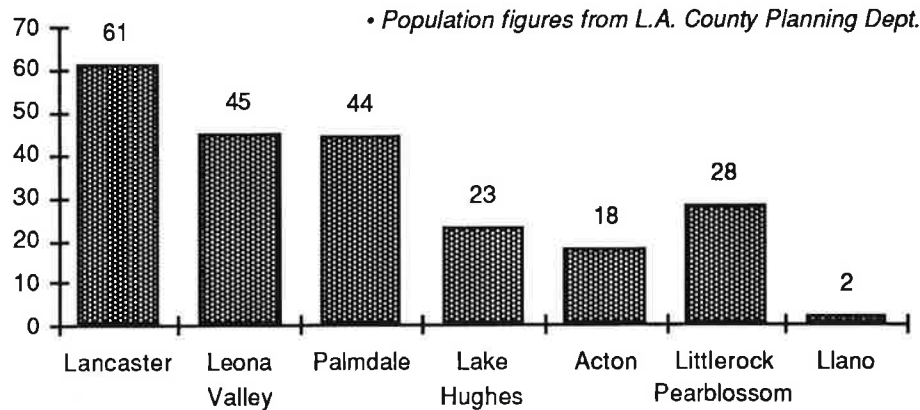
In any case, the coming 1990 Census data will assist greatly by providing a more accurate picture of the coming growth.

District Enrollment Projections

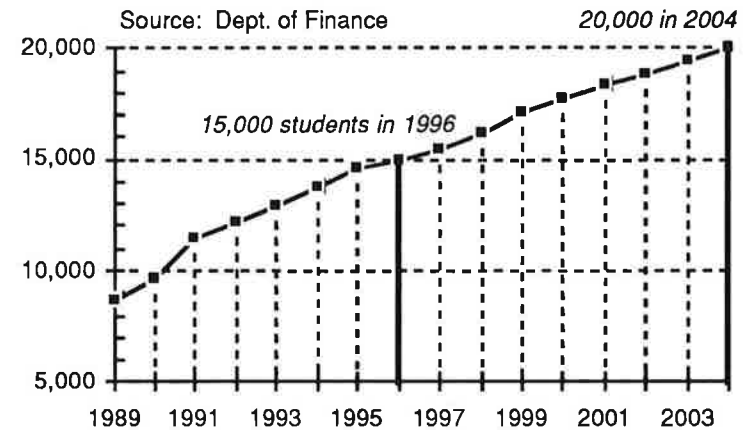
The graph below shows enrollment projections from 1989 to the year 2004. In 1989 the College attracted 8,637 students, including credit and non-credit enrollments. The Department of Finance projects enrollments of 11,470 students in 1991, an increase of almost 33% in just two years.

The Department of Finance's projections have been significantly increased in the three years since this master planning process commenced. Before 1988, enrollment projections predicted very little growth over the coming ten years. But now, the projections show the District nearly doubling in enrollment within the next ten years.

**AVC Participation Rates:
Ordered by Distance from the College**



Enrollment Projections - 1989 to 2004



Long-Range Potential District Enrollments

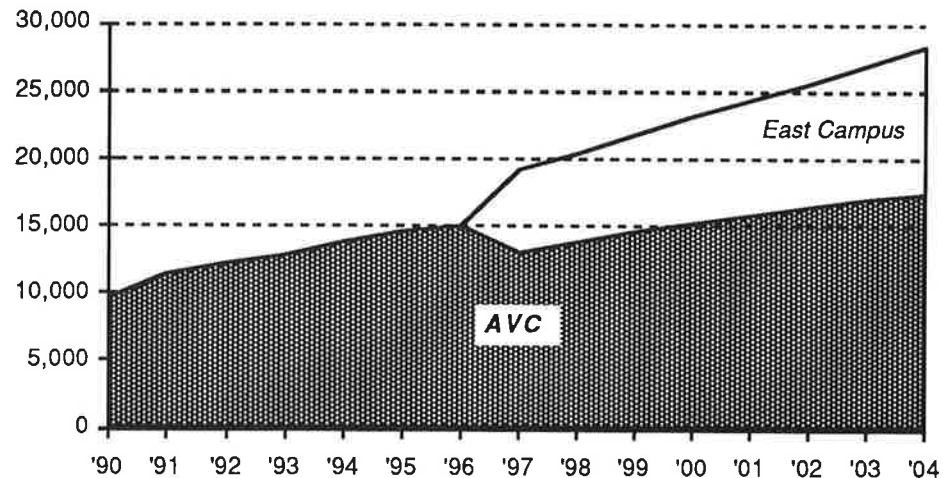
A 1,100,000 population in Antelope Valley would represent a population increase of 540% over the estimated present population. More importantly, it would imply total District enrollments of at least **50,000 students**, using the state average participation rate of 50 students per 1000 population. Of course, this enrollment number could nearly double if the total population were to grow to the higher future population estimate of 1,850,000 and could increase even more if participation rates were to increase to the near 75:1000 rate experienced in 1981.

What this tells us is that District enrollment growth will clearly outstrip the capability of the present campus to accommodate it. It suggests that there will be a need for more than one full-service campus within the District...and most likely at least three.

The addition of satellite campuses would change the trajectory of growth within the District. Some students would transfer from AVC to avoid long commutes. Others, of course, would remain at AVC to take advantage of specialized facilities and programs which would be unavailable at the new site. New students would be attracted who had been dissuaded from attending by either the distance or the large size of the AVC campus. The total participation rate would increase when these new students were added. It could be expected that in the vicinity of the new college, the participation rate would approach the present rate in Lancaster (61 per thousand, as compared with 2 per thousand in Llano and 28 in Littlerock / Pearblossom).

The graph below shows what might happen if a new campus were opened in the east after AVC reached 15,000. Enrollments at AVC would drop temporarily, the total number of students in the District would rise sharply because the new campus would attract new students who had previously been deterred from attending. If AVC's enrollments were capped at 15,000, enrollments at the new campus would increase even more rapidly, reaching over 10,000 in less than a decade.

Potential District Enrollments After the Addition of an East Campus



Future Campuses as They Affect Antelope Valley College

Through the master planning process, the College District has made specific decisions regarding the development of future campuses and centers within the District. The following is a synopsis:

Satellite Campuses & Satellite Centers

1. *Future campuses will be operated as satellites to the main college. The concept of satellites is preferred because it avoids duplication of some functions and may eliminate competition between colleges.*
2. *Future campuses will be in the form of either:*
 - a. *Satellite campuses*
 - b. *Satellite centers*
3. *Satellite campuses should be located where growth will potentially support a full-service campus. They would be relatively self-contained so as to avoid students having to travel long distances to the main college. They should present to the students as complete a campus as possible. On the other hand, they might always be seen as feeders to the main campus for students wishing to advance into higher levels in a particular field.*
4. *Satellite centers should be located where long-range growth potential is insufficient to support a full-service campus. They could be quite small in size and limited in their offerings*
5. *Satellite campuses are likely to include:*
 - a. *complete basic curriculum and services*
 - b. *complete general education curriculum including basic college transfer courses*
 - c. *entry-level labs*
 - d. *high-demand vocational courses such as computers*
 - e. *vocational programs which respond to local needs*
 - f. *full scope remedial programs*
 - g. *complete physical education program except for competitive athletics and, perhaps, swimming*
 - h. *small library*
 - i. *bookstore and food services*
 - j. *local student services*
 - k. *local maintenance and operations*
6. *Satellite campuses should avoid:*
 - a. *specialized lab programs*
 - b. *specialized & expensive vocational programs*
 - c. *competitive athletics*
 - d. *large comprehensive library*
 - e. *audio visual production services*
7. *The satellite campuses and centers may be run by a site manager instead of a president.*
8. *The satellites may be more compact than the main campus because of the elimination of the more specialized and space consuming labs as well as competitive athletics. They will tend to have a higher-than-normal percentage of lecture teaching space.*
9. *Satellite campuses should, however, be planned with sufficient area that they can grow into full colleges if need be. Each site should have perhaps 100 to 120 acres. Land costs in the desert are still low enough to permit this.*
10. *A satellite center might be as small as five acres, or it might be a store front in leased space. A start-up satellite might need only 500-700 ADA to start operation. For start-up satellites, the District can rent or lease space instead of purchasing.*
11. *Computerized registration will reduce space needs for that function at the satellites.*
12. *Computerized cataloging and check-out system at the main library linked with all the campuses might reduce library space needs at the satellites.*

Main Campus

1. *Because of its central location, the Antelope Valley College campus would be the best candidate for the main campus. The main campus would include the following:*
 - a. *specialized lab programs*
 - b. *specialized & expensive vocational programs*
 - c. *competitive athletics*
 - d. *centralized large comprehensive library*
 - e. *centralized audio visual services*
 - f. *District-level administration*
 - g. *college president & staff*
 - h. *centralized personnel department*
 - i. *centralized accounting & payroll*
 - j. *specialized student services*
 - k. *centralized maintenance functions such as specialized shops*
 - l. *central warehousing and receiving*
2. *The main campus might provide space for a CSU outreach program. Discussions have already taken place with CSU Northridge on this possibility.*
3. *The main campus should handle those instructional programs, such as Allied Health, which need to be near a metropolitan area.*
4. *The main campus will tend to have a larger-than-normal library in light of its function as a central District library.*
5. *The main campus will tend to have larger-than-normal administration functions. Its role as the District administrative headquarters may lead to a separate District administration unit.*
6. *The main campus will also tend to have larger-than-normal P.E. / athletic facilities, and will require sufficient land area for this.*

Considerations for Locating Future Campuses and College Centers

Enrollment projections for the District suggest that the campus will be at or near capacity in hardly more than ten years. This means that the District will need to begin the process of locating sites for new campuses and centers. The following are the results of discussions on this subject:

1. New campuses and centers should be, if possible, located close to a freeway route. Visibility from and easy access to freeways can be a real benefit.
2. Keeping new campuses and centers as far as possible from the San Andreas fault could be a consideration. This would need to be evaluated by a geologist, though.

Eastward sites:

1. This is the area with the strongest growth trend away from the traditional urban centers. The next campus (as opposed to center) may likely occur to the east or southeast of AVC.
2. Locations ranging from Four Points to Antelope Center and as far east as Lake Los Angeles have been discussed. Consideration should, however, be given to a location close enough to serve greater Palmdale. The District needs to consider "showing the flag" in greater Palmdale, its second largest city.
3. The 'Mayor Tom Bradley speech' indicated that most of the future large-scale industrial development in the L.A. region will occur in Antelope Valley. One specific location alluded to was the area to the east and south of the future Palmdale Regional Airport site.
4. The Wilsona School District in Antelope Center, several miles east of the Palmdale Airport site, is one of the fastest growing school districts in the state.

5. If a closer-in east site is selected, then an additional site farther to the east for a campus or center might be considered.
6. Plans by the Victor Valley District for a new campus in Phelan will very unlikely affect the decision as to where to locate a second east campus if one should be needed because the Phelan site is approximately 12 miles from the east District boundary.

Westward sites:

1. Growth to the west is presently less extensive. Antelope Acres is the only discernable community far to the west of present development and it has little actual infrastructure. The Poppy Reserve State Park is further west and will not permit development. But west of that is a large area which could support a large population.
2. California Springs¹, a recently-announced planned industrial and residential development to be located west of the Poppy Reserve could provide the nucleus for a large city in the west valley. Being planned by a joint venture partnership of two large developers, Watt Industries and Richard Barclay and Associates, as well as a local developer, Waln and Associates, the project of 35,000 homes and 24 million sf. of industrial space is expected to be constructed over a period of 35 years. Its main concept is to construct homes and jobs in the same planned community. If this project moves ahead, it will substantially change the growth pattern of the region.
3. The projected state prison site roughly two miles west of the College has been addressed in this planning process. Its effect on development west of the campus is unknown at this time. There have been suggestions that the prison could benefit the College by attracting some staff housing and services around it, but at the same time it may

discourage general growth in the area. It is the consensus that a prison so near the college could be detrimental, and the plan for a prison in that location has been opposed by the College District.

Southward Sites:

1. The Acton/Agua Dulce area is growing rapidly, but might best be served by a center. Its growth potential may not be enough to support a full-service campus unless it serves areas outside the immediate vicinity.
2. A firm decision on whether to develop a center or campus in the Acton/Agua Dulce area could be strongly dependent on what occurs in the Santa Clarita District.
3. Inter-district planning should be undertaken.

Northward Sites:

1. A possible fourth campus (as opposed to a center) might be located in Rosamond which is along the Antelope Valley Freeway corridor and is experiencing major growth.
2. Affecting the decision to build either a campus or center in Rosamond is the Kern Community College District's plans for Mojave to the north (presently largely served by AVC).
3. Mojave and Rosamond are likely too close to one another to justify a campus at both sites.
4. Cerro Coso College, part of the Kern District operates a Center in Edwards AFB, and has in the past asked AVC for assistance in operating its facility. It might be advantageous for AVC to take over operation of that facility which serves an area which straddles the two Districts.
5. Inter-district planning with the Kern District would be of value in answering these questions.

¹ "Community will rise in the desert", Los Angeles Business Journal, Week of March 13-19, 1989

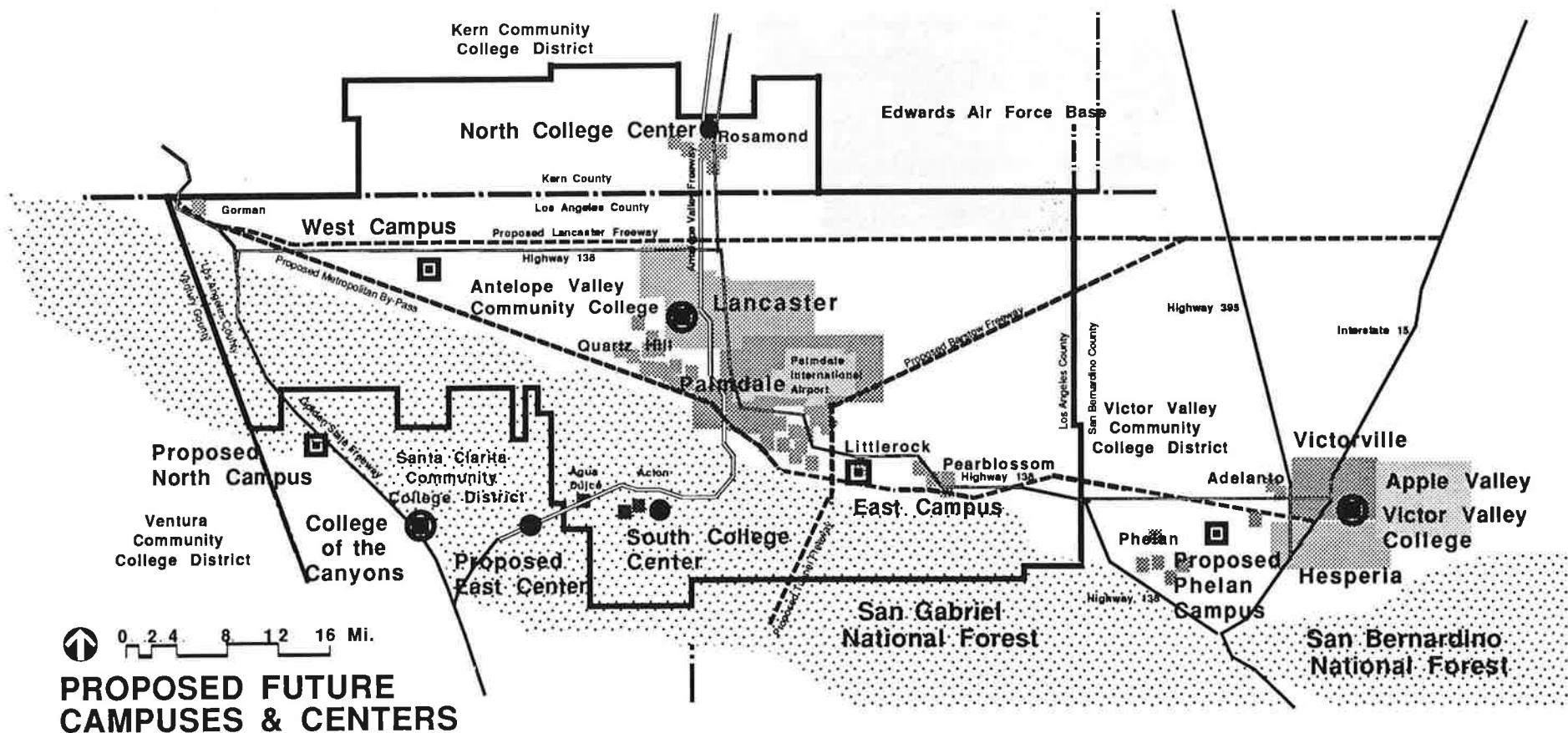
Possible Locations of Future Campuses and College Centers

The drawing below indicates possible locations for future satellite campuses and centers within and outside the District. The locations are intentionally very approximate as they are based at present on only rough information and speculation about the directions of future growth. They have been placed near planned locations of future freeways and projected development. Also considered are locations of planned facilities by other Districts, in particular the Victor Valley District's Phelan Campus, whose site is roughly

12 miles from the eastern Antelope Valley District boundary. The overall purpose of the drawing is to stimulate further study into where and how many future campuses and centers should be created. Two new satellite campus sites and two new satellite centers have been tentatively indicated. Based on present information, this is a reasonable and conservative estimate of long-range needs. They are located at a radius of roughly 18 to 20 miles ('as the crow flies') from the main AVC campus. The actual driving distance will add ten miles or so unless more direct routings are constructed. The campuses and centers have been located as far as practical from the San

Andreas Fault given the fact that the proposed West Campus site also must consider the Garlock Fault. The actual sites of local development as well as geological considerations will eventually dictate the final locations.

The planned capacity of each of the new campuses has been discussed as being a minimum of 10,000 total enrollment. Capacity of the new centers should be sized to meet local needs as well as Chancellor's Office criteria for capital outlay funding (minimum 500 ADA by the third year).



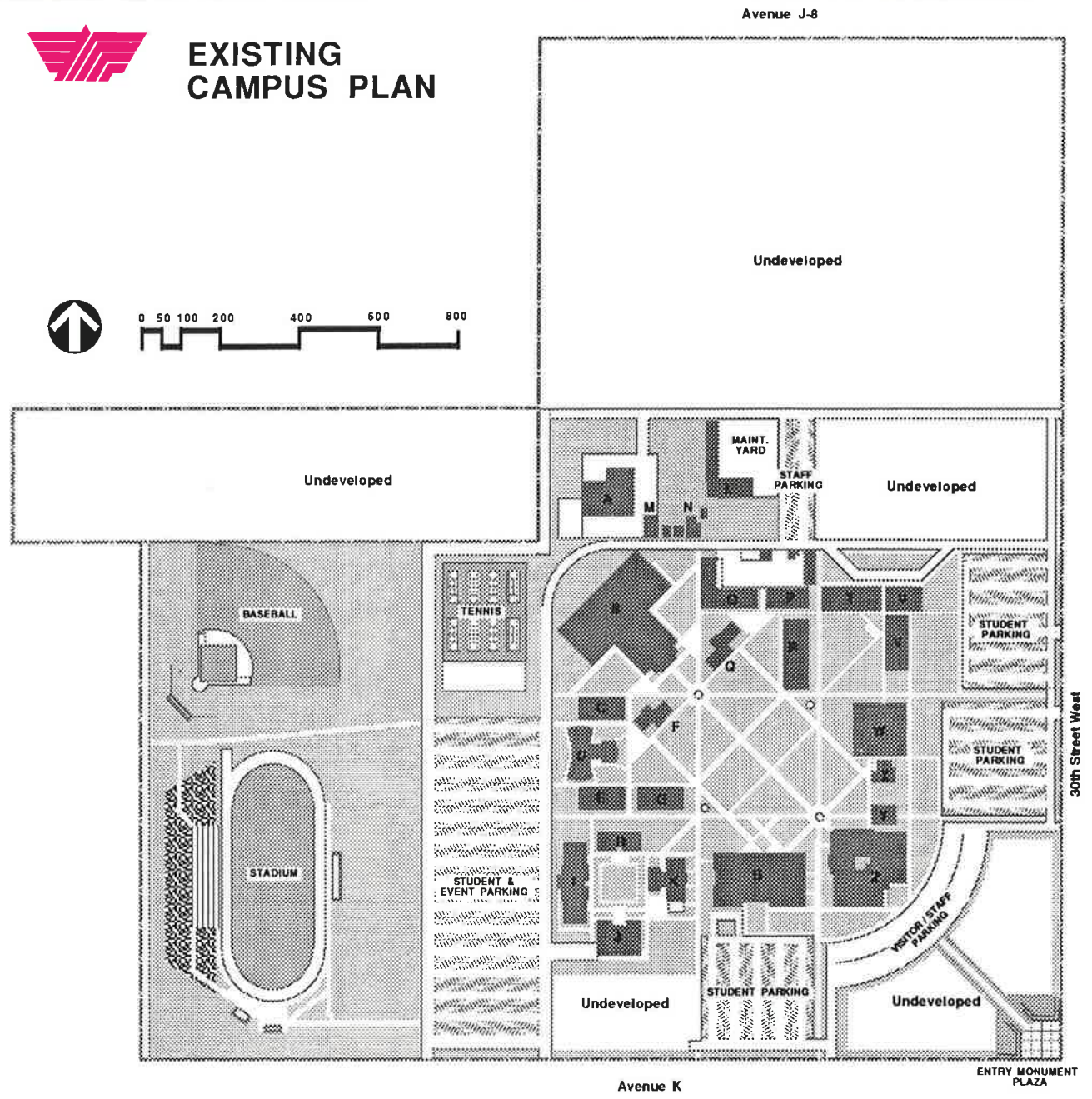
LEGEND

EXISTING BUILDINGS

- A AUTOMOTIVE
- B GYMNASIUM
- C CHEMISTRY
- D LECTURE HALLS
- E PHYSICS
- F FACULTY OFFICES
- G BIOLOGY
- H FAMILY & CONSUMER EDUCATION
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- J DRAMA LAB
- K ART
- L MAINTENANCE SHOP
- M AGRICULTURE LABS
- N LATH HOUSE
- O AUTO/WELD
- P ELECTRONICS
- Q ACADEMIC ADVANCEMENT
- R MATH/ENGINEERING
- S STUDENT CENTER
- T LANGUAGE ARTS
- U OFFICES
- V SOCIAL SCIENCES
- W LIBRARY
- X AUDIO/VISUAL
- Y COMPUTER CENTER
- Z ADMINISTRATION



**EXISTING
CAMPUS PLAN**



ENTRY MONUMENT
PLAZA

Existing Campus

College History

Antelope Valley College celebrated its 60th birthday on September 11, 1989. Founded in 1929, the College District is actually older by several days than the Los Angeles Community Colleges.

This report will not attempt to cover the history of the College. That is already partially covered in a document: A History of the First 34 Years of Antelope Valley College, 1929-1963¹.

Though that document does not cover the most recent 25 years after the College was relocated to its present site, it does cover the important formative years of the college in the context of the broader history of the community. Beginning with the difficult years during the Depression and later, during World War II when enrollments were tiny, the College was run essentially as a department of the High School. Other highlights in the college's history include the development of an identity separate from the High School, the development of the College as an athletic power, and a period of discord when, in 1957, the College was placed on Athletic Probation and lost its accreditation for a short time. The College recovered fully from this setback and finally was able to construct and staff the present campus.

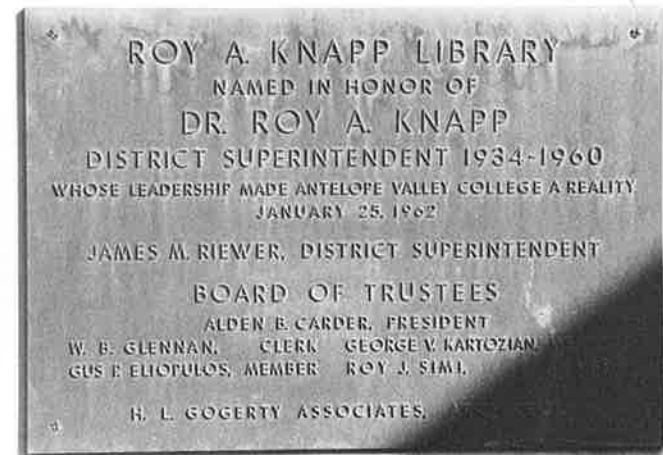
¹ by Roy A. Knapp, D. Ed., District Superintendent, Antelope Valley Joint Union High School and Junior College District, 1934--1960

Milestones in the Formation of Antelope Valley College:

Date of Founding:	September 11, 1929
First Location:	Antelope Valley Joint Union High School in Lancaster; 1929 to Sept., 1956
Second Location:	Temporary Campus on 30 acres located between 3rd & 5th St. East and Avenue I & Kettering Street. 1956 to Sept., 1961
Present Property purchased	April, 1957
First phase completed	1961
Campus opened	Sept. 1961
Campus dedicated	Nov. 1961
Election to separate from High School District	Dec. 12, 1961
Language Arts & Social Sciences completed	1967
Art Quad completed	1969
Auto Mechanics Completed	1975
10 Additional Acres Purchased	1989

Organization / Governance

The college is directed by a publicly-elected Board of Trustees. The President-Superintendent operates the college through four Vice Presidents, one each for the functions of academic affairs, business services, student activities, and student services. There are currently eight academic divisions: Allied Health, Business, Fine Arts/Family & Consumer Education, Language Arts & Learning Resources, Math/Science, P.E. & Athletics, Social Science, and Applied Academics & Technology (formerly Technical Education). Physical changes to the campus resulting from the implementation of this master plan will bring about organizational changes as certain departments and functions are moved into new quarters.



District-Owned Property

Illustrated on the right, College District property ownership is currently limited to the immediate site, of the Antelope Valley College campus. The site, configured in a reverse "L" shape, is bounded by public streets on three sides, providing great flexibility for access.

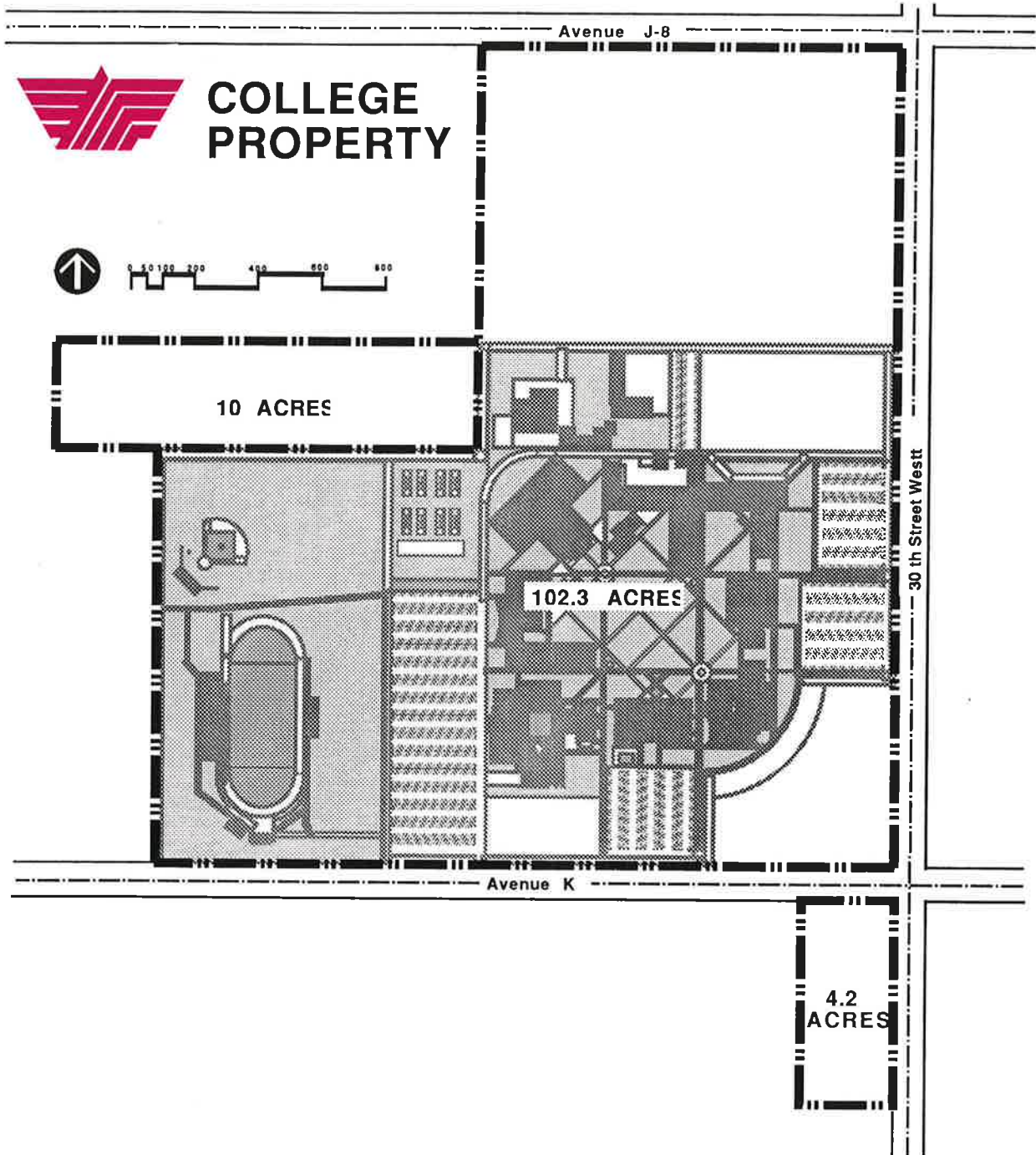
The main campus site comprising nominally 110 acres is north of Avenue K and west of 30th Street. "Nominal" acreage measures gross area from the center of public streets bounding the site. The actual usable area of the site, subtracting public street right-of-ways, is estimated to be 102.3 acres. That property is composed of three parcels:

1. A 40-acre square parcel where most of the buildings are located
2. A second 40-acre parcel comprising the north 'leg' which is mostly undeveloped
3. A 30-acre parcel at the west where the P.E. fields are located.

Augmenting the main property are two additional parcels:

1. A net 10 acres recently purchased north of the P.E. fields. This is composed of four 2.5 acre parcels. These ten acres were recently acquired, as a result of this master planning process, to provide space for P.E. expansion.
2. A nominal 5 acres on the southwest corner of Ave. K and 30th. The actual area, subtracting public street right-of-ways, is estimated to be 4.2 acres.

The total net usable area of property owned by the District is estimated to be 116.5 acres. The total area of the property contiguous to the present campus is estimated to be 112.3 acres.



Land Use

The present contiguous campus, amounting to a total usable area of 112.3 acres, is not fully utilized. As is illustrated on the right, approximately 47.5 acres (including the 10 acres recently purchased) are unused and mostly undeveloped. Buildings, including the 6.5 acre central green, occupy 29 acres. Outdoor physical education areas take up 22.3 acres and parking uses 13.5 acres.

Undeveloped Land

The largest undeveloped parcel, ripe for development, is the north 27 acres. The next largest is the newly-purchased 10 acres north of the P.E. fields. In addition, there are two undeveloped parcels of 4.8 acres and 2.1 acres at the "front door" of the College (on the corner of Avenue K and 30th Street) and a 3.6-acre parcel at the east side of maintenance shop, presently used as a temporary unpaved parking lot. The 4.8-acre parcel has been particularly awkward because visitors have difficulty locating and identifying the college due to lack of landscaping and development at the most heavily entrance to the College.

Main Entry Monument Plaza

Recommended by this Master Plan, a formal entrance plaza and monument sign with a diagonal landscaped walk have been constructed at the corner of Avenue K and 30th Street to better identify the campus.

Developed Land

Developed areas of the campus include approximately 26.8 acres of buildings (with a nearly 8-acre park in the center), 22.3 acres of outdoor physical education, and 13.5 acres of permanent parking.

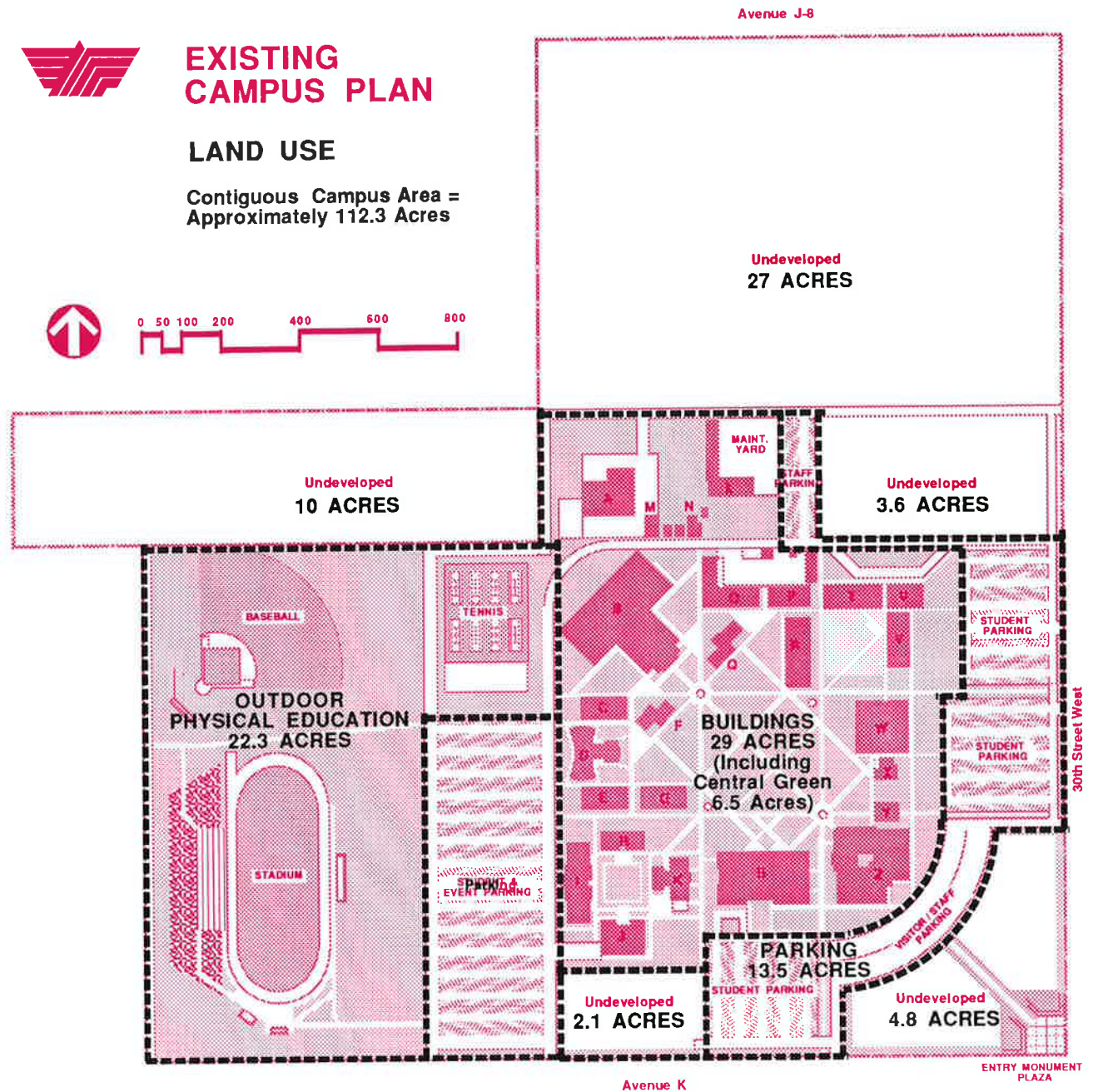
The land area of the current campus appears to be sufficient to meet long-range needs for buildings, parking, and physical education.



EXISTING CAMPUS PLAN

LAND USE

Contiguous Campus Area = Approximately 112.3 Acres



ENTRY MONUMENT PLAZA

Campus Organization

The campus is largely a *two dimensional organization*. It is composed of relatively small, one-story buildings which are inefficient in land use. Fortunately, though, this inefficiency is compensated by a nearly level site permitting 100% potential utilization.

Concentric Ring Plan

Illustrated at right, the three major land-use functions (buildings, parking, and outdoor P.E.) are loosely arranged in concentric rings around a central green. The land allocated to each of the three functions appears to have been sized appropriately to reach the original 5,000 FTE planned campus size. In theory, when all the rings are filled, the campus should have reached its maximum planned size.

An inherent inflexibility of the layout of the campus is that it cannot accommodate unplanned growth without diminishing the space allocated to another necessary function. Nor does the concentric ring plan relate well to the actual "L"-shaped configuration of the property. Easy access is blocked to the 27 acres of undeveloped land available for substantial growth at the north end of campus.

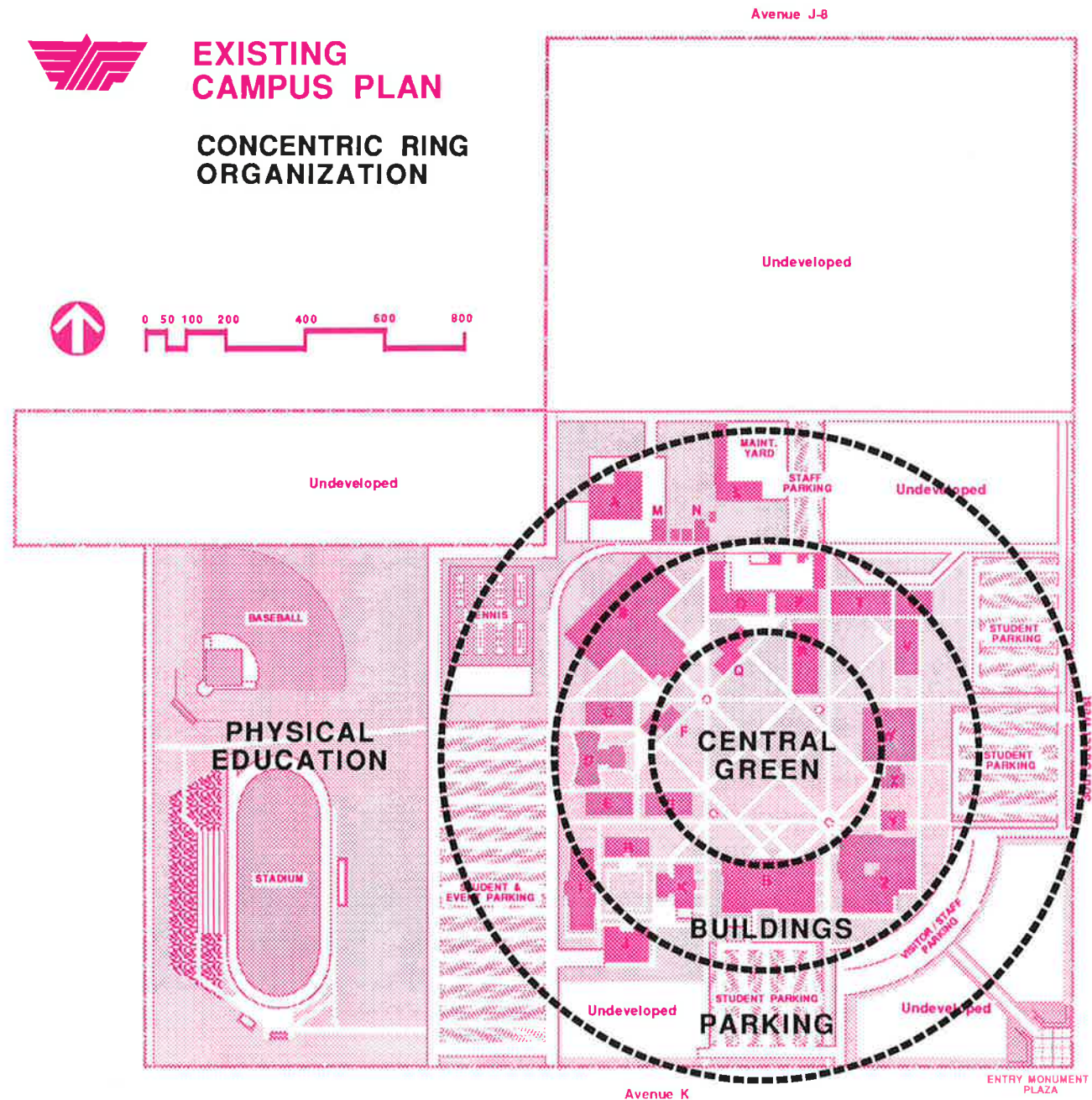
If a better plan is not developed for expanding the campus to a larger capacity, continuing to adhere to the present ring plan could eventually require filling in the central open park with buildings or a costly displacement of the parking and P.E. rings as the buildings expand outward.

The concentric ring plan is a strong impediment to full utilization of the remaining undeveloped land ... especially at the north. A means of breaking out of the rings and inducing a northward linear growth is needed in order to properly utilize the site..



EXISTING CAMPUS PLAN

CONCENTRIC RING ORGANIZATION



Potential Directions for Expansion

The drawing at the right illustrates the possible directions in which development could occur.

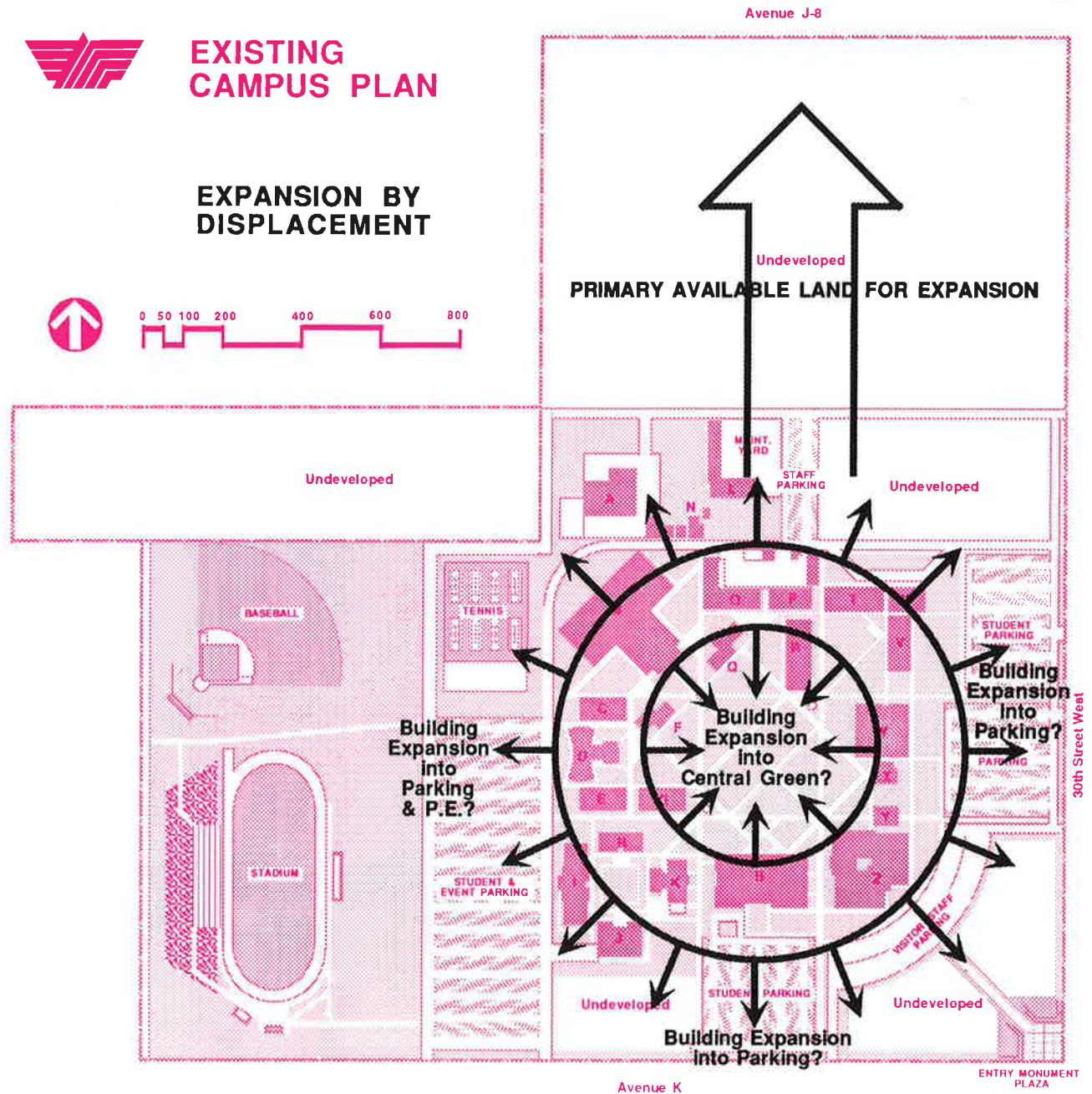
If the the concentric ring plan were to be followed, the primary areas open enough to accommodate new buildings would be the central green, parking lots, P.E., the undeveloped areas on the front of campus and at the corner of 30th and K. Each of these solutions involves displacing an important existing physical or aesthetic resource of the campus.

With the availability of a large plot of undeveloped land at the northern end of campus, such displacement would seem to be unnecessary and undesirable.



EXISTING CAMPUS PLAN

EXPANSION BY DISPLACEMENT



Functional Relationships

Illustrated on the right, the existing developed campus can be categorized into five general functions:

1. **Buildings which serve the College as a whole** or contain primarily interdisciplinary functions such as Lecture, Library, Student Services, Student Center, Administration. Most of these are located on the south and east portions of campus.
2. **Buildings which serve specialized functions** such as Labs, Faculty Offices, P.E. and District Maintenance. These tend toward the west and north of the campus.
3. **Landscaped open spaces** for outdoor recreation and quiet activities
4. **Parking Lots and roads**
5. **Outdoor Physical Education**
6. **Outdoor Specialized Labs**

With only limited exceptions, the buildings which house the interdisciplinary functions that serve the College as a whole are on the south and east sides of the campus, whereas the more specialized functions and laboratories are on the north and west. Both categories are close to the largest area for available for expansion at the north. But, as discussed before, the circular campus layout closes off access to the north property.

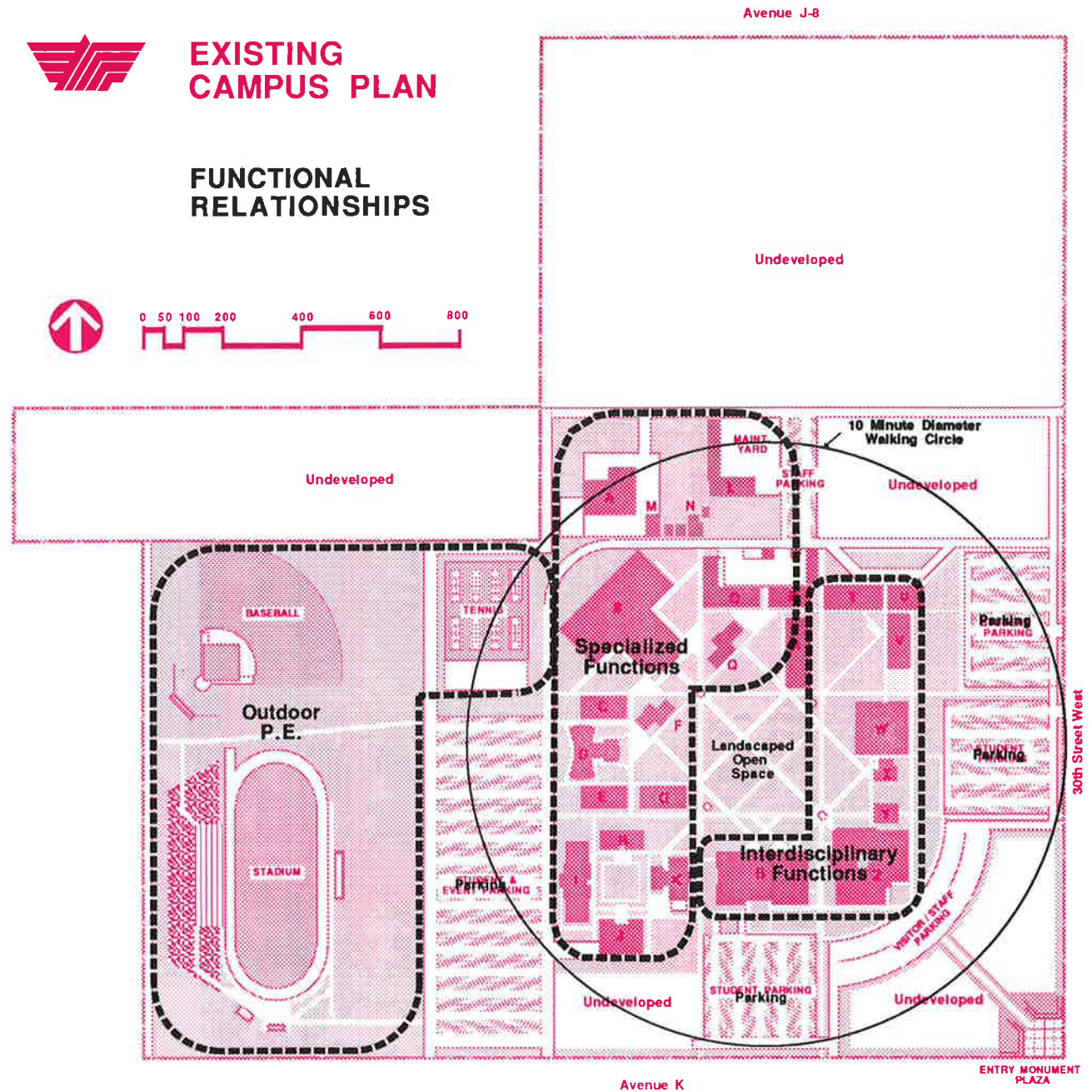
The outdoor specialized labs are primarily in temporary space at the north end of the campus as are the District shops. Most of these could be moved should the campus expand northward.

The buildings housing interdisciplinary services (such as the library and Student Center) are close to the largest available area of parking. These services do tend to have more in-and-out traffic than other functions and are well located in terms of access to parking.



EXISTING CAMPUS PLAN

FUNCTIONAL RELATIONSHIPS



Divisional Relationships

Another way of looking at the campus organization is to analyze the interrelationship of the various divisions and functions. The original plan of the campus was laid out according to departments.

The drawing at the right shows that most functions normally associated with a particular division are grouped together as originally planned. Support facilities, including Administration and Student Services as well as the Student Center are appropriately located close to the "front door" of the College.

Sciences are located in a distinct "quad" as are most of the arts (an exception is photography which is temporarily located in what was a restroom in the north campus.). Math and computers are located together, and business labs and classrooms are together on the second floor of the Administration Building.

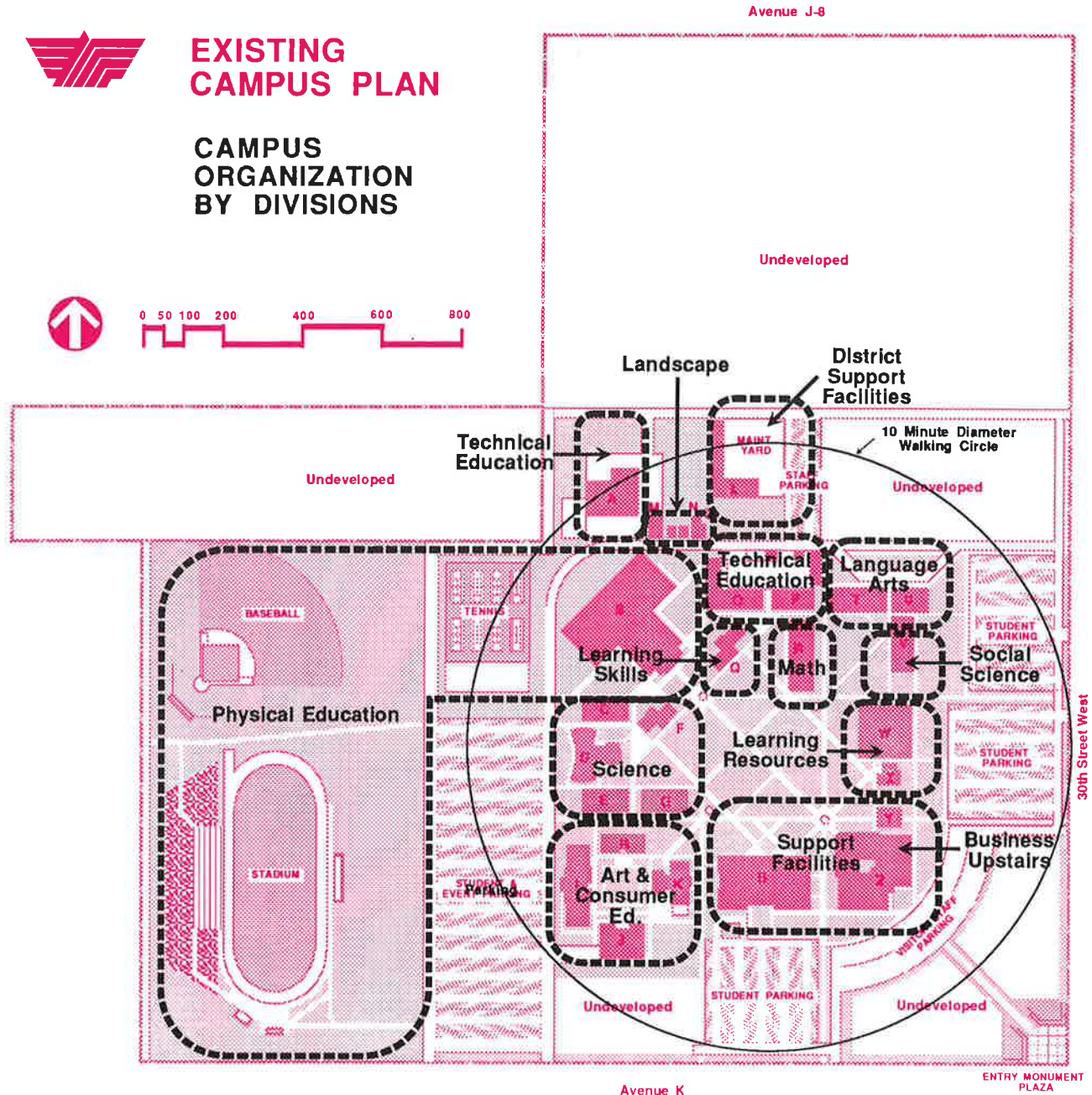
Language Arts and Social Sciences are located close to the library (in the "Learning Resources" box on the drawing), which is quite appropriate because traditionally they are among its heaviest users. Learning Assistance seems far from Student Services and the library with which it is most logically grouped. Most technical education programs are clustered together, though the automotive shop is somewhat remote from the rest of its program and perhaps suffers as a consequence of its isolation. Lastly, the gym and locker rooms form a visible part of the central campus instead of being shunted off to a hidden rear location as is usually the case.

Perhaps the one major fault is that the most interdisciplinary-use academic facility on campus, the library, is on an edge of the campus rather than a more central location, favoring some disciplines at the expense of others which are across the campus.



EXISTING CAMPUS PLAN

CAMPUS ORGANIZATION BY DIVISIONS



Avenue K

ENTRY MONUMENT PLAZA

LEGEND

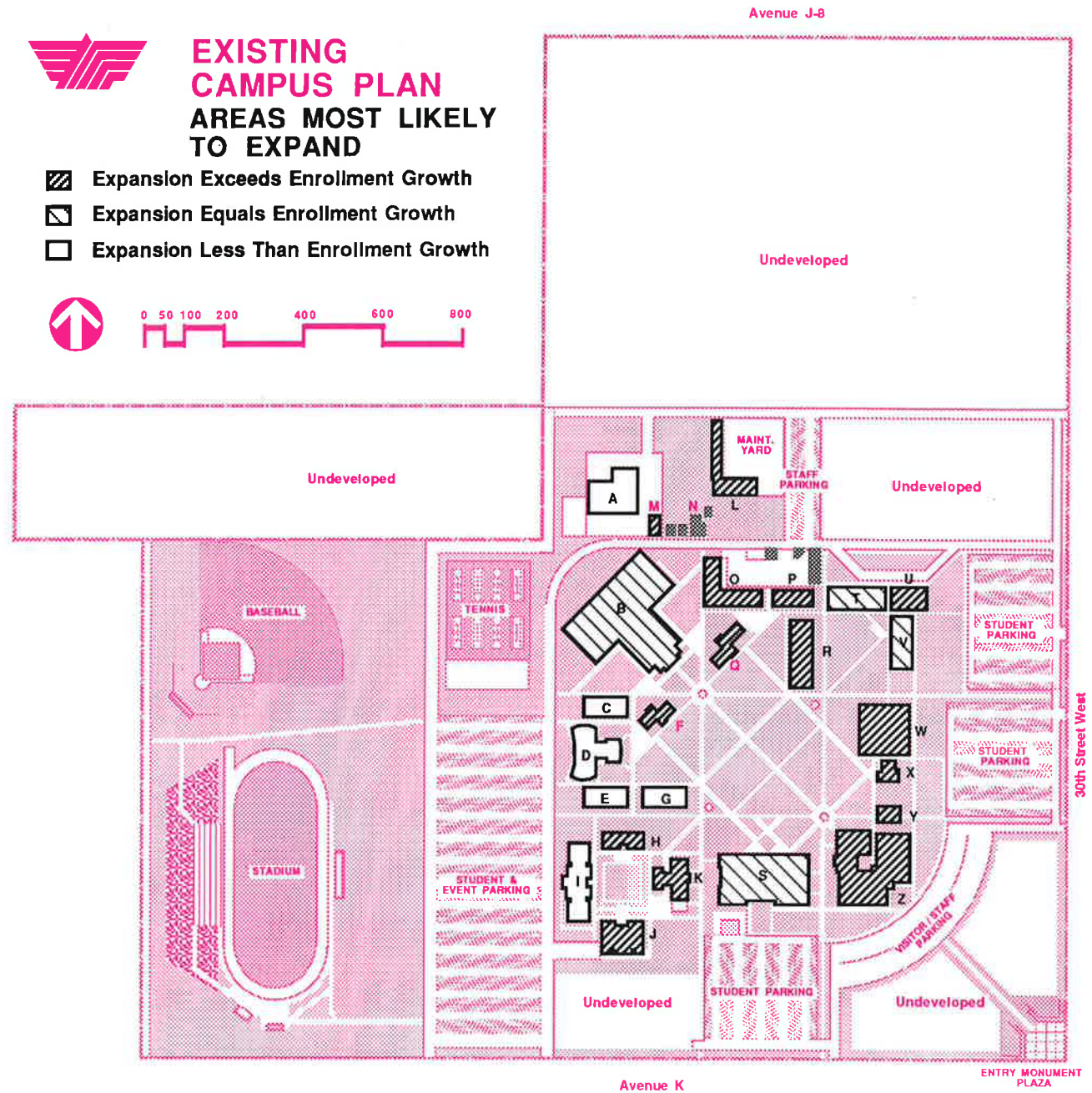
EXISTING BUILDINGS

- A AUTOMOTIVE
- B GYMNASIUM
- C CHEMISTRY
- D LECTURE HALLS
- E PHYSICS
- F FACULTY OFFICES
- G BIOLOGY
- H FAMILY & CONSUMER EDUCATION
- I MUSIC
- J DRAMA LAB
- K ART
- L MAINTENANCE SHOP
- M AGRICULTURE LABS
- N LATH HOUSE
- O AUTO/WELD
- P ELECTRONICS
- Q ACADEMIC ADVANCEMENT
- R MATH/ENGINEERING
- S STUDENT CENTER
- T LANGUAGE ARTS
- U OFFICES
- V SOCIAL SCIENCES
- W LIBRARY
- X AUDIO/VISUAL
- Y COMPUTER CENTER
- Z ADMINISTRATION



**EXISTING
CAMPUS PLAN
AREAS MOST LIKELY
TO EXPAND**

- Expansion Exceeds Enrollment Growth
- Expansion Equals Enrollment Growth
- Expansion Less Than Enrollment Growth



30th Street West

ENTRY MONUMENT PLAZA

Space Inventory

The campus has 28 buildings totalling 253,744 gross square feet or 188,793 assigned square feet (ASF). The buildings range in age from 8 to 30 years. Older buildings were constructed before the enactment of Community College Facilities Standards and most have never been remodeled to conform with modern educational technology.

Current lecture capacity is 53,678 WSCH, and lab capacity is 21,591 WSCH (totalling 75,269 WSCH). At 15 units per FTE (full-time equivalent) student, the capacity of the present buildings is 5,018 FTEs. In 1988 there were actually 4,400 FTEs, so there was existing capacity to accommodate 14% growth. Since the campus land area is 42% undeveloped, the total growth capacity of the campus is thus about 7,200 FTEs or 12,700 total enrollment, assuming present building densities are continued. The actual capacity of the campus is much greater because building densities can be vastly increased on AVC's sparsely developed campus.

Use of existing space includes approximately:

23,000 ASF	(12%) classrooms
63,900 ASF	(34%) laboratories
19,400 ASF	(10%) offices/conference
13,300 ASF	(07%) library/study
33,100 ASF	(18%) physical education
27,100 ASF	(14%) food, assembly
8,900 ASF	(05%) other (A/V, computer)

If expansion of the campus were to continue the present density of development, the maximum capacity of the campus would be approximately 12,700 total enrollment. If the College wishes to grow beyond that capacity, the master plan must find ways to develop the campus by increasing density without greatly diminishing the sense of spaciousness and the beauty of the setting.

Expansion by Disciplines

Illustrated on the chart at right are the relative degrees to which the various disciplines utilize the space allocated to them. Those shown in boldface are already inadequate to meet current needs. Those in italics are areas which have insufficient excess capacity to accommodate a doubling in the student population. It can be seen from the chart that there are inequities in the distribution of space on campus. This imbalance in capacity has an effect on the way in which disciplines and functions will be allocated new space.

Areas Most Likely to Expand

Illustrated on the drawing at left are areas on campus needing more-or-less area in the future based on their current relative capacities and utilization. Areas where there is excess capacity (e.g. science) will inherently need less new space and may change less as the campus grows. *Remodeling and additions in these areas can therefore be more appropriate as a strategy.*

The opposite would be true of disciplines and functions for which there is already a shortage of space (such as applied arts, office space, library). Not only must the new construction account for new growth, but it also must make up for present shortages. Those areas of campus will experience the most physical change. Additions and remodels of such limited space can aggravate an already serious space shortage. *Relocating these functions into new facilities may be more appropriate as a strategy.*

One caveat should be observed here. Particular areas of study wax and wane in popularity -- often at surprisingly rapid rates (witness the relative changes in automotive and science enrollments since the planning process began in 1988). New buildings must be designed for maximum flexibility so the College can respond to changing needs.

It is interesting that, with some exceptions, the general areas most likely to experience growth are clustered at the north and east sides of the campus...closest to the land available for future growth.

1988 SPACE UTILIZATION BY DEPARTMENT

	Lecture	Lab
Agriculture		144%
Air Conditioning		215%
Art		69%
Auto Body	8%	136%
<i>Auto Mechanics</i>	3%	71%
Biology		52%
<i>Business</i>	44%	89%
Chemistry		30%
Computer		86%
<i>Electronics</i>		88%
Geology		29%
Home Ec.		47%
Language Arts	46%	
Learning Assistance	27%	
Lecture Halls	47%	
Math/Engr.	49%	100%
Music		56%
Nursing		20%
Photography		252%
Physics	39%	44%
Social Sciences	48%	
Theater Arts		
Welding		54%
Writing Labs		112%

Boldface:

Overutilized...signifying space shortage

Italics:

Properly utilized...signifying adequate space

Plain text:

Underutilized...signifying excess space

Building Densities

As was discussed before, the current buildings are of relatively low density when compared with other campuses. This is due to the use of comparatively small, mostly one-story buildings. This was appropriate for the originally-planned campus, given the low land cost and its relatively small planned size. But it could become a problem in the future if the College grows substantially.

With the present low density building core, it would be logical in the future to construct much larger multi-story buildings in order to conserve land and avoid excessive walking distances. But because most available unused space is on the perimeter, this will tend to create higher density uses on the campus perimeter than in the core. The effect of this is to actually increase average walking distances rather than reduce them as would be intended. This is because larger buildings accommodate more people and, if they are located on the campus perimeters, more people have to walk farther to move among them.

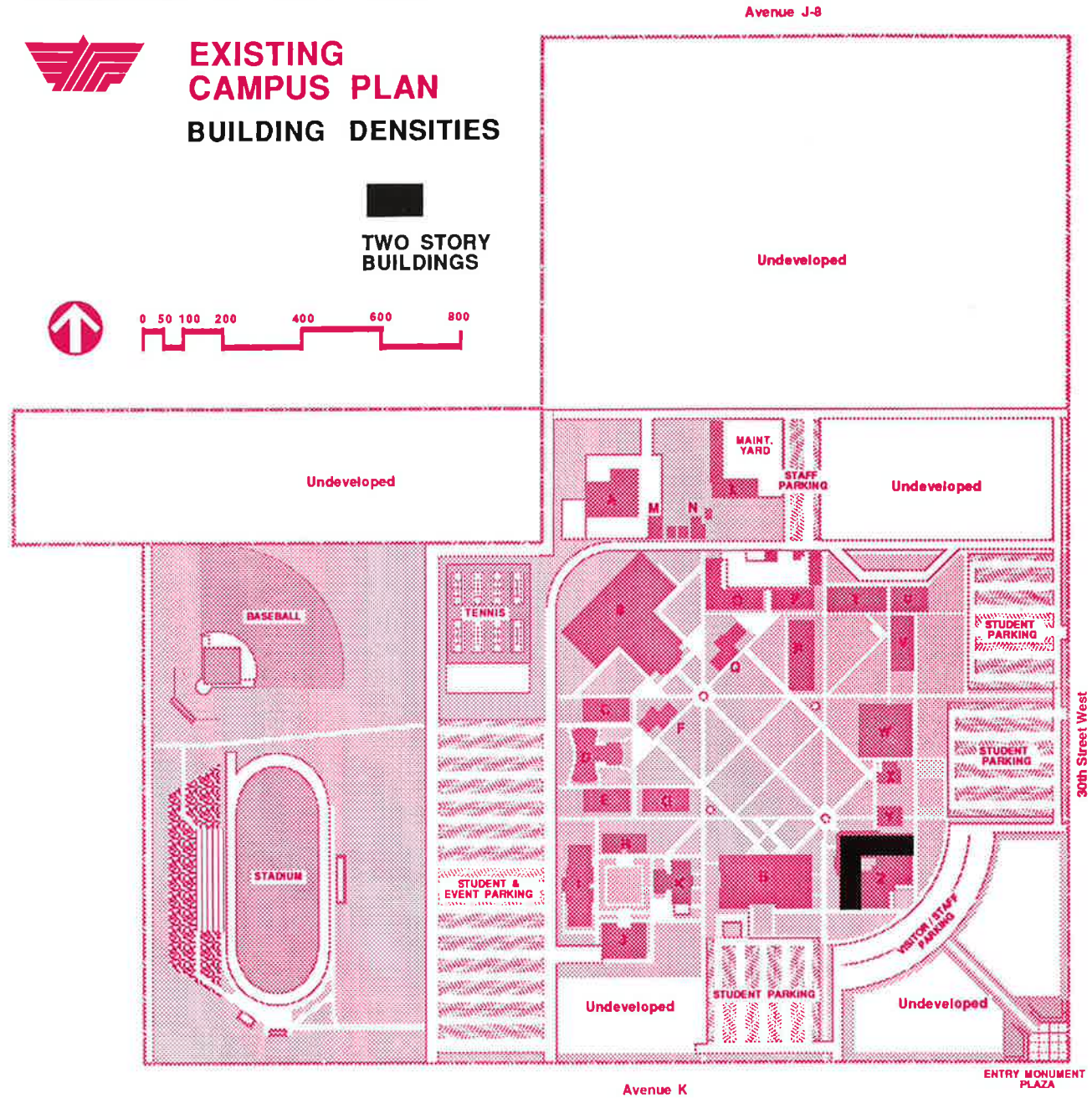
It would be a better strategy to locate the higher density, larger buildings as close to the campus center as possible...especially those which have heavy traffic and are interdisciplinary in nature such as the library and classrooms.

The problem of the low density building core is worsened by the uncommonly large open park at the center of the campus. Though other chapters will cover this in more detail, its effect on walking distances could eventually lead to it being encroached upon by large buildings unless a realistic long-range plan to deal with this is developed.



EXISTING CAMPUS PLAN BUILDING DENSITIES

TWO STORY BUILDINGS



30th Street West

ENTRY MONUMENT PLAZA

Outdoor Spaces

Most buildings are organized in rectilinear groupings facing normal to the north-south orientation of the site. But three are arranged on a 45° diagonal (the gym, and Academic Advancement (Learning Assistance) and Faculty Office buildings). Where these adjoin the north-south buildings, they tend to create triangular outdoor spaces. These spaces can be attractive and refreshing counterpoints to the predictability of most of the outdoor areas, but they are harder to utilize for building expansion unless triangular structures are designed to fit them.

Visual Features

Perhaps the most important visual feature of the College is the central green or park. It serves as the focal point for the College. By creating an open campus center, it allows for views of most buildings from nearly any point, permitting better-than-average visual orientation. Augmenting the central park are smaller green "quads" which serve to distinguish groupings of buildings. These include the art, science, P.E., and language arts/social science/math quads.

Utilization of Outdoor Spaces

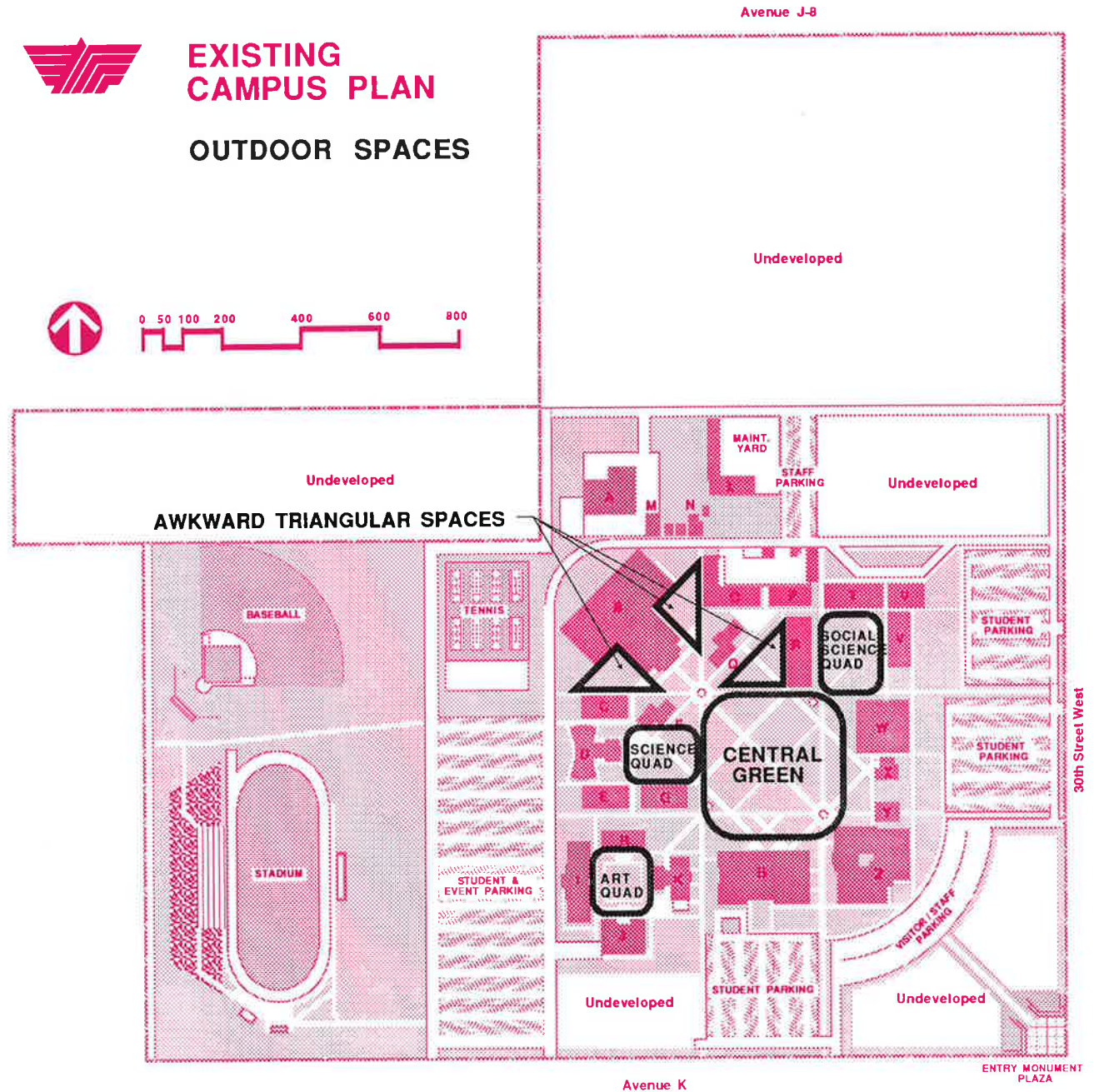
The central open park has been criticized as being too large to be comfortable for student gatherings, and it lacks wind protected places to sit comfortably. It is essentially a passive environment located, unfortunately, at what should be the most active area of campus.

The College lacks the bustling student environment characteristic of many campuses. The present 'green' is only lightly used as a park and is so large as to remain a potential target for unplanned building expansion. A more appropriate space for activity and social interaction needs to be created at the center of the campus.



EXISTING CAMPUS PLAN

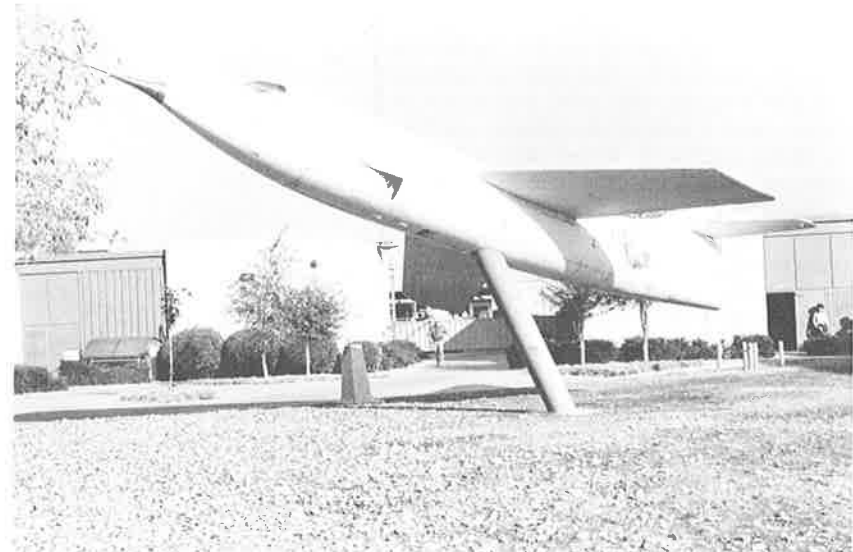
OUTDOOR SPACES





6.5 Acre Central Green

--Largely unused because of lack of wind shelter and places to sit.

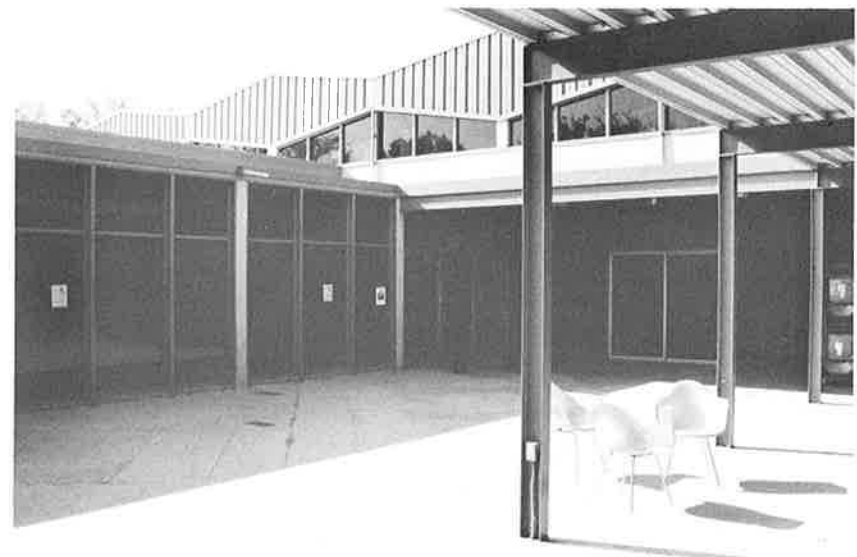


Douglas Skyrocket--*One of 3 in existence. It occupies the Applied Academics & Technology quad, though its long term location and meaning to the College is in question.*



Gathering Point at Old Fountain near Humanities Quad

--One of the few well-used outdoor spaces on campus



Courtyard at Student Center

--Underused due to cold north-facing orientation

Environmental Considerations

Like most colleges, the AVC campus receives its heaviest student load in the cooler months and its heaviest hours of use in the morning and evening hours. Outdoor spaces, to be usable, must be adapted to the unique climate as well as the periods of heaviest use.

The sun is lower and more southerly in the cooler months. Westerly prevailing winds which cool in the hot summer months aggravate already cold winter temperatures.

Few of the present outdoor spaces and nodes of activity on campus are oriented properly for wind protection and correct sun orientation (see the drawing at right). Others lie at the north sides of buildings where the winter sun is shaded-out. This is particularly true of the Student Center whose outdoor spaces are entirely on the north side of the building and in a windy location. Open areas which work relatively well, such as the stadium and Fine Arts quad, have wind barriers on the west side

The majority of the existing classroom buildings are constructed with outdoor covered walks instead of interior corridors. This results in classrooms and labs opening directly to the often windy and cold weather. The library entrance opens directly out to the winds. The tennis courts, auto shop and the central green are also unprotected from strong winds.

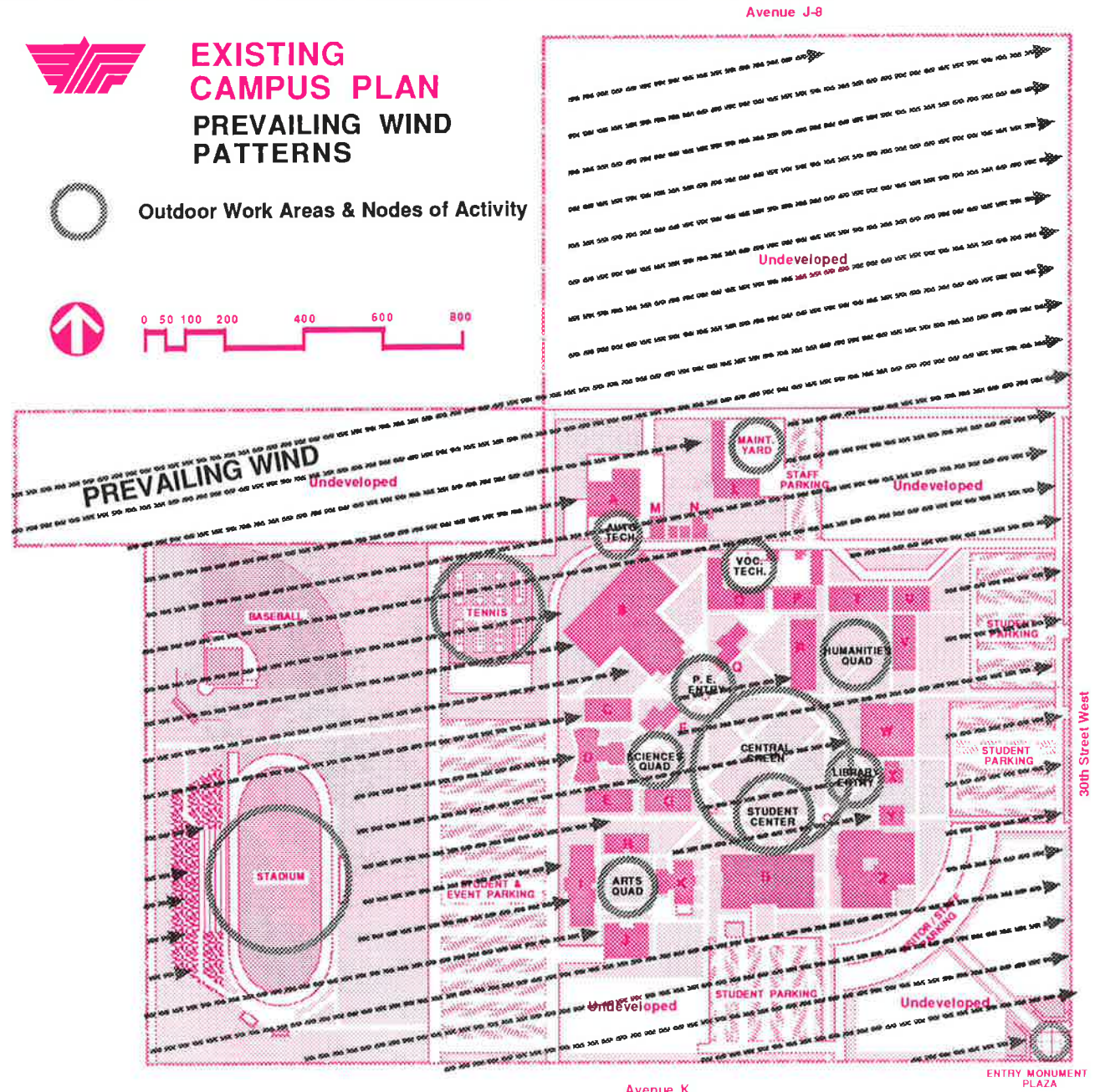
The wind must be taken into account when siting new buildings, especially multi-story ones which will further increase wind velocities. Outdoor spaces should be protected from the west wind by structures or landscaping which dissipate the wind velocity. Outdoor spaces would best be oriented to the south and south-east to invite the winter morning's sun while simultaneously avoiding the worst of the summer sun's heat.



EXISTING CAMPUS PLAN PREVAILING WIND PATTERNS



Outdoor Work Areas & Nodes of Activity



30th Street West

Avenue K

ENTRY MONUMENT PLAZA

Walking Distances

Illustrated on the right is a 1,500 ft. diameter circle projected from a hypothetical center point which is roughly the present center of the campus. This distance represents a comfortable walking distance which can be covered in 10 minutes -- the passing time between most one hour classes.

The circle illustrates that most buildings are within a reasonable walking distance from one another. This is made especially true with the open central park -- it is possible to walk by a nearly direct routing from one side of the campus to the other in most areas.

But if the building area were to expand into the 27 acres at the north, much of that area would be beyond a comfortable walking time from the south end of the campus. Also, with increasing pressure to construct buildings where there are now open spaces, routes may become less direct and walking times will correspondingly increase.

It is extremely important to the long-range effectiveness of the Master Plan as well as the viability of the College that all portions of the campus, especially those functions which are most interdisciplinary be kept within a ten-minute walking distance.

Pedestrian Circulation

Illustrated on the right is a pedestrian circulation diagram. Existing circulation is quite diffuse when compared with most campuses due to the effect of the large open park at the center of the campus. Most paths crossing it are also quite narrow and with few related gathering spaces. The present layout generally discourages gathering in this space.

The most heavily-used circulation routes appear to be along diagonals across the central park area and in most areas the present pathway layout handles this need well.

Nodes of Activity

Where major paths intersect, potential "nodes of activity" are created. These are locations where people might stop and sit or a group of friends might gather. There are existing circular benches at four major intersection points on campus. These were originally raised fountains and have been converted to planters. Unfortunately, there is a lack of sufficient paving around them, and all four sites are windy and isolated from buildings. Beyond these four, there are nodes of activity at the entrances to the Student Center, library, Fine Arts quad and science complex from the center of campus. These are created because they are logical gathering places where students meet before and after classes.

People tend to gather in relationship with, or in proximity to, the buildings they use. Examples of such building-related outdoor spaces on the AVC campus are the Fine Arts quad, whose gathering space is considerably more successful than others on campus and the humanities quad area (R, T, U, V).

The Master Plan should therefore aim to create outdoor spaces near the buildings they serve, properly oriented and environmentally protected to be usable.



Node of Activity at Old Fountain near Humanities Quad *Students can gather here at a major crossroads where seating exists...except when it is windy.*

LEGEND

EXISTING BUILDINGS

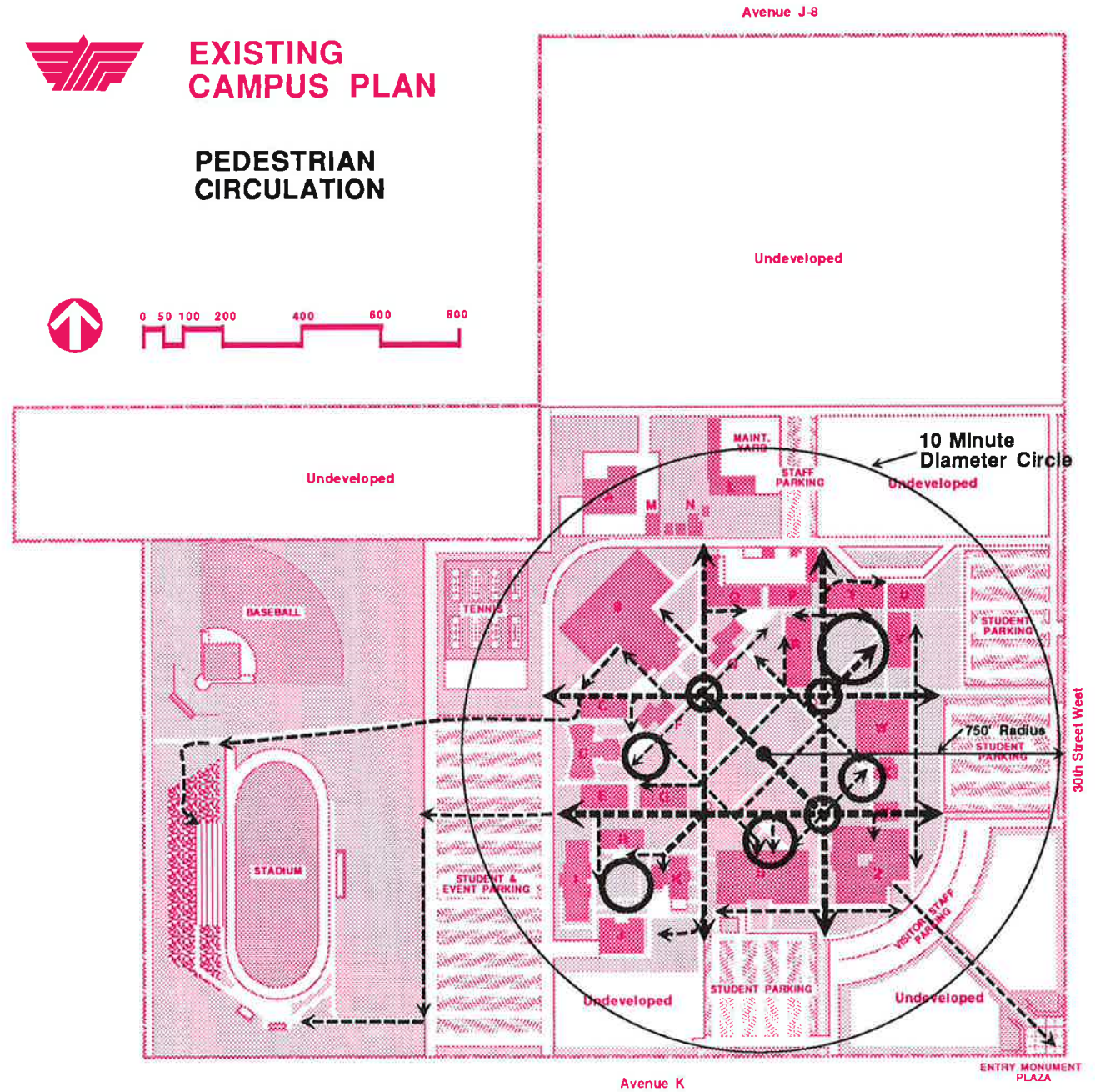
- A AUTOMOTIVE
- B GYMNASIUM
- C CHEMISTRY
- D LECTURE HALLS
- E PHYSICS
- F FACULTY OFFICES
- G BIOLOGY
- H FAMILY & CONSUMER EDUCATION
- I MUSIC
- J DRAMA LAB
- K ART
- L MAINTENANCE SHOP
- M AGRICULTURE LABS
- N LATH HOUSE
- O AUTO/WELD
- P ELECTRONICS
- Q ACADEMIC ADVANCEMENT
- R MATH/ENGINEERING
- S STUDENT CENTER
- T LANGUAGE ARTS
- U OFFICES
- V SOCIAL SCIENCES
- W LIBRARY
- X AUDIO/VISUAL
- Y COMPUTER CENTER
- Z ADMINISTRATION

- ← Major Circulation Axis
- ← Secondary Circulation Axis
- ← Local Circulation Route
- Nodes of Activity



EXISTING CAMPUS PLAN

PEDESTRIAN CIRCULATION



Parking & Vehicular Circulation

Illustrated on the right is a current layout of parking, roadways and access driveways. Parking is well located around the perimeter and relatively equidistant from the various areas of campus. Many of the parking lots are interconnected and most have good provision for expansion. Several of the lots, however, are isolated from other lots -- especially the visitor lot opposite the Administration Building and the Student Center lot immediately west. From these lots, vehicles needing to circulate to other areas of the campus must exit onto public streets and reenter the campus elsewhere. This should be corrected as future parking lots are constructed.

Using the criterion of pedestrian safety, the current circulation layout is quite good. Most driveways which interconnect the lots are on the outer perimeter of the campus near the public streets. This protects pedestrians from heavy cross traffic when entering the campus proper.

Precisely because they are close to the public streets, however, an inherent liability with the perimeter driveways is that there is very little stacking space for cars entering from the public streets. A car pausing to wait for a parking stall can effectively block the entire entering or exiting traffic flow, as can a car backing out of a slot to exit. This problem is particularly acute in the morning just before the first classes begin. Exiting traffic is not generally as serious a problem because there tends to be less peak traffic as students leave at a variety of times.

The present response to this problem has been to provide as many entrances to the public streets as possible. Cars can then "cruise" to another entrance when one appears to be plugged. It is the judgment of the planners, however, that this will create future security problems and will not permanently solve the problem because traffic is expected to keep increasing on Avenue K and 30th Street.

**West Parking Lot--Heavily used
at north side nearest Science and P.E. Quads**

Another problem with the present configuration of entrances and parking lots is that driveways are very narrow and cars must make sharp turns to enter the perimeter road immediately after leaving the street. This slows traffic flow generally, and there have also been numerous accidents at these junctures.

Service and fire vehicle access lanes into the campus center are also of concern to planning. The present service road, shown as a dashed line, runs from the unpaved parking lot west around the P.E. building to the parking lot west of the Fine Arts quad. Access for emergency vehicles includes walkways designated which are, in reality, too narrow and are lighted with low fixtures which overhang the walks and block access to emergency vehicles. These access routes will need to be reviewed with the State Fire Marshal when new buildings are planned inside the campus.

A better solution is required to deal with the problem of entrances, access to parking, congestion on campus, safety (for cars and pedestrians) and overall campus security. This master plan addresses these challenges and suggests a way to improve vehicular circulation onto and within the campus.

Current Utilization of Parking

As the drawing on the right indicates, there are currently 1,433 paved parking stalls on campus. Augmenting this is a large unpaved parking lot north of the Language Arts Building with an approximate capacity of 500 cars.

Information on present patterns of use provided by the College indicate that the south end (roughly 280 stalls) of the west P.E. lot lies unused, whereas nearly all of the temporary lot is used.

This suggests that roughly 1,600 stalls are currently needed to satisfy peak parking demand. It also suggests that the College will need to begin to construct more permanent parking, especially at the north, fairly soon, or a parking shortage will develop.

Current Parking Ratio

The parking ratio is determined by comparing the current total enrollment with the number of stalls in use as follows:

9,100 Fall '89 total enrollment
+1,600 Stalls in use - peak times
5.7 Students per parking stall

This ratio is slightly higher than planners' usual rule of thumb which is five students per stall. This suggests a greater-than-normal number of students carpooling or finding alternate means of transportation to get to the College. It has been determined that students use the local public transportation system very little because it is quite limited in service. Therefore the most plausible explanation is that the students carpool in greater numbers than normal...perhaps due to the unusually great driving distances.



LEGEND

EXISTING BUILDINGS

- A AUTOMOTIVE
- B GYMNASIUM
- C CHEMISTRY
- D LECTURE HALLS
- E PHYSICS
- F FACULTY OFFICES
- G BIOLOGY
- H FAMILY & CONSUMER EDUCATION
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- U OFFICES
- V SOCIAL SCIENCES
- W LIBRARY
- X AUDIO/VISUAL
- Y COMPUTER CENTER
- Z ADMINISTRATION

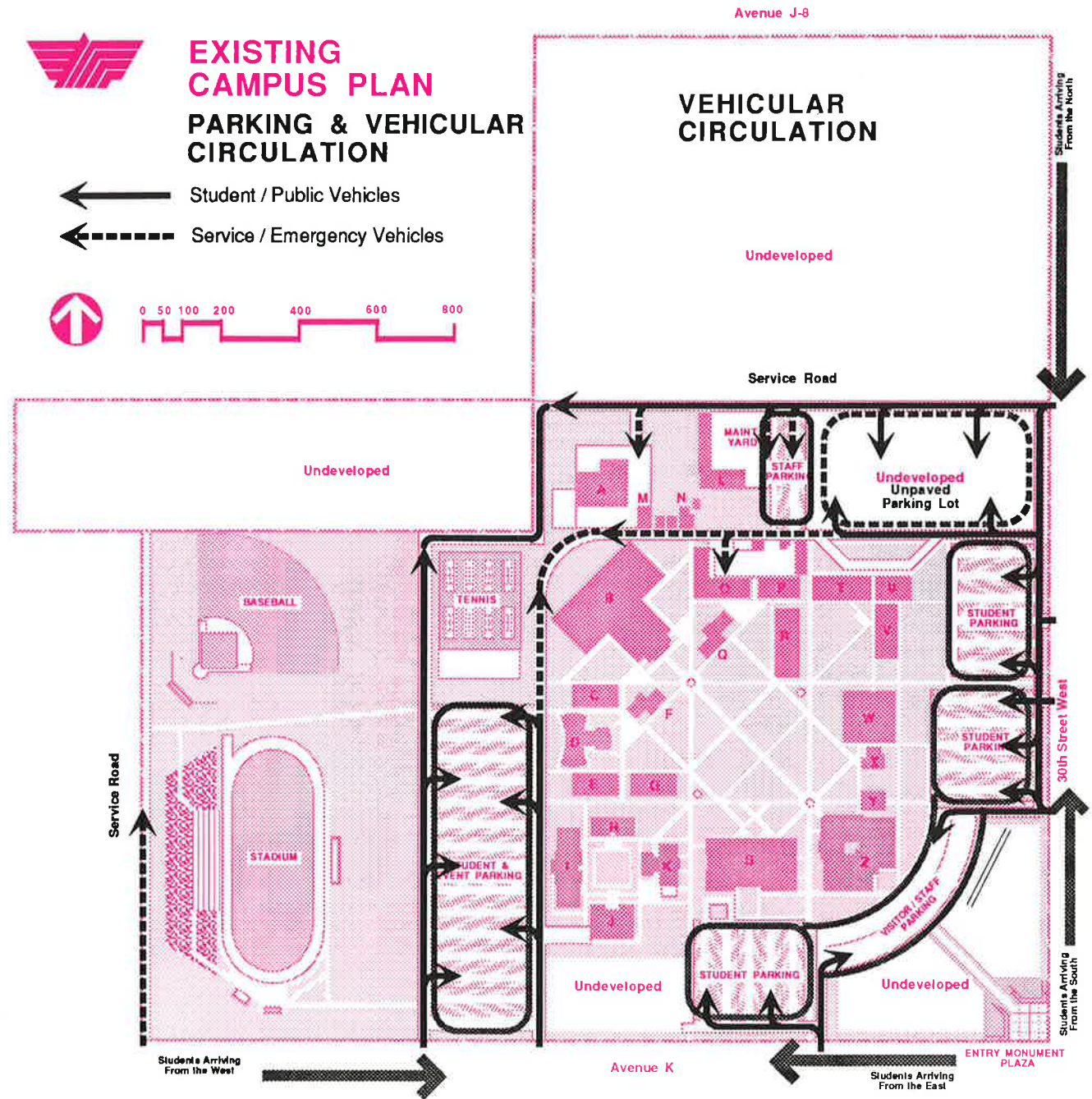


**EXISTING CAMPUS PLAN
PARKING & VEHICULAR CIRCULATION**

- Student / Public Vehicles
- Service / Emergency Vehicles



Paved Parking = 1,433 Stalls
Area of Paved Parking = 13.5 Acres
Average Area Per Stall = 410 S.F.
Unpaved Parking = 500 Stalls



Campus Architecture

As the photographs on the right indicate, the College is quite consistent in its architecture. With the exception of the more recently constructed buildings comprising the Art Quad and the remodel of the Administration Building, most appear to have been designed from 'one hand'. This is probably true because the majority of the campus was constructed over a relatively short span of time and in large projects by the same firm, H. L. Gogerty Associates of Los Angeles.

The style of the buildings is an early development of what later has been termed Contemporary 'Hi-Tech' which had its roots in the International Style from Europe of the 1930s and later through the early practitioners in steel of the 'Post and Beam' style in California including: Richard Neutra, Raphael Soriano, Craig Ellwood, Pierre Koenig and others. The 'Hi-Tech' style went on to be used throughout the world in office and industrial buildings.

In its purest form this style is best exemplified on campus by the centerpiece gymnasium and Student Center buildings whose graceful steel post-and-beam canopies and floating roof planes act as a foil to the simple massive concrete walls behind. Other buildings are more anonymous and repetitive in appearance and are treated as background structures. Among these, perhaps the library should have been given more prominence.

The buildings comprising the art quad are more rusticated in character and show the influence of later styles. Though it does not precisely match the rest of the campus, it is part of an attractive and separate coherent unit reasonably compatible with the rest of the buildings.

The remodel of the Administration Building on the other hand eliminated one of the more interesting and important features of the original campus design...the grand entry colonnade and covered plaza facing a northwest diagonal view across the campus. It is questionable whether the minimal gain in space

was worth the esthetic loss. The design is also incompatible with the rest of the building, and due to the unshaded glass and poor weatherproofing, has been a continuing maintenance problem. The Master Plan may establish a long-range goal to remove this addition and restore the colonnade and its covered plaza...perhaps after a new administration building is constructed.

New buildings should incorporate more view windows, especially for offices. This is one feature lacking in the present building design which is largely based on tilt-up concrete construction which limited windows to vertical slots or high windows.

New buildings should avoid current fashion and be made as compatible in appearance as possible with existing ones. On the other hand, incorporating a softer, more human scale as well as more clearly defining the entrances and adding other visual clues will improve on the original design concept.

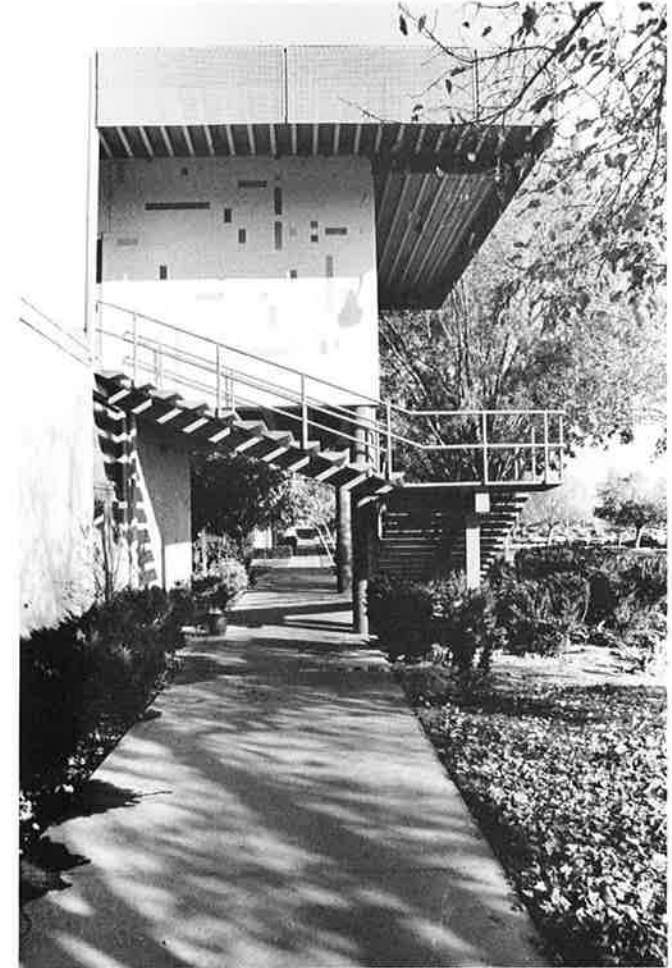
Energy Use

The present buildings were constructed before the energy crisis of 1974 and the subsequent development of the Energy Code¹. As a result, they were not as well insulated, either at the roofs or the exterior concrete walls as would be required today. The present configuration of relatively small buildings also increases unit energy costs because of a higher surface-to-volume ratio. However, many of the windows are well shaded through the use of sunscreens and overhangs, and this does reduce cooling costs.

The College has subsequently applied additional roof insulation when the buildings have been reroofed. For wall insulation, a rigid insulation system with fiberglass-reinforced epoxy stucco is available for retrofit on the concrete surfaces should energy costs justify it. But countering any gains from better insulation is the fact that most classrooms and labs have outdoor entrances opening to the weather. The hot or

¹ Title 24, Energy Conservation Standards, California Administrative Code

cold, often dust-laden winds can blow directly into conditioned space, causing substantial energy losses as well as discomfort. This feature of the design is perhaps the one element which least recognizes the extremely harsh climate of the desert region.



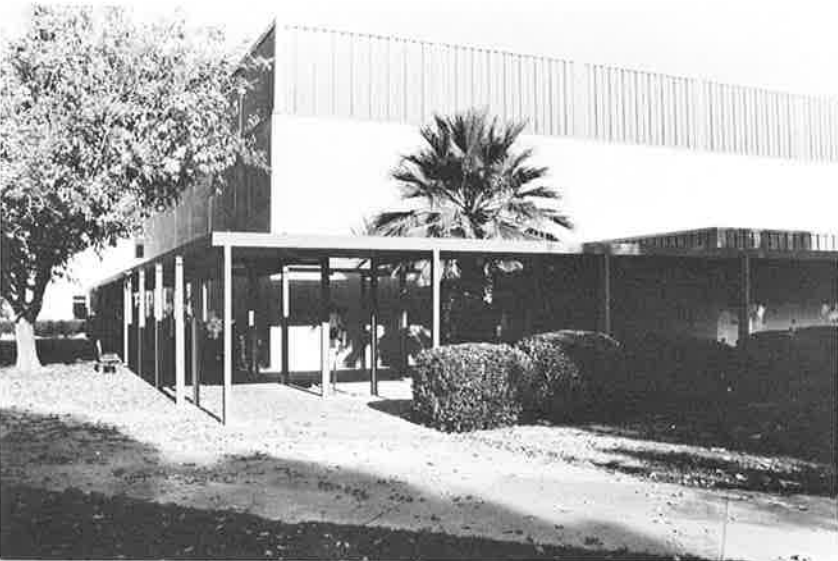
Administration Building
--Only existing two story building on campus



Library Building Entrance
--Somewhat obscure for such an important entrance point on campus



Student Center---*Attractive floated steel roof design with covered walk in foreground which was later glass enclosed due to windy weather*



Gymnasium---*An attractive design which uses the light steel covered walks as a 'foil' to soften the massive main structure behind*



Standardized Outdoor Corridor Design--*Overhangs with expanded metal fascia are effective in providing summer shade, but exterior doors facing into the weather can waste energy.*

Conclusions

For its originally planned size, the concentric ring plan of the campus was well sized and organized. Walking distances are reasonable, visual orientation is good, and functions are grouped conveniently. The future, however, is expected to bring growth to such an extent that the present student population is likely to double within ten years. The concentric ring plan blocks access to the undeveloped land at the north to which expansion is most logical. The sparseness of the original layout is impractical given the degree of growth expected and the long walking distances between the southern and northern extremes of campus. Interdisciplinary functions should be centrally located and most classrooms and labs should be within a 10-minute walk of one another.

Outdoor spaces are underutilized because they are exposed to chilling winds in the winter and to the hot sun in the summer. Their scale of the central open space is too large and discourages use. Outdoor spaces need to be protected from the weather and brought down in scale so that they encourage students to congregate.

The one-story construction used throughout the campus is energy and space inefficient. Multistory buildings are much more efficient and should be used wherever possible in new construction. They should also be concentrated as much as possible toward the center of campus to avoid long walking distances.

Energy efficiency is also a problem with the outdoor corridors and unprotected entrances. These should be closed off to prevent outdoor weather conditions from contact with indoor conditions.

Parking is presently quite adequate, but it is laid out with entrances directly off the street which encourage logjams as cars queue up waiting for spaces to become available. There is no loop road connecting all parking lots and sections of campus. Cars must leave campus and reenter to continue searching when parking lots fill up. Disabled drivers must cross through parking lots and across driveways to get from their cars to their classes. The College may eventually wish to control access to the campus if a security problem should develop in the future. The present large number of entrances could make setting up gates or guardhouses prohibitively expensive.

All these problems must be addressed in the master plan along with the provision of additional parking which will be required as the campus expands.

Space shortages in certain buildings have forced some departments to spread functions around the campus. This problem will be exacerbated by continued growth. Present space inadequacies must be eliminated and provision made for expansion as the student population doubles in size. In addition, additions need to be designed with maximum flexibility to provide space which can be converted to other uses in response to the vicissitudes of society's training needs and students' interests.

The master plan must respond to all of these individual problems. In addition, it must address the issues of the interrelationships of functions and departments, location of utilities, consistent architectural style, access to emergency vehicles - all within an overall concept of ordered growth. It sounds like a daunting challenge, but most of the problems can be solved and the goals can be met with the implementation of the master plan which has been developed through the cooperation of the staff and the planners over the last three years.



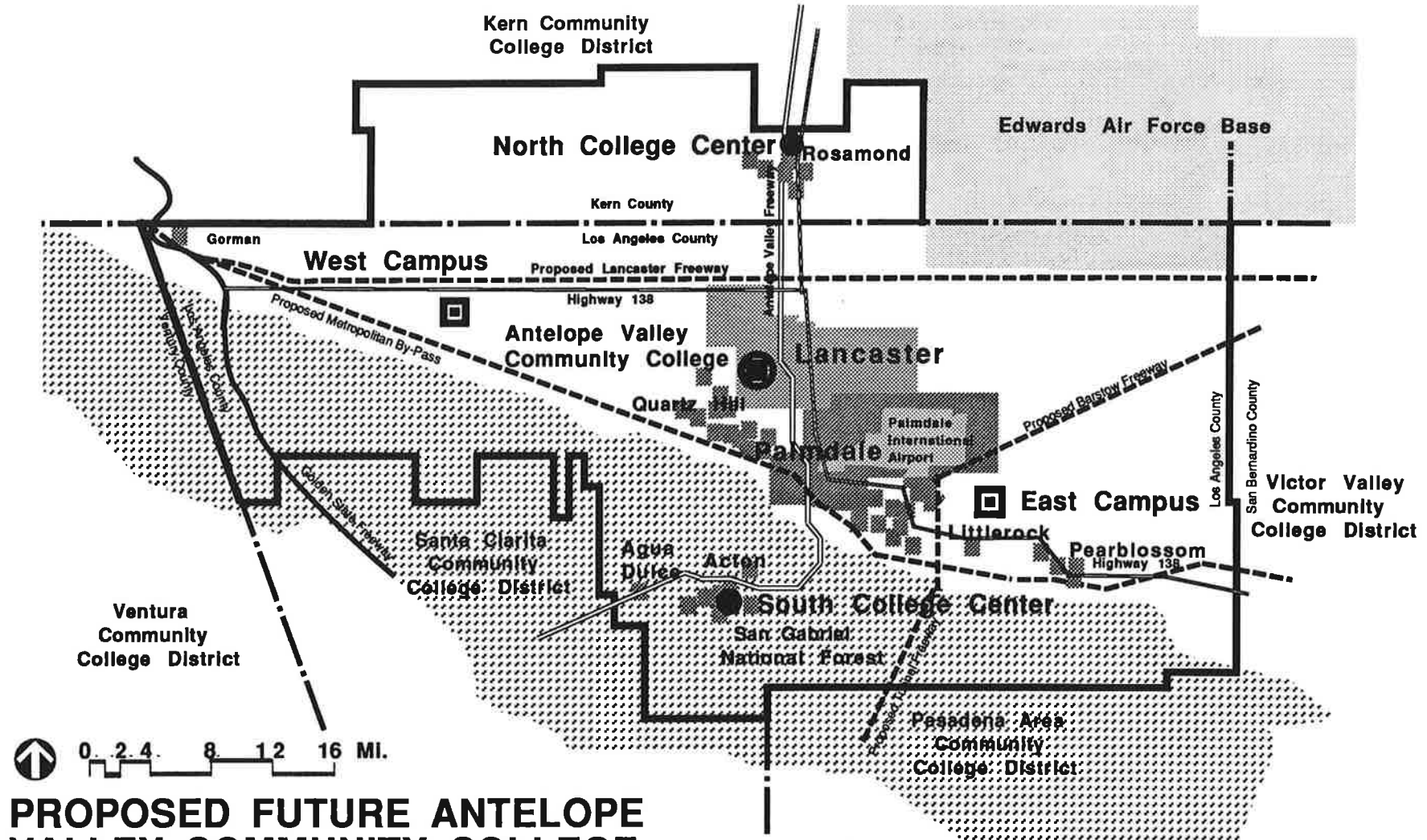
North-South Axis on West Side of Central Green Looking South
 ---The canopy of mature deciduous trees which provides shade and some wind protection will be preserved.



Original College Events Sign
 ---At corner of 30th and Ave K...since removed



Antelope Valley College Looking North, 1988



PROPOSED FUTURE ANTELOPE VALLEY COMMUNITY COLLEGE DISTRICT CAMPUSES & CENTERS

The Master Plan

Editor's Note: Throughout the section of this report where we deal with the future physical plans of the College, the word "will" is used to create a positive vision rather than to indicate any final, fixed aspect of the plan. As with any plan, this one is fluid in nature and is open for, indeed, likely to change.

The Role of AVC in the Community and the Region

As the region grows and matures, the College District is expected to grow and mature with it. Antelope Valley College is today the dominant educational institution in the region. With multiple campuses in the future, the District will likely remain the largest and perhaps the most important institution of higher education in the valley in spite of the long-term possibility of a California State University or a University of California campus.

It could also be said that the College is the dominant cultural institution within the region. At present, the College provides the only theater arts facility in the valley. It also is home to the local symphony

orchestra and numerous other musical activities. With the addition of a larger, more formal theater, this central role in the cultural life of the region can only be expected to increase.

Changing Educational Mission

At present, the average age of the population is younger than average, statewide and is composed mostly of skilled workers and native-born American families. As a result, the College serves a higher-than-average statewide percentage of traditional 18-to-22-year-old high school graduates and college transfer students. The courses which serve this group are traditional college transfer courses augmented by skilled trades and business and computer skills.

As the population make-up changes, so must the College change with it in order to better meet its needs. It is expected over time that a large increase in semi-skilled and unskilled labor will move into the region to work in the growing number of local industries and in construction. This group is likely to bring with it a greater percentage of non-English

speakers as well as immigrants needing basic job skills. The overall emphasis of the College could, therefore, evolve to add more programs providing basic job and language skills.

As the population ages, it can also be expected that there will be more older students who require night and evening classes as well as child care and reentry services.

The College must also be prepared to implement new programs and standards as required by State directives and legislation. The College itself is dedicated to providing a constantly improving educational program through a process of planning, evaluation, and follow-through. The College is also involved in outreach efforts, such as off-campus classes, meant to bring in more students.

The implication of all of this change is that plans for the future must aim for maximum flexibility to accommodate the changing nature of the region and of the needs of the students.

LEGEND

EXISTING BUILDINGS



- A AUTOMOTIVE
- B GYMNASIUM
- C CHEMISTRY
- D LECTURE HALLS
- E PHYSICS
- F FACULTY OFFICES REMOVED
- G BIOLOGY
- H REMODEL ART LABS
- I MUSIC
- J EXPERIMENTAL THEATER
- K ART
- L RELOCATED DISTRICT MAINTENANCE SHOP
- M RELOCATED AGRICULTURE GREEN HOUSES
- N P.E. STADIUM SUPPORT BUILDINGS
- O REMODEL APPLIED TECHNOLOGY
- P REMODEL ELECTRONICS
- Q SMALL BUILDING REMOVED
- R MATH
- S STUDENT CENTER
- T LANGUAGE ARTS
- U FACULTY OFFICES
- V SOCIAL SCIENCES
- W REMODEL LEARNING SKILLS & COMPUTER CENTER
- X MAIN ELECTRICAL TRANSFORMER
- Y TEMPORARY BUILDING REMOVED
- Z REMODEL STUDENT SERVICES

FUTURE BUILDINGS

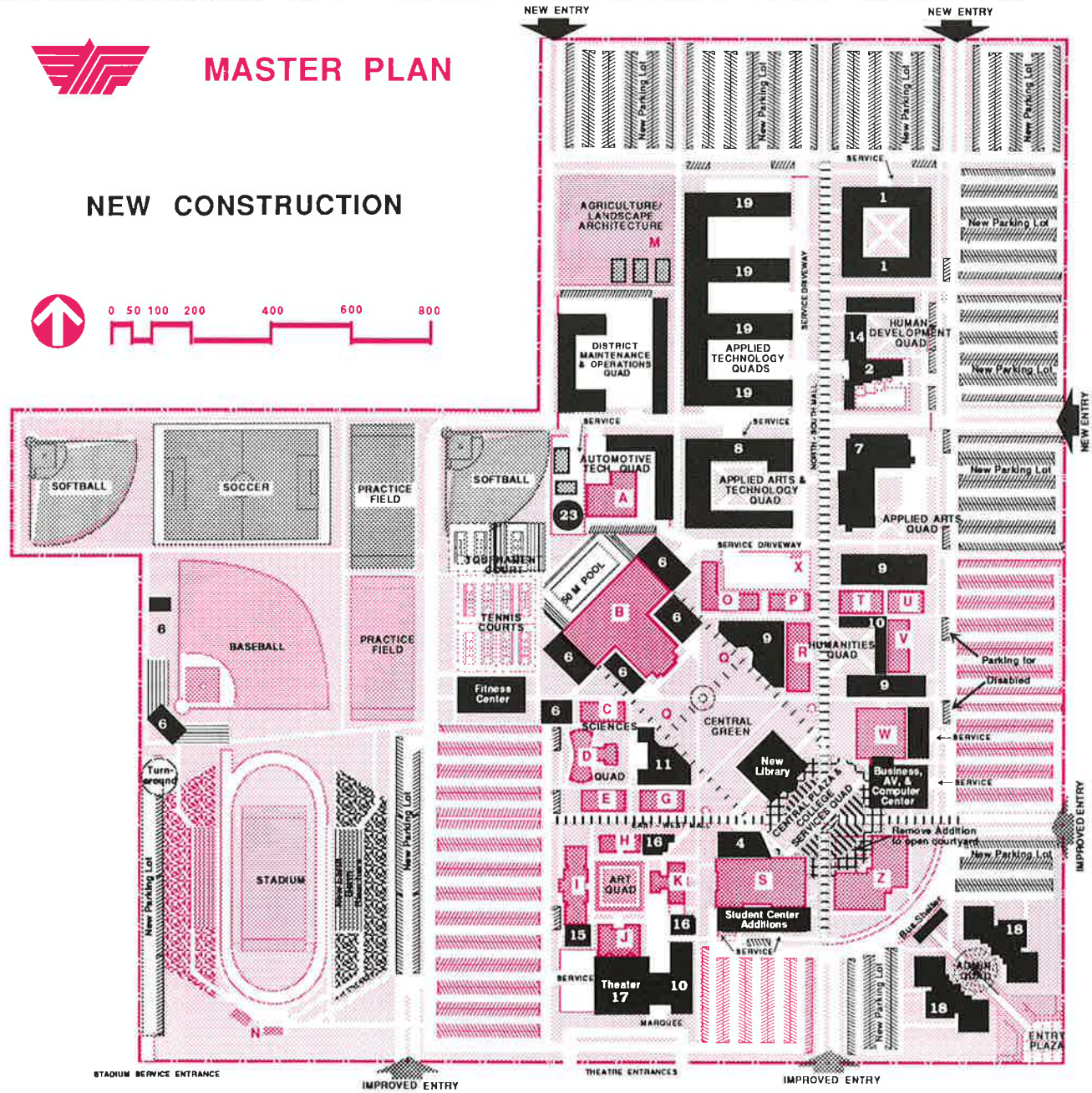


- 1 C.S.U. OUTREACH SITE OR UNPLANNED EXPANSION
- 2 CHILD DEVELOPMENT CENTER
- 3 DISTRICT MAINTENANCE YARD/WAREHOUSE
- 4 STUDENT CENTER / BOOKSTORE EXPANSION
- 5 50 METER POOL
- 6 P.E. BUILDING EXPANSION
- 7 APPLIED ARTS CENTER
- 8 LABORATORY EXPANSION
- 9 CLASSROOM EXPANSION
- 10 FACULTY OFFICES
- 11 SCIENCE EXPANSION
- 12 LIBRARY
- 13 BUSINESS CLASS/LAB CENTER
- 14 FAMILY & CONSUMER EDUCATION CENTER
- 15 MUSIC EXPANSION
- 16 ART EXPANSION
- 17 THEATRE
- 18 ADMINISTRATION
- 19 APPLIED TECHNOLOGY SHOPS
- 20 AUTO BODY SHOP
- 21 P.E. FITNESS & RAQUETBALL CENTER
- 22 BUS STOP SHELTER
- 23 HVAC CENTRAL PLANT



MASTER PLAN

NEW CONSTRUCTION



STADIUM SERVICE ENTRANCE

IMPROVED ENTRY

THEATRE ENTRANCES

IMPROVED ENTRY

Establishing the Optimal Maximum Campus Size

Estimating the maximum student capacity of the present campus can be done from several perspectives, and each should be considered before coming to a final conclusion.

Initially, the most logical approach is to determine the maximum size by the potential physical capacity of the existing site, but limited by existing facilities. With a total land area of approximately 112.3 acres and roughly 47 acres of that unused, growth would appear to simple linear calculation. It could be the percentage increase represented by the unused land augmented by in-fill into present underutilized areas. However, when one considers the overall needs of the entire district and the possibility of creating competing campuses, the equation is not so simple. The following analysis goes more deeply into the issues surrounding the decision as to the maximum capacity AVC should plan to reach:

As Limited by Land Area:

The flat site makes for very efficient land use. The existing campus could accommodate well over 25,000 total students if pushed to the limit. Note that a feasible future District enrollment rate is 50,000 students, based on an eventual population of 1 million for the District.

To Best Serve Educational Needs:

As a campus grows to its limits its size can become unwieldy. A certain impersonality and loss of contact can be the result, especially if walking distances and campus organization provide a disincentive for students to break out of their departmental worlds into the main campus areas. On the other hand, economies of scale can be achieved with a large campus.

To Best Serve Regional Needs:

At 1,945 square miles (70 by 40 miles) the District is too large to be well-served by just one college, even if it were placed dead center. The needs of students far from Lancaster would be underserved. As

each population center in the region develops, it is likely to create employee-training needs which are particular to the local area and, again, would not be well served by a large, central, magnet college. Of course, such a large campus would be likely to achieve certain levels of efficiency and economies of scale not possible at a smaller college.

As Limited by Driving Times:

The dimensions of the region are such that driving times can already be longer than the recommended 20 to 30 minutes. Add to that increasingly congested traffic around the present campus and in areas to the east, as peak traffic onto campus comes at the same time as the peak commute hours to L.A. It becomes obvious that students from certain areas are very likely to be discouraged from attending solely because of the time it would take them to get from home to class.

This analysis leads to the conclusion that the District must either decide that it is acceptable to underserve certain segments of their service population or plan to expand to more than one campus. Accepting the premise that expansion beyond the present campus is the better option, then the master plan for the Antelope Valley College must adapt to a vision as one of the campuses and centers in the district and accommodate its size and programming to fit into the larger picture.

With the growth in the area's population, it is evident that the Lancaster campus must be expanded to accommodate many more students, no matter what decisions are made about other campuses and centers. *This master plan is predicated upon the assumption that the campus should plan to grow to accommodate no more than 11,000 to 13,000 FTE, or a total of 20,000 students taking an average of 8 to 10 units each.*

Additional Space Needed for 20,000-Student Total Enrollment

In order to accommodate double the present number of students, the campus must not only double the size of its present facilities, it must make up for current space shortages. What follows is a model of what the ultimate campus facilities might encompass and their projected size as compared with the amount of space allocated to those functions on the current campus.

Model of 20,000 Student Campus

Type of Use	ASF for 20,000	Existing ASF
Library	43,006	13,312
A/V	13,128	1,292
Lecture	55,495	23,028
Lab	96,865	61,295
Office	76,975	19,420
P.E.	70,000	33,069
Other	10,000	
Food Service	20,000	10,537
Lounge	4,000	247
Bookstore	10,000	3,478
Recreation	2,500	1,540
Meeting	3,500	2,473
Data Proc	2,500	766
Shop	7,000	2,944
Storage	5,500	1,536
Independent Study	10,000	2,607
Assembly	20,000	7,892
Exhibition	2,000	934
Clinic	750	180
Child Development	8,500	486
Field Building	1,500	982
Greenhouse	6,500	775
Total	469,719	188,793

Concepts for Growth

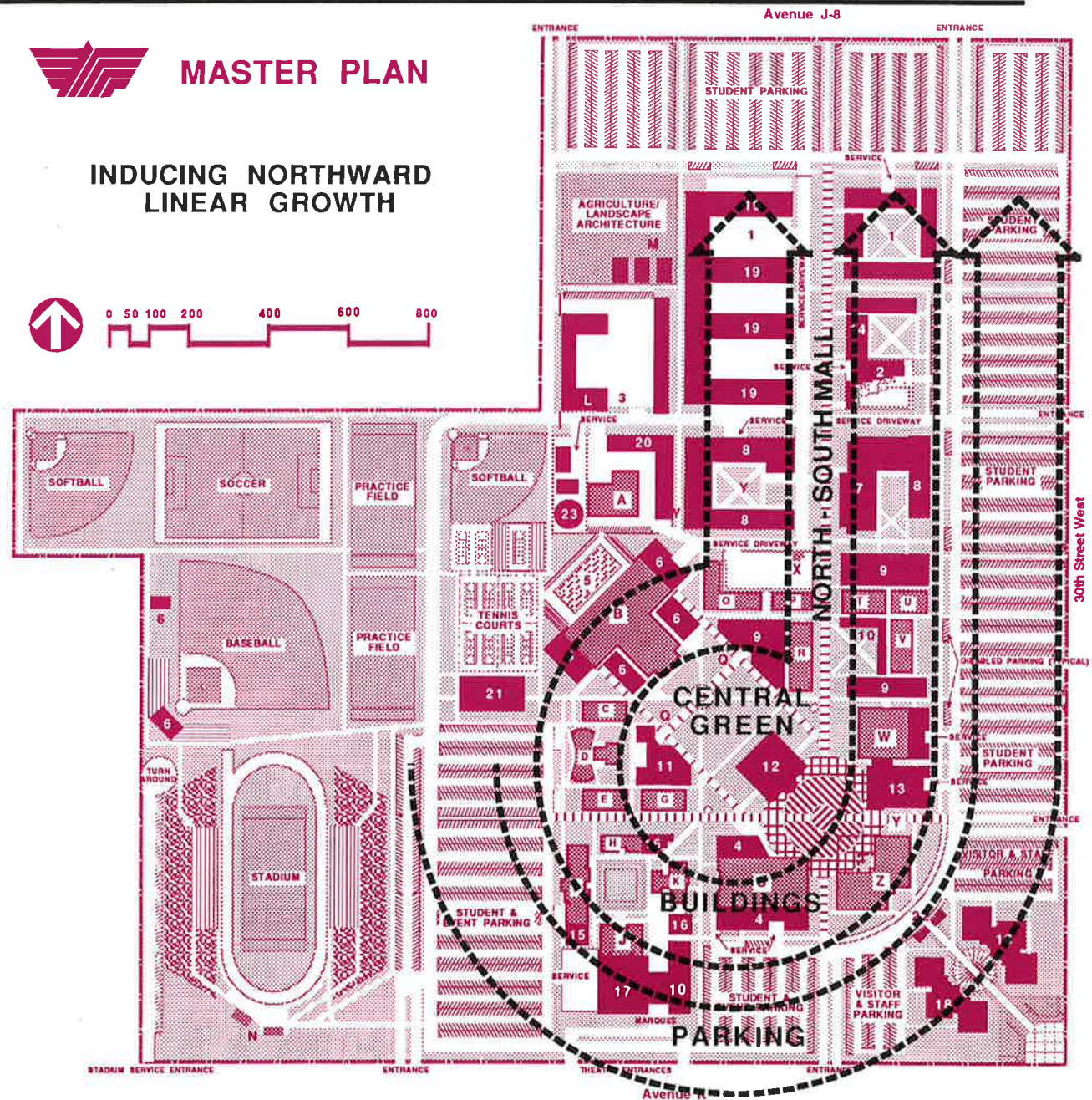
The following pages illustrate the overall goals and approaches followed in the design of the master plan.

1. Growth will proceed linearly toward the north, moving the epicenter of campus, from which walking times are computed.
2. In order to retain large green areas, overall building density will be increased by adding more multistory buildings (toward the center of campus) and by filling buildings into smaller spaces to create quads of academically related disciplines.
3. Specialized functions will be located toward the periphery while interdisciplinary functions will be located more centrally.
4. Outdoor areas will be more human scaled to encourage greater use.
5. The campus will have new focal points in the central plaza and quad created by the addition of the library, the central green in front of the gym, the new main campus entry, and the various quads throughout campus.
6. Orientation and design will minimize the harsher aspects of the climate and take greater advantage of the milder aspects. Energy efficiency will be increased.

Linear Growth Northward

The present concentric ring plan of the campus could be viewed as a "noose" choking out new development. In order to expand programs and physical plant, it will be necessary to break free of the rings and grow in a more linear mode.

As the drawing on the right shows, the rings of buildings and parking are opened up and extended toward the north. The north-south pedestrian mall breaks into the ring of buildings and draws growth along with it on both sides. Parking surrounds the central core of buildings so that it is always convenient to the ultimate destination of students.



Campus Epicenter Moves North

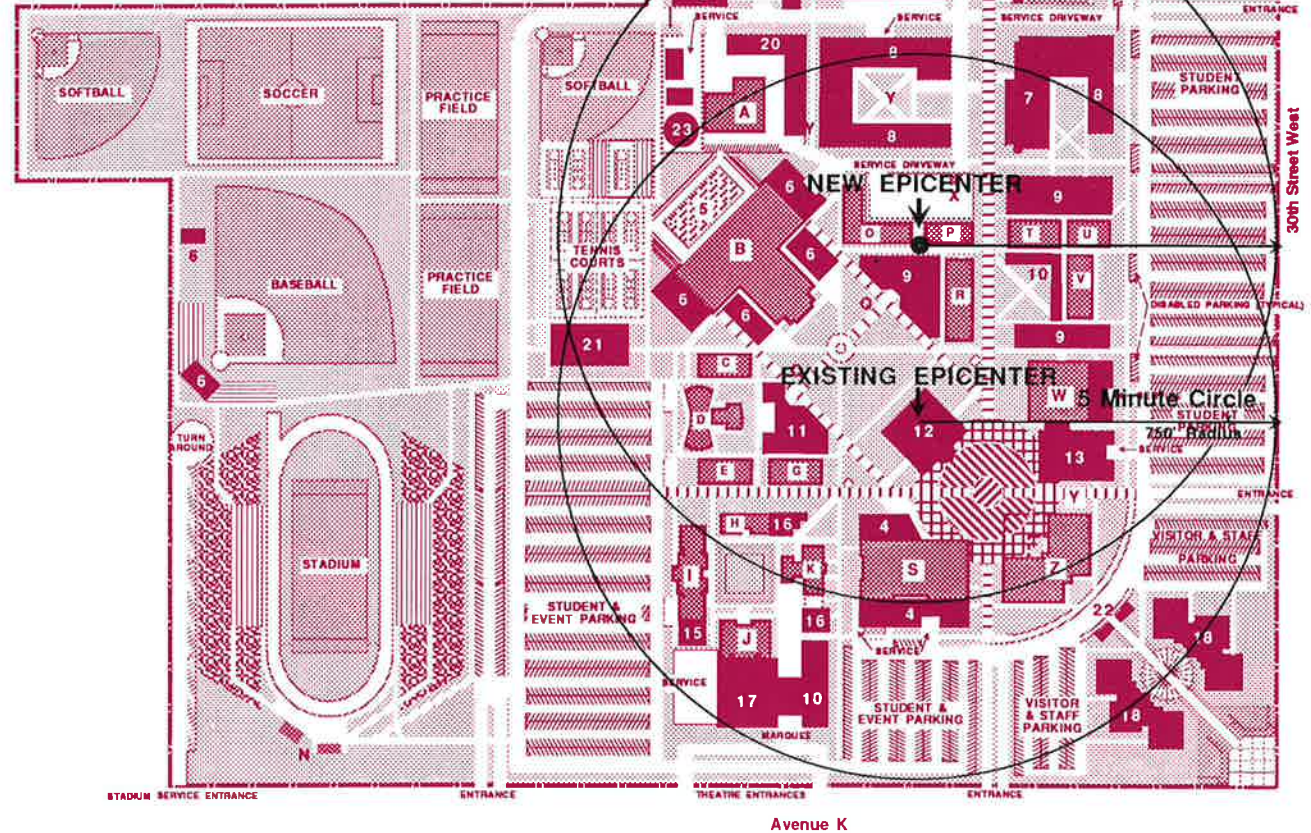
New development is planned to expand the campus primarily toward the north on the east side of campus. This will move the conceptual epicenter of the campus toward the north from its present location in the center of the open park to a point just west of the present math/engineering building. The most heavily-used area of campus, however, will remain in the south.

Walking distances on campus are measured from the epicenter. A maximum walking distance of 10 minutes (for an average, fit young person) is considered acceptable. With the northward expansion of the campus, the new theater and Administration Building would be outside the 10-minute walking distance from some of the technical shops, child development center, and the undeveloped area to the north. The P.E. fields are already more than 10 minutes away from the east side of campus. Of course these times would not apply for the disabled or mobility impaired.



MASTER PLAN

CAMPUS EPICENTER MOVES NORTH AS A RESULT OF PREDOMINANTLY NORTHWARD GROWTH



Avenue K

Higher Density

The campus has several unique features. It has a marvelously flat site which is potentially very efficient in land utilization. The buildings on the present campus are primarily one story; only the Administration Building has two stories. The campus is relatively spread out and has comparatively low density of development. Higher density will be accomplished by filling developed areas with buildings and by using multiple story buildings. This will enable the College to grow without substantially encroaching upon the cherished open spaces on campus.

Infilling between Buildings

Where possible and desirable, buildings will be planned to fill in open spaces which are underutilized or where the building would help complete a logical grouping. Fortunately for the plan, the existing construction style often allows for lateral and vertical additions which will make greater density possible. Most of this infilling is planned for the Fine Arts and Humanities quads. See the side-by-side plans of the existing and planned campuses on pages 56 and 57 to visualize the higher density development.

Multi-Story Near Center

It is important for the overall plan that multi-story buildings be concentrated as much as possible in the central part of the campus rather than on the periphery. The two-story buildings, in addition to the present Administration building, will be: the Applied Arts Center (7), new classroom buildings (9) west of the Math building and north of Language Arts, the science expansion (11), the new lab building designated for applied arts' westward expansion, the new library (12), and the Business and District Audio Visual Center (13). It is presumed that if a CSU outreach center is developed in the northern undeveloped section it, too, will be a multi-story building.



Specialized Functions on Periphery

Insofar as is feasible given existing uses, specialized functions such as labs are planned to be located toward the periphery. This would minimize the number of trips into the central part of campus and avoid some possible congestion of pedestrian walkways. Construction on the periphery is least disruptive of normal functioning of the more heavily used functions in the center of campus.

Functions used by the general public are also planned to be located on the periphery so that they are easily seen and accessed from the street and visitor parking.

Interdisciplinary Functions Central

The more heavily-used, interdisciplinary functions, such as general-use classrooms, the new library, computer centers, and the like, are planned to be concentrated in central locations to minimize distances students must walk to get to and from classes and other functions. The plan aims to place classrooms in locations which are most accessible, not just on the horizontal plane, but also on the vertical plane (i.e. in first-floor locations).

Clustered functions in quads

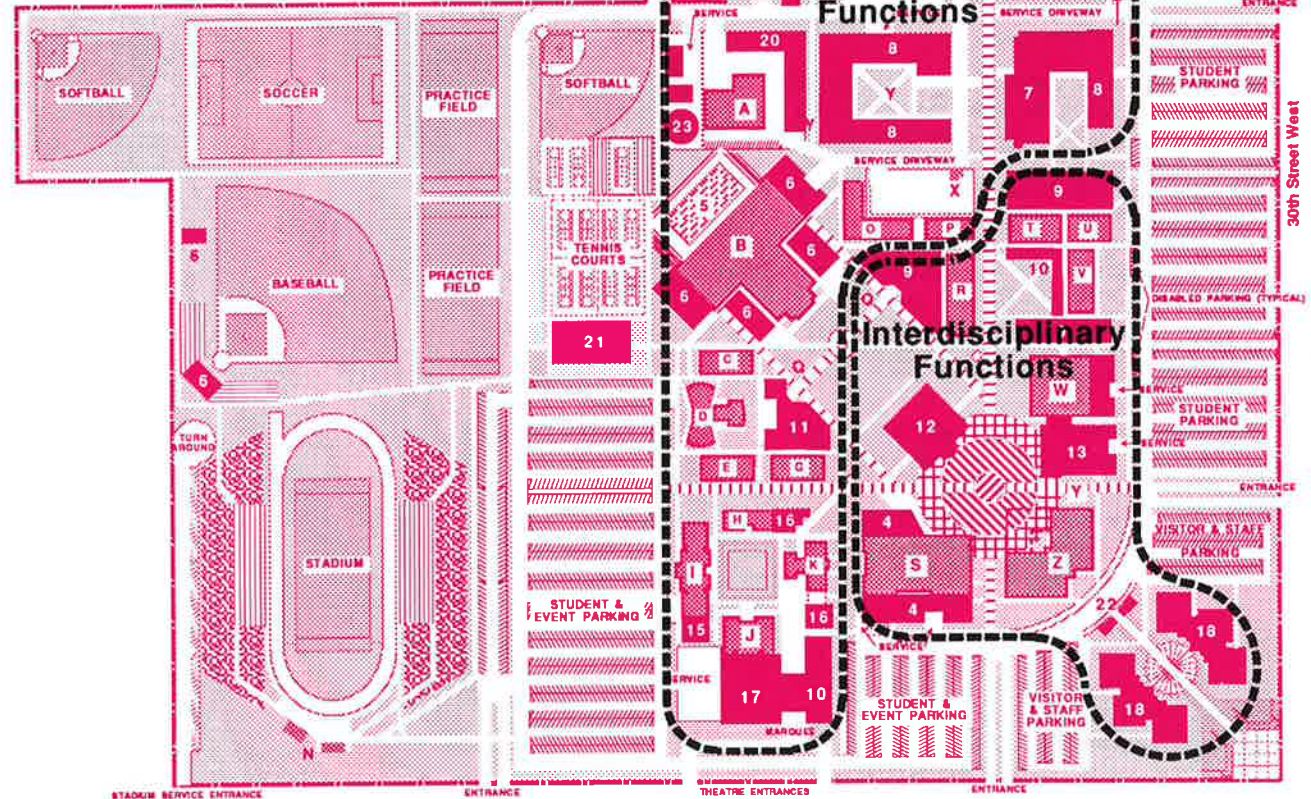
Offices, classrooms, labs and support functions are all clustered together in discipline-related quads. This keeps faculty offices close to labs and also allows instructors to convene classes in labs occasionally for demonstration purposes.

The number of offices included in each building is developed in accordance with State guidelines which are based on the number of full-time equivalent (FTE) staff. Shared work areas will be designed into buildings for part-time faculty.



MASTER PLAN

FUNCTIONAL RELATIONSHIPS



Avenue K

Classrooms

Classrooms need to be distributed in the most geographically central and accessible (i.e. ground floor) locations possible in order to minimize the passing time between classes.

The arts complex is in particular need of added classrooms. Classrooms for the arts are planned to be added to the present Family and Consumer Education building (H) when that function is moved to its new home (14) next to the Child Development Center.

Some functions such as the auto welding and electronics shops (buildings O & P) should logically be converted into classrooms because of their central location.

Highlighting the addition of classrooms to the AVC campus will be the new triangular-shaped building (9) tucked into the space between the math building (R) and the present auto-welding shop (O) which will be created by the removal of the Learning Assistance (Academic Advancement) offices (Q). Much to the delight of those who cherish the wide expanse of open green space on the campus, the shape of the building will actually open up the Central Green, allowing a diagonal path from the gym to the College Services quad to be developed.

Classroom buildings with faculty offices (9) will be added north of the Language Arts building (T) and south of Social Sciences (9). Classrooms are also planned to be included in the expansion of the Sciences quad (11) and in the new Applied Arts quad (7).



Buildings to be Removed or Relocated

In order to achieve the goal of higher density building and continued excellent pedestrian circulation, certain buildings are slated to be moved, demolished, or diminished in size.

The two diagonally-oriented buildings flanking the gym entrance, the Faculty Offices building (F) and the Academic Advancement (Learning Assistance) building (Q) take up an inordinate amount of space. They are relatively small buildings. One will be removed to make room for the eventual enlargement of the sciences area (#11 on the master plan) and they other to accommodate a classroom/faculty office building (#9 on the master plan).

The present audio-visual wing of the library (X) and the temporary computer center (Y) will be removed to make room for a new Business & Audiovisual center (#13 on the master plan).

Temporary buildings presently housing the maintenance shop (L), agriculture labs (M), lath house (N), and a storage container (north of P) can be moved to make room for the new vocational education center.

The present Language Arts building (T) is a major impediment to making the north-south pedestrian mall sufficiently wide to accommodate the greatly increased flow of students to the newly-developing north sections of campus. Approximately 30' are due to be removed from the west end of the building to make room for the pedestrian mall. Ample additional classroom and office space are being added to the social sciences quad to make up for the lost space (#8 & 10 on the master plan).



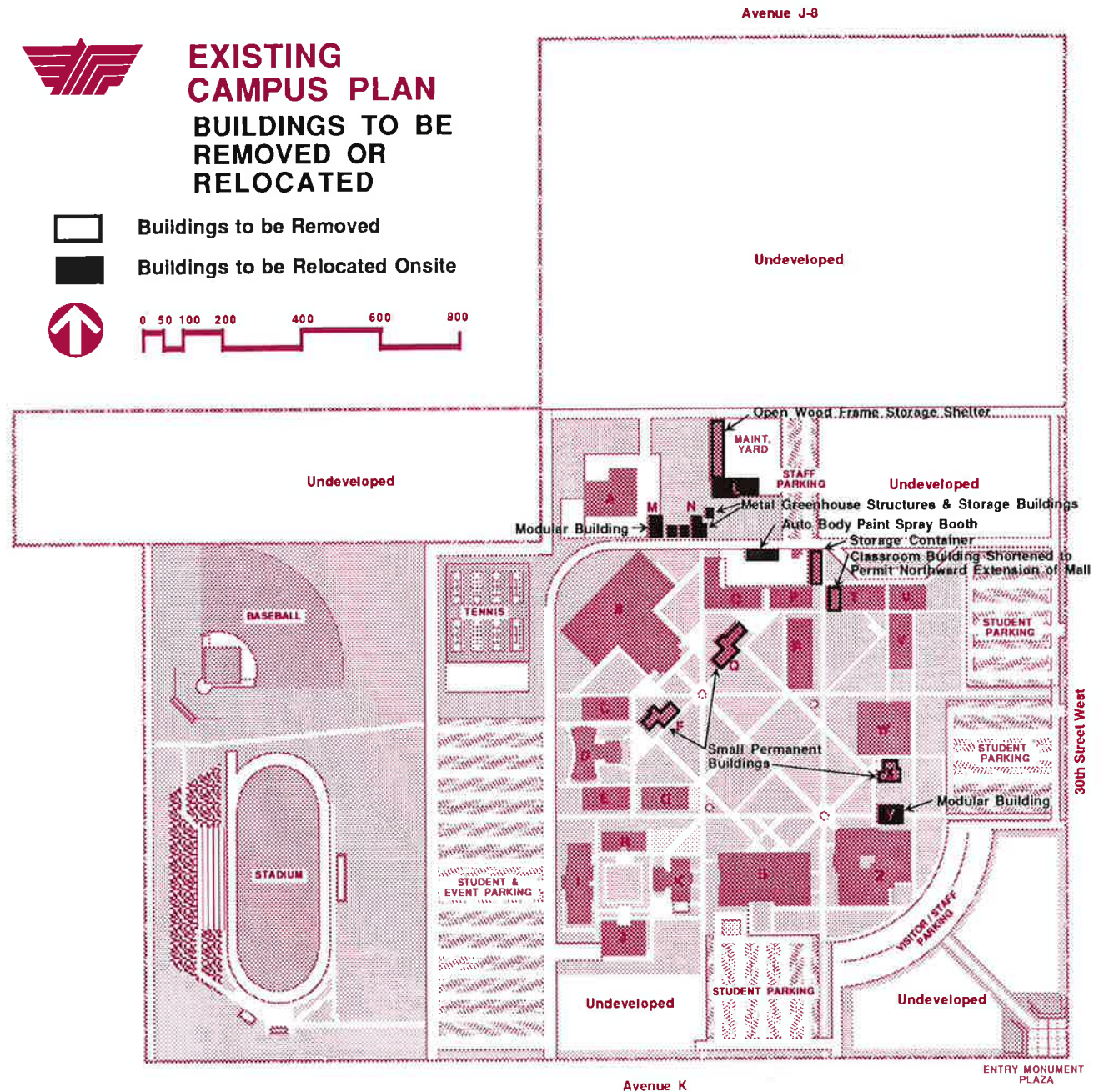
EXISTING CAMPUS PLAN BUILDINGS TO BE REMOVED OR RELOCATED



Buildings to be Removed



Buildings to be Relocated Onsite



Concepts for Circulation

The following pages illustrate how vehicular and pedestrian circulation as well as the outdoor spaces they create will serve to knit the campus together and define its structure:

Vehicular Access

The new entry monument plaza on the southeast corner of 30th and Avenue K will become the main formal entry point with driveways off 30th Street and Avenue K. From the plaza the plan calls for development of a sidewalk corridor leading to what will become student services and the business wing. Flanking the sidewalk will be the new administration building and a 'mirror image' addition as well as visitor parking.

The number of entrances will be limited in order to enhance campus security. Selected entrances will be widened to accommodate in and out traffic and allow for future addition of gates and/or guardhouses should the College's excellent security record change. Some existing entrances are slated to be eliminated. In designing the detail of new entrances, account should be taken of the volume of traffic likely to be coming in from each direction. For example, at present the greatest number of vehicles arrive from the east on Avenue K, having come from the freeway.

The plan calls for the campus to be served by six entrances: two from Avenue K (one at the west side of the stadium lot and one serving the new administration building), two from 30th Street (one to the northeast of the new administration building and one feeding the service road which leads to the maintenance and automotive shops) and two from Avenue J-8. The entrance by the stadium will be offset west of the present student & event parking lot and a small parking lot could be added north of the entrance. If needed, another entrance could be added west of the stadium with parking alongside and a turning loop at the north. These additions will make more efficient use of the land around of the stadium.

Students arriving from the west will be able to turn right into entrances off Avenue J-8 or turn left into the entrances off Avenue K. Students arriving from

the east can enter from Avenue K or turn right onto 30th Street and enter there. Students coming from the north and south are likely to enter from 30th Street.

The new theater (17) will have a loop driveway in front for passenger drop-off before parking. Of course, it will also serve as a service and delivery entrance. A service entrance with turnaround could also be added at the west side of the stadium.

Entrances slated for elimination include one on the east side of the stadium parking lot and two off 30th Street (one just north of the existing library and one which presently connects with the fire and service road by the language arts and gym buildings.

Vehicular Circulation

A complete loop road will connect all of the parking lots and service roads on campus. It will be relocated to the inner side of the parking lots from its present routing on the outer perimeter.


The road will run north from the main entrance on the campus side of the parking areas paralleling 30th Street. It will turn west between the undeveloped area and the planned parking area serving Avenue J-8, turn south past the maintenance yard, jog west at the north end of the outdoor hardcourts, heading south again between the P.E. fields and the parking lot which serves the stadium. It will then loop back around the planned theater toward the Student Center. The east-west service road north of the present automotive and maintenance shops can be eliminated, allowing for future expansion of buildings as needed.

Ample access for service and emergency vehicles will be provided. Shown on the right by dashed lines, there will be a service road just west of the pedestrian quad serving the applied technology quads. This will feed into driveways which serve the applied arts quad, the north end of the humanities quad, the vocational education and electronics buildings (O & P) and the southeast corner of the automotive technology quad. The east-west pedestrian mall will double as a service road connecting the Fine Arts, Sciences, and College Services quads.



New Main Entry Monument Plaza---Gives the College a much-needed identity and creates a forecourt to the future Administration building.

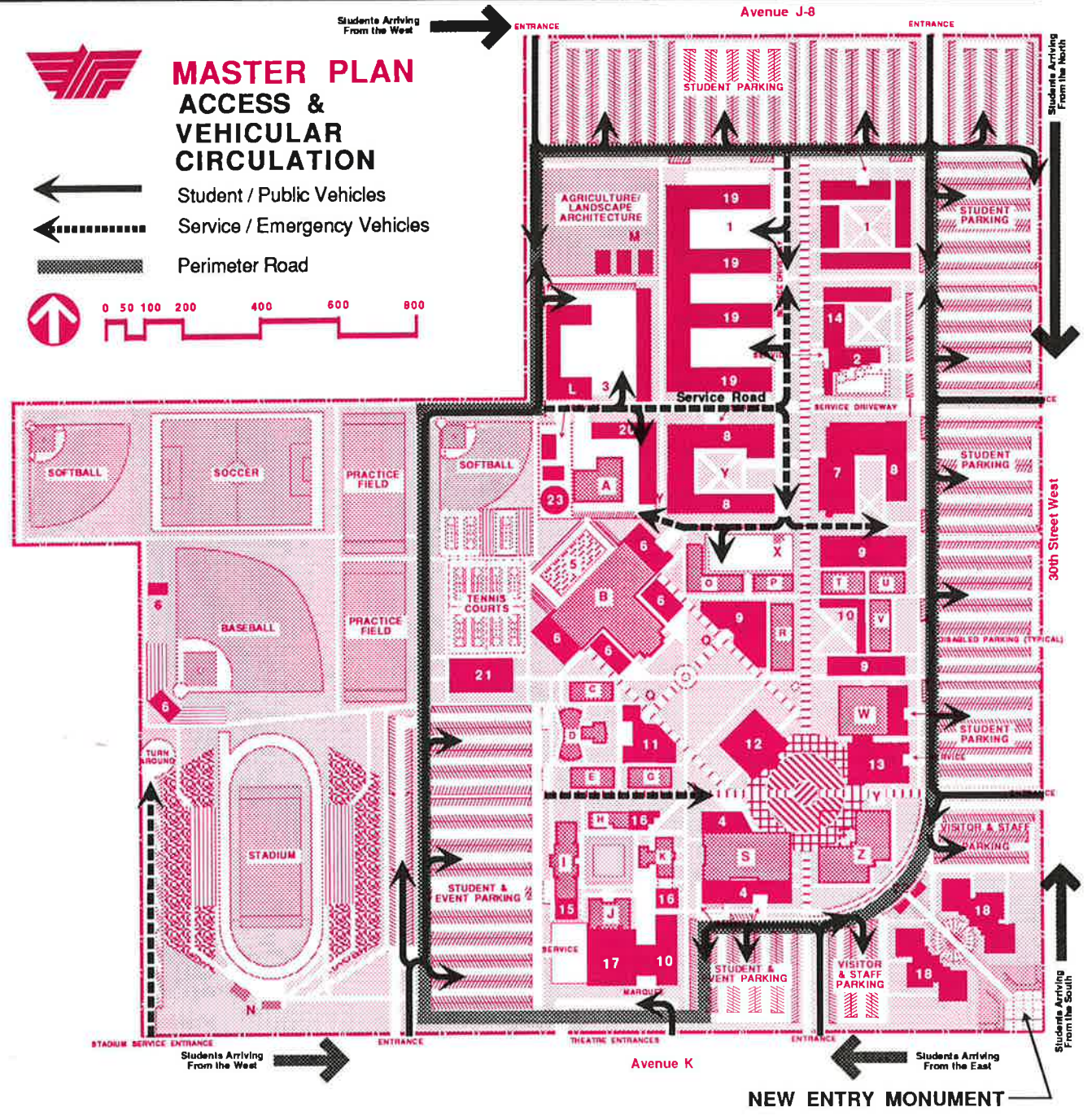
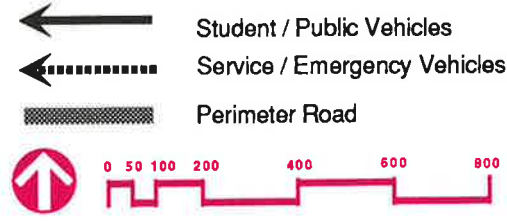
LEGEND

- EXISTING BUILDINGS** 
- A AUTOMOTIVE
 - B GYMNASIUM
 - C CHEMISTRY
 - D LECTURE HALLS
 - E PHYSICS
 - F FACULTY OFFICES REMOVED
 - G BIOLOGY
 - H REMODEL ART LABS
 - I MUSIC
 - J EXPERIMENTAL THEATER
 - K ART
 - L RELOCATED DISTRICT MAINTENANCE SHOP
 - M RELOCATED AGRICULTURE GREEN HOUSES
 - N P.E. STADIUM SUPPORT BUILDINGS
 - O REMODEL APPLIED TECHNOLOGY
 - P REMODEL ELECTRONICS
 - Q SMALL BUILDING REMOVED
 - R MATH
 - S STUDENT CENTER
 - T LANGUAGE ARTS
 - U FACULTY OFFICES
 - V SOCIAL SCIENCES
 - W REMODEL LEARNING SKILLS & COMPUTER CENTER
 - X MAIN ELECTRICAL TRANSFORMER
 - Y TEMPORARY BUILDING REMOVED
 - Z REMODEL STUDENT SERVICES

- FUTURE BUILDINGS** 
- 1 C.S.U. OUTREACH SITE OR UNPLANNED EXPANSION
 - 2 CHILD DEVELOPMENT CENTER
 - 3 DISTRICT MAINTENANCE YARD/WAREHOUSE
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**MASTER PLAN
ACCESS &
VEHICULAR
CIRCULATION**



Parking

Referring to the drawing at the right, the plan calls for more stacking space at major entrances in order to avoid logjams as cars queue up waiting for spaces. This would be accomplished by guiding cars to the campus side (rather than the street side) of entrances and then into the parking lots. At present, cars come directly into the parking lots from the street. The lots would no longer be continuous and one would have to exit the lot and use the loop road to move to another lot.

Parking lots will be oriented and striped so that driveways lead in the direction pedestrians walk onto the campus, perpendicular to the roads. This is done for the safety of students, staff and visitors so that they do not need to weave in and out between cars.

In theory, the location of the campus loop road between the parking lots and the main section of campus could be seen as unorthodox. However, the reality of circulation on college campuses is such that cars are usually going slowly up and down parking lanes looking for spaces, rather than driving through and around campus. Traffic on the loop road will be slowed by frequent stop signs to increase safety of pedestrians moving from lots onto campus.

Parking for the disabled will be placed in strategically located groups on the campus side of the loop road so that their safety is maximized.

It is estimated that the 9,100 students enrolled in the fall of 1989 were using 1,600 stalls, or 5.7 students per stall. At the planned maximum capacity of 20,000 students, a total of 3,500 stalls will be needed. There are presently 1,433 permanently paved stalls, so up to 2,133 may have to be added.

According to the plan, 40 stalls of parking will be added adjacent to the new theater. 100 stalls of visitor and staff parking will be added on each side of the new administration building. 20 stalls of parking can be added to serve the District maintenance yard and warehouse

As growth proceeds toward the north, student parking is envisioned to be added along 30th Street to accommodate new students and prevent congestion of existing parking lots and access routes. This east lot will eventually total 1,150 stalls. The most remote planned lots, in the presently undeveloped northern extreme off avenue J-8, will be developed only when congestion elsewhere on campus necessitates further expansion of parking. They will accommodate an additional 950 stalls.

In the P.E. area 60 slots can be added west of the football stadium. Student and event parking between the Fine Arts quad and the stadium will total 750 with the addition of a small lot just behind the new earth berm bleachers east of the stadium. The 180 slots of student and event parking south of the Student Center will remain essentially as they are now.

Pedestrian Access into Campus

On the drawing at the right, the main routes of pedestrian access into campus are indicated by arrows on dashed stems. Parking for disabled students will be located near these major entries, inside the loop road so they need not cross a street to get from their cars to their classes. Students will, of course, enter by the sidewalk nearest to their car or destination.

Space has been reserved for bus stop shelters (22) to be built on the loop road between the new Administration building (18) and Student Services (Z).



Main Entrance Driveway---Much too narrow. Recommended to be widened by creating a second driveway and a planted median for a future guard 'shack' or gate, if needed

LEGEND

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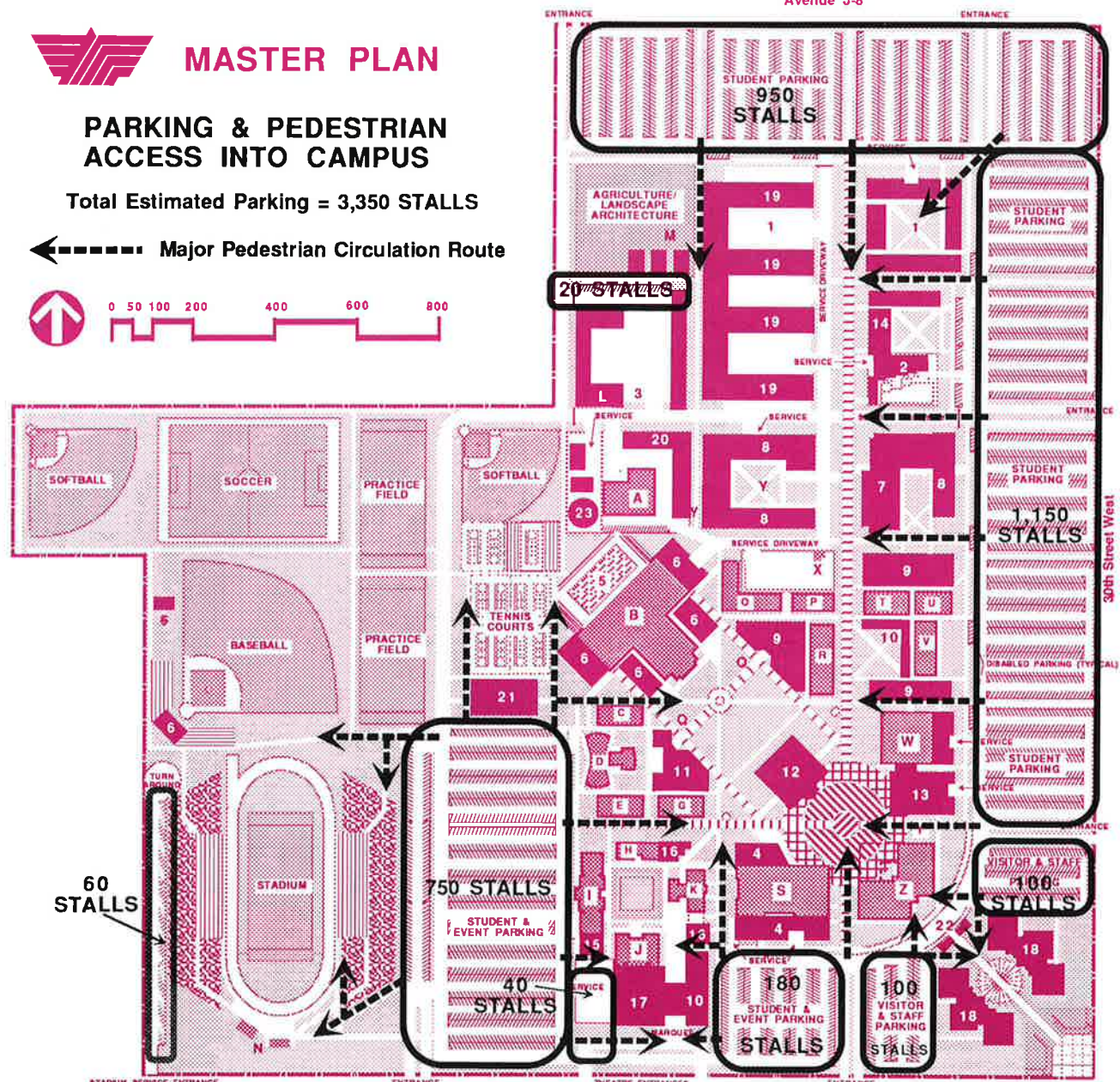


MASTER PLAN

PARKING & PEDESTRIAN ACCESS INTO CAMPUS

Total Estimated Parking = 3,350 STALLS

← Major Pedestrian Circulation Route



Avenue K

Pedestrian Circulation

Illustrated at right are the pedestrian walkways throughout campus. Major circulation axes (thickest dashed lines) are those expected to carry the greatest volume of traffic because they connect the most frequently-used functions. The north-south and east-west malls are the two major circulation axes on campus. They intersect at the main campus focal point - the College Services quad which contains most of the interdisciplinary functions on the AVC campus.

The north-south pedestrian mall will lead from the existing student parking and Student Center all the way north to the new human development center (2, 14). The center of campus activity will be drawn north as development proceeds. The new (conceptual) epicenter of campus will move from the point in the middle of the four "fountains" to a point between the Vocational Education and Electronics buildings. The pedestrian mall will be an important link between the classrooms, labs, and services on the north end and the centralized service functions (Student Center, student services, new library and new computer and learning center) which will remain clustered around the southeast fountain. In order to create this pedestrian mall it will be necessary to eliminate at least some part of the language arts building.

Secondary circulation axes (denoted by thinner dashed lines) connect specialized functions such as academic groupings. One of these runs north and south connecting the Arts quad, Sciences quad and the gym. The others follow the diagonals defined by the P.E. building. One set leads from the gym to the College Services quad. A perpendicular set traverses the central green to connect the Sciences quad with the the math building (R) and its next-door neighbor the new classroom building (9). These secondary axes can be expected to carry a significant amount of traffic because of their diagonal orientation.

Local circulation routes, denoted by thin dashed lines, connect individual buildings and quads with the major and secondary circulation axes.

This plan strives to maintain the good visual orientation of the existing plan as changes are made on campus. At present, the openness of the campus and sparsity of buildings allows one to see the whole campus from the open central park area. With the addition of the new library and the linear development to the north, this will no longer be possible. It will, however, be possible to aid orientation through use of visual landmarks such as trees, flagpoles, fountains, and the like. The new library will itself be a visual landmark. The pedestrian malls discussed below will also aid visual orientation.

As can be seen from the ten-minute walking circle superimposed on the campus plan, functions placed at the extreme north will be more than a ten-minute walk from functions at the extreme south. It is important that buildings located on the north end of campus house functions which are specialized and tend to attract students who are not pursuing general academic studies. This will minimize the number of people who are inconvenienced by being so far from the southern campus activities.

Passing times between classes on opposite ends of the campus could increase somewhat because there will be fewer diagonal routes through the campus.



Existing Main Pedestrian Entrance at Administration Building---Will be preserved and also become an on-campus public bus drop-off point

LEGEND

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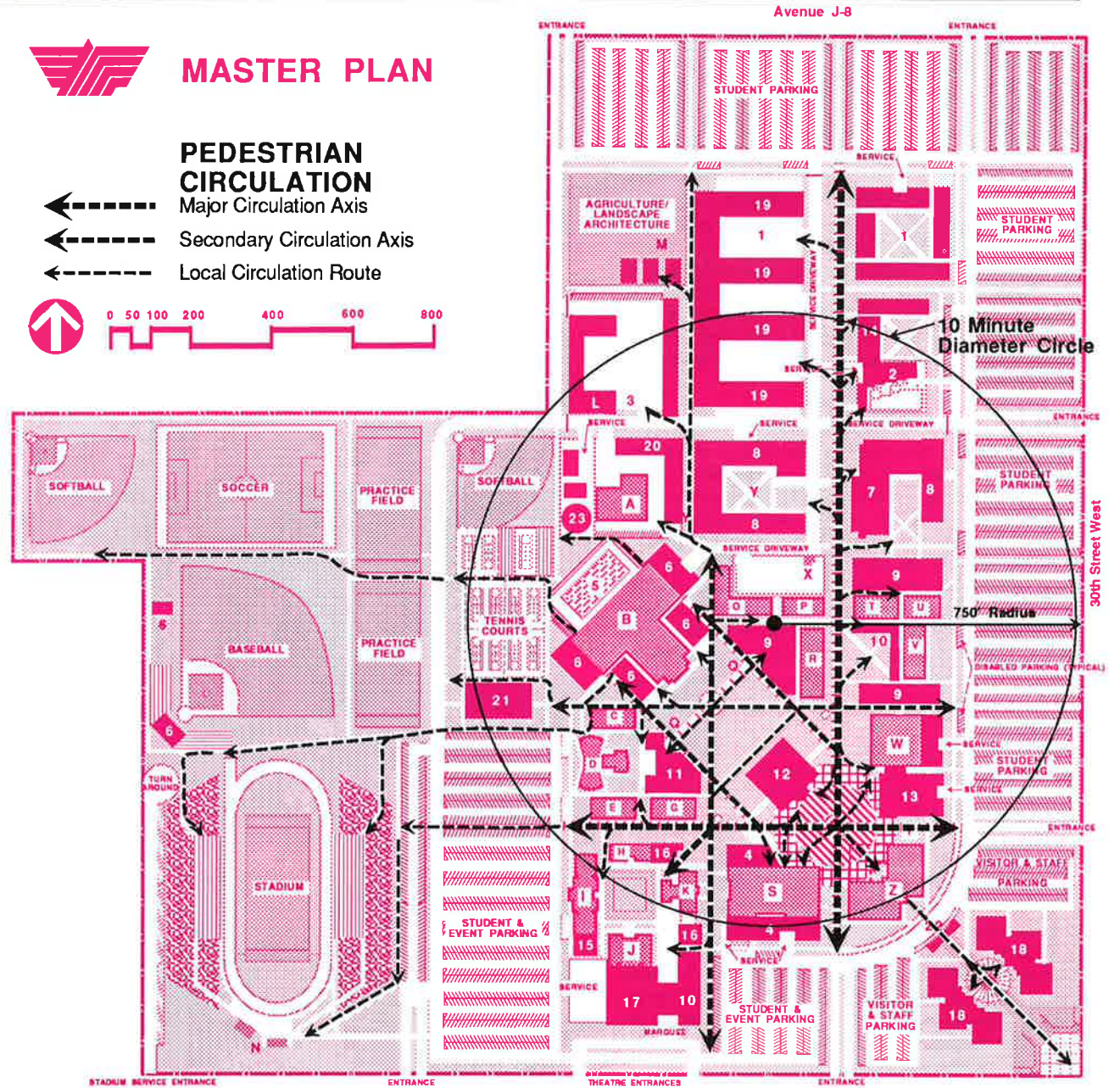
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MASTER PLAN

PEDESTRIAN CIRCULATION

-  Major Circulation Axis
-  Secondary Circulation Axis
-  Local Circulation Route



Avenue K

Outdoor Spaces

Illustrated on the right are the two major types of outdoor areas - those which draw or attract people (framed by solid lines) and those which bring people to their destinations (shown as elongated boxes in dashed lines). It is a healthy goal to create outdoor spaces which attract activity. It creates a sense of vibrant dynamism on a campus. There are three ways in which this master plan intends to draw activity outdoors: (1) by bringing outdoor spaces down to a scale which does not dwarf human activity, (2) by creating centers of activity to focus student and faculty interaction outdoors, and (3) by linking outdoor spaces to groupings of buildings housing related academic fields.

Human-scale Outdoor Areas

The huge central open park will be used to create two new human-scaled, park-like courtyards which will be warm and inviting. These areas will become the new focal points of campus -- the Central Plaza/College Services Quad because of its link to such universally used functions as the library and Student Center and the Central Green because of its natural beauty and its location at the new geographic epicenter of campus. The present open park is too expansive to create the proper human proportions which lead to use. Though many people treasure it in concept, the green area is, unfortunately, actually an underutilized resource. Adding the new library inside this green area, far from diminishing the sense of natural beauty, will enhance the beauty of the campus by creating courtyards which have a more appropriate scale for attracting activity and use.

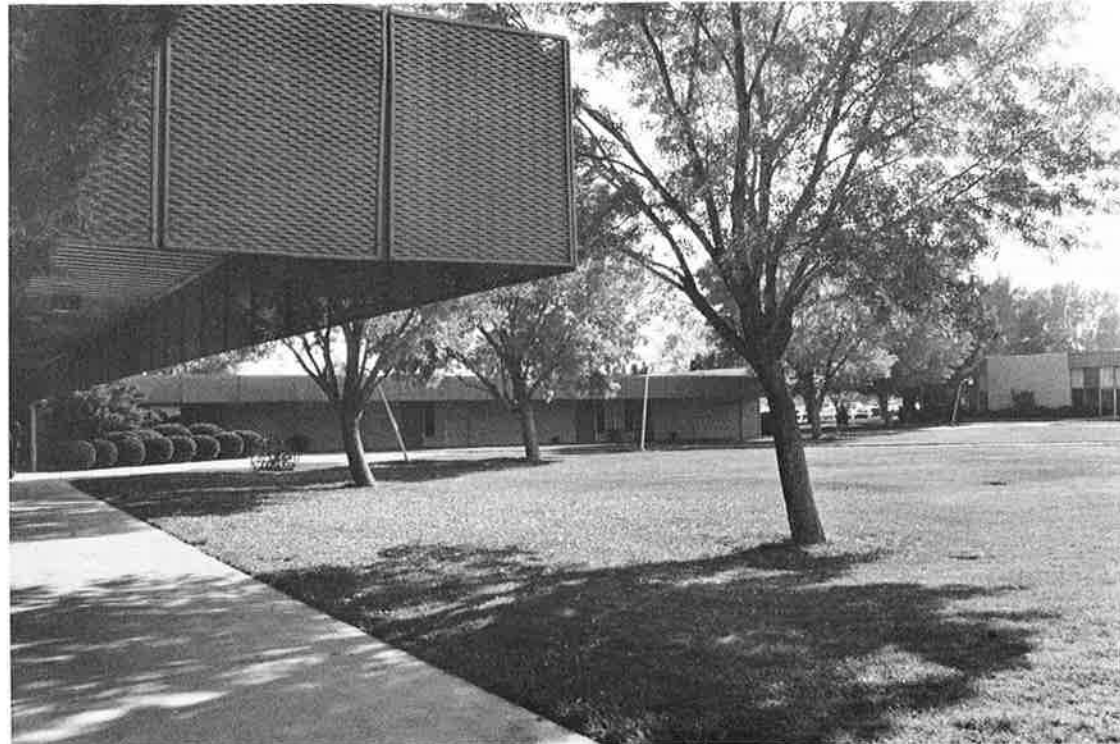
The existing Central Green in front of the gym will be enhanced by the removal of the faculty office building (F) and the Learning Assistance (Academic Advancement) offices (Q). This will open up the area and provide diagonal pathways connecting the College Services quad, Science quad, and the gym. There will still be significant open, park-like space connecting the existing west and north fountain areas. This area should become a greater attraction because of its new, friendlier dimensions.

New Campus Focal Points

The addition of the new library at the center of the campus will create an active new campus focal point, called the Central Plaza, properly scaled for human activities. It will create, in effect, a "college services" quad which will include the Student Center, student services, learning assistance, library, and computer centers. Extending from the hub of this quad is planned to be the new north/south pedestrian mall and a secondary, east/west pedestrian mall connecting the parking lot east of the stadium with the lot east of the present library, running past the science quad and the Fine Arts quad.


Another focal point - for the public - will be the entry plaza and the administration quad. This will draw the attention of passersby and increase the overall visibility of the college.


The theme of human-scaled groups of functions or buildings built around outdoor focal points will be developed throughout the campus. This will create, in effect, a series of wind-protected quads or clusters which will encourage more outdoor activity. The present Fine Arts quad is a good example of the general idea, although without protection from the wind it has been underutilized.



Humanities Quad---*Courtyard-like space better scaled for outdoor use than the central green. Offices are presently under construction on the far side which will enclose the outdoor corridor.*

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MASTER PLAN

OUTDOOR SPACES



Major Positive or Destination Spaces



Major Linear or Circulation Spaces



Avenue K

Response to Local Climate and Energy Use

It is important to make the most of the unique climatic features of Lancaster. The area has the potential for being a near year-round outdoor center. The major impediments to the ability to use outdoor spaces are the intense summer sun and the strong prevailing winds illustrated on the right which become quite chilling in winter. The plan creates wind-protected outdoor spaces which face the winter sun, but are shaded from the hot west sun and shielded from prevailing winds.

Planned additions and new buildings would also create protected entrances which, wherever possible, face away from the west winds. They will have indoor corridors and larger building masses which will minimize the surface to volume ratio and make for more efficient climate control. To minimize heat gain during summer and optimize it in winter, new buildings will, wherever possible, be oriented with their broad exposure facing south and avoid unshaded windows on their east and west facades.

The plan would create faculty offices at existing outdoor classrooms and labs, enclosing them and connecting them with an indoor, rather than outdoor, corridor. The existing outdoor covered corridors should be enclosed, or vestibules constructed, at locations where individual classroom entrances face the wind or where there are sensitive functions housed such as in the science labs.

Architectural Features & Design

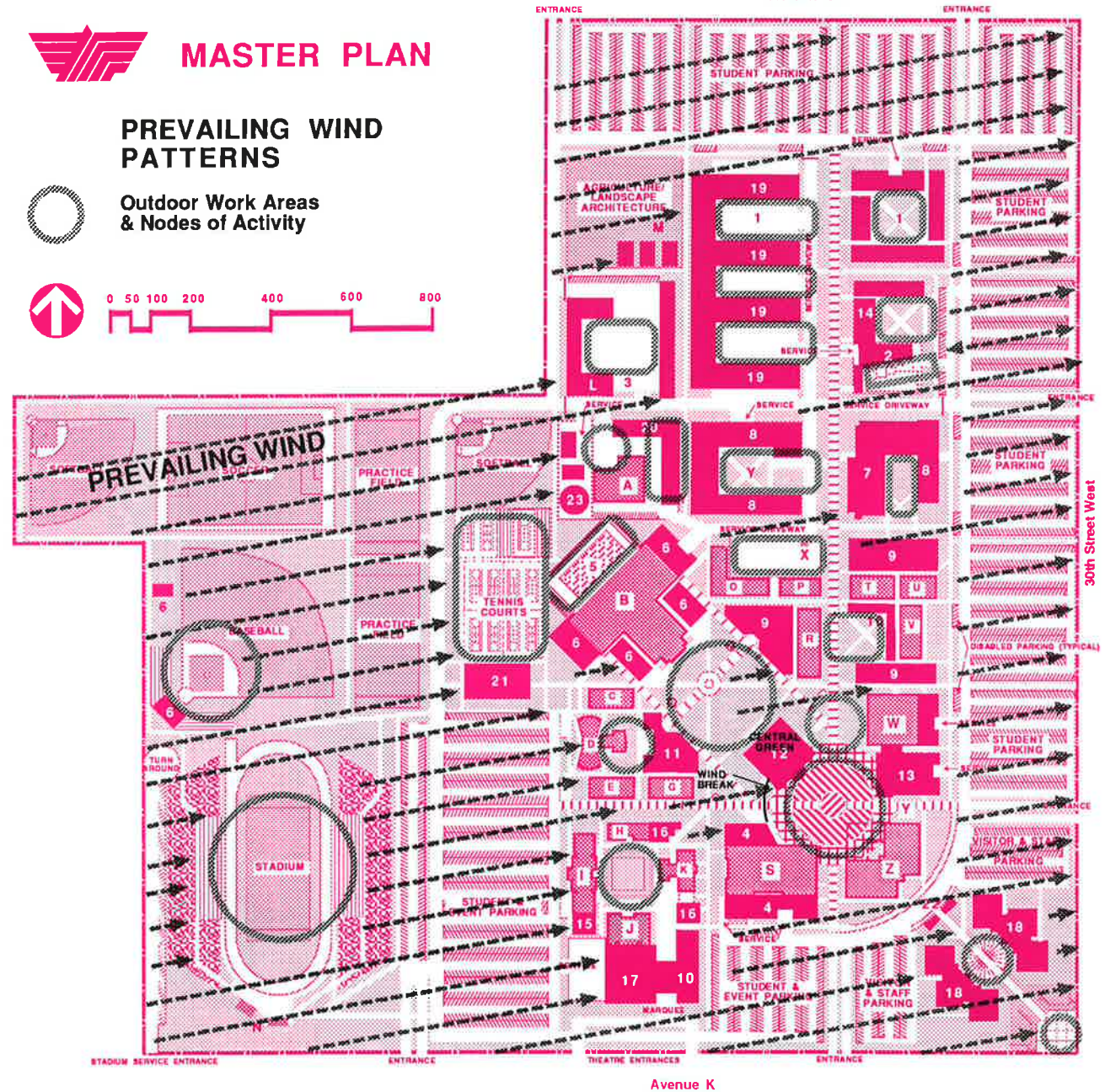
New buildings should avoid current fashion and be made as compatible in appearance as possible with existing ones. One the other hand, incorporating a softer, more human scale as well as more clearly defining the entrances and adding other visual orientation clues will improve on the original design concept. New buildings should incorporate more windows, especially for offices and natural lighting.

MASTER PLAN

PREVAILING WIND PATTERNS



Outdoor Work Areas & Nodes of Activity



Future Land Use

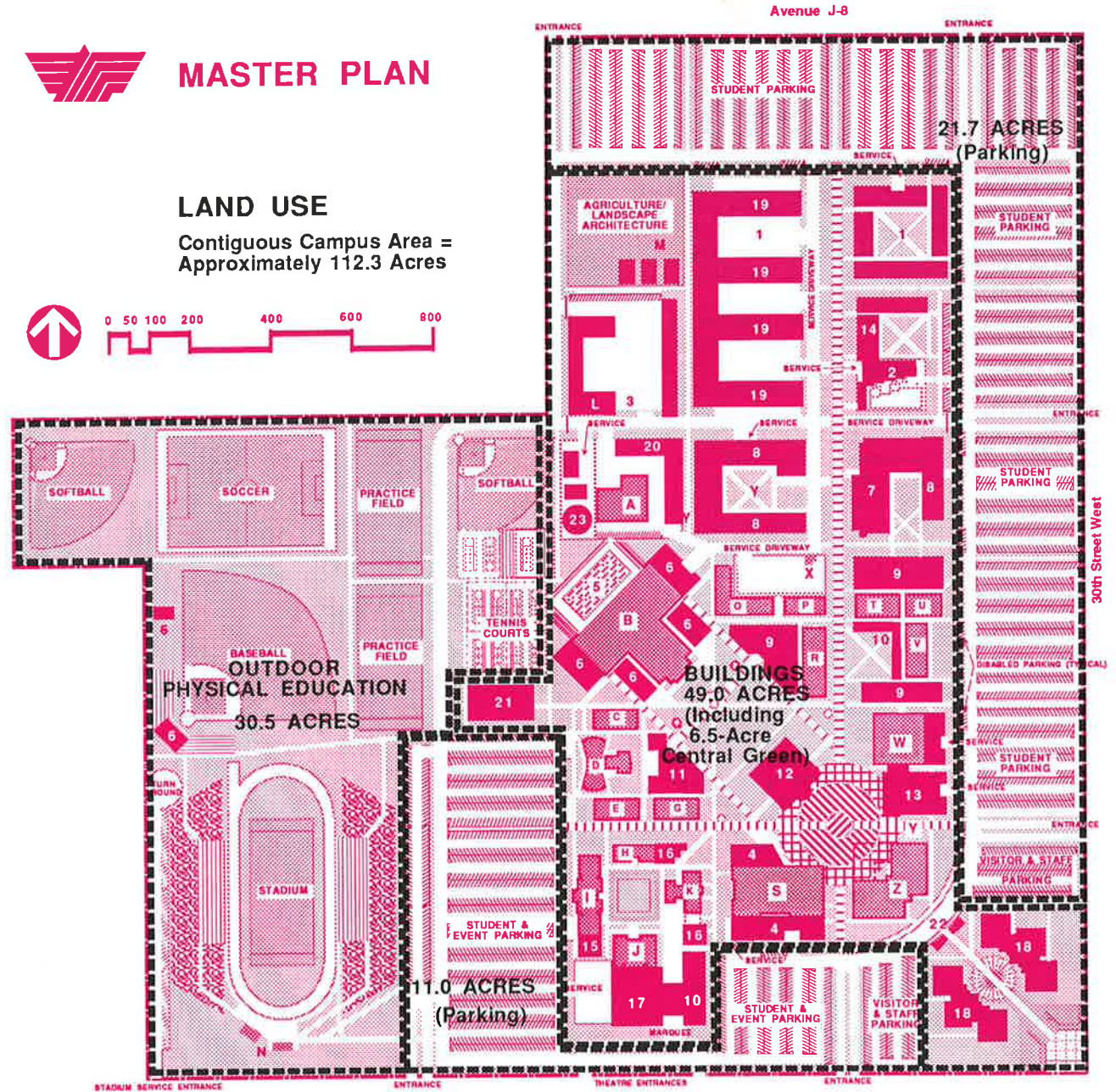
The future contiguous campus, amounting to a total usable area of 112.3 acres, is now fully utilized. Buildings, including the 6.5 acre central green, occupy 49 acres. Outdoor physical education areas take up 30.5 acres and parking uses a total combined area of 32.7 acres.



MASTER PLAN

LAND USE

Contiguous Campus Area =
Approximately 112.3 Acres



New Buildings

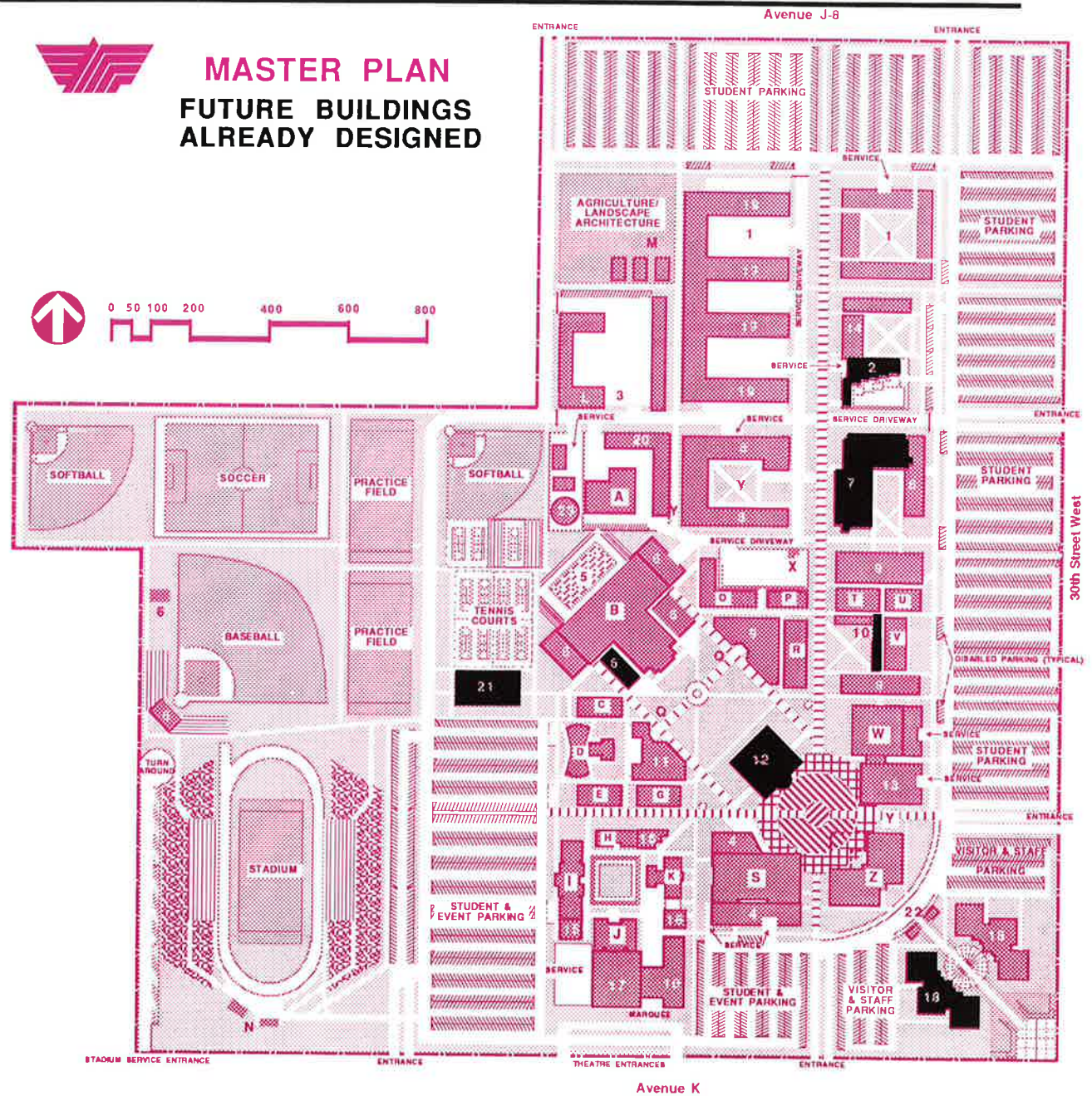
The pages following illustrate the various building projects planned in order for the College reach 20,000 students. Many are simply footprints of an approximate size and location to house the functions indicated. Others have been designed in a great deal of detail. With some, the functions are speculative in nature and will refine or even change as a result of the upcoming Educational Master Plan. Others may change due to changing needs over time.

The locations have however been selected to provide sufficient space and most importantly, the proper relationship with other functions planned or already in place. Should a function change, it is possible its location might need to change in order to maintain its proper relationship within the context of the whole campus. It is important however that the 'structure' of the campus, its circulation and outdoor spaces as well as more mundane items such as utility systems be maintained in spite of changes in individual buildings.

Future Buildings Already Designed

Illustrated on the right are a number of buildings which have already been designed and are in various stages of progress. All have been submitted to the Chancellor's Office in the form of PPG's¹. Some are already in Working Drawings and are funded for construction while others currently await release of funding. *These projects are considered defined in concept and program. Because most of them are already in various stages of approval, there is comparatively little room for changes without jeopardizing their priority order and funding.*

¹ Project Planning Guide, a schematic design submittal to the Chancellor's Office with estimates, room capacities, and other requirements amounting to a funding application.



Quads

Collegiate spirit will be enhanced by developing the concept of quads around the campus. Each cluster or quad is planned to have a focal point which will encourage gathering for study, socializing and exchange of ideas. They group similar disciplines, but are not so departmentalized that they should become insular. The focal points, in fact, should encourage communication which could bring cross-pollination" of points of view and broader vision among students and faculty.

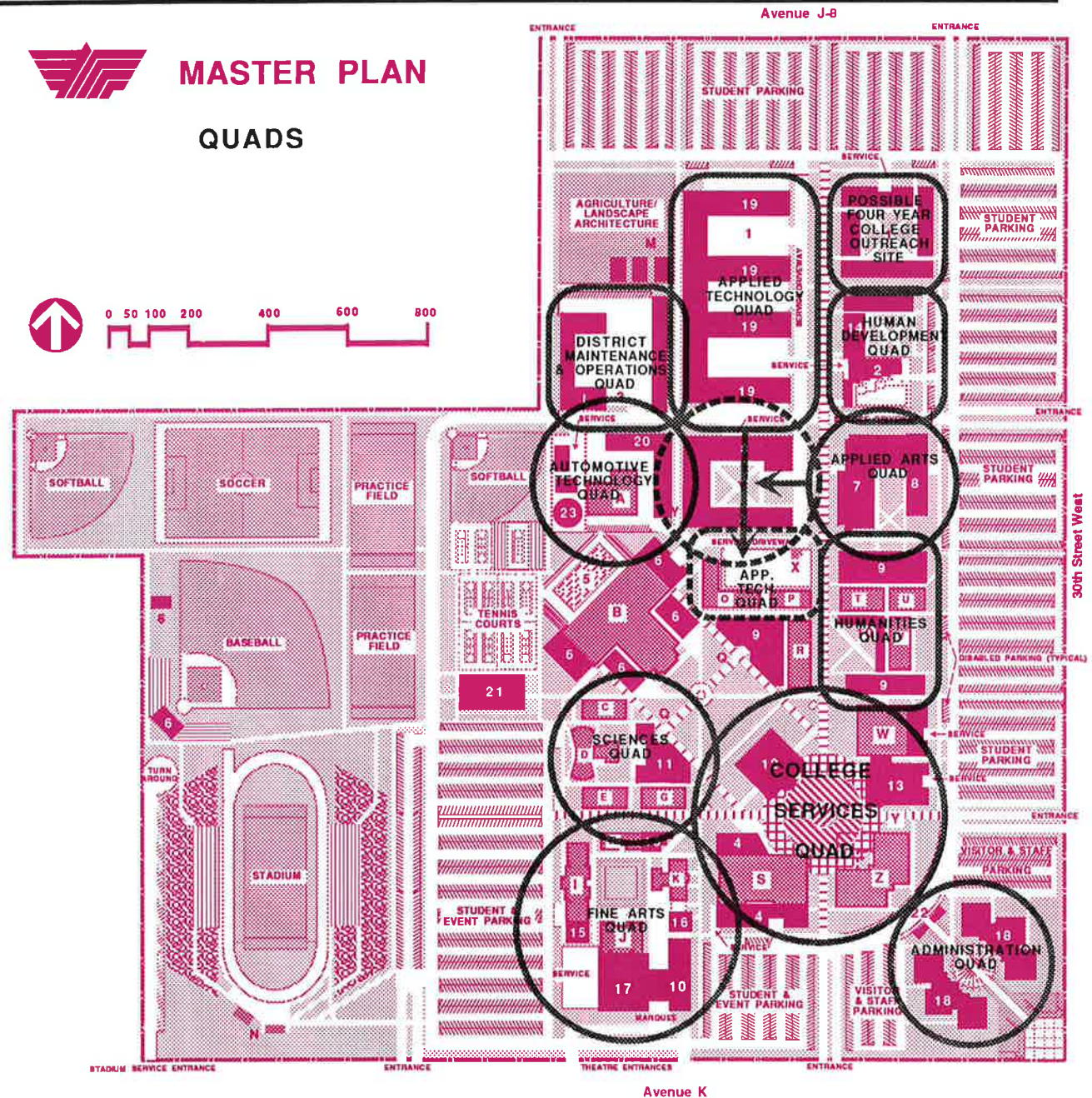
Within each quad, offices, labs, classrooms and support areas are clustered together. This allows instructors to have offices near labs. It also makes it easier for instructors to occasionally hold classes in labs for demonstration purposes. Part-time staff will share open work spaces since funding guidelines will not permit private offices for part-timers.

The updated Fine Arts Quad will include the existing Music and Drama buildings, the new theater, and expansions of the Art and Family & Consumer Education buildings, the latter of which is slated to be converted into art labs. The Science Quad will consist of the existing Physics, Chemistry, Biology, and lecture buildings, plus a new building intended to house expanded science programs and faculty offices. The College Services quad will encompass the Student Center, Student Services, library, and Computer & Learning Assistance Center. Other quads will form around the Social Sciences/Humanities area, Applied Arts Center, Administration, District Maintenance and Operations, Automotive Technology, Applied Technology, and the Human Development Center.



MASTER PLAN

QUADS



College Services Quad

The design principle of centrally locating interdisciplinary or nonspecialized functions will be well satisfied by the creation of the College Services quad, highlighted by the circle in the drawing. The most universally-used resources -- the Student Center, Student Services, Business Center, Learning Skills (Learning Assistance) & Computer Center and Library will all be located together, close to parking, administration, and the main formal entry to campus. Surrounding the College Services quad will be quads for most of the other academic disciplines including Fine Arts, Sciences, Humanities and Social Sciences.

After the completion of the new Administration Building close to the main formal entry, the existing Administration Building (Z) will be converted to Student Services, with business classrooms remaining upstairs. Longer range, the plan might be to expand Student Services upstairs and displace business into its own building. Given the propensity of the State to require new programs which relate to student services (such as the Matriculation Act) this scenario is not far fetched.

In order to facilitate flow of pedestrian traffic onto campus and to create a more appealing visual landmark for the public and for students, it is recommended that the original open courtyard be recreated at the northwest corner of the existing Administration Building. This feature was obliterated by the allied health addition which is aesthetically incompatible and obstructs easy pedestrian flow.

The new Library (12), through its positioning and design, will create and define a new, wind-protected, central plaza and gathering place which will reach out to incorporate the Student Center (S) court, Student Services (Z) (old Administration Building), the Learning Assistance & Computer Center (W), and the Business Center (13). The effect will be particularly enhanced if the old Administration Building courtyard is restored.

The fountain might be resurrected and redesigned with a downward water flow to eliminate the wind problem. In order to fully achieve the effect desired, it may be preferable to eliminate the glass wall from the north side of the Student Center courtyard. This will more effectively integrate the Student Center into the central plaza.

The addition to the north side of the Student Center will serve as a windbreak for the central plaza. The Student Center will also be expanded toward the south to enlarge the bookstore, loading dock, and other facilities. The distance between the Student Center and the extreme northern end of campus may make it desirable to develop a snack bar near the Human Development Quad (14). This should be a minimal facility to counter the isolation of functions on the north.

Within any campus, the location of the library is of critical importance. It should be located as centrally as possible. The planned location of the new AVC Library is quite central given the present configuration of the campus. As development progresses to the north, the new buildings will be farther away. The potentially isolating effects of this distance should, however, be mediated by the library's location close to other campus attractions, particularly the Student Center where the food service and bookstore are located.

Of similar, and growing importance is the location of the Business Center (13) and the Learning Skills and Computer Center (W). These functions can be expected to increase their attraction as more disciplines incorporate computers and audiovisual



College Services Quad---Looking north along the main north-south axis. New Library will be at the left edge and Language Arts Building which must be shortened for pedestrian mall is at right rear.

methods into their curricula and as students from an ever broader spectrum of society come to the area and the College, possibly needing to develop basic study skills. The Business Center will incorporate greatly expanded audiovisual services, duplicating services, and data processing. Building 13 will take the place of the existing freestanding audio visual and computer centers (existing plan X & Y). In order to facilitate integration of all business-oriented academic functions, a bridge will connect the business labs and classroom on the second floor of the existing Administration building (to become Student Services) with the Business Center.

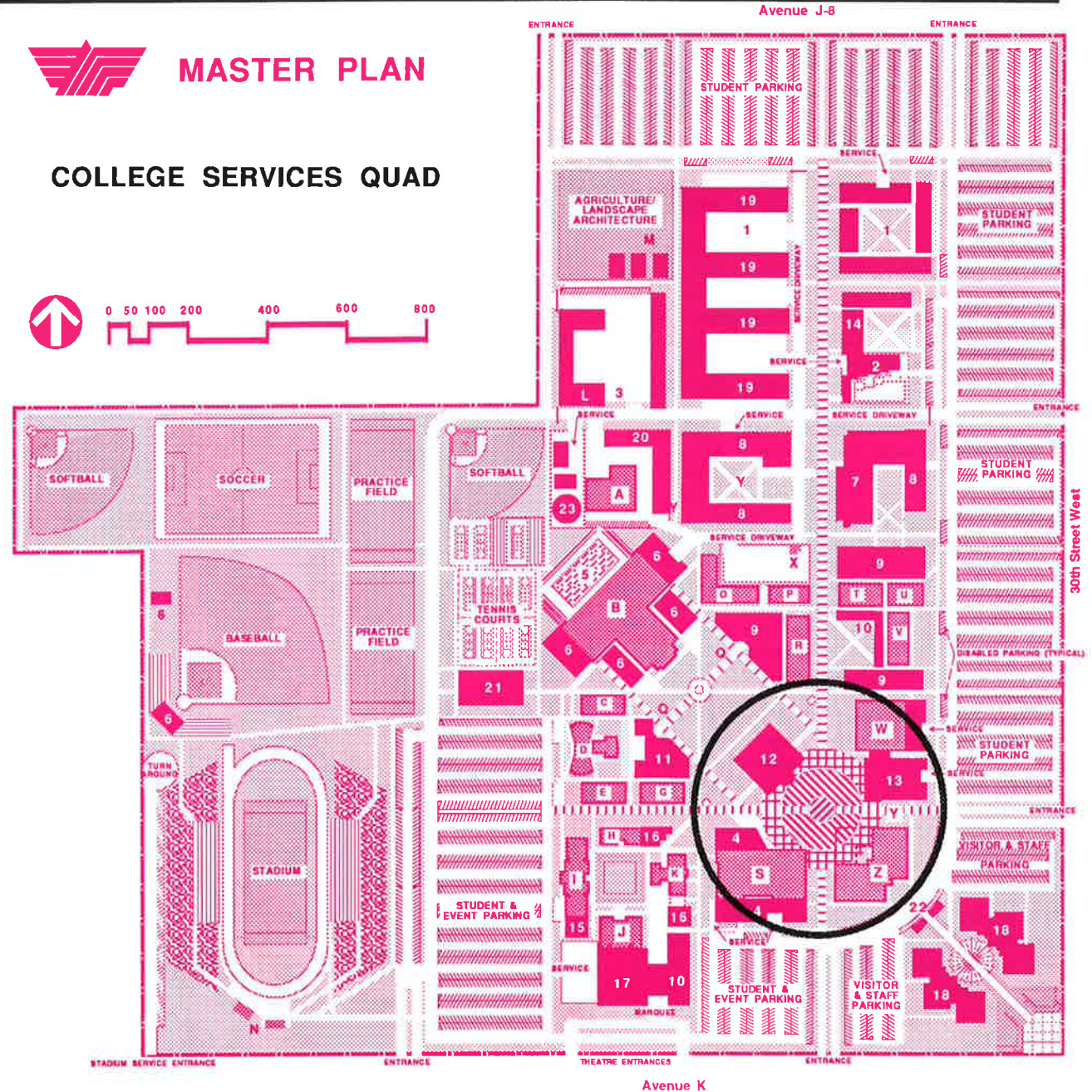
By the time the College reaches its planned capacity of 20,000 it may require the addition of a Health Center. In such a case it would be located either in Student Services or in the Student Center. Students' health care needs are now met through the College's contract with the Antelope Valley Hospital and Medical Center.

When these projects are completed, there will be a very strong focus on interdisciplinary services to students in the central plaza within the quad. One possible vision of the use of this area entails creating a series of smaller outdoor areas for food, congregating, studying, and the like. The contiguity of a beautiful outdoor attraction, library, computers, video, and other media of communication and learning, together with services to new and special-need students, plus food and social opportunities will aid in the integration and orientation of new students and will attract a strong center of activity. The appearance of a vital, kinetic and involved student body will be attractive to the community and to potential students and will improve students' sense of collegiality.



MASTER PLAN

COLLEGE SERVICES QUAD



Avenue K

Administration Quad

As shown within the circle on the drawing, the important public function of administration will be relocated to the main campus entry (18). This will free the present Administration Building (Z) for conversion to Student Services which need to be closer to the center of campus.

The design is intended to be open and inviting to the public and to students as they enter the campus. It will be a light, comfortable working environment for staff. It is configured as three pods joined together by the public entry lobby, which is protected from prevailing winds. The three pods include: Human Resources and Business Services; the Office of the President, Vice Presidents and Public Information Director; and Academic Affairs, duplicating, mail room, and the facilities planning office. Each pod can be expanded independently if needed in the future. There will be staff and visitor parking on both sides of the main entry. New bus stop shelters (22) could be added on the loop road between Administration and Student Services. This would provide students and visitors with a safe spot to board and alight from buses, eliminating the need to cross busy streets.

As the District expands, it may need offices separate from those of the College. In such a case, District offices could be constructed as a mirror image of the college Administration Building on the northeast side of the main entry walkway. An alternate location would be across Avenue K where the District owns 3.9 acres.

The building could also house special events conference facilities and a Board meeting room. The Board room would otherwise have to remain in the Student Services building away from other administrative functions.



ADMINISTRATION QUAD



Avenue K

Sciences Quad

The sciences are due for only a modest expansion because there is excess capacity in this area. There are presently ten science labs and an additional two or three are expected to be needed in the future.

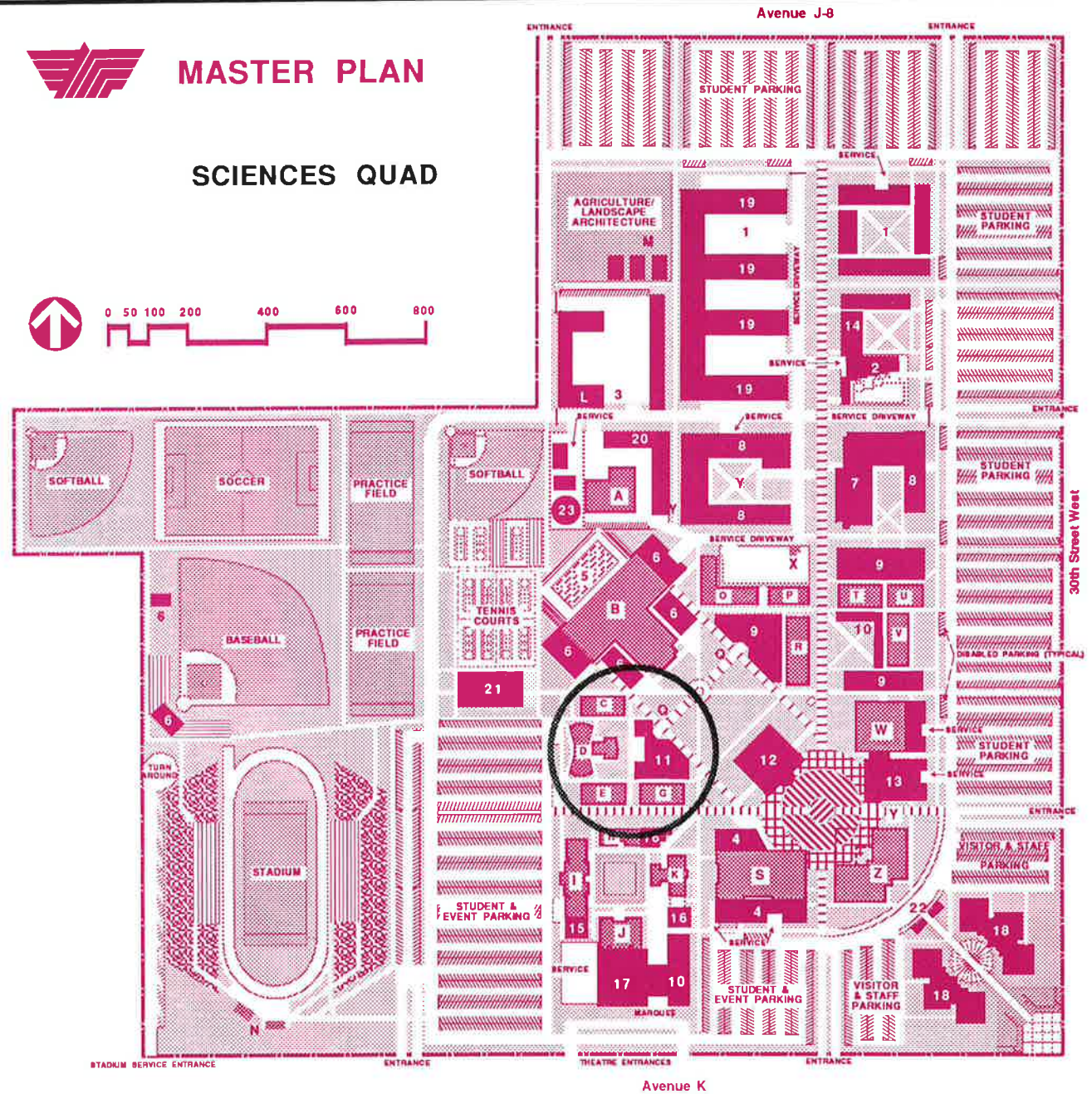
A two-story classroom and laboratory building (11) will be added to the three existing science buildings at the site of the current faculty office cluster (F). The building will complete the ring of buildings to create a true Sciences quad. It will be designed in a right-triangular shape to fit in with the existing science buildings and parallel the angle created by the gymnasium. By facing the diagonal side onto the path leading from the gym to the College Services quad, the Central Green will actually be enlarged. Opening up the diagonal path will enhance pedestrian circulation on campus. Classrooms in the new building will be located on the ground floor; labs, offices and support services will be upstairs.

There is also room to add offices to the Chemistry (C) and Physics (E) buildings toward the lecture halls (D), by enclosing the existing outside corridor (10).



MASTER PLAN

SCIENCES QUAD



Fine Arts Quad

The highlight of the changes to the Fine Arts quad will be the addition of a new 400 seat theater (17). It will be located at the south end of the quad as an expansion to the present experimental theater, convenient to the stadium parking lot off Avenue K. The theater will include labs for all drama support functions, such as scenery, lighting, sound, and makeup. The existing experimental theater will complement the new, larger theater, each developing its own special character and function.

Two fine arts labs, faculty offices, and a classroom for art history and music appreciation will be created by relocating the Family and Consumer Education labs (H) to the new Child Development and Consumer Education Center. Once this is accomplished, there will be a total of five art labs. Additional art labs can be created by expanding the present art building (K) southward and by extending the Family and Consumer Education building to the east.

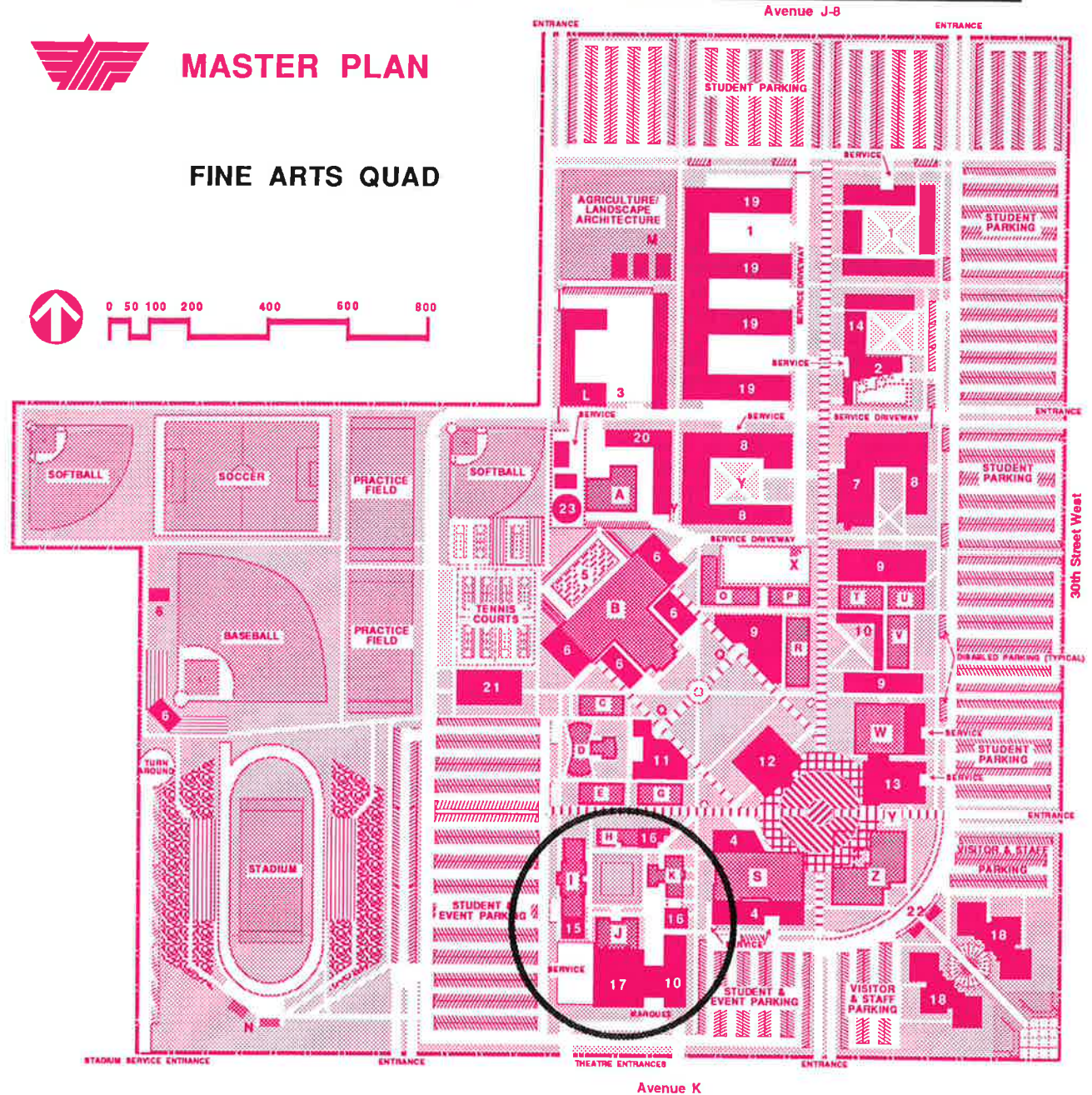
In the Music building (I), offices will be recon-verted back into practice rooms. The offices will be moved to the addition south of the art building (16) along with additional offices for the art and theater departments. More space can be created on both the north and south ends of the Music building (15).

The arts will be united by a more functional courtyard. At present, activity is hampered by the wind-tunnel effect caused by the southwest-erly winds. If the gap between the music and drama buildings can be closed, the courtyard should be used much more heavily and become a dynamic social center on campus.



MASTER PLAN

FINE ARTS QUAD



Avenue K

Humanities Quad

The Language Arts building (T) is due to be shortened by about 30 feet on the west side in order to permit the northward extension of the new north-south pedestrian mall. A row of offices (10) will be added on the windward side (south of Language Arts; west of social sciences - V) to enclose the outdoor corridor and turn it into an indoor hallway. This will serve as a wind break for the rest of the humanities complex. Classrooms (9) will be added at the south end of the quad to make up for those lost from the Language Arts "amputation."

It was recently discovered that a water main runs east-west under the Social Sciences building and in the site of planned future buildings. This potential problem is under study and some changes may be necessary.



MASTER PLAN

HUMANITIES QUAD



Applied Arts Quad

The applied arts, as the concept is used at AVC, include nursing, allied health, design, desktop publishing, journalism, photography, drafting, engineering, clothing and textiles, and the like. The present facilities for the applied arts are overcrowded now, and demand is increasing for offerings in these areas. Some labs are in converted classrooms and even restrooms. Many of the functions are scattered throughout campus, making supervision and assistance to students difficult. They have also displaced other important functions such as dance classes and vocational technology labs.

In order to bring all of the applied arts together and provide them with adequate space for now and the future, a new 37,000 sf. Applied Arts Center (7) will be constructed north of the Humanities quad in the space now occupied by temporary parking. It will be oriented so as to create an open, wind-protected courtyard. Entrances from covered walkways or balconies are to be protected from prevailing winds by building masses.

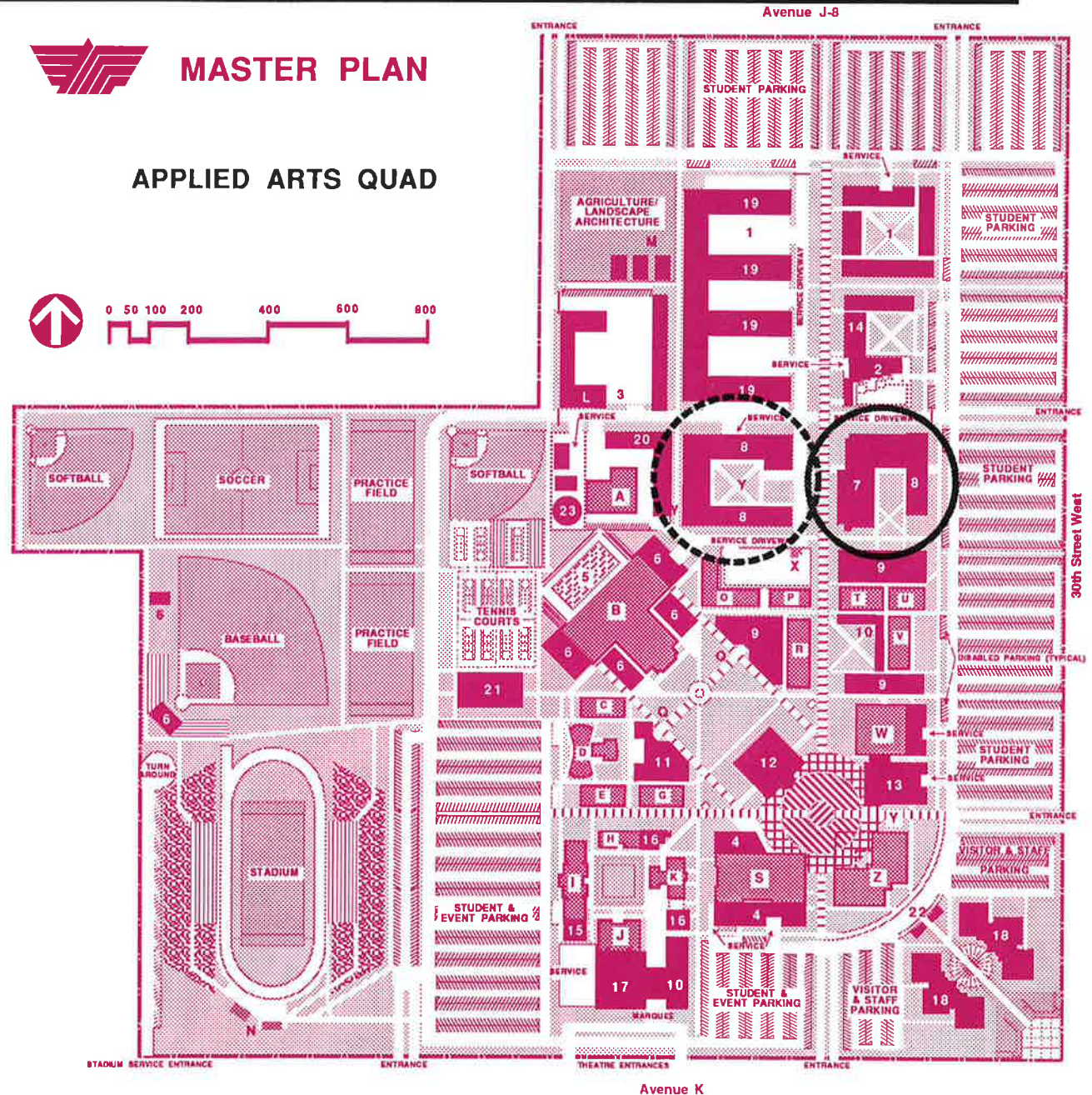
On the first floor, the north wing will house labs and offices for nursing and allied health. The west wing will contain lecture halls and laboratories for journalism, interior and fashion design, and commercial art. The second floor will include faculty offices, video, television and photography studios and labs, and computer-oriented labs including CAD, electronic imaging, computer video and graphics, desktop publishing plus labs for architecture, landscaping, and drafting.

Additional future expansion could be accomplished by appending a wing onto the east side of the north wing. Further expansion westward is possible by sharing facilities with the Applied Technology center (Y/8)



MASTER PLAN

APPLIED ARTS QUAD



Avenue K

Applied Technology Quad

Society's needs for trained technical workers can be expected to change rapidly in the 90s and into the twenty-first century. In order to respond to those changing needs, it is important that a great deal of flexibility be built into the physical plant for vocational education programs. This master plan recommends use of single-story metal buildings built around lab courtyards with connecting offices. It will look like a series of connected "horseshoe" or continuous E-shaped buildings with outdoor working spaces and rolling metal doors opening to indoor labs and classrooms (19, indicated by darker box). The outdoor work areas, since they face the east, will be well protected from the wind. There will be a service driveway on the mall side with a tree buffer between it and the north-south pedestrian mall.

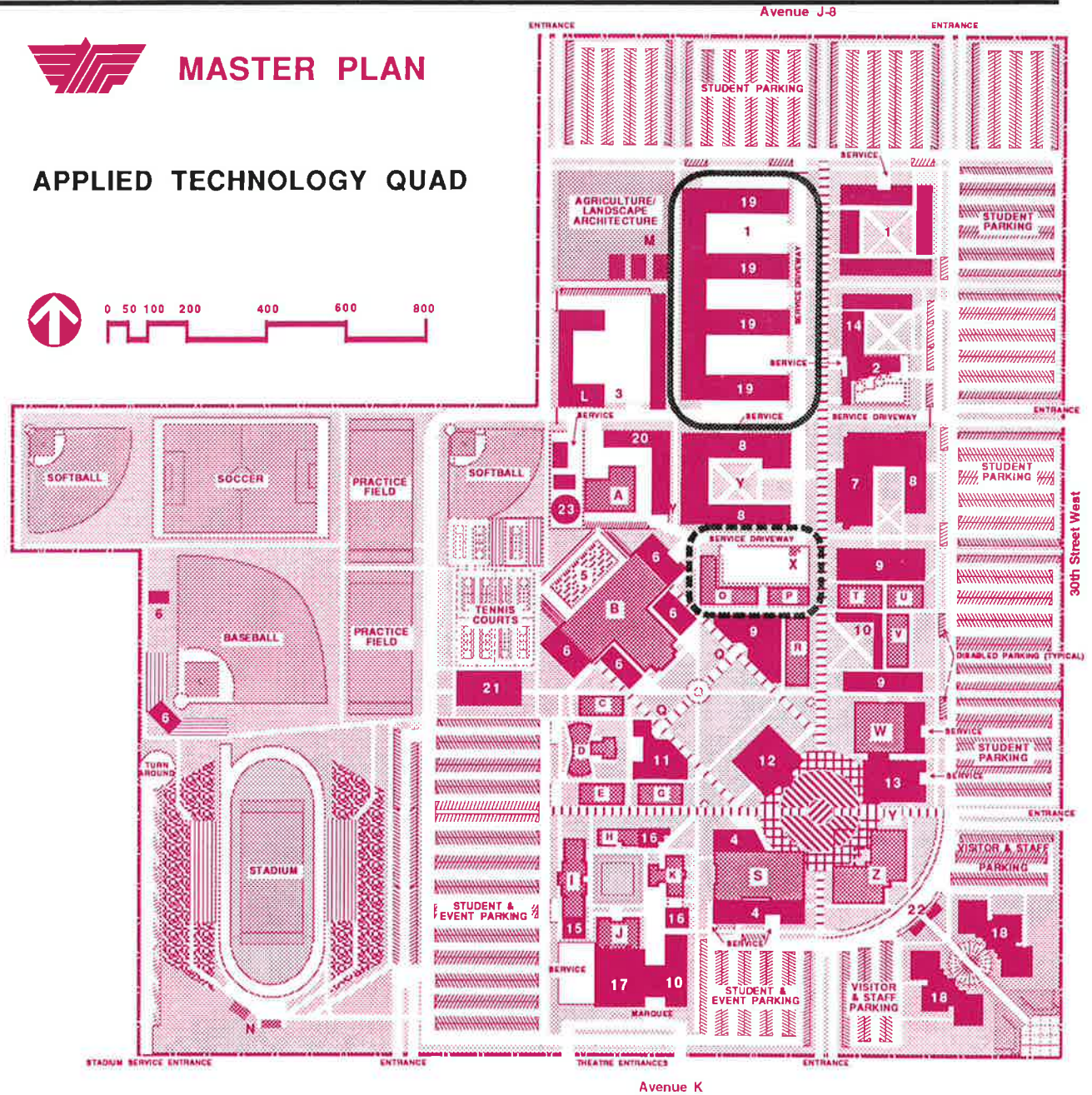
It is currently envisioned that the buildings will house new departments such as high-tech manufacturing, composites and metallurgy, computer-integrated manufacturing, robotics, and construction technology, as well as other related fields. Long term, the creation of a new construction technology facility would permit vacating the existing electronics, welding and HVAC classes from their present buildings (O & P) and converting them to other uses such as classrooms (indicated by the lighter box in the drawing).

As the development of the campus unfolds, it may become evident that there is a function which requires the northern portion (1) of the Applied Technology Quad. If such be the case, the Applied Technology quad could be shifted south to occupy the space currently indicated as laboratory expansion (8/Y), an area which can be shared with the Applied Arts programs.



MASTER PLAN

APPLIED TECHNOLOGY QUAD

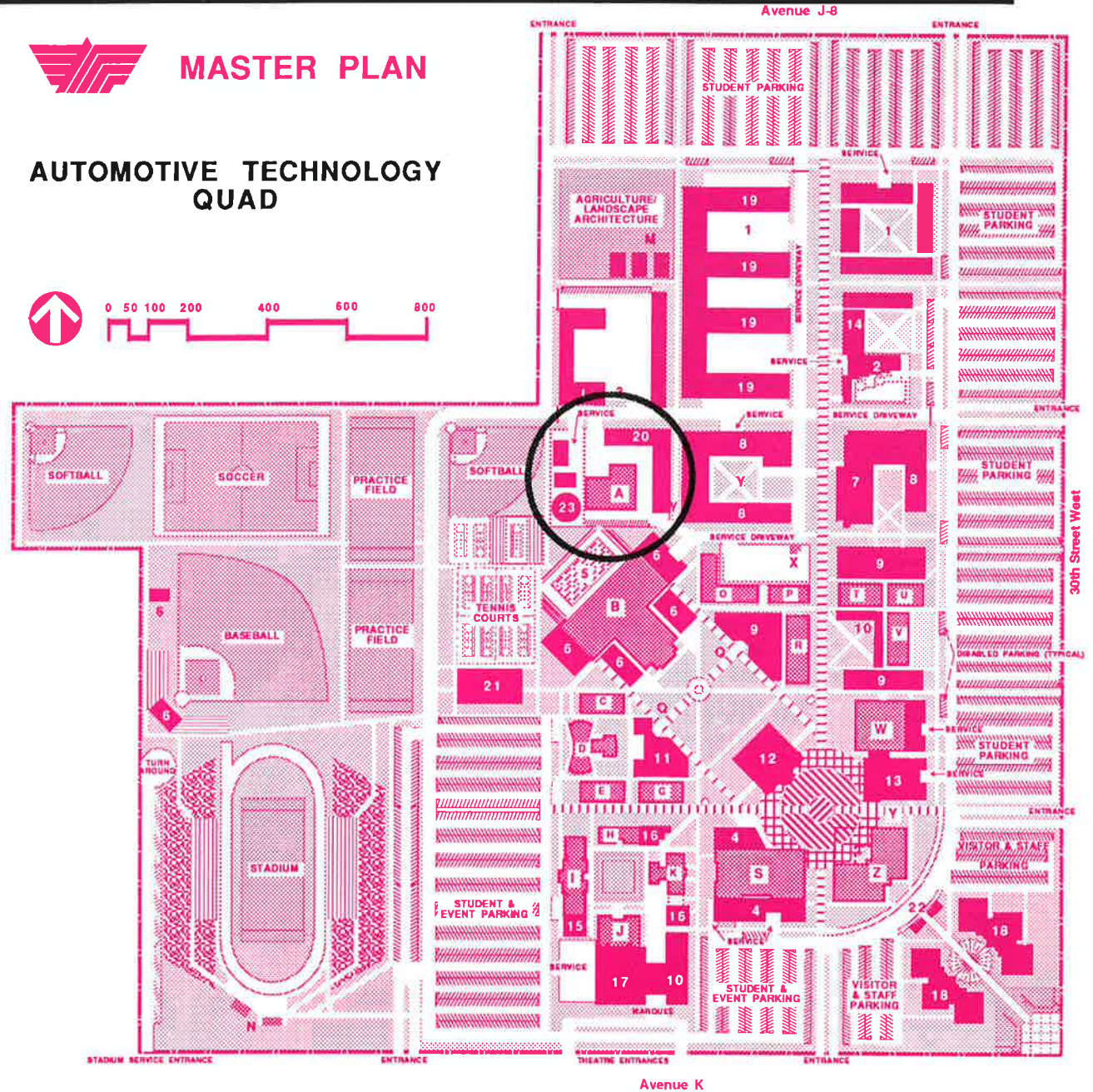


Automotive Technology Quad

Equipment from the present auto body shop (O) will be moved to the northwest and joined with the auto mechanics shop (20) to create the Automotive Technology quad (A). It will be oriented so as to create an outdoor, east-facing, wind-protected work area. The space vacated by the move should be converted to other use such as classrooms, because of the present building's advantageous, central location.



AUTOMOTIVE TECHNOLOGY QUAD



Human Development Quad

The state has already been approached for financing of a new 8822 sf. Child Development Center (2). The Center will support the academic preparation of child care workers as it provides much-needed day care for students, staff, and community members. The building is designed and oriented to allow the children as much outdoor time as possible. It provides outdoor areas which are wind-sheltered and which are shaded in summer and exposed to the sunlight during the winter.

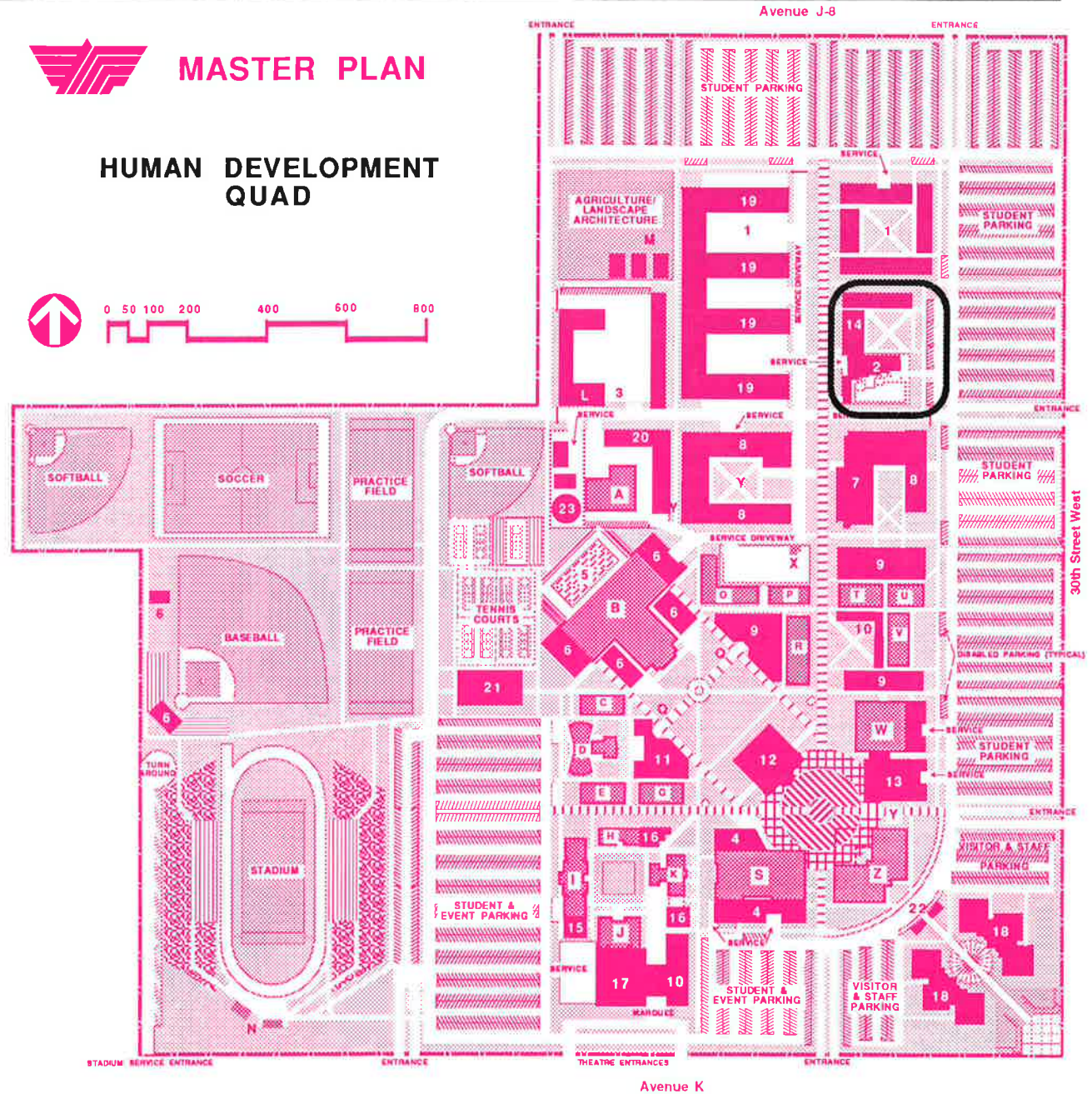
The building is located near parking on the periphery of the campus to provide convenient access for parents, security for children, and minimum intrusion into the academic life of the college. After dropping off their children, parents will find themselves conveniently located on the main north-south pedestrian mall no more than a brisk ten-minute walk from most other buildings.

The Family and Consumer Education Department is slated for transfer from its present location in the Fine Arts quad (H) to its new spot north of the Child Development Center (14). This will free up much-needed space for additional art labs and fit logically with the Child Development department.



MASTER PLAN

HUMAN DEVELOPMENT QUAD



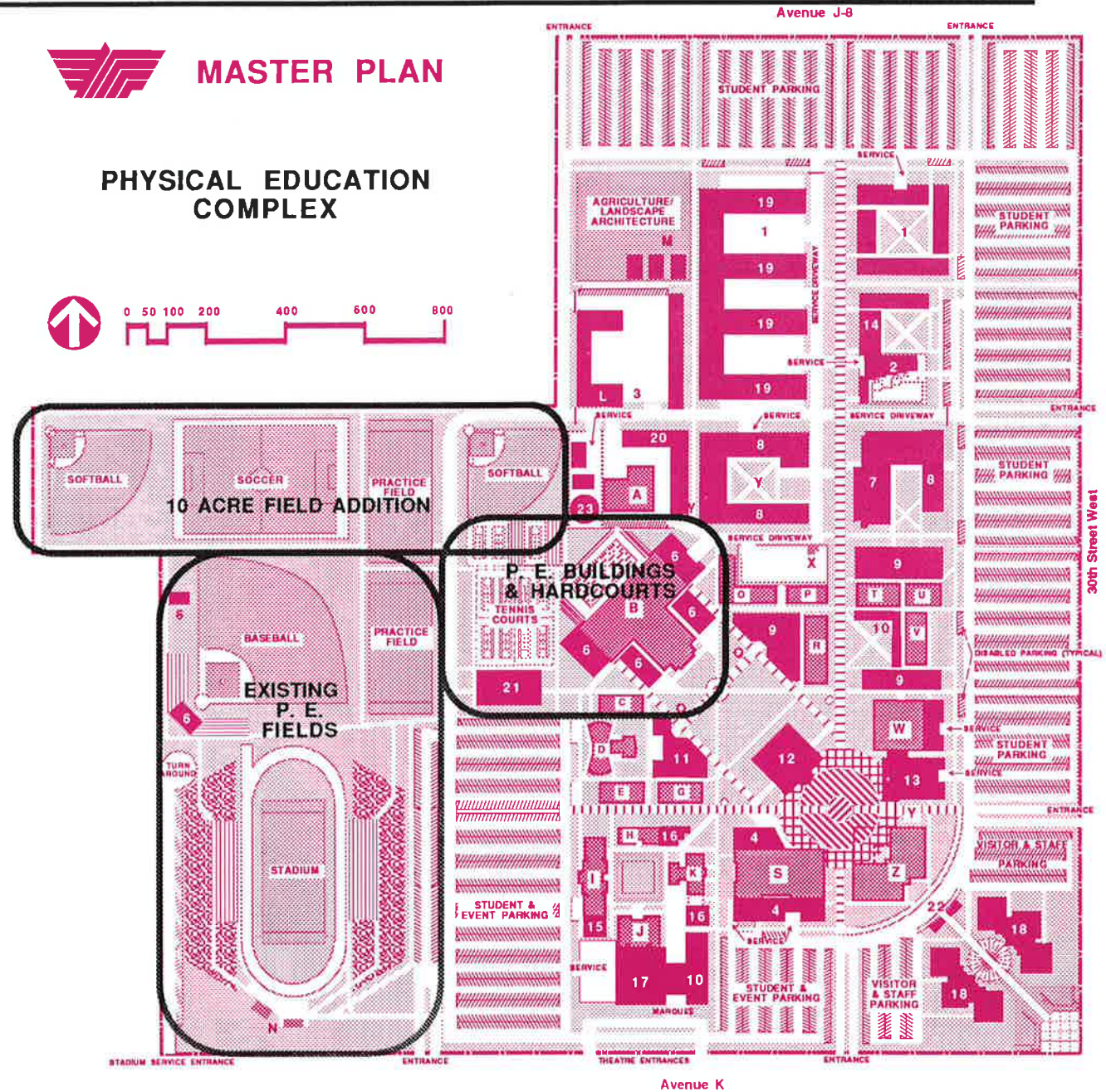
Physical Education

The college already has a strong competitive sports program. With the addition of a 50-meter pool (5) alongside the existing 25-yard pool, the college can become a strong presence in swimming, too. Without an existing 50 meter pool in the valley, AVC is the logical location for such a facility which will serve both the educational and recreational needs of the region. It is envisioned to be built parallel to the northwest side of the P.E. building. It could be protected by a wind break to make year-round use practical or completely enclosed. Because the existing pool already has diving, it will not necessarily need a deep end, which will save cost. It could be warmed with waste heat from the HVAC Central Plant (23).

The P.E. building will be augmented by additions on most elevations (6). These will house locker rooms, new P.E. offices and classrooms, and an auxiliary gymnasium. Just west of the P.E. building will be two new tennis courts, a tournament court, and a new fitness and racquetball center (21).

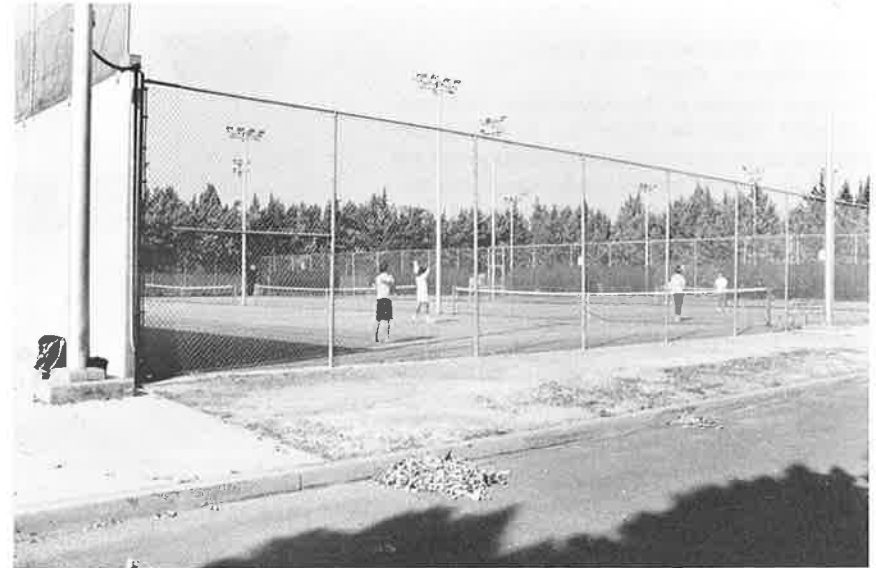
The recent acquisition of 10 acres expanded the area devoted to physical education by 45% to over 32 acres. The area will accommodate two softball fields, as well as football practice and soccer fields. Bleachers and a field house (6) will be added to the existing baseball field. A football practice field will be added east of the baseball diamond. New earth berm bleachers are planned on the east side of the stadium to match those on its west side. Significant areas of earth fill will be added around the bleachers on both sides of the stadium which will help in blocking the wind.

The layout of the area around the stadium is relatively inefficient. In order to utilize this land, narrow strips of parking could be added in back of the bleachers to the east and west of the stadium. A new gated entrance to the campus loop road is also planned there.

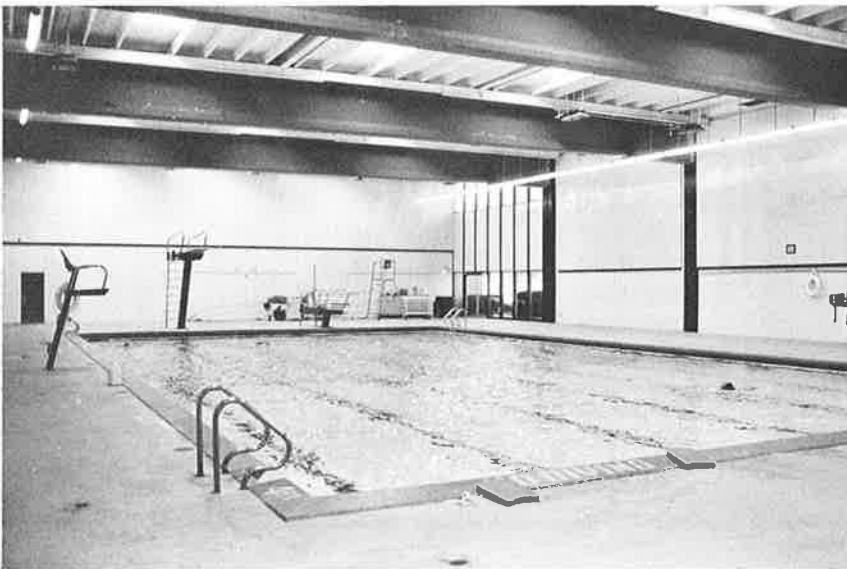




Earth Berm Stadium
---Future earth berm seating is planned in the foreground.



Tennis Courts
---A Tournament Court with spectator seating is planned on the north.



Indoor 25 yard Pool with Diving
---A 25 yard by 50 meter pool is planned immediately adjacent.



Main Gymnasium with Spectator Seating---*A smaller gym without spectator seating is planned for the north side of the building.*

District Maintenance and Operations Quad

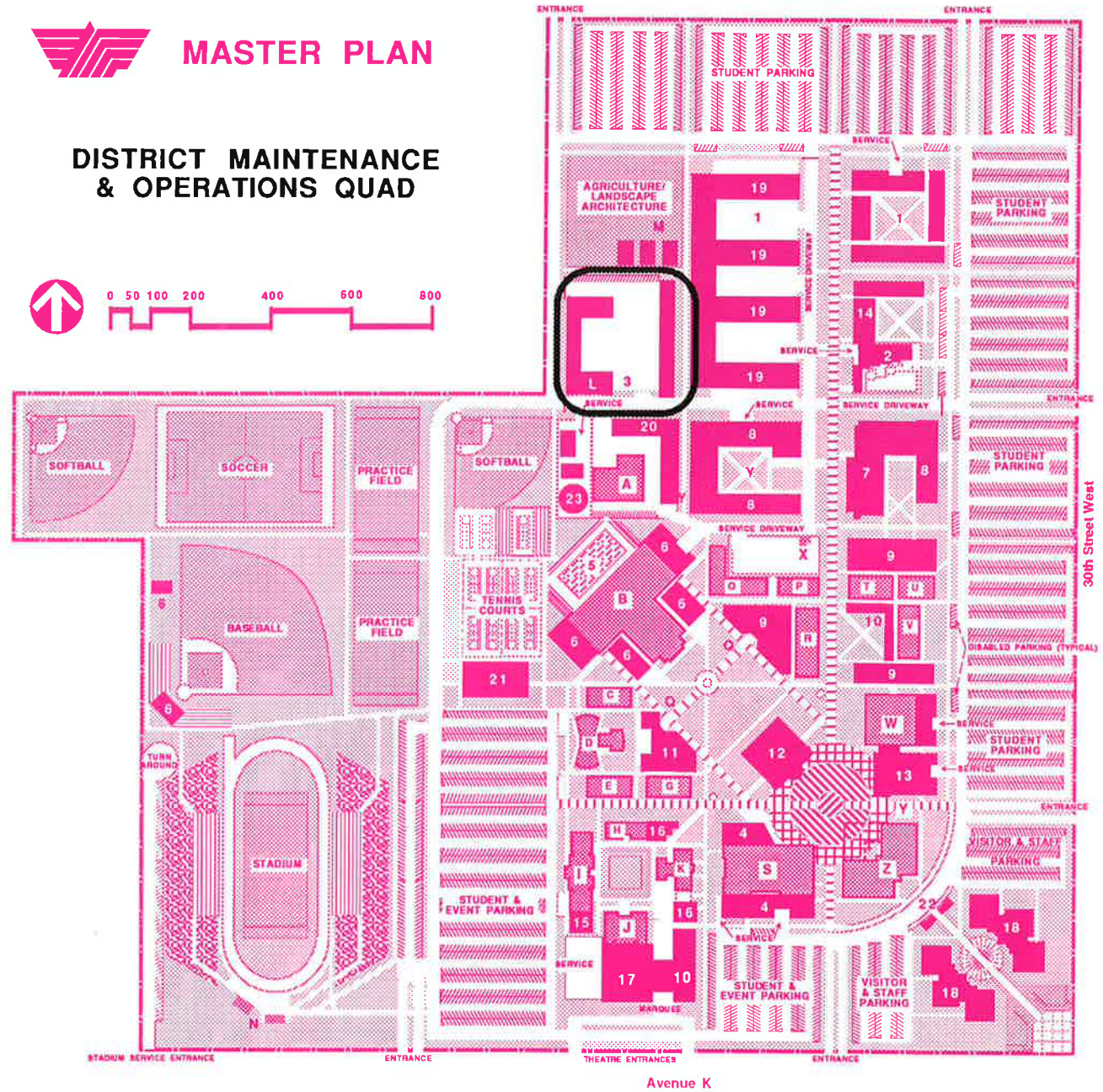
The new location of the maintenance functions, indicated within the black box, is strategically planned to be convenient operationally and yet out of the way of needed expansion of the academic areas. There is good truck access from Avenue J-8, yet it is unlikely to disrupt the flow of student traffic.

The district maintenance yard/warehouse (3) and lath house (L) will be relocated to the west side of the north leg of the campus, on the new campus loop road. The move will permit the ordered, logical expansion of the instructional program northward. The present sites of maintenance buildings will be assumed by a general-use laboratory building (Y/8). It can be used for applied technology or for applied arts, depending on society's demand for these subject areas. The present metal building can be relocated to the new site.



MASTER PLAN

DISTRICT MAINTENANCE & OPERATIONS QUAD



Landscape Architecture

Landscape architecture labs (M) will be relocated from their present spot east of the Automotive shop to their new location north of the new maintenance yard.

Remaining Undeveloped Land

North of the new Child Development Center is a large plot of land (1) reserved for as-yet undetermined uses, among which are possibilities for general expansion if the college grows beyond 20,000 students, a desert preserve, a CSU extension site or other space-consuming programs. This site could extend further west (dashed-line box) if Applied Technology does not require the entire extent of its planned location or if it is dropped south in place of the lab building (Y,8).

It is a great advantage that the College can achieve its maximum planned capacity without developing every bit of land. The future has many surprises to offer and the College will be well-equipped to deal with them.

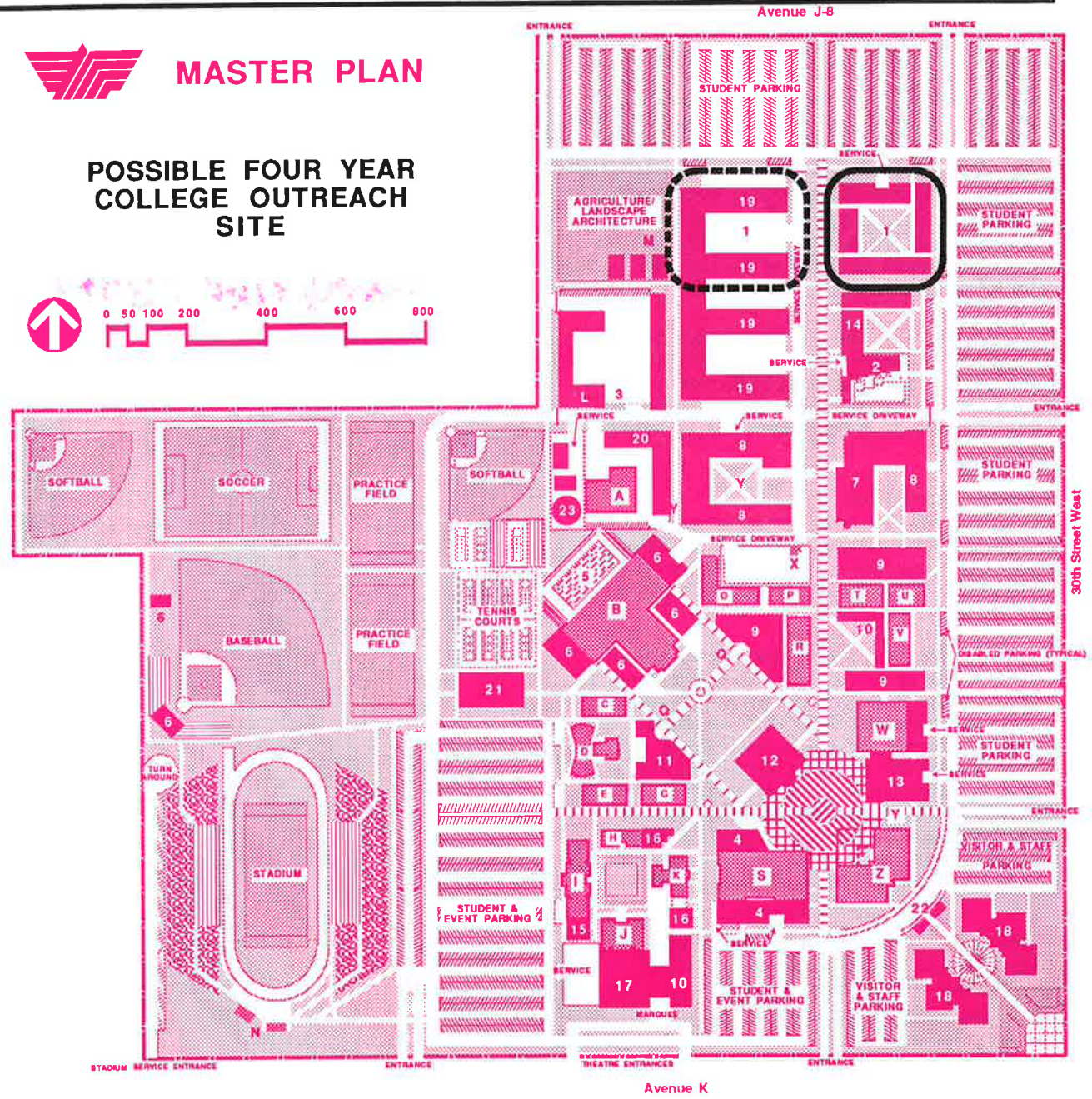
Flexibility in the Plan

Many contingencies are provided for in the plan. In particular, the Applied Arts & Technology Quad (between Applied Arts and Automotive Tech.) and the Applied Technology Quads (19), Buildings O & P, and the potential CSU outreach site (1), are all areas whose use will ultimately be determined depending upon the unfolding of the other areas of campus and the needs of the program at the time when they are actually implemented. The relative need for space for programs will depend upon the types of people who are attracted to the area and to the College as well as the types of local businesses and their human resource needs. The space provided in these buildings is needed to accommodate the 20,000 enrollment projection, the ultimate use of the space is the only unknown.



MASTER PLAN

POSSIBLE FOUR YEAR COLLEGE OUTREACH SITE



Utilities

The following are a series of schematic layouts of each of the major utility systems projected for the expanded campus. The layout has resulted from a study completed for the District by Robert Bein & Frost, Mechanical & Electrical Engineers¹ and is covered in part in a 1992 PPG¹. Portions of the system Power & Communication System are also to be installed earlier as a part of the New Library Building project².

This study was the culmination of a request by the College's Maintenance & Operations Department that the long term capacities and maintenance of existing utility and mechanical systems be investigated before existing systems are overwhelmed by coming growth.

Existing Conditions

The AVC campus will double its enrollments in about 10 years, reaching its maximum size of 20,000 students by the year 2004. Its facilities supported by utilities need to grow by almost 150% to accommodate this number of students.

The College has already surpassed the student population for which its existing facilities were planned. Pipe and conduit sizes are too small, and the present systems are inconveniently routed through the center of the campus and through planned building sites. The antiquated and overtaxed electrical system is 'radial' in nature; and when failures occur, it has no provision to 'back feed' an area isolated beyond the point of failure. The consequence is that when failures have occurred, large portions of the campus have been left without power for days and even weeks until

repairs can be made. Finally, at nearly 30 years of age, most of the existing utility and HVAC systems and equipment will soon be due for replacement.

AVC is located in a region of high daily temperature (diurnal) swings and also seasonal climatic changes. It is also characterized by low humidity. The HVAC system designed for the College needs to be able to make best use of the existing conditions while ensuring the comfort and safety of students and staff. The present inefficient systems are presently fragmented and oriented to particular buildings. There is no campus-wide system nor backup systems.

General Concepts for New Utilities

This Master Plan views the College as an integrated system. Adequate infrastructure will be key to achieving orderly growth. The plan calls for developing utilities in concert with on-campus roads or planned open spaces so that the cost of installation is minimized and future conflicts between utilities and buildings can be minimized.

New utilities are to be placed in common trenches wherever possible. These are to be located under roads or in the pedestrian malls as much as possible to retain maximum buildable area for edifices.

Buildings will be grouped into systems which have the capability of sharing their capacities and make use of more favorable off peak utility rates. Unused heat energy will be captured for beneficial uses instead of wasted.

This plan includes the existing buildings in the systems approach and ensure new utilities can incorporate the existing buildings as well. Upgrading the utility and HVAC systems according to an integrated plan will ensure that the growth of the College is supported by the most energy and cost-efficient utility systems possible.

¹ Preliminary Master Plan for Site Utilities and Central Plant for Antelope Valley College Robert Bein, William Frost & Associates, 2/12/91

¹ 1992 Campus Loop Road / Utilities / Thermal Storage Central Plant PPG

² 1990 New Library / Upgrade Campus Electrical Service PPG

Power & Communication System

The major high voltage distribution system shown at the right is slated to be placed in or alongside the perimeter roads to maximize accessibility and minimize disruption of future building plans. The system will create a loop around the existing campus buildings and a second north loop around the future building areas. The two loops will achieve the redundant loop capability that the present system lacks.

The system will be installed underground using service manholes, PVC conduit and coordinated in easements with other mechanical utilities. The PPG project will investigate the need for a dual feed from two separate sources with automatic transfer in case of problems.

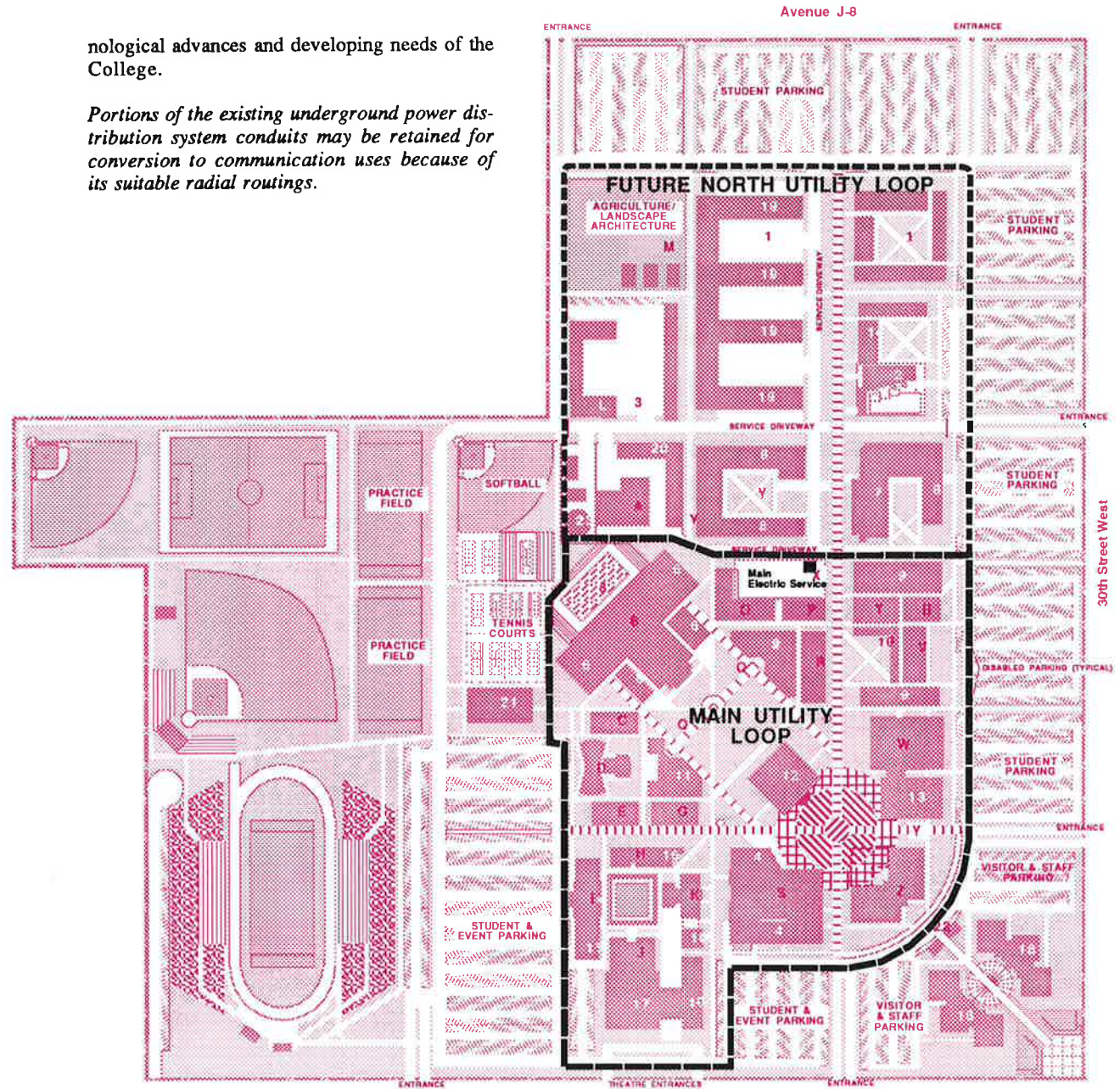
The present emergency power system as well as relocating the emergency generator presently located in the Library building will also be addressed. Options to be considered include self-contained generating sets to provide emergency power for strategic buildings, groups of buildings, or sections of a single building instead of a single system.

Outdoor lighting for roadway areas, security, and landscaping will be extended and upgraded throughout the campus and provided in areas into which the campus will expand. The system will use underground service raceways and cable, automatically controlled from a central point through programmable clocks, photocells and security sensors.

The communications system will be updated to incorporate new life safety requirements as well as new technologies. These applications may include fire alarm and security, energy management auditing systems, telephone, and audio-visual and computer networking and communications. Wherever possible common raceways or trenches will be used and spare raceways provided to accommodate future tech-

nological advances and developing needs of the College.

Portions of the existing underground power distribution system conduits may be retained for conversion to communication uses because of its suitable radial routings.



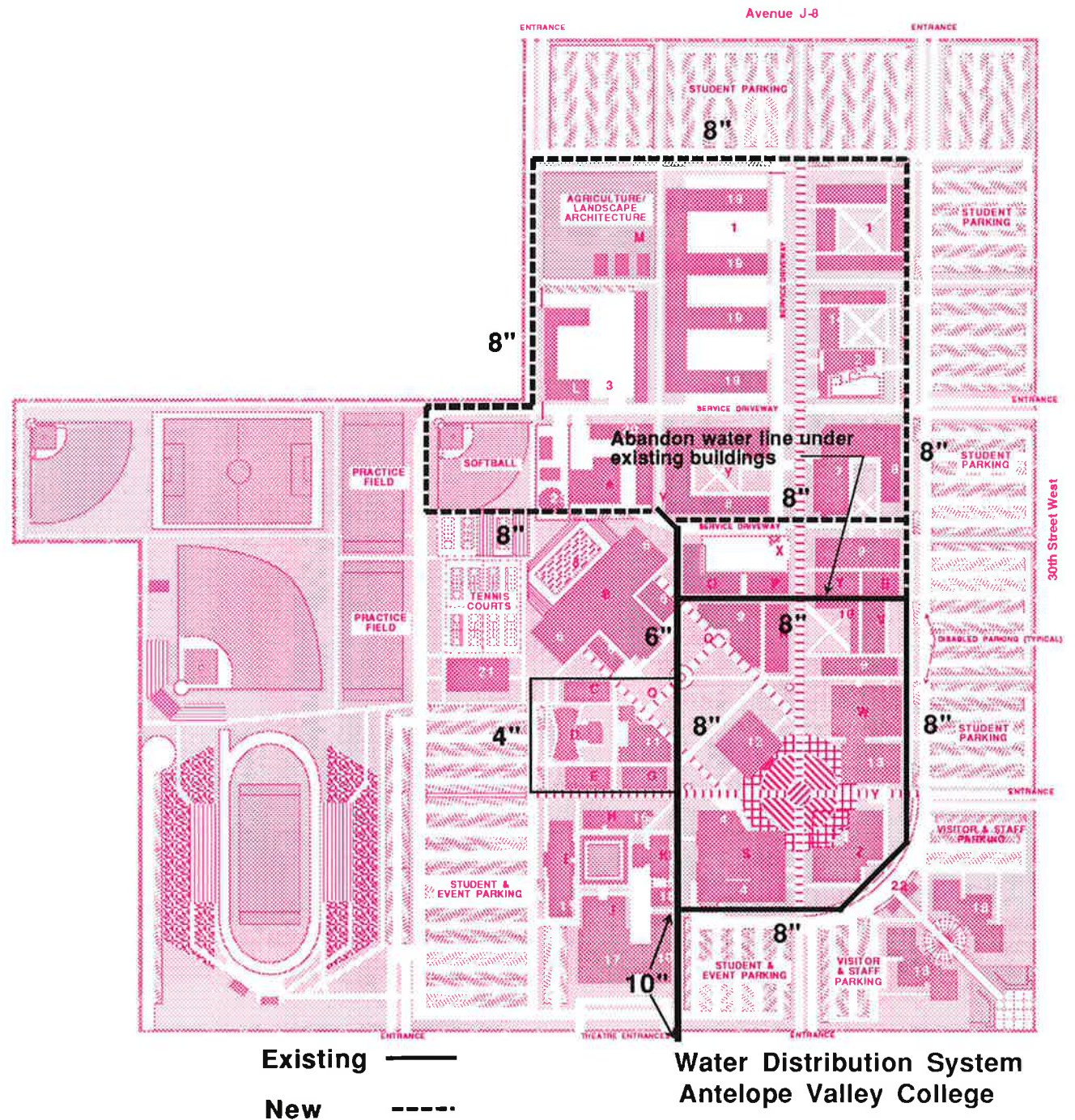
**Campus Utility Routes
Antelope Valley College**

Water Distribution System

The existing water distribution system combines domestic and fire protection uses. The system is adequate for present buildings. However, the campus will be growing substantially to keep up with booming enrollments. Dead-ended water mains and the fact that they have probably reached the limits of their flow and pressure capability necessitate expanding and improving the system. Existing water mains are cement-lined cast iron with mechanical joints. Unfortunately, portions of the 8" diameter water main run under existing buildings. This situation must be rectified to avoid the possibility of damaging buildings in the event of a leak or break in the main.

As much of the existing water distribution system as possible will be used in the upgraded system. It will be augmented by a looped circulating main that will minimize the pressure requirements of the future extension of the campus toward the north. The fire protection distribution system may need either a central pump or localized building system fire pumps to meet insurance and code requirements. New installation will probably use PVC materials because they are more effective at minimizing deterioration and handling supply while costing less than the existing cement-lined cast-iron pipe.

With the growing regional water shortage, alternate sources to use of domestic water should be considered. The College will need to contact and coordinate with the City and other agencies in order to explore use of recycled water. Use of non potable water sources will only be possible if the existing and future irrigation systems are separated from the domestic and fire protection systems.



Sanitary Sewer System

The sanitary sewer system is sized for the current inventory of buildings, but is insufficient for the ultimate planned capacity of the College. Existing sewer piping is reinforced concrete or vitrified clay, depending on size.

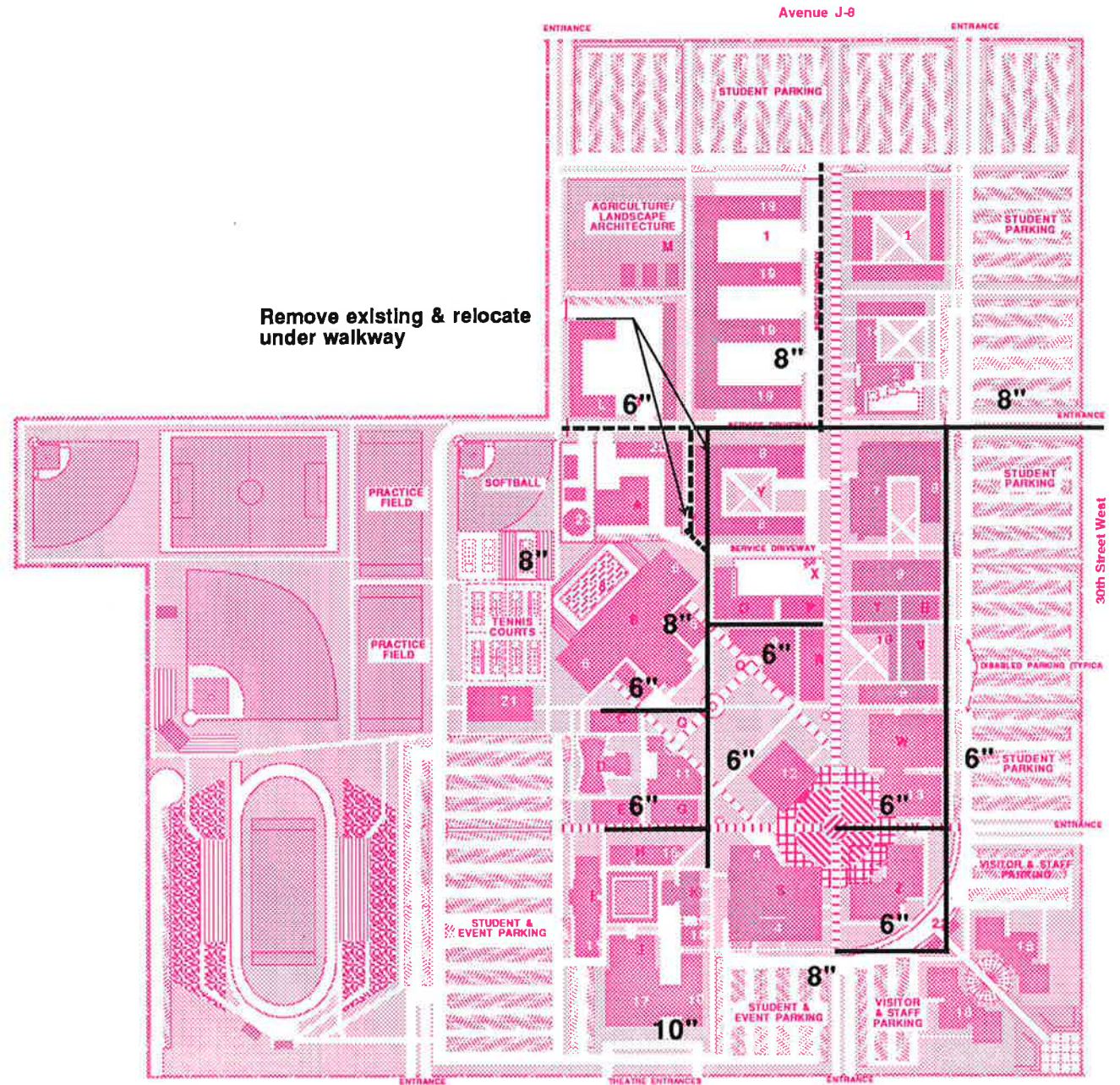
The drawing at right illustrates only a modest expansion requirement for the system. Because of the gravity nature of the system, it will be routed largely along internal pedestrian malls and along service roads. The topography of the site and specific building requirements may require on-site sewage lift stations as the campus develops.

It is expected that any new sewer piping required will match the existing. Sewer line additions, routing, and manholes will be sized and numbered appropriately for the ultimate 20,000-student size of the campus.

Storm Drainage System

Not illustrated on the drawing, the existing storm water drainage system consists of minimal sheet drainage to inlet and catch basins. Campus growth has increased the runoff from approximately 10% to 90% over the past 20 years.

The upcoming Utilities PPG project will include a separate study of storm water systems on site and off site.

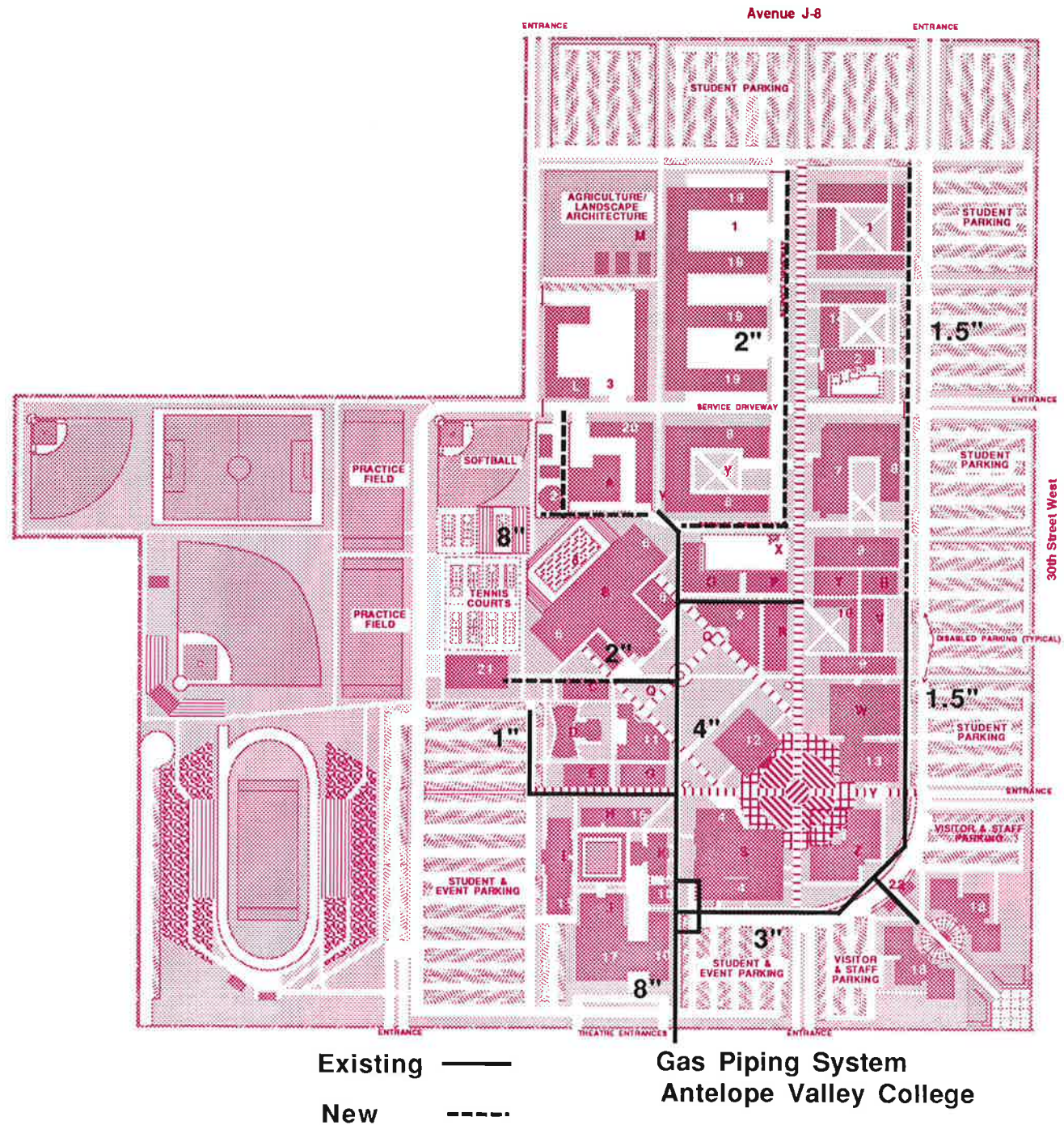


Existing ——— Sanitary Sewer System
 New - - - - - Antelope Valley College

Gas Distribution System

The College's medium-pressure gas piping system extends from a Southern California Gas Company high pressure service at the south side of campus. Existing distribution pipe is probably PVC, as was commonly installed at the time the College was built. It has since been discovered that this material is inferior for the purpose and causes uncommonly high rates of maintenance problems. If this indeed be the case, it will be replaced with Polyethylene "Plexco" wherever major retrofits are in effect.

Illustrated on the drawings at the right, most of the existing system will be retained and will be extended along both pedestrian malls and the east loop road. The system will be augmented to include gas pressure-reducing stations and meters plus extensions and retrofitting of underground mains. Polyethylene "Plexco" piping will be used for new, and in some cases replacement piping wherever major retrofits are needed.



**Gas Piping System
Antelope Valley College**

Central HVAC Plant & Thermal Storage System

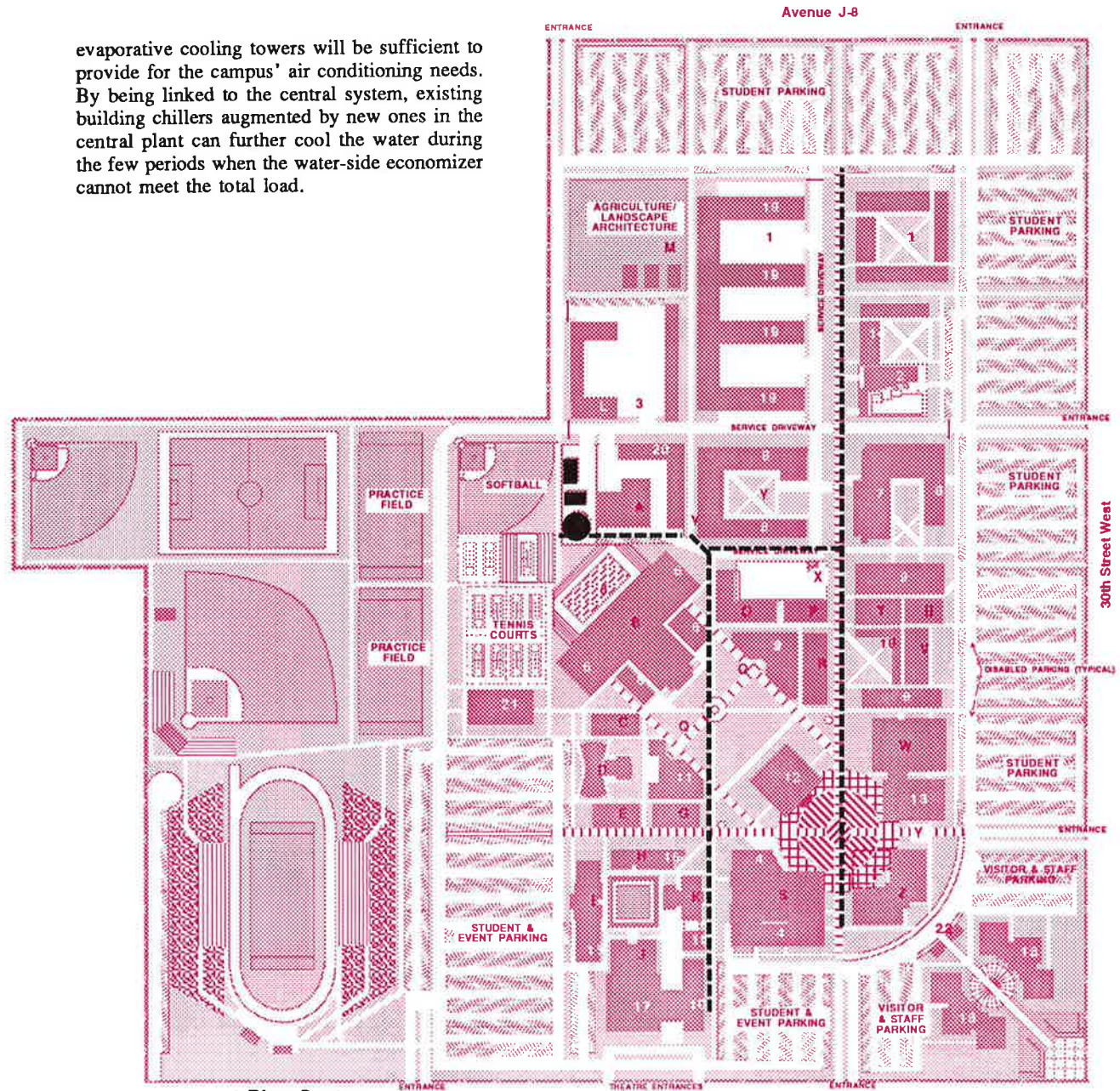
At present, all buildings have their own independent heating and cooling systems. With between 20 and 30 years of use, most are nearing replacement and are inefficient in terms of energy and maintenance costs. There is also little in the way of backup for the buildings resulting in much discomfort when the aging systems require repair.

Saving energy is a key element of the Master Plan. Buildings will be designed with greater mass, proper orientation, shading, natural lighting and materials to minimize heat loss and gain. The Heating, Ventilation and Air Conditioning (HVAC) systems developed for the new buildings can also achieve much greater energy-efficiency than those presently in use at the College.

The most exciting possibility to be studied and developed in this report is a peak demand shift chilled water system. This system will eventually provide cooling (and perhaps heating) throughout the campus using underground insulated piping as illustrated at the right. The system requires construction of a new Central Plant (23) to be located immediately north of the Gymnasium (B) and 50 Meter Pool (5) and just south of the Maintenance and Operations Quad (3). Centrally located to serve the existing and new north campuses, it is close to maintenance and to the pools and shower/lockers which can make use of waste heat energy when available.

The region's extremely low year-round "wet-bulb" temperature will enable the College to use a "water-side economizer" system consisting evaporative cooling towers to chill water circulated throughout campus to cool the buildings. The chilled water which can be generated at night time when power rates are lower will be stored in a Thermal Energy Storage (TES) tank for use during daytime when buildings require cooling. For the most part, the energy-saving

evaporative cooling towers will be sufficient to provide for the campus' air conditioning needs. By being linked to the central system, existing building chillers augmented by new ones in the central plant can further cool the water during the few periods when the water-side economizer cannot meet the total load.



4 Pipe System

Cooling: 2 - 4" Pipe
Heating: 2 - 3" Pipe

Hot & Chilled Water Piping System
Antelope Valley College

LEGEND

EXISTING BUILDINGS

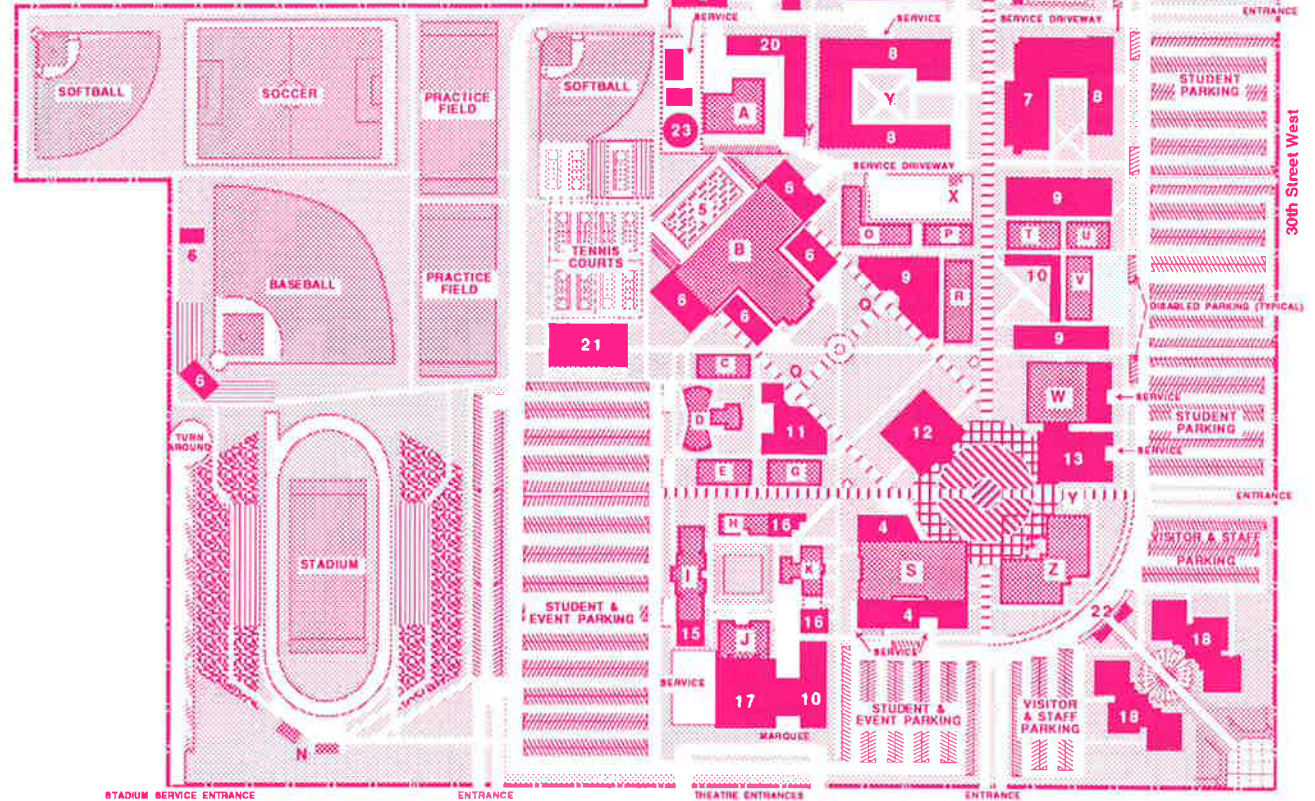
- A AUTOMOTIVE
- B GYMNASIUM
- C CHEMISTRY
- D LECTURE HALLS
- E PHYSICS
- F FACULTY OFFICES REMOVED
- G BIOLOGY
- H REMODEL ART LABS
- I MUSIC
- J EXPERIMENTAL THEATER
- K ART
- L RELOCATED DISTRICT MAINTENANCE SHOP
- M RELOCATED AGRICULTURE GREEN HOUSES
- N P.E. STADIUM SUPPORT BUILDINGS
- O REMODEL APPLIED TECHNOLOGY
- P REMODEL ELECTRONICS
- Q SMALL BUILDING REMOVED
- R MATH
- S STUDENT CENTER
- T LANGUAGE ARTS
- U FACULTY OFFICES
- V SOCIAL SCIENCES
- W REMODEL LEARNING SKILLS & COMPUTER CENTER
- X MAIN ELECTRICAL TRANSFORMER
- Y TEMPORARY BUILDING REMOVED
- Z REMODEL STUDENT SERVICES

FUTURE BUILDINGS

- 1 C.S.U. OUTREACH SITE OR UNPLANNED EXPANSION
- 2 CHILD DEVELOPMENT CENTER
- 3 DISTRICT MAINTENANCE YARD/WAREHOUSE
- 4 STUDENT CENTER / BOOKSTORE EXPANSION
- 5 50 METER POOL
- 6 P.E. BUILDING EXPANSION
- 7 APPLIED ARTS CENTER
- 8 LABORATORY EXPANSION
- 9 CLASSROOM EXPANSION
- 10 FACULTY OFFICES
- 11 SCIENCE EXPANSION
- 12 LIBRARY
- 13 BUSINESS CLASS/LAB CENTER
- 14 FAMILY & CONSUMER EDUCATION CENTER
- 15 MUSIC EXPANSION
- 16 ART EXPANSION
- 17 THEATRE
- 18 ADMINISTRATION
- 19 APPLIED TECHNOLOGY SHOPS
- 20 AUTO BODY SHOP
- 21 P.E. FITNESS & RAQUETBALL CENTER
- 22 BUS STOP SHELTER
- 23 HVAC CENTRAL PLANT



MASTER PLAN



Avenue J-8

ENTRANCE

ENTRANCE

30th Street West

Avenue K

STADIUM SERVICE ENTRANCE

ENTRANCE

THEATRE ENTRANCES

ENTRANCE