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PLANNING PROGRAM**

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**TEMPE  
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THE  
COMPREHENSIVE PLANNING PROGRAM  
TEMPE, ARIZONA

Prepared Under Contract with the  
Division of Economic and Business Research  
University of Arizona

by

TEMPE PLANNING DEPARTMENT  
and  
VAN CLEVE ASSOCIATES, CONSULTING PLANNERS

REPORT NUMBER FIVE  
COMMUNITY FACILITIES

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JULY 1966

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SECTION I  
SCHOOLS

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## INTRODUCTION

Explosive population growth of the Tempe Planning Area since 1960 has tended to foreshorten the perspective of school planners while, at the same time, it has emphasized the need for long-range school system planning.

With in-migration accounting for most of the enrollment growth, school planners have often been forced to attempt the many complex judgments involved in the projection of area-wide land use and population growth patterns. Working outside their own field and handicapped by inadequate data, they have kept abreast of basic educational needs remarkably well.

Through the recent past, school planning and operating policies have been rather fluid, frequently leading to departures from accepted standards for location and size of school plants and service areas. Since it is always easier to "add-on" than to create a new plant, school buildings have tended to expand by accretion. Service areas of individual schools have been adjusted constantly in the effort to avoid new construction wherever possible. Bus transportation has become excessive, with far too many students living beyond walking distance. It has been easier to acquire sites and construct schools on major thoroughfares than to select sites on the interior of as-yet-unformed residential neighborhoods.

Although these conditions have been natural and inevitable under the circumstances, most are still reversible. A long-range school system plan coordinated with a comprehensive community development plan can anticipate where new residential growth will occur, its general range of density, and its out-put in terms of school-age children. School neighborhoods can be delimited in advance of complete development, and new school plants can be properly located with reasonable surety in advance of immediate need. Oversize school buildings need not continue to expand, and their enrollments can ultimately be reduced through adjustment of service area boundaries. Surplus classrooms can be remodeled into much-needed multi-use space.

Bus transportation for elementary pupils can be entirely eliminated as school service areas approach capacity development. Unfortunately, where existing schools are located on major traffic arteries, some children will continue to be exposed to undue traffic hazard and required to walk excessive distances.

Arizona law establishes school districts and municipalities as separate legal entities, each standing alone and independent of the other. However, school and city functions are overlapping in many respects; both are concerned with health, safety, recreation, education and the proper location of service facilities. Close school-city cooperation is mandatory if both agencies are to provide maximum service to citizens.

School District trustees determine educational policies, govern design and construction of school plants, and operate school facilities. They are responsible for determining the type, size, capacity and location of school plants. City government is responsible for traffic circulation and transportation systems, utility systems, park systems, land use planning and development controls.

Neither agency can discharge its special responsibilities without considering the needs, characteristics and limitations of the other. No system can be fully efficient or effective unless it is correlated with every other system -- this is a basic concept of comprehensive community planning.

Hence, it is incumbent upon school and city to develop and maintain the lines of communication which will keep both entities fully informed as to the other's policies, needs and plans. Close coordination will avoid duplication of effort and produce the efficient, high-level service to the public which is the mutual objective of both agencies. The public has the right to expect and demand such coordination.

PART I  
SCHOOL PLANNING FACTORS

Expectation that the population of the Tempe Planning Area will increase more than threefold during the next twenty years suggests the critical need to commence long-range planning for development of the more than fifty additional schools that will be required by 1985. Year-to-year growth pressures should no longer be permitted to distract us from crystallizing the total plan within which short-range problems can be solved most intelligently.

Population growth rates, distribution, density and composition determine the general scope of long-range school planning. Community progressiveness and the value it places on education determine the quality of future school service. Finally, the community's tax base determines its ability to pay for the educational facilities it desires.

Population Factors

The numbers and characteristics of the present and future population of the Tempe Planning Area have been fully discussed in earlier planning reports. Figures 14, 15 and 16 of Report No. One, POPULATION, provide background data of special significance to school planning.

Land Use Factors

Schools, more than any other major land use, are complementary to residential development. They must be ready with open doors the very day a new family moves in.

The location of individual schools within clearly defined service areas is, of course, critical to the efficiency of the entire school system. Failure to correctly evaluate growth trends can result in improper school location, poor service and expensive school bus operations. Proper location of sites involves two major questions concerning future land use: (1) How much developed residential land will ultimately be redeveloped to other uses? and, (2) Where will new residential growth occur? Poor guesses lead to

expensive, often irreconcilable mistakes.

In older parts of Tempe, land use patterns will be in a constant state of change for several years. As structures pass their economic point-of-no-return they will be removed to make way for commercial and industrial establishments, public uses and high-density apartments housing fewer children. Non-residential uses may gradually surround small concentrations of older residences, isolating them from existing schools and reducing the quality of school service. Blighted areas may be partially or even wholly redeveloped to non-residential uses. New freeways, arterial streets or floodways may isolate small residential districts making them difficult and expensive to serve. Adjustment of school system plans must commence immediately as soon as any of these major land use changes can be predicted. Planning Reports No. Two and Four, HOUSING AND RESIDENTIAL ENVIRONMENT, and LAND USE, provide background data on existing and future land use.

## PART II

### EXISTING SCHOOL SYSTEMS AND FACILITIES

The Tempe Planning Area encompasses parts of four elementary school districts and three high school districts. As shown in Figure 1, all of the Planning Area south of Van Buren Avenue and north of Guadalupe Road is in Tempe Elementary District No. 3, and nearly all of the Planning Area south of Van Buren is in Tempe Union High School District. Scottsdale Elementary District No. 48 and Scottsdale High School District serve the small section of Tempe lying north of Van Buren. Kyrene Elementary District No. 28 serves the scattered rural population south of Guadalupe Road. Mesa elementary District No. 4 and Mesa High School District serve the small area south of Apache Boulevard and east of Price Road.

#### Tempe Elementary District

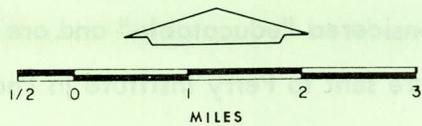
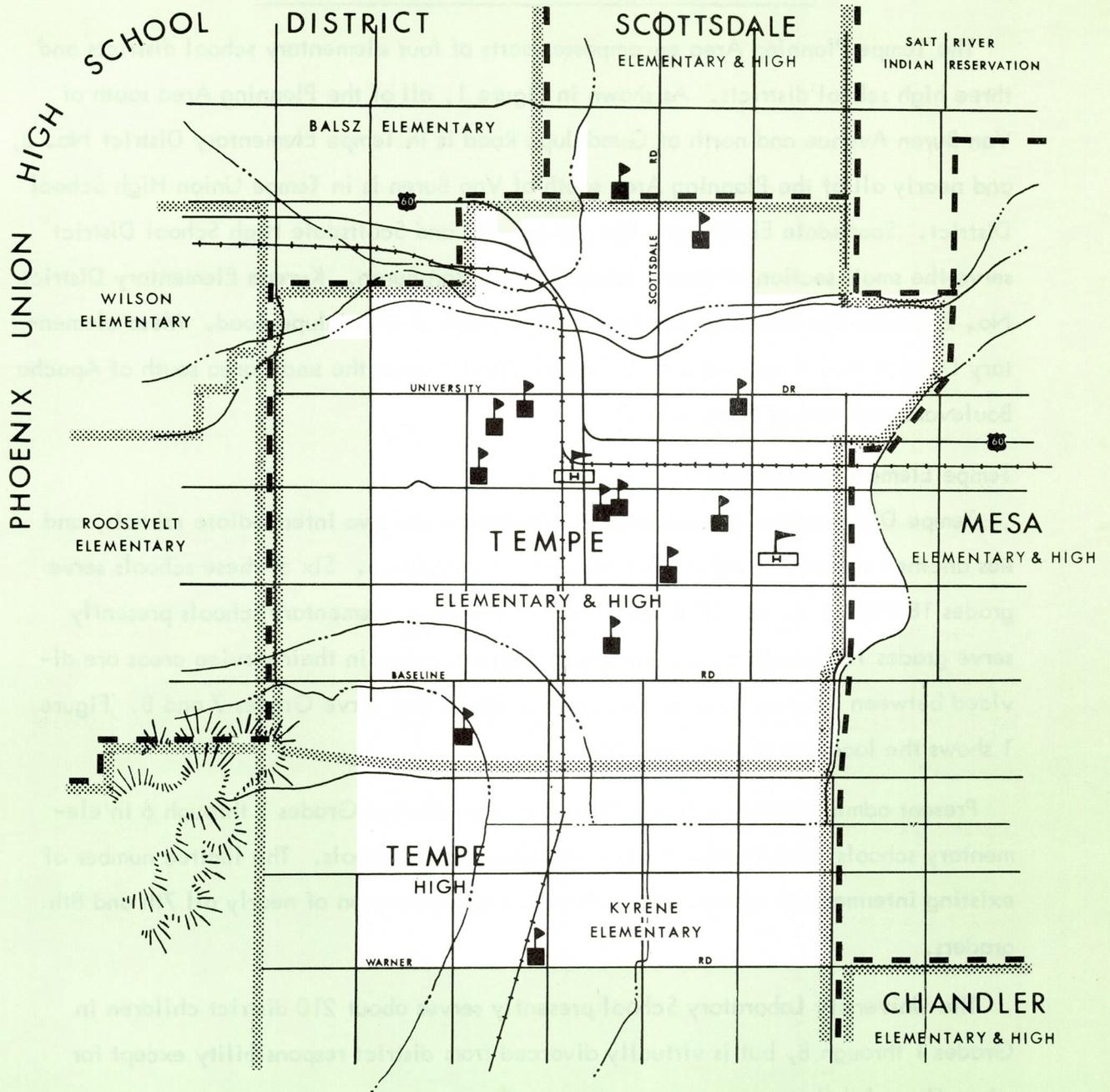
Tempe District No. 3 operates nine elementary and two intermediate schools, and has another elementary school (Evans) under construction. Six of these schools serve grades 1B through 6, as will Evans School. The other elementary schools presently serve grades 1B through 5, and 6th grade pupils residing in their service areas are divided between the two intermediate schools which also serve Grades 7 and 8. Figure 1 shows the location of these schools.

Present administrative policy calls for accommodating Grades 1 through 6 in elementary schools, and Grades 7 and 8 in intermediate schools. The limited number of existing intermediate schools necessitates bus transportation of nearly all 7th and 8th graders.

The University Laboratory School presently serves about 210 district children in Grades 1 through 8, but is virtually divorced from district responsibility except for minor financial ties.

Facilities or arrangements are provided for training mentally retarded children. Sixty-two of these elementary-age children are considered "educatable" and are taught in district schools, while 21 "trainable" children are sent to Perry Institute in Phoenix.

Figure 1  
**SCHOOL DISTRICTS**  
 TEMPE PLANNING AREA



**LEGEND**

-  ELEMENTARY SCHOOL
-  HIGH SCHOOL
-  ELEMENTARY SCHOOL DISTRICT
-  HIGH SCHOOL DISTRICT

TEMPE PLANNING AND ZONING COMMISSION  
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The preparation of this map was financially aided through a Federal grant from the Urban Renewal Administration of the Department of Housing and Urban Development under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

The District's administrative center is located on Rural Road north of Southern Avenue. A transportation and maintenance center for storage and maintenance of school buses, equipment and supplies is presently under construction on a 10-acre site at 56th Street and University Drive.

Data concerning existing school plants are shown in Figures 2 and 3. Several of the older schools are situated on major arterial streets, resulting in exposure of children to serious hazards while walking along or crossing major traffic arteries, and restriction of the normal movement of high-volume traffic. The accessibility of several existing schools is restricted by adjoining undeveloped land.

In general, off-street parking space is adequate for staff use but inadequate for visitors and special events. Landscaping is minimal and evidences a general lack of design and character. Playground space is ample in all cases and play equipment is fairly adequate though poorly located and arranged in terms of maximum use and function.

Broadmore, Holdeman, Mitchell and Ritter Schools are presently operating at or very near capacity, based on 30 pupils per classroom. Guadalupe, Rural, Thew and McKemy Schools are presently overloaded, while Laird, Meyer and Gilliland Schools could accommodate more pupils.

#### Kyrene Elementary District No. 28

Kyrene School, located at Warner and Kyrene Roads, is a consolidated rural school containing 25 classrooms and currently serving about 570 students in Grades 1 through 8. The very small number of children residing in that southern most part of the Tempe Planning Area attend Kyrene School.

#### Scottsdale Elementary and High School Districts

Throughout the 1964-65 school year, Scottsdale Elementary District served nearly 18,000 students in 18 school plants. Concentrated residential development in the district has developed very rapidly, contributing to a policy of constructing extremely large elementary schools. Supai School, at Roosevelt and 67th Street in Scottsdale,

Figure 2  
SCHOOL OPERATIONAL DATA, 1964-65  
 Tempe Planning Area

School	Grades Served	No. Classrms.	No. <sup>1/</sup> Pupils	No. Teachers	Pupils/Teacher Average	Pupils per Room
<u>Tempe Elem. Dist. 3</u>						
Broadmor Elem.	1B-5	23	686	24.5	28.0:1	29.8
Guadalupe Elem.	1B-6	27	721	27	26.7:1	26.7
Holdeman Elem.	1B-5	26	761	26.5	28.7:1	29.3
Laird Elem.	1B-6	17	429	15.5	27.6:1	25.2
Meyer Elem.	1B-6	19	418	16.5	27.0:1	22.0
Mitchell Elem.	1B-5	29	857	29	29.5:1	29.6
Ritter Elem.	1B-6	20	602	20.5	29.3:1	30.1
Rural Elem.	1B-6	28	903	29	31.1:1	32.3
Thew Elem.	1B-6	24	731	25.5	28.6:1	30.5
Gilliland Intermed.	7-8	41	957	33	29.0:1	23.3
McKemy Intermed.	7-8	42	1036	35	29.6:1	24.7
<u>Scottsdale Elem. Dist. 48</u>						
Supai Elem.	K-8	46	1315	43	30.6:1	28.6
<u>Kyrene Elem. Dist. 28</u>						
Kyrene Elem.	1B-8	25	571	20	28.0:1	22.8
<u>Tempe Union H.S. Dist.</u>						
Tempe Union H.S.	9-12	66	1858	82	24.0:1	28.2
McClintock H.S.	9-10	38	676	52	20.8:1	17.8
<u>Parochial Schools</u>						
Mt. Carmel Catholic	1-8	15	650	16	40.0:1	43.3
Seventh Day Adventist	1-8	3	65	3	22.0:1	21.7

1/ End of 1964-65 School Year  
 Source: School District Records

Figure 3  
SCHOOL PLANT DATA, 1964-65

Tempe Planning Area

School	Site Acrg. <sup>1/</sup>	No. Class Rooms <sup>1/</sup>	Year Built <sup>1/</sup>	Condition <sup>1/</sup>	Capacity @ 30/rm. <sup>1/</sup>	Accessibility <sup>2/</sup>		Off Street Parking <sup>2/</sup>
						Vehicles	Pedestrian	
<u>Tempe Elem. Dist. 3:</u>								
Broadmore Elem.	10	23	1955	Good	690	Good	Good	Inadequate
Guadalupe Elem.	10.5	27	1929	Fair	810	Good	Adequate	Inadequate
Holdeman Elem.	10	26	62-65	Good	780	Good	Poor	Inadequate
Laird Elem.	10	17	1964	Good	510	Poor	Poor	Adequate
Meyer Elem.	10.5	19	1965	Good	570	Adequate	Adequate	Minimal
Mitchell Elem.	10	29	1952	Good	870	Good	Good	Inadequate
Ritter Elem.	10	20	1950	Good	600	Good	Good	Inadequate
Rural Elem.	10	28	1962	Good	840	Good	Hazardous	Minimal
Thew Elem.	8	24	1958	Good	720	Good	Good	Adequate
Evans Elem.	5+	--	-----	-----	-----	-----	-----	-----
Gilliland Intermed.	15	41	1963	Good	1230	Adequate	Poor	Inadequate
McKemy Intermed.	15	42	1958	Good	1260	Good	Good	Adequate
<u>Scottsdale Elem. Dist. 48:</u>								
Supai Elem.	20	46	59-61	Good	1380	Good	Good	Adequate
<u>Kyrene Elem. Dist. 28:</u>								
Kyrene Elem.	10	25	20-65	Good	750	Good	Poor	Adequate
<u>Tempe Union H.S. Dist.:</u>								
Tempe Union H.S.	39	66	1953	Good	1980	Good	Good	Adequate
McClintock H.S.	40	38	1964	Good	1140	Adequate	Adequate	Adequate
<u>Parochial Schools:</u>								
Mt. Carmel Catholic	10	15	57-59	Good	450	-----	-----	-----
Seventh-day Adventist	2	3	1965	Good	90	-----	-----	-----

Source: 1/ School District Records

2/ VCA Survey

contains 46 classrooms on a 20-acre site and accommodates 1320 students in Grades K through 8. At the end of the 65-66 school year, about half of Supai School's students lived north of Van Buren Avenue in Tempe. High School students from this area attend Coronado High School at Oak and 76th Streets in Scottsdale.

#### Mesa Elementary and High School Districts

Mesa Elementary and High School Districts have been combined under unified administration, enabling a 6-3-3 grade organization. The portion of the Tempe Planning Area served by the Mesa District is primarily agricultural, producing about 20 students who are bussed to Alma Elementary School, West Mesa Junior High and Westwood High School.

#### Tempe Union High School District

Tempe High School District covers an area of 163.5 square miles, serving virtually all of the Tempe Planning Area as well as an extensive rural area bounded on the north by the northerly boundary of Phoenix South Mountain Park, on the south by the Maricopa County line, on the east by Price Road (extended), and on the west by 19th Avenue (extended).

The district operates two high schools, Tempe Union and McClintock. At year-end, 1964-65, Tempe Union High School, located at Broadway and Mill Avenue, had an enrollment of about 1,865 students in Grades 9 through 12, while McClintock High School served about 790 in Grades 9 and 10.

Both high schools are well located with excellent accessibility and adequate off-street parking space. Bus transportation is available for all students living more than 1 and 1/2 miles from Tempe Union and for all McClintock students. Annual bus transportation costs presently approximate \$28,500. About half of the Tempe Union students walk to school, while 32% use private transportation. Only 8% of McClintock students walk to school, while 20% use private transportation.

#### Parochial and Private Schools

Approximately 8% of Planning Area elementary students attend parochial schools.

Mt. Carmel Catholic School accommodates about 650 elementary students in 15 classrooms on a 10-acre site on Rural Road south of Broadway. The school is overcrowded and turns away about 30% of students applying for admission. Investigation disclosed no plans for expansion of Mt. Carmel or for construction of new catholic schools in the Planning Area.

A Seventh Day Adventists school, located at 17th Place and Roosevelt Street, serves students from the Mesa-Tempe area, accommodating about 65 pupils in Grades 1 through 8 in three classrooms. Epiphany Episcopal School, located south on Broadway on Price Road, serves a very small number of students in Grades 1 through 6.

The Arizona State Tuberculosis Hospital conducts general education classes for children confined to the hospital. Cook Christian Training School, a multi-denominational missionary school, accepts a very limited number of students who have not completed high school elsewhere.

PART III  
SCHOOL PLANNING PRINCIPLES AND STANDARDS  
A. PRINCIPLES

Equality

The principle of equality is basic to every public endeavor. All citizens are entitled to equal treatment by government, whether it be law enforcement, or availability of educational, recreational or cultural opportunity. Every child, youth and adult is entitled to equal opportunity regardless of economic or social status, or place of residence.

When applied to the practical problem of deciding where, how and when to improve or build schools, parks and playgrounds, this principal of equality has important and far-reaching implications in the older sections of every rapidly growing community. Educational as well as physical plant standards are in a constant state of advancement, and schools which were built twenty or even ten years ago do not measure up to current standards. As a result, it may take many years to catch up with current inequalities among school service areas.

The location of some existing school plants, together with the basic structure of Tempe's central core, result in certain basic inequalities which may never be possible to overcome:

1. Excessive walking distances to schools and playgrounds;
2. Excessive hazards connected with crossing major traffic streets; and
3. Continued difficulty in developing neighborhood identity and spirit, and in focalizing activities of common interest.

Neighborhood Planning Principle

If all parts of the city are to be served equally, definite service area boundaries must be established as a base for facility planning. Year-to-year changes in service area boundaries place an intolerable burden on both administrators and citizens. Sites, buildings and equipment cannot be planned without knowledge

of the distribution, characteristics and density of the population. With this knowledge, decisions as to size and type of facility can be based upon the number and characteristics of people living within service area boundaries.

Planners consider the residential neighborhood the basic physical and social service unit of the urban community. Neighborhoods may vary widely in size since their geographic limits are determined by the location of rivers, railroads, freeways, arterial streets, commercial and industrial districts, and similar physical features. They also vary in terms of residential density, type and value of housing, and median family income. Nevertheless, a system of small service areas called "neighborhoods" provides a practical base for planning elementary schools and recreation areas.

Ideally, the neighborhood embraces a single elementary school service area. The elementary school, together with neighborhood park and playground, should be centrally located where it can be reached conveniently and safely by children without crossing major streets and where it can become the focal point of neighborhood social, cultural and recreational activities for all age groups.

The following four-level planning structure is proposed for the Tempe Planning Area:

1. The Neighborhood Unit -- an area from one-half to one square mile in size, occupied by 3,000 to 4,500 persons and containing a centrally-located elementary school, wherein service to elementary school age children receives primary attention.
2. The District Unit -- an area comprising three or more contiguous neighborhoods, containing an intermediate school, wherein primary attention is given to serving children from ten to fourteen years of age.
3. The Community Unit -- encompassing the area required to support a senior high school, wherein services are focussed on the adolescent group, ages 12 through 17.
4. The Entire City -- wherein attention is given to those services which are unique, expensive or otherwise special, and which cannot be provided at the lower levels of service.

### Other Basic Principles

All public school sites should have a specific function to perform, and should be planned, designed, located, constructed, maintained and operated with that function foremost in mind.

The location of all schools should be central to the population to be served, and adequate in size for the intended function. If a choice must be made, good location and not size should be the ruling principle, except that certain size minimums must be observed.

All public sites, including schools, should be designed, equipped and operated for maximum multi-use on a year-round basis. To the extent feasible, school, recreation and other public sites serving the same age-group should be of integrated design, or at least located adjacent to one another.

Schools, as well as other public sites, should be landscaped for beauty, function, ease of supervision and police surveillance, sound and light control, and for positive effect on neighboring private properties. Buildings should be designed to enhance the neighborhood and should be attractive from all sides. Each site should be identified by an appropriate sign giving information about the school and its program.

## B. STANDARDS

Planning standards are always a compromise between measurement of need, measurement of desire and measurement of what can be afforded. The following standards are based upon recommendations by national authorities, local school district policy, and certain legal and cost limitations.

### Grade Organization

The grade organization most widely favored by national school authorities is the 6-3-3 system, wherein total enrollment is divided among elementary schools (Grades 1-6), junior high schools (Grades 7-9) and senior high schools (Grades 10-12).

However, Arizona state law places responsibility for education of children in Grades 1 through 8 with elementary school districts, and that for Grades 9 through 12 with high school districts, making no provision for an intermediate level. Where elementary and high school district boundaries are coterminous, as in Mesa and Tucson, it has proven practical to operate a 6-3-3 system. In Tempe and other areas where district boundaries are not coterminous, the 6-3-3 system is considered impossible of achievement under existing legislation.

#### Class Size, Building Size and Enrollment Level

"There is no hard and fast rule as to the ideal size for elementary schools. It is dependent on a number of factors, all of which are not present in any one situation. It is the general opinion of administrators, supervisors and teachers that an elementary school which is too large or too small can impair the effectiveness of the educational program."<sup>1/</sup> In excessively large elementary schools, demands placed on such costly general-use facilities as auditoriums, gymnasiums and cafeterias, are so great that their value to the student declines sharply. School plant planners also believe that children attending excessively large schools are subject to unnecessary and undesirable social and psychological pressures.

The National Council on Schoolhouse Construction agrees with recommendations of the Elementary School Principals of the National Education Association, which states: "The interest of the child can best be served when the maximum class size is twenty-five, and the size of the individual school is limited to 500."<sup>2/</sup> The Committee for Economic Development states that: "A grade school needs at least one teacher for each level. For kindergarten to 6th grade this implies over 200 pupils, if the present average elementary school class size of 30 pupils per classroom teacher is used as a standard. Important educational advantages and operating

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<sup>1/</sup> National Council on Schoolhouse Construction, Elementary School Plant Planning, 1958; and Guide for Planning School Plants, 1958.

<sup>2/</sup> National Council on Schoolhouse Construction, op. cit.

economies appear to accrue until a school is three times this size."<sup>1/</sup>

In respect to optimum size of high schools, the Committee for Economic Development states: "A senior high school with a graduating class of less than 100 is too small to offer a sufficiently diversified curriculum to meet the needs of its students . . . in a four-year senior high school (this would imply a total enrollment of) considerable more than 600. Again, important advantages accrue from a larger enrollment."<sup>1/</sup> How much larger? Guides are considerably less definitive in terms of desirable maximums. A general consensus of school authorities favors a senior high school enrollment ranging from 1500 to 2000 students.

Based on a compromise of educational, economic, and administrative objectives, it is recommended that Tempe's elementary schools range from a minimum of 18 classrooms to a maximum of 24. At an average of 25 pupils per classroom, individual school enrollment would range between 450 and 600, while at an average loading of 30, enrollment would range between 540 and 720. This degree of flexibility is desirable and necessary in order to arrange a comprehensive school service plan which recognizes the advantages of neighborhood unity and convenience, the necessity of holding safety hazards to a minimum, and the limitations imposed by such physical barriers as railroads, freeways, major traffic arteries and topographic features. It is further recommended that high school enrollments range between 1500 and 2200, with 1800 considered most desirable.

### Site Size

Standards for size of school sites are directly related to the uses to be made of the site, particularly the area to be devoted to outdoor recreation. In 1958, 31 states were recommending to their school boards that elementary school sites total five acres plus one acre per 100 students of ultimate enrollment, with a minimum area of ten acres.<sup>2/</sup>

<sup>1/</sup> Committee on Economic Development, Paying for Better Public Schools, 1959

<sup>2/</sup> U.S. Department of Health, Education & Welfare, School Sites - Selection, Development and Utilization.

Upward trends in school site acreage has been dictated by the greater land area required for campus-type architecture, provision of sufficient off-street parking, increased emphasis on outdoor classroom and physical fitness activities, and increased community use of buildings and grounds. Current standards reflect the general acceptance of the advantages -- social, recreational and educational -- of developing the elementary school as a major focal point of neighborhood activities.

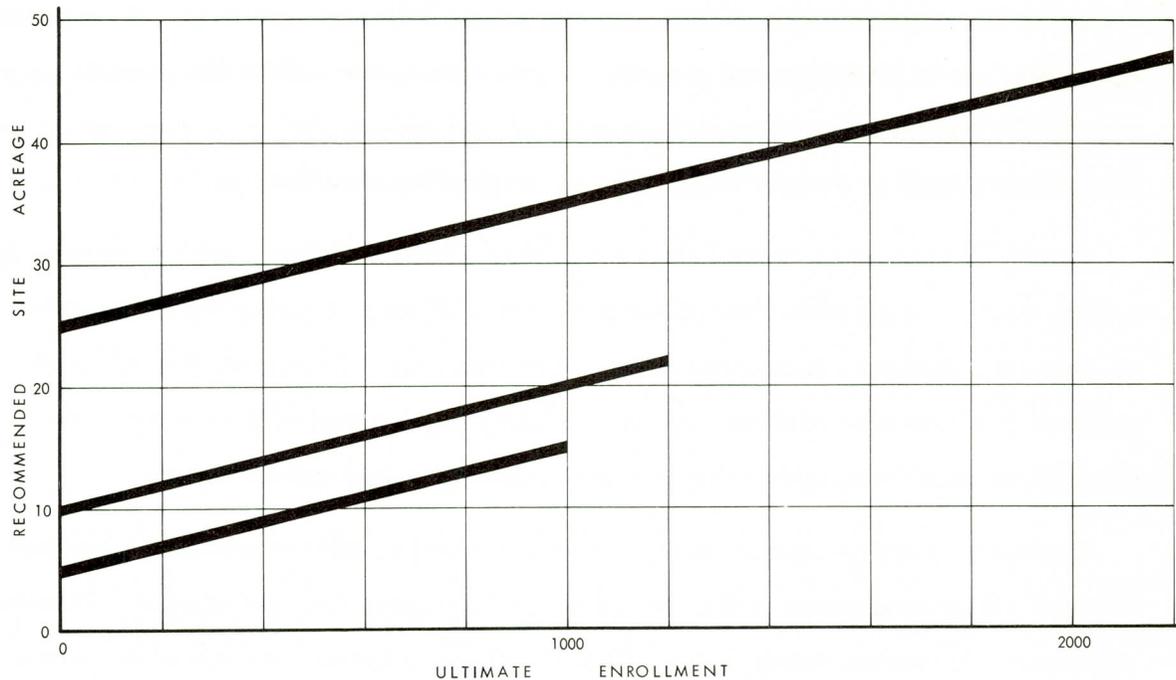
A study of elementary school sites shows that school buildings, drives, parking and setting rarely occupy more than about three acres of land, leaving the balance for playground, physical educational and recreational uses. Therefore, the national standard of a ten-acre minimum site area clearly implies that 40% or more of the site will be used for neighborhood recreation during out-of-school hours.

Another frequently-used elementary school standard calls for provision of school-oriented playground space at the rate of about 200 square feet per student. Translated into acres, this means nearly 2 and 1/2 acres of space for outdoor school activities alone for a school serving 500 students.

Generally accepted standards recommend a minimum of 10 acres plus an additional acre per 100 junior high students and 25 acres plus one acre per 100 students for senior high schools. The National Council on Schoolhouse Construction suggests a minimum of 20 acres for junior high and 30 acres for senior high, plus an additional acre per 100 ultimate enrollment. Junior high school sites of this size are expected to satisfy a substantial portion of surrounding community recreation needs through free out-of-school use of space and facilities -- particularly athletic and playfield facilities. Similarly, the more highly developed athletic facilities provided senior high schools should be readily available by arrangement for major athletic and other assembly events of community-wide significance.

Figure 4 provides a guide to determining site acreage for elementary, intermediate and high schools, based on the foregoing standards.

Figure 4  
RECOMMENDED SIZE OF SCHOOL SITES



### Location

Schools are a major user of land in the community and their location influences the community far beyond their educational function. Selection of a school site is a technical problem and requires the cooperative efforts of school officials, architect, landscape architect, recreational consultant and legal consultant. Some of the factors which should be considered are:

1. Use of site for buildings, settings, parking, playground facilities and community service.
2. Type of school -- elementary, intermediate or high school.
3. Ultimate number of prospective students to be accommodated.
4. Attendance area to be serviced.
5. Present population and population trends.
6. Availability of adequate sites near service area center.
7. Physical feasibility of the site from architectural and engineering stand-points, as well as its adaptability for recreational and community use.

8. Legal implications in acquiring title.
9. Site costs, including existing structures to be moved or razed, site improvements, and street and utility improvements.
10. Relationship to such other community facilities as parks, recreation centers, libraries, health centers, streets and highways.
11. Hazards and undesirable environments, including railroads, main highways, industrial noise and odors, bulk fuel storage, airports, taverns, rivers, gravel pits, fire stations, and industrial zoning.
12. Relationship to such public services as water, gas, electricity, fire protection, transportation and sewage disposal.

### Accessibility

Elementary schools should be located within walking distance for every student. Proper spacing of urban schools is based upon the following maximum walking distances from home to school: Elementary - 1/2 to 3/4 mile; Junior High - 1 to 1 and 1/2 miles; and Senior High - 1 and 1/2 to 2 miles. Elementary and intermediate students should not be forced to walk or bicycle along major traffic routes and should be afforded special protection at all major street crossings. All access to schools should be by way of public streets with sidewalks, never by alleys, and rarely by crosswalks.

The school site should have access from two streets, preferably not intersecting streets. Sites at street intersections and those with streets abutting on three sides function no better while involving greater street improvement costs and greater loss of site area to proper setback. Sole access from a cul-de-sac street is wholly unsatisfactory.

Accessibility as well as size of school sites is often directly related to the timing of site acquisition. When the neighborhood is more than half built-up, it is often difficult to locate a site which has satisfactory location, accessibility and size, whereupon the school district may be forced to accept one which is deficient in one or more respects. In Tempe, contiguous residential platting and development

without basic coordination of street patterns or attention to general internal circulation has created a condition wherein the accessibility of several elementary schools is permanently deficient.

Students living on certain lots immediately adjacent to Ritter School are forced to walk nearly one-half mile to the school via the nearest public access route. All access to Gilliland School from the east is by two pedestrian crosswalks between adjacent residential properties -- otherwise, students would be forced to walk through alleys or completely around to the single street entrance on College Avenue. Whereas the crosswalks provide at least a partial solution to the access problem, they place a severe burden on adjoining homeowners and inevitably result in depreciation of property values.

#### Site Design and Development

School site development involves three kinds of areas which should be designed as integral and interrelated segments of the complete development: (1) building area, (2) service areas, and (3) recreational and community use areas. Principles of functional planning should be applied to the design of each area and facility.

Preliminary site studies leading to a land use plan should coordinate in proper scale the location and orientation of buildings, locations of walks, drives, parking and service areas, and general layout of recreational and community facilities, both active and passive. Within the framework of the land use plan, the architect, landscape architect, engineer and recreation designer then proceed with preparation of final design plans, construction drawings and specifications.

Buildings should be set well back from the street to avoid undue traffic noise and odors, to lessen the danger of children spilling out onto the street, and to eliminate the necessity of installing unsightly boundary fences for their protection. Activity areas which require constant supervision should be located near a central control point, and areas having close activity relationships, or used by the same age groups, should be placed close to one another. Facilities involving spectators should be close to parking areas.

Every effort should be taken to plan recreation areas and facilities for maximum safety. Apparatus, playfields and parking areas should be laid out to avoid lines of foot traffic and facilitate traffic control.

Points of entry to the building area should be limited to facilitate traffic control. Walks and drives should follow the most direct and natural routes consistent with good alignment. Drives should not serve as walk ways -- the two should be effectively separated and intersections avoided wherever possible. Where bus transportation is necessary, careful consideration must be given to safe and convenient bus-loading space on the site.

Parking space should be provided for: (1) Teachers, school employees and students; (2) Parents, salesmen and other visitors; and (3) Large spectator groups attending school or community activities. Parking for the first two groups should be well separated from play areas, and located where it will not detract from street views of the building facade. Spectator parking should be located conveniently in relation to the activities it serves, and, if divided into several smaller areas, may be used as hard-surfaced play areas during school hours.

Development units most commonly used for community purposes include: auditorium, gymnasium, cafeteria, health service, library, locker rooms, recreation fields and multi-purpose room. These units should be situated where they are conveniently accessible from the outside as well as from the rest of the school. They should be planned so they may be used independently of the rest of the building, an objective involving closing off access to other parts, providing toilets and telephones for public use, and zoning of heating and cooling systems. Playground equipment storage should be situated near play areas and directly accessible from the outside. Drinking fountains and toilet facilities should be accessible to the playground for use during out-of-school hours.

Landscape of school grounds should be harmonious with the character and use of the facilities. Beautiful surroundings are important in developing civic pride and in the

child's attitude toward the educational program. Plantings should be restricted to trees, shrubs and evergreens of sturdy species, should be informal in character, and place emphasis on scale and shade. If the budget is limited, trees and lawns should be established first. Playground areas should not be completely screened from adjacent streets to simplify policing and present an attractive appearance to passersby and neighbors. Site boundaries abutting residential properties should be fenced and screen planted to prevent encroachment and lessen disturbance of neighbors, and areas designed for intensive, active play should be set well back from streets and abutting residential properties.

## SUMMARY OF SCHOOL PLANNING STANDARDS

For long-range school planning purposes, the following basic standards are recommended:

<u>Grade Organization:</u>	6-2-4
<u>Class Size:</u>	Elementary - maximum, 30; desirable, 25. Intermediate - maximum, 28; desirable 25. High School - maximum, 25.
<u>School Enrollment:</u>	Elementary - minimum, 200 (construction start); desirable, 450-600; maximum, 720. Intermediate - same as elementary. High School - minimum, about 600 (construction start); desirable, 1800-2000; maximum, 2200.
<u>Building Size:</u>	Elementary - desirable, 18-20 classrooms; maximum, 24 classrooms.
<u>Distance, Home to School:</u>	Elementary - desirable, 1/2 mile or less; maximum, 3/4 mile. Intermediate - desirable, 1 mile or less; maximum, 1 and 1/2 miles.
<u>School Site Acreage:</u>	Elementary - 5 acres, plus 1 acre per 100 students, with 10-acre minimum. Intermediate - 10 acres, plus 1 acre per 100 students, with 15-acre minimum. High School - 25 acres, plus 1 acre per 100 students.
<u>Site Selection:</u>	Elementary and Intermediate: Access - from two streets, preferably not intersecting streets, one should be collector street. Adjacent Land Use - non-commercial. High Schools: Access - from two or more streets, one may be major arterial. All Schools: Off-street Parking - to accomodate all teachers, employees, student drivers, visitors, and most spectators.

PART IV  
FUTURE SCHOOL NEEDS

Enrollment Growth and Trends

In general, enrollment growth of Tempe Elementary and High School Districts has directly reflected the city's overall population growth. In 1960, elementary school enrollment equalled 15.8% of Tempe's total population,<sup>1/</sup> while the 14-17 age group enrolled in public schools equalled 4.8% of the total population. By 1965, elementary school enrollment had dropped to 15.0% while high school enrollment had risen to 5.3%. As a general rule of thumb, elementary school enrollment may be assumed to equal about 15% and high school enrollment about 5% of total area population.

Figures 5 and 6 show enrollment growth for the period 1960-65, while Figure 7 shows projections by other consultants.

Figure 5  
ENROLLMENT GROWTH, 1959-65  
Tempe Planning Area

Date	Tempe <sup>1/</sup> Elem.	Kyrene <sup>1/</sup> Elem.	Scottsdale <sup>2/</sup> Supai Elem.	Tempe <sup>1/</sup> High
1959-60	4,004	393	942	1,207
1960-61	4,456	433	1,122	1,366
1961-62	5,032	429	1,187	1,575
1962-63	5,632	455	1,253	1,822
1963-64	6,399	470	1,252	2,147
1964-65	6,910	499	1,252	2,435

Source: 1/ Annual Statistical Report of Maricopa County Public Schools, Office of Maricopa County School Superintendent, 1965.

2/ Supai Elementary School Administration Office, 1966.

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1/ Van Cleve Associates, Tempe Planning Report No. 1, POPULATION, 1965; Figure 18, P. 27.

FIGURE 6  
SCHOOL ENROLLMENT GROWTH  
Tempe Planning Area

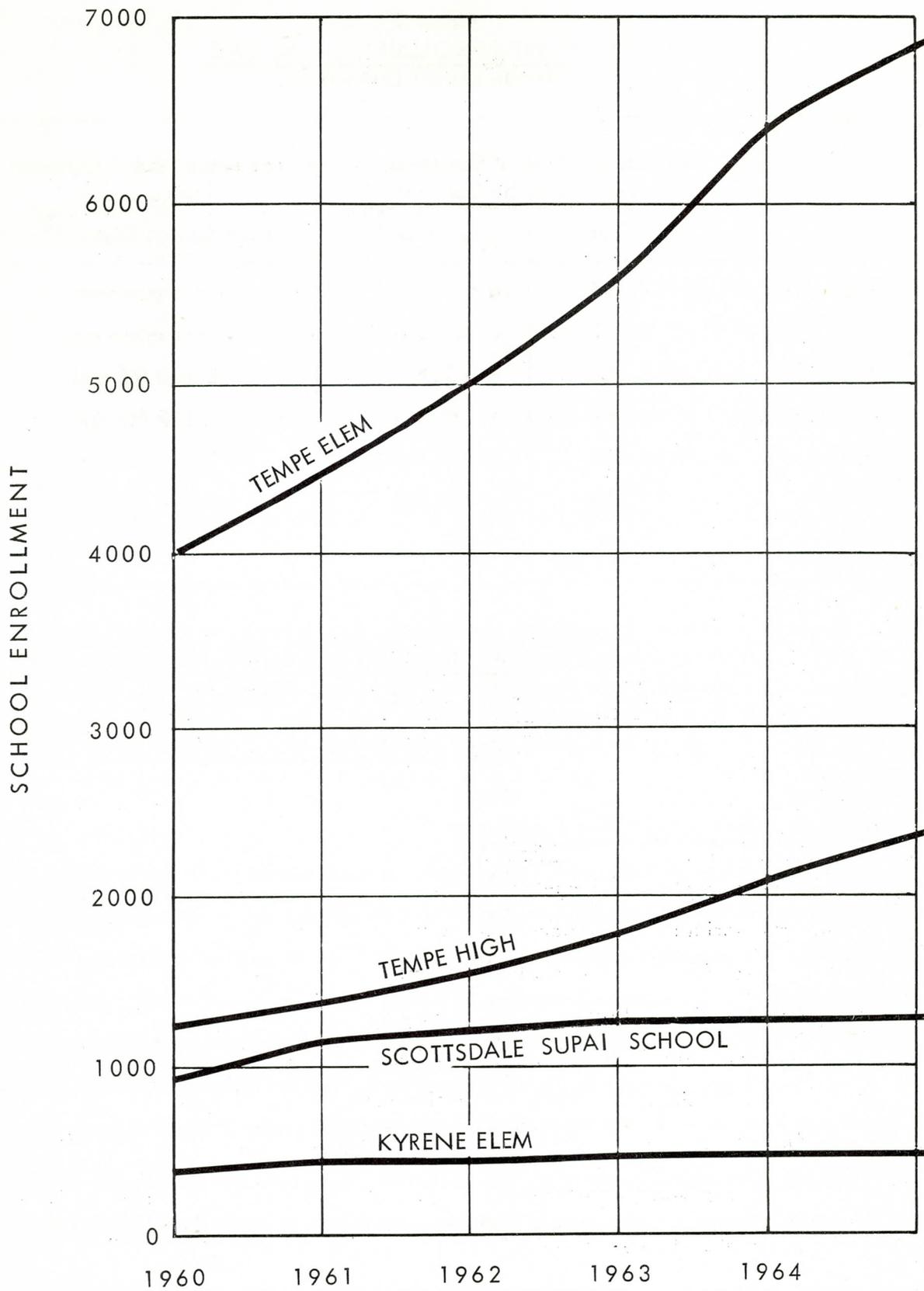


Figure 7  
PROJECTED ENROLLMENT, 1964-1970  
 Tempe School Districts

Year	Projected Year-End Enrollment Tempe Elementary School Dist. 3		Projected Peak Enrollment Tempe Union High School District <sup>3/</sup>
	A.E.C. 1963 <sup>1/</sup>	Cox, 1964 <sup>2/</sup>	
1964	7,154	-----	-----
1965	7,973	7,275	-----
1966	8,854	7,931	2,830 (65-66)
1967	9,798	8,664	3,122 (66-67)
1968	10,803	9,398	3,499 (67-68)
1969	11,872	10,190	3,924 (68-69)
1970	13,002	11,001	4,361 (69-70)

- Source: 1/ Arizona Educational Consultants, Site Survey, Preliminary Report, 1963  
 2/ Frank Edmond Cox, The Development of a Prediction Equation for Pupil Enrollment in Tempe Elementary School District No. 3, 1964.  
 3/ Bureau of Educational Research and Services, College of Education, Arizona State University, Student Population and Site Data, 1964.

#### Methods of Estimating Future Enrollment

The projection of long-term future needs for educational facilities is subject to all the variables and inaccuracies that affect the projection of future population. Vagaries of population growth, and particularly the difficulty of projecting levels, characteristics and rates in a community subject to heavy in-migration, seriously affect the reliability of long-range school enrollment forecasts. This is especially unfortunate since changes in population numbers or characteristics affect school enrollment more directly and immediately than any other type of community service.

While short-term estimates are more reliable, they lack the perspective essential in systems planning. Long-range estimates, on the other hand, benefit from the law

Figure 8  
METHODS FOR PROJECTING FUTURE SCHOOL NEEDS  
 Tempe Planning Area

Method	Advantages and Disadvantages
1. Projection of Current Child Population	<p><u>Advantages:</u> (a) Accurately based on 100% enumeration of previous census; (b) Based on accurate age composition of population in previous census <u>plus</u> well-tested "survival" rates; Provides detailed accounting for <u>all</u> children at time of census.</p> <p><u>Disadvantages:</u> (a) Fails to account for effects of migration and new growth, but furnishes the base for such estimates; (b) Fails to account for changes in age composition.</p>
2. Projection of Existing Enrollments	<p><u>Advantages:</u> (a) Based on actual experience related to latest enrollment figures and "attrition" rates; (b) Easily up-dated annually; (c) Good for year-to-year predictions.</p> <p><u>Disadvantages:</u> (a) Depends heavily on <u>rate</u>, which may fluctuate widely in areas having high mobility factors; (b) Fails to account for net migration, mobility, changes in service areas, new population growth, private school attendance, special education needs, and non-attendance; (c) Difficult to adjust estimates for urban areas to apply to entire school districts.</p>
3. Estimates of Student Population based on Age and Household Composition and Population Projections	<p><u>Advantages:</u> (a) Based on accurate age and household composition from census; (b) Can be applied to population estimates for any given date, accounting for growth, migration, etc.; (c) Accounts for <u>all</u> children; (d) Good for long-term use and also for short-term use when combined with Method 2.</p> <p><u>Disadvantages:</u> (a) Affected by changes in family size and age compositions over projection period; (b) Fails to account for differences between age cohort and grade enrollment; (c) Difficult to adjust estimates for urban areas so as to apply to entire school districts.</p>
SUMMARY	<p>Method No. 3 provides maximum flexibility consistent with accuracy and is most useful for general planning purposes. Method No. 2 provides maximum accuracy on a year-to-year basis.</p>

of compensating error and absorb variations within the total system. Both short and long-range forecasts are essential in school planning, just as capital improvements budgets and capital improvements programs are essential in municipal financial planning. In either case, long-range forecasts must be re-evaluated periodically as conditions change.

Figure 8 outlines three commonly used methods of estimating future enrollment and notes the principal advantages and disadvantages of each method. The first two methods give insufficient consideration to the effects of in-migration, a major disadvantage in any area where in-migration will dominate future population growth. The third method, based on projected population levels and age and composition of households, is considered most appropriate for use in the Tempe Planning Area.

Average household composition data for Tempe will produce fairly reliable estimates of the total number of school-age children and the total number of schools required at any given projection date. However, the same data will not produce reliable estimates on a school-by-school basis due to wide variations in household size and presumably, age composition, among the various sections of the city. These variations were shown in Figure 16 of Planning Report No. 1, POPULATION. Family income level, type of housing unit, race, and educational level, are other factors influencing the number of school-age children residing or projected in any given section of the city.

Figure 9  
AGE GROUP FACTORS  
FOR ESTIMATING FUTURE CHILD POPULATION  
Tempe Planning Area

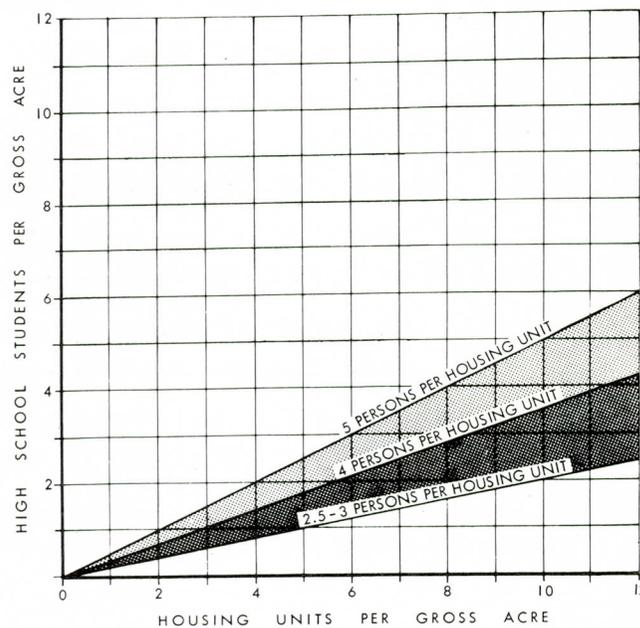
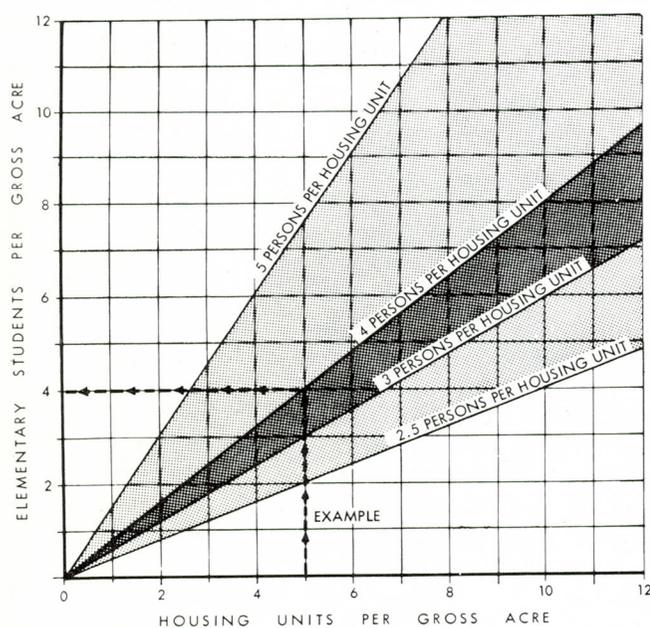
Grade	Persons per Household Unit	
	Single - Family Areas	Multi - Family Areas
Kindergarten	0.08	0.06
K thru 6	0.50	0.22
7 and 8	0.12	0.04
9 thru 12	0.20	0.12

Figure 9 shows recommended age group factors for use in long-range school planning.

### Estimating Future School Enrollment from Current Development Proposals

Figure 10 shows graphs developed as basic guides to estimating the ultimate future child population which will be housed in proposed residential developments. These graphs apply typical household sized to typical development densities to produce estimates of the number of elementary- and high school-age children per gross acre of proposed development. For maximum accuracy on a continuing basis, the graphs must be up-dated periodically as changes in land use and population occur and new data becomes available.

Figure 10  
GUIDE TO ESTIMATING FUTURE SCHOOL AGE  
POPULATION OF RESIDENTIAL AREAS



Source: VCA estimates developed from census and land use survey data.

Figure 11 shows the process of estimating future population and school loads that will ultimately be produced by proposed residential development. The procedure involves the use of: (1) data measured directly from the proposed plat, (2) certain standard factors, and (3) certain judgment factors determined through analysis and estimation of household size and age composition produced in the specific development. Gross acreage, non-residential acreage, and dwellings per net acre are measured directly from the plat. Public street rights-of-way normally reduce gross acreage by about 30%, and a 90% ultimate occupancy ratio has proven a practical maximum for use in population estimating. Total persons, total elementary age children, and total high school age children per dwelling are data selected from Figure 9 for application to the proposed development, based upon analysis of its type, location and other characteristics.

Figure 11

PROCESS OF ESTIMATING FUTURE CHILD POPULATION  
IN PROPOSED RESIDENTIAL DEVELOPMENTS

1. GROSS ACREAGE minus 30% (Public R-O-W's) equals NET DEVELOPMENT ACREAGE.
2. NET DEVELOPMENT ACREAGE minus NON-RESIDENTIAL ACREAGE\* equals NET RESIDENTIAL ACREAGE.
3. NET RESIDENTIAL ACREAGE minus 10% (Vacant or undeveloped) equals OCCUPIED RESIDENTIAL ACREAGE.
4. OCCUPIED RESIDENTIAL ACREAGE multiplied by DWELLINGS PER NET ACRE\*\* equals OCCUPIED DWELLING UNITS.
5. OCCUPIED DWELLING UNITS multiplied by ELEMENTARY-AGE CHILDREN PER DWELLING UNIT equals TOTAL ELEMENTARY-AGE CHILDREN.
6. OCCUPIED DWELLING UNITS multiplied by HIGH SCHOOL-AGE CHILDREN PER DWELLING UNIT\*\*\* equals TOTAL HIGH SCHOOL-AGE CHILDREN.
7. OCCUPIED DWELLING UNITS multiplied by TOTAL PERSONS PER DWELLING UNIT\*\*\* equals TOTAL POPULATION.

\*Includes commercial and industrial, and schools, parks and other public spaces.

\*\*Determined from lot size or net density of apartment units.

\*\*\*From Figure 9.

Enrollment Projections to 1985

Figure 12 shows projections to 1985 of elementary and high school age persons in the Tempe Planning Area.

In using these projections to estimate future school enrollment, it will be necessary to apply current factors for drop-outs, handicapped and retarded children, and students attending private or parochial schools.

Figure 13 shows projected school requirements for 1975 and 1985.

Figure 12  
PROJECTED SCHOOL - AGE POPULATION, 1970-1985  
 Tempe Planning Area

Year	Total Pop.	Pers/Hshld.	No. D.U.'s	Child/D.U. Ratios		Elem-Age Pop.	H.S.-Age Pop.
				Elem.	H.S.		
1960	24,897	3.5	7,116	0.57	0.17	4,004	1,207
1965	45,919	3.2	14,300	0.48	0.17	6,910	2,435
1970	67,880	3.25	19,000	0.55	0.18	10,500	3,490
1975	96,615	3.3	25,600	0.58	0.19	14,950	4,830
1980	126,195	3.3	34,800	0.56	0.18	19,600	6,320
1985	157,485	3.4	43,000	0.57	0.18	24,400	7,880

Figure 13  
PROJECTED SCHOOL REQUIREMENTS, 1975-1985

Tempe Planning Area

District	Existing			Projected Needs					
	1965			1975			1985		
	Pupils	Rooms	Schools	Pupils <sup>1/</sup>	Rooms	Schools <sup>3/</sup>	Pupils <sup>1/</sup>	Rooms	Schools <sup>3/</sup>
Tempe Elem.	6,910	296	11	12,700	489 <sup>2/</sup>	20	20,700	755 <sup>2/</sup>	34
Kyrene Elem.	571	25	1	931	37 <sup>2/</sup>	2	3,701	128 <sup>2/</sup>	6
Scottsdale Elem.	1,315	46	1	1,320	46 <sup>2/</sup>	1	1,320	46 <sup>2/</sup>	1
Mesa Elem. & H.S.	20	0	0	690	-	1 <sup>5/</sup>	690	-	1 <sup>5/</sup>
Tempe High	2,435	66	2	4,830	161 <sup>4/</sup>	3	7,880	283 <sup>4/</sup>	5

1/ Based on 85% of total projected student population.

2/ Based on 30 pupils per homeroom.

3/ Based on 20 homerooms per school.

4/ Based on 25 pupils per homeroom.

5/ One elementary school in Tempe Planning Area; junior and senior high school students accommodated elsewhere in Mesa District.

PART V  
PRELIMINARY LONG-RANGE SCHOOL PLAN

General Recommendations

Figures 14 and 15 show the preliminary long-range plan for public elementary and high school facilities, respectively, in the Tempe Planning Area. This plan is based upon prior studies of population, land use, housing and residential environment and predicated on the desirability of developing residential neighborhoods within which the elementary school becomes the focal point of social, cultural and recreational activity as well as education. The plan provides a framework within which existing and future development can be evaluated under a variety of growth situations. While it is recognized that it may be several years before some of the planned school service areas will be sufficiently developed to warrant school construction, broad variations in timing, extent and direction of growth can be accommodated within the framework of this scheme.

The plan shows 49 elementary school neighborhoods, each of which will contain an estimated 400 to 600 Grade K-6 children when completely developed. It shows 10 intermediate school service areas and 5 high school service areas. The plan indicates a total ultimate need for 524 acres of land for elementary schools, 165 acres for intermediate, and 230 acres for high school sites.

In developed and partially-developed residential areas, planned school locations are necessarily rather definite due to limited availability of land. In these neighborhoods the planned location may not be as central as could be desired. In other areas recommended locations are only general, permitting greater selectivity of site according to established criteria.

Figure 16 shows the projected school population for each elementary and intermediate school service area shown on the plan, as well as the number of high school students resident in the Tempe Planning Area. These figures are based upon judgment of land use patterns and various assumptions as to family composition, and type and density of residential development. They present a general picture of land capacity

at the stage when neighborhood development will be virtually complete.

### Assumptions

In addition to conforming to accepted standards of service, site size and location, and building size, the preliminary plan is based upon the assumption that the grade organization current in each school district will be continued. It has also been assumed that kindergarten education will be provided in conjunction with all elementary schools.

The coordinated development of school and recreation facilities on contiguous sites offers advantages to both programs, to the surrounding residential neighborhood, and to the community-at-large. The natural overlapping of educational, recreation, social and cultural activities supports the premise that unified planning, development and use can affect significant savings in land and development costs as well as in administration, operation and maintenance. The plan proposes development of neighborhood park and playground facilities in combination with or adjacent to all elementary and intermediate school sites. This principle will be discussed more fully in a subsequent report on Parks and Recreation.

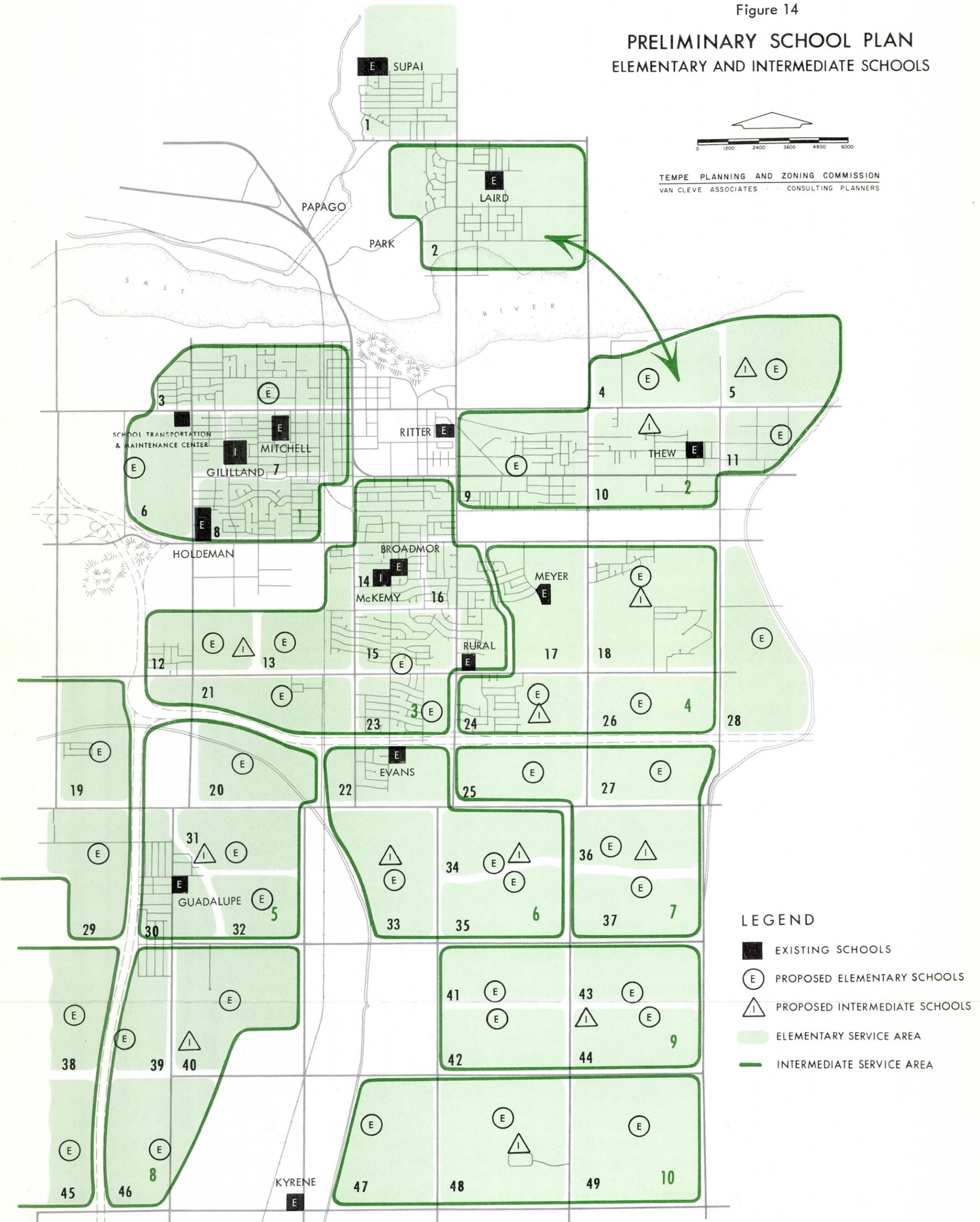
### Timing of Acquisition

Timing of school site acquisition involves consideration of several alternate approaches. Although obviously involving the lowest land cost, the wisdom of acquiring school sites far in advance of need is open to question. On the other hand, it is prohibitive to purchase and redevelop built-up property.

In actual practice it has usually proven advantageous to defer site acquisition until development of the individual school's service area is fairly predictable and neighborhood planning has progressed to the point where the location of collector streets can be established. Between the time that residential occupancy of the service area commences and the time when it reaches the level required to support a minimum size elementary school, bus transportation and some continual reassignment of students among schools will be necessary. However, this should always be regarded as a temporary

Figure 14

# PRELIMINARY SCHOOL PLAN ELEMENTARY AND INTERMEDIATE SCHOOLS

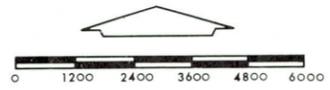


TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES · CONSULTING PLANNERS

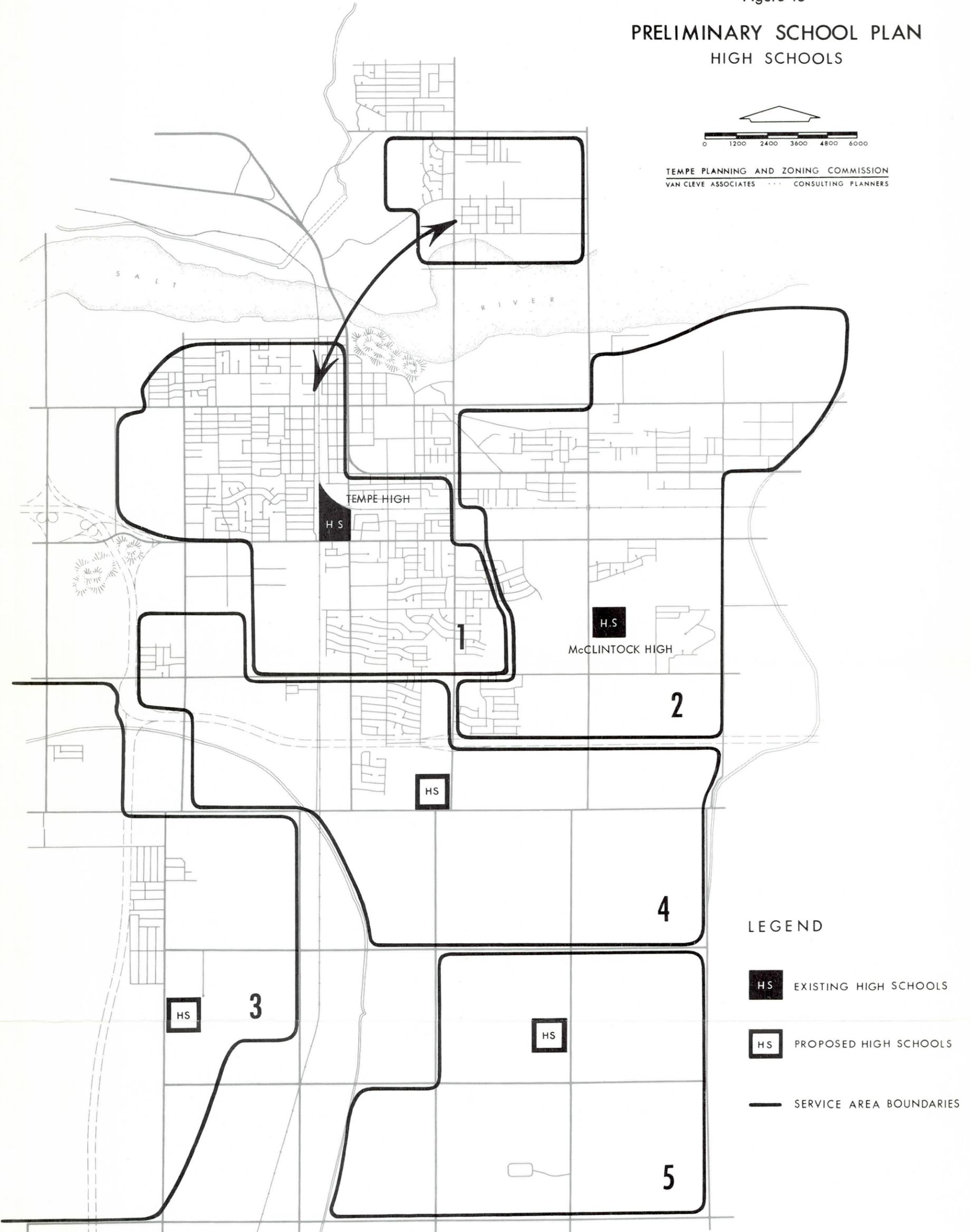
The preparation of this map was financially aided through a Federal grant from the Urban Renewal Administration of the Department of Housing and Urban Development under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

Figure 15

# PRELIMINARY SCHOOL PLAN HIGH SCHOOLS



TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES CONSULTING PLANNERS



The preparation of this map was financially aided through a Federal grant from the Urban Renewal Administration of the Department of Housing and Urban Development under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

Figure 16  
PROJECTED ENROLLMENT AND SITE NEEDS BY SERVICE AREA

Tempe Planning Area

School Service Area No.	Grades K-6 Enrollment	Min. No. Classrooms	Min. Site Acreage	Grades 7 & 8 Enrollment	Grades 9-12 Enrollment
<u>Elementary</u>					
1	1,550	52	21	220	520
2	580	20	11	128	248
3	550	19	11	155	217
4	420	14	10	128	280
5	560	19	11	185	260
6	620	21	12	160	300
7	530	18	11	121	280
8	510	17	11	174	268
9	600	20	12	120	180
10	580	20	11	115	152
11	400	14	10	69	98
12	410	14	10	93	134
13	420	14	10	90	170
14	500	17	10	144	250
15	400	14	10	97	148
16	480	16	10	125	246
17	620	21	12	220	350
18	640	22	12	150	280
19	500	17	10	192	242
20	560	19	11	150	210
21	460	16	10	73	107
22	520	18	11	78	110
23	400	14	10	81	110
24	520	18	11	98	135
25	520	18	11	117	170
26	550	19	11	108	157
27	500	17	10	106	140
28	480	16	10	81	130
29	420	14	10	85	120
30	580	20	11	136	280
31	540	18	11	140	200
32	420	14	10	120	220
33	650	22	12	180	250
34	490	17	10	130	240
35	580	20	11	160	240

Figure 16 (Cont'd)

School Service Area No.	Grades K-6 Enrollment	Min. No. Classrooms	Min. Site Acreage	Grades 7 & 8 Enrollment	Grades 9-12 Enrollment
36	570	19	11	150	240
37	530	18	11	140	200
38	480	16	10	120	210
39	410	14	10	90	140
40	620	21	12	180	215
41	560	19	11	170	220
42	560	19	11	160	220
43	510	17	11	140	210
44	520	18	11	140	220
45	460	16	10	120	160
46	520	18	11	150	240
47	600	20	11	170	260
48	500	17	10	140	180
49	520	18	11	140	180
Totals	26,420	899	524	6,539	10,337
<u>Intermediate</u>					
1		22	17	610	
2		27	18	745	
3		26	18	703	
4		21	16	586	
5		20	16	546	
6		19	16	528	
7		19	16	513	
8		15	15	420	
9		23	17	620	
10		17	15	450	
Totals		209	164	5,721	
<u>High School</u>					
1		86	49		2,127
2		76	44		1,892
3		81	46		2,027
4		86	47		2,151
5*		60	40		1,490
Totals		389	226		9,687

\*This school would accommodate additional students south of Warner Road.

situation and never used to justify the permanent enlargement of existing schools beyond the optimum enrollment size.

Specific local conditions may warrant the delay of site acquisition until the time when land is actually being subdivided. This necessitates prior choice of a general school location and requires that the school district be ready to select and negotiate for a desirable site.

The public clearly has the right to require that the land developer plan for and reserve the selected site for acquisition by the school board. Requesting a developer to donate a portion of his land for a school site is a fairly common, though extra-legal, practice throughout the country, but the public is not always well-served by such a policy. The developer merely passes site cost along to his homebuyers, indirectly forcing a few property owners to pay a disproportionate share for a facility which will benefit the entire neighborhood. Donated land is rarely as well located or suitable for school development as other criteria dictate.

It is reasonable to expect that a selected school site will be made available for purchase at the going raw land price. Adoption of a long-range school site program gives prospective developers sufficient warning that the school district is interested in acquiring a site in or near a particular tract.

#### Specific Recommendations

Arizona State University expansion plans anticipate acquisition and redevelopment of the Ritter Elementary School site in the not-too-far distant future. It is recommended that Tempe Elementary District proceed with site selection and acquisition for an elementary school to replace Ritter School. First consideration should be given to the general location indicated on the preliminary school plan, Figure 14. Phasing out of Ritter School should commence as soon as the timetable for its replacement can be firmed up.

## PART VI

### SCHOOL-CITY RELATIONS

"Until relatively recently, the public schools limited themselves basically to development of the skills of the mind -- the teaching of reading, writing and arithmetic. Today their goals have been broadened, and they are asked to help children to acquire any skill or characteristic which a majority of the community deems worthwhile. Thus, in addition to intellectual achievement, the schools frequently are expected to foster 'morality, happiness, and any useful ability'."<sup>1/</sup>

The foregoing statement suggested an increasing overlap in both goals and responsibilities of school districts and local government. Even in 1956 this overlap was not a recent development -- it had existed for many years -- and it is now reaching major proportions as the urban population grows, city government becomes more sophisticated in response to citizen demands, and the role of schools in public affairs expands.

Local school districts and the City of Tempe have demonstrated an increasing awareness of their overlapping interests and the need for developing new concepts in school-city relationships. A consultant study<sup>2/</sup> on the subject of school-city cooperation, published in August 1965, was followed by several joint meetings of the Council and school district officials which have established preliminary lines of communication and defined basic areas of mutual concern. To date, school-city cooperative efforts in Tempe have produced some measure of success in several areas of overlapping interest, but there remains much to be done and much to be gained. Initial efforts and general agreements must now be extended into a study of problems, objectives and limitations, and development of more specific agreements.

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1/ The Committee for the White House Conference on Education, A Report to the President, 1956.

2/ Arizona Educational Consultants, Areas of City-Elementary School District Cooperation, 1965.

Basic to any consideration of school-city relations must be the fact that the two bodies are established as separate legal entities and have traditionally operated as wholly independent bodies. It is a well-known fact that throughout the country this independence has often been characterized more by competition and excessive concern for separate prerogatives than by demonstrated acceptance of the fact that both entities serve the same taxpayers.

This fact of "separateness" underlies the basic decision of local school districts and the City of Tempe that future agreements should be expressed in contractual terms. Heretofore, most cooperative agreements have been informal in nature rather than contractual and binding.

School-city efforts to date have concentrated entirely on "cooperation", with overtones of "coordination". It is suggested that while cooperation and coordination may produce optimum results in some areas of interest, the word collaboration more nearly expresses the relationship required for effective planning of the school site system and the community's residential environment.

In general, areas of mutual concern in which school-city relationships need further exploration, definition, refinement and agreement include: community planning, education and recreation, traffic circulation and access, utilities, fire and police protection, and general administration and operations. This report is primarily concerned with the first three areas of interest.

### Community Planning

Earlier parts of this report have discussed the critical influence of the school plant system on the basic structure of the city. The "neighborhood concept", an approach which is basic to most environmental planning, assumes that the residential neighborhood and the elementary school service area will be generally coterminous. However, if the residential neighborhood is to be wholly effective as the basic structural unit of the urban community, it is essential that the formerly separate processes of city planning and school system planning be integrated and accomplished through collaboration

between school and city.

Planners cannot delineate future neighborhoods with assurance until the school district has established the grade organization and enrollment standards for the school system. Service area planning by the school district must consider the future distribution and characteristics of population, arterial street system and non-residential land uses. The two planning efforts are closely interrelated and require collaboration. With relatively little compromise, neighborhoods and elementary school service areas can be coterminous.

Both school and city planning efforts should be based upon cooperative research and interchange of basic data. The record-keeping and data processing systems of each entity should be developed with the intent of facilitating maximum utilization of data by the other.

#### Education and Recreation

Substantial amounts of land in the community are required for both educational and recreational purposes. The growing scarcity, and hence the value, of suitable land makes it incumbent upon school and recreation agencies to work toward maximum possible use of both kinds of public sites. Their overlapping interests, together with the fact that both agencies serve the same age groups living in the same areas, imply that maximum use means multi-use of combined school and recreation sites. Basic criteria for inter-agency agreements regarding acquisition, planning, development, operation and maintenance of combined school-recreation sites are fully discussed in Section II of this report.

#### Streets and Traffic

While the major street and traffic pattern is critical to the location of high schools, the collector and local street pattern influences the location and accessibility of elementary and intermediate school sites. Hence, through the day-to-day administration of subdivision platting and land development controls, the City's planning department determines the ease of circulation within the neighborhood and the convenience of

access to the school site. School locational criteria should be clearly understood by both school and planning officials, and agreement should be reached on site selection prior to acquisition.

Schools are also interested in the convenience and safety of pedestrian access, a factor in the preparation of land development standards and regulations relating to installation of sidewalks. School districts should participate in the formulation of such standards and requirements.

In respect to traffic control, and particularly that required for protection of school children, the city is responsible for establishing, marking and maintenance of needed crosswalks. At the same time, the city is responsible for maintaining the maximum traffic-carrying capacity of major thoroughfares -- a task in which the school district can indirectly assist through avoiding location of schools on traffic arteries or where children are forced to cross major streets on their way to and from school.

#### Utilities

To acquire a site for school development which cannot immediately be provided adequate sewage disposal exemplifies the poorest kind of coordination between school and city -- yet this has occurred far too frequently throughout the country. Such action on the part of the school district forces the city's hand, disrupting its long-range capital improvements program and contributing to excessive construction costs. Hence, the school's needs and plans must be considered in preparation of the city's long-range capital improvements program, and the school must keep abreast of master planning and projected timing of sewage disposal improvements.

Of less complicated nature, but nonetheless important, are provision of water, collection and disposal of rubbish, and disposal of storm drainage by the city. It would also appear advantageous for the schools to depend upon the city for management of irrigation services.

#### Fire and Police Protection

The dependency of the schools upon police protection, and the responsibility of

the city to provide such protection is very clear and requires no discussion. Applicability of the same principle to institutions of higher learning is open to question.

It is also clear that schools must depend upon the city for fire protection, and that the city should make periodic inspection of school premises to determine and point out fire hazards to school authorities. Any assistance which the city fire department can give the schools in fire prevention training is clearly in the interests of the public as well as the educational program.

#### Other Areas of School-City Cooperation

In addition to the foregoing areas of mutual concern, the consultants<sup>1/</sup> have recommended investigation of possible advantages, problems and limitations involved in school-city cooperation in such activities as record-keeping, purchasing, personnel, and site maintenance.

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<sup>1/</sup> Arizona Educational Consultants, op. cit.

PART VII  
SUMMARY OF FINDINGS

The major findings of this report on Schools are summarized as follows:

Existing Systems and Facilities

1. The Tempe Planning Area includes parts of four elementary school districts and three high school districts; however, most of the Area is covered by Tempe Elementary School District No. 3 and Tempe Union High School District, and this report has given primary attention to the influence of these districts on development of the Tempe Planning Area.
2. Tempe District No. 3 operates nine elementary schools serving Grades 1 through 6, varying in size from 17 to 29 classrooms, and accommodating from 418 to 857 pupils in 1964-65. In addition, the District's two intermediate schools accommodated a total of 1993 pupils in Grades 7 and 8. A tenth elementary school is presently under construction.
3. Based on a loading of 30 pupils per classroom, four Tempe District No. 3 schools are presently at or very near capacity, four are overloaded, and three can accommodate additional students.
4. The two high schools presently accommodate about 2,600 students in Grades 9 through 12, with McClintock High planned for appreciable expansion as the need dictates.
5. About 8% of Planning Area elementary children attend parochial schools. Eighty-three mentally retarded children in Tempe District No. 3 are taught in local schools or at Perry Institute in Phoenix.

School Planning Principles

The following principles are recommended as basic to school system planning:

1. Equality -- every child, youth and adult should have equal opportunity for education, regardless of economic or social status, or place of residence.
2. The system of school service areas should be based upon locating an

- elementary school in each residential neighborhood and an intermediate school in each district comprised of from three to four neighborhoods.
3. All public schools should have a specific function to perform, and should be located and designed with that function foremost in mind.
  4. The location of all schools should be central to the population to be served, and adequate in size for the intended function.
  5. All school sites should be designed, equipped and operated for maximum multi-use on a year-round basis. To the extent feasible, school and recreation sites serving the same age group should be of integrated design.
  6. Schools should be designed and school sites landscaped for beauty, function, ease of supervision and police surveillance, sound and light control, and to enhance the neighborhood.

#### Recommended Long-Range School Planning Standards

- |                              |  |
|------------------------------|--|
| 1. Grade Organization:       | Elementary (Grades K-6)<br>Intermediate (Grades 7-8)<br>High School (Grades 9-12)  |
| 2. Class Size:               | Elementary - desirable, 25; maximum, 30.<br>Intermediate - desirable, 25; maximum, 28.<br>High School - maximum, 25.   |
| 3. Enrollment:               | Elementary - minimum, 200; desirable, 450-600; maximum, 720.<br>Intermediate - same as elementary<br>High School - minimum, about 600; desirable, 1800-2000; maximum, 2200.  |
| 4. Building Size:            | Elementary - desirable, 18-20 classrooms; maximum, 24 classrooms.  |
| 5. Distance, Home to School: | Elementary - desirable, 1/2 mile or less; maximum, 3/4 mile.<br>Intermediate - desirable, 1 mile or less; maximum, 1 and 1/2 miles.  |
| 6. School Site Acreage:      | Elementary - 5 acres, plus 1 acre per 100 students, with 10-acre minimum.<br>Intermediate - 10 acres, plus 1 acre per 100 students, with 15-acre minimum.<br>High School - 25 acres, plus 1 acre per 100 students. |

7. Site Selection:

Elementary and Intermediate:

Access - from two streets, one a collector street.

Adjacent Land Use - non-commercial

High Schools:

Access - from two or more streets, one a major arterial.

All Schools:

Off-street Parking - to accommodate all teachers, employees, student cars, visitors and most spectators.

Future School Needs

1. In the five years preceeding the 1965-66 school year, enrollment of Tempe Elementary District increased 72.5% while Tempe Union High School District enrollment rose nearly 102%.
2. Projections of school-age population of the Tempe Planning Area through 1985 are:
  - 1970 - 10,500 of elementary school age; 3,490 of high school age.
  - 1975 - 14,950 of elementary school age; 4,830 of high school age.
  - 1980 - 19,600 of elementary school age; 6,320 of high school age.
  - 1985 - 24,400 of elementary school age; 7,880 of high school age.
3. By 1985, 42 more elementary and intermediate schools having about 542 classrooms will be required in the Planning Area, as well as three more high schools.
4. By 1985, Tempe Elementary District will need a total of 34 schools capable of accommodating 20,700 students and Tempe Union High School District will require 5 high schools serving 7,880 students. Kyrene District will require 6 schools in the Planning Area serving 3,700 students and Mesa District will need one elementary school in its portion of the Planning Area. No change is projected for that part of the Planning Area situated in Scottsdale School District.

Long-Range School Plan

1. The long-range school plan is based on serving the ultimate population capacity of the Tempe Planning Area, a population which will be reached sometime after 1985.

2. The Plan arranges 49 elementary school neighborhoods, each containing an estimated 400 to 600 Grade K-6 children when completely developed. It also shows 10 intermediate school service areas and 5 high school service areas.
3. The Plan indicates a total ultimate need for about 525 acres of land for elementary schools, 165 acres for intermediate schools and 230 acres for high schools.

### School-City Relations

1. Overlapping interests of school districts and cities are increasing rapidly as the urban population grows, city goals broaden and the role of schools expands beyond the teaching of reading, writing and arithmetic.
2. Substantial progress has been made in local school-city relations and informal cooperative agreements have proven productive in several areas of mutual concern. Initial efforts and general agreements should now be extended into a thorough study of mutual problems, objectives and limitations, and the development of more specific contractual agreements.
3. Whereas school-city efforts have concentrated largely on "cooperation" and "coordination", the word collaboration more nearly expresses the working relationship required to effectively plan the school site system and the community's residential environment.
4. Areas of mutual concern in which school-city relationships need further exploration, definition, refinement and agreement include: community planning, education and recreation, traffic circulation and access, utilities, fire and police protection, and general administration and operations.

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SECTION II

PARKS AND RECREATION

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## INTRODUCTION

"The noble employment of leisure is the highest aim which a man can pursue."

—— Aristotle: 330 B.C.

Only four percent of Americans lived in cities when the first U.S. Census was taken in 1790. Now, a hundred and seventy-six years later, the proportion has reached two-thirds, and it seems assured that metropolitan areas alone will house three-fourths of the American population by the year 2000.

Less than a hundred years ago the average work week was 80 hours. Today, the average worker rarely works more than 40 hours a week without additional pay. Within the next two decades a 30-hour week will become commonplace.

The problem of occupying increased leisure time in a satisfying, pleasant and productive manner is already a monumental problem in the American society. Public funds have been directed in large measure to street and highway construction, water systems, sewer lines, fire stations and other basic community necessities, while parks and recreation areas have too long been considered "deferrable". The current movement to preserve and extend the fast-dwindling supply of urban open space is long overdue, but perhaps not too late to prevent leisure time from becoming a critically serious social problem in the nation's cities. "Leisure is the blessing and could be the curse of a progressive, successful civilization."<sup>1/</sup>

In today's concept, recreation constitutes any form of leisure-time activity which is engaged in voluntarily for the enjoyment and satisfaction it brings the participant. It may provide opportunity for self-expression, creative activity, service to others, or the pure joy of living. "As long as the activity is freely chosen -- because it is refreshing and interesting to do -- then it serves the basic function of 'recreation' -- the task of re-creating human vitality. Latent energy is tapped, unused powers of the body, mind and spirit are employed, the imagination works on fresh material, and

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<sup>1/</sup> Outdoor Recreation Resources Review Commission, Outdoor Recreation for America, 1962.

when all these things occur, the individual returns to his work with a sense of renewal."<sup>1/</sup>

The provision of recreation space, facilities and programs in urban areas is clearly a function of local government. The federal government has responsibility for preservation and development of areas having nationwide natural, historic and recreational values. Similar responsibility at the state level has been accepted by virtually all states and at the county level by many counties.

City government obviously cannot, and should not, seek to provide all of the recreational opportunities people require. While recreation includes all of the things that people do in their spare time, both indoors and out, the public's responsibility is limited to providing for those activities which the citizens desire but cannot provide for themselves and which are not made available by other means. Many leisure-time pursuits are satisfied through personal initiative. Unfortunately, private enterprise has shown little interest in providing recreational space and facilities, with the notable exception of golf, swimming, tennis and a few other specialized club activities. However, more and more organizations are entering the field of conducting recreational activity: churches, schools, industrial plants, special interest clubs, etc.

Municipal responsibility for recreation includes the provision, maintenance and operation of a system of major areas and facilities, and the provision of leadership for a balanced program of athletics, music, drama, crafts and other activities primarily centered at the public facilities.<sup>2/</sup> Recreation authorities<sup>3/</sup> throughout the country support the belief that an adequate community recreation system is based upon:

1. Realistic long-range plans ahead of population growth and community development.
2. Well-defined administrative authority established under law.
3. Adequate areas, well-designed facilities, and efficient, modern equipment.

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1/ Outdoor Recreation Resources Review Commission, Outdoor Recreation for America, 1962.

2/ International City Managers' Association, Municipal Recreation Administration, 1960.

3/ National Recreation Association, The Essentials of a Good Recreation Department.

4. Sufficient funds for full-time, year-round, professional leadership, operation and development.
5. A well-rounded program for all ages, interests and sections of the Community.
6. Cooperation by schools, press, planning, social agencies and all related public and private organizations.
7. General support from the citizenry.

The comprehensive planning program is concerned primarily with those activities which take place out-of-doors and require provision of open space and facilities. Community planners have the responsibility not only for arranging a system of recreation spaces in the city's long-range development plan, but also for making full use of zoning and other regulatory powers in the preservation of open space, protection of scenic values and desirable man-made features, and enhancement of recreational opportunities in private developments.

The need for land is basic -- it must be acquired, protected and kept available for use. But it is merely the beginning in the development of a park system. Planning must be visionary -- plans must present a challenge -- they may even appear impossible to accomplish at the time they are drawn. Management must remain flexible and sensitive to changing times and capable of fulfilling the legitimate needs of the people as changes transpire. Public recreation has become a necessity so serious that it can no longer be deferred -- the need for public financing must be faced squarely.

Consideration of the foregoing matters is the objective of this planning report.

PART I  
DEMAND FOR RECREATION

It is clear that Americans are seeking outdoor recreation as never before in history. Today's children are experienced and skillful in far more different kinds of outdoor activities than their parents. Each new generation will have more leisure time and spend more of it out-of-doors.

Present and future demands for outdoor recreation are influenced by several factors:

1. Population change - total numbers, age composition and place of residence.
2. Rising per capita income - increased ability to afford recreation.
3. More leisure time - shorter work days and work weeks, longer paid vacations, and longer, healthier retirement years.
4. Greater mobility and ease of travel.

Population Change

Tempe's recent and future population growth has been discussed fully in earlier planning reports. The magnitude and distribution of future population growth, as well as the changing composition of population, are primary determinants of the future demand for parks and recreation facilities.

Tempe has a relatively young population -- in 1960 the median age was 22.7 years, appreciably below that of comparable suburban communities. The ratio of population under 18 years of age was considerably lower than in the state, county or comparable communities, as was the ratio of persons over 65 years old. By 1965, the median age had decreased more than one full year, the ratio of population under 18 years had increased slightly, and the ratio over 65 had decreased substantially.<sup>1/</sup> On a long-term basis, however, it is anticipated that the ratios under 18 and over 65 will both tend to increase toward a balance more normal for suburban cities.

Hence, present and future age composition of the population suggests a fairly normal

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<sup>1/</sup> Special Census, 1965.

balance of recreation demand, without special emphasis on either youthful or elderly needs.

The type and density of housing, together with the rapidly-shifting center of local population, will cause recreation demands to vary widely in type among the various parts of the city. In general, areas containing concentrations of multi-family housing will usually contain fewer children and larger numbers of single- and two-person households, with an accompanying need for emphasis on passive, adult types of recreation space and facilities. New single-family neighborhoods will continue to produce large numbers of young children and an accompanying demand for emphasis on active recreation facilities for children and young adults. For planning purposes, it has been assumed that Arizona State University will provide adequate space and facilities for the recreation of its resident students without burdening public facilities in the vicinity.

#### Rising Incomes

With the gross national product expected to increase at an annual rate of 3.5 percent, disposable consumer income\* is expected to rise from \$354 billion in 1960, to \$706 billion by 1976, and to \$1,437 billion by 2000.<sup>1/</sup>

Tempe's median family income rose from \$5,933 in 1960 (3.4% below the Phoenix Urban Area average) to \$7,638 in 1965 (12.5% above the area average). This rapid increase is attributed to accumulating numbers of new residents whose incomes are well above previous local averages. Newcomers are attaining the majority and as their number increase the median family income will continue to rise.<sup>2/</sup>

Rising incomes will stimulate a general broadening of recreational interests. Records over the past three decades show that an average of 5% of total disposable income in the United States was spent on recreation. Higher incomes make it both possible and desirable for families to allocate increasingly larger percentages of their incomes to recreation.

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\* "Disposable" income represents the income remaining after deductions of personal tax and non-tax payments for government.

1/ Outdoor Recreation Resources Review Commission, op. cit.

2/ Van Cleve Associates, Tempe Planning Report No. 3, Economics, 1966.

The Outdoor Recreation Resources Review Commission found that city people spent \$77.80 to \$119.60 per capita per year on recreation, while the national average expenditure was \$74.90. Higher incomes also increase citizens' ability to enjoy the kinds of recreational activities they prefer but have been unable to afford.

### Educational Attainment

High educational attainment is characteristic of Tempe's population, far exceeding state, county and nearby suburban community averages in 1960. The ratio of local population having completed four years of college was approximately double that recorded for comparable entities.<sup>1/</sup> Differentials will probably continue to increase due to the University's attraction.

A high level of educational attainment produces greater participation in such culture-oriented recreation as nature study, botanical gardens, museums, drama arts and crafts.

### Leisure Time

The technological revolution that is providing Americans with more and better goods and services and higher incomes is also leaving them more leisure time. Average working hours of the labor force have declined steadily over the past 100 years. The 1850 70-hour work week decreased to 60 hours by 1900, and the 40-hour week established during the 1930's is already decreasing. The President's Commission on Materials Policy foresaw an average work week of 34 to 36 hours by 1975. Based on changes in age structure and part-time work patterns, the United States Bureau of Labor Statistics has projected a more conservative decrease averaging only one-half hour per week by 1975. It is still to be seen whether increased home-to-work commuting time will effectively offset anticipated decreases in actual working time.

The nature of this gain in leisure time is as important as its magnitude. If the extra time accrues as the result of a shorter work day, the greatest impact on recreation will be local and regional. If the extra time accrues from working fewer days a week, a

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<sup>1/</sup> Van Cleve Associates, Tempe Planning Report No. 1, Population, 1965.

a three-day weekend will result, or if reflected in fewer work weeks per year, a longer vacation will result. In either case, the larger and more distant state and national recreation attractions will feel the impact.

The age of entry into the working force is also increasing, with a corresponding increase in leisure time among young adults. New and improved features of homes and home equipment have increased the housewife's leisure. Improvements in the national social security system and the widespread growth of retirement pension plans now enable people to enjoy the leisure of retirement at earlier ages. Medical advances and health programs have materially increased the life span and prolonged the physical vitality of elderly people, making recreation a critical need during later life.

#### Increased Mobility

In 1900 the average United States citizen traveled about 500 miles a year, over half of which was by railroad. By 1922 the automobile accounted for half the nation's total personal transportation and per capita annual travel had increased to 1,600 miles. By 1940 per capita annual travel had reached 4,600 miles, about 86% of which was by automobile, and by 1956 the average had reached 5,080 miles.

People can now travel long distances in a short time and the widening range of leisure time travel has opened up new recreational opportunities and developed new demands. Not only will increasing everyday mobility influence the ease and distance of recreational travel -- continued development of travel trailers, campers and vehicles for transporting boats, horses and other types of bulky recreation equipment will tremendously influence the type and volume of recreation demand.

Local governments may be called upon to service more recreationists than local revenues can support. Thus, intergovernmental cooperation and assistance in local recreation by county, state and federal agencies will become a practical necessity.

#### Occupation, Opportunity and Other Factors

The occupational composition of Tempe's population has shifted rapidly toward pro-

fessional and technical categories. Although this shift may tend to reverse itself in the future as the local economy diversifies, Tempe will continue to be dominated by white collar workers. Professional, technical and other white collar workers participate more extensively in recreation activities than persons in other occupations, and their activities exceed those of operatives, laborers and farm-workers by more than 34%.<sup>1/</sup>

Suburbanites participate more frequently and extensively in outdoor recreation than do residents of big cities and rural areas.

Availability and accessibility of open space and facilities for recreation greatly increases recreation demand and participation.

Finally, recreation demands vary widely depending on local climate and season of year. Mild temperatures, coupled with low humidity and little precipitation, stimulate demand for outdoor recreation, while high summer daytime temperatures curtail vigorous outdoor activity and encourage participation in water activities. In addition, two non-climatic factors affect seasonal participation in recreation: (1) closing of schools, and (2) influx of large numbers of winter visitors.

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<sup>1/</sup> Outdoor Recreation Resources Review Commission, op. cit.

PART II  
EXISTING CONDITIONS

Organization

The City Council is the legislative and policy-making authority of Tempe City government. The Parks and Recreation Board serves in an advisory capacity to the Council in formulation of official policy regarding parks and recreation matters.

Duties of the seven-member Board, as set forth in Ordinance No. 407, are to:

1. Develop plans for a city park system and recreation program.
2. Develop standards for development of park facilities.
3. Prepare recommendations as to annual budget, work program and capital improvements related to administration, development, maintenance and operation of park facilities and recreation programs.

The Parks and Recreation Director and staff are advisory to the Board and also serve and advise the City Manager. The Director presents the Board's recommendations to the Council, and is responsible for administration and effectuation of official policy and directives.

The Parks and Recreation Department is responsible for: (1) developing and conducting the recreation program; and (2) operating and maintaining recreation sites and facilities (exclusive of buildings) and city beautification sites. Activities of the Department presently comprise seven major areas of effort: administration, recreation programming, recreation site development and maintenance, city beautification site development and maintenance, city cemetery maintenance, golf course operation, and aquatics programs operation. The department staff numbers 21, including the Director.

Sites and Facilities

Figures 1, 2 and 3 show the location, size, use classification and inventory of developed facilities of existing public recreation sites in the city. Figure 4 shows the extent of recreation area and facilities existing on public school sites in the

Figure 1  
INVENTORY OF PARKS AND OPEN SPACES

City of Tempe

Site	Location	Use Classification	Acre- age
<u>Recreation Sites:</u>			
Tempe Beach	1st St. & Mill Ave.	District Park-Playfield	15.0
Clark Park	Roosevelt & 19th St.	Neighborhood Park-Playground	8.9
Hudson Park	Spence Ave. & Cedar St.	Neighborhood Park	4.1
Daley Park	College Ave. & Encanto	District Park-Playfield	13.7
Jaycee Park	5th St. & Hardy Drive	Neighborhood Park-Playground	8.0
Palmer Park	College Ave. & Carson Circle	Neighborhood Park-Playground	3.8
Cyprus Park	Malibu Dr. & Dorsey Lane	Neighborhood Park-Playground	3.9
Indian Bend Park	Miller Rd. & Marigold Lane	Neighborhood Park-Playground	3.2
Escalante Park	River Road & Orange Ave.	Undeveloped	10.0
Unnamed Park Site	Alameda Drive	Undeveloped	3.7
Rolling Hills	Papago Park	Nine-Hole Lighted Golf Course	40.0
		Total acreage	114.3
<u>Open Space:</u>			
Papago Park	North Tempe	Rseervation	285.0
Hayden Butte	Mill ave. & Salt River	Reservation	55.0
		Total acreage	454.3

Figure 2  
INVENTORY OF PUBLIC RECREATION FACILITIES

City of Tempe

Facility	Tempe Beach	Clark Park	Hudson Park	Daley Park	Jaycee Park	Palmer Park	Cyprus Park	Indian Bend Park	Rolling Hills Golf Course	Totals
<u>Buildings:</u>										
Bathhouse	1									1
Clubhouse, Pro Shop									1	1
Refectories	1									1
Comfort Stations	1			1			1	1		4
Equipment Storage	1									1
Arts & Crafts	1									1
<u>Play Areas:</u>										
Basketball Courts								2		2
Tetherball	2									2
Softball, unlighted				1			1			2
lighted	1	1		1	1	1				5
Tennis Courts	1									1
Horseshoe Courts				8						8
Shuffleboard Courts				2				2		4
<u>Apparatus:</u>										
Swings	4		9	9	8		4	6		40
Slides	1	1	1	1			1	1		6
Horizontal Bars	1	1					1	2		5
Climbers		1		1						2
Teeter Totters		3	2	3			1			9
<u>Miscellaneous:</u>										
Picnic Tables	16	10	4	22		4	4	3		63
Cooking Place	4	5		4				3		16
Swimming Pool	1									1
Wading Pool	1									1
Golf Course, 9-hole, Ltd.									1	1
Golf Driving Range									1	1
Golf Putting Green									1	1

Figure 4  
INVENTORY OF PUBLIC SCHOOL RECREATION LAND

Tempe Planning Area

School	Total Site Acreage	Approx. Acreage Used For Rec.*	Adjoining City Rec. Site
<u>Elementary Schools:</u>			
Broadmore	10.0	7.7	None
Guadalupe	10.5	5.9	None
Holdeman	10.0	7.1	None
Laird	10.0	7.0	None
Meyer	10.5	7.6	None
Mitchell	10.0	7.3	None
Ritter	10.0	8.2	None
Rural	10.0	6.5	None
Thew	8.0	5.4	Escalante Park
Evans	5. +	---	Palmer Park
Supai	20.0	15.0	None
Kyrene	10.0	3.5	None
Totals	124.0 +	81.2	
<u>Intermediate Schools:</u>			
Gilliland	15.0	10.5	None
McKemy	15.0	9.6	None
Totals	30.0	20.1	
<u>High Schools:</u>			
Tempe Union	39.0	12.1	None
McClintock	40.0	27.5	None
Totals	79.0	39.6	

\* Includes undeveloped portions of sites.

Note: Facilities provided on each elementary and intermediate school site in Tempe District No. 3 include the following:

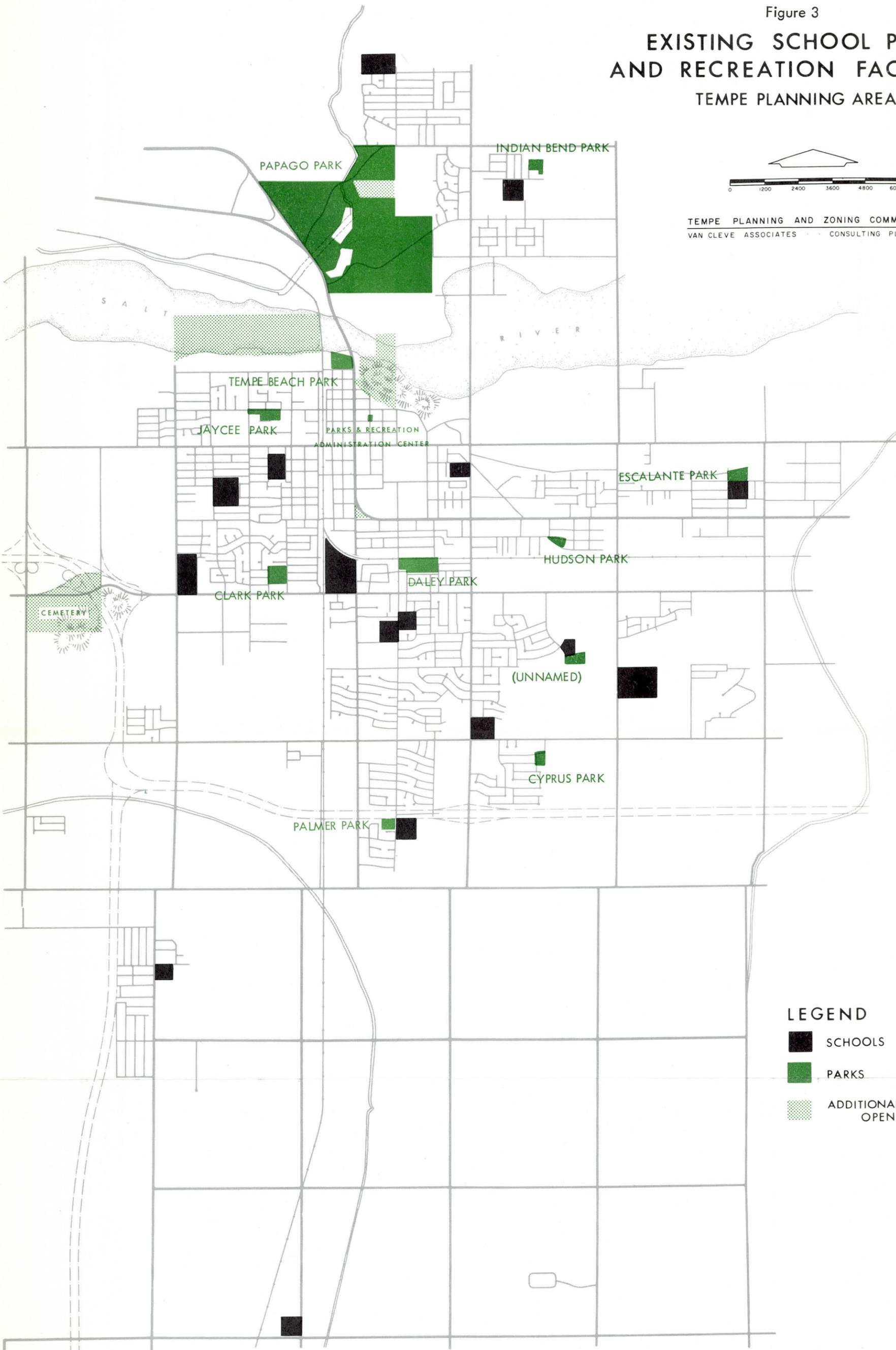
- |                      |                             |
|----------------------|-----------------------------|
| 3 softball diamonds  | 8 tether ball courts, grass |
| 2 sets chinning bars | 6 basketball courts, grass  |
| 1 swing set          | 2 football fields           |
| 1 miracle whirl      | 2 volleyball courts, grass  |

Three additional softball diamonds and one additional basketball court (paved) are provided on intermediate school sites.

Any apparatus or facilities exceeding that furnished as standard equipment is contributed by P.T.A.'s or other organizations.

Figure 3

# EXISTING SCHOOL PARK AND RECREATION FACILITIES TEMPE PLANNING AREA



TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES CONSULTING PLANNERS

## LEGEND

-  SCHOOLS
-  PARKS
-  ADDITIONAL CITY-OWNED OPEN SPACE

The preparation of this map was financially aided through a Federal grant from the Urban Renewal Administration of the Department of Housing and Urban Development under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

## Tempe Planning Area.

As yet, Tempe's recreation plant can hardly be considered a system. It would be more accurately described as an accumulation of individual sites acquired through the years with greater consideration for price and availability than for established locational criteria or preconceived function. With exception of Papago Park, Daly Park and Tempe Beach, all existing sites may be classified generally as neighborhood park-playgrounds. Papago Park, undeveloped except for Rolling Hills Golf Course, would presently be called a reservation, while Tempe Beach and Daly Park would be best termed district park-playfields.

Except for Tempe Beach, no existing recreation site is fully-developed. Daly Park and Hudson Park are nearest to full development, while Tempe Beach is over-developed considering its non-central location in respect to user convenience.

With exception of Hudson Park, all neighborhood sites are in early stages of development. They are characterized as poorly-arranged, thin assortments of use areas and equipment, without apparent definition of recreation function. Landscape development is minimal, with shade trees of common species and uniform size widely spaced in rows or geometric patterns without semblance of park design character. Demand has dictated a major investment in lighted ballfields, but several of these expensive installations have been situated on sites which would have been more appropriately developed for passive types of recreation.

Without exception, each existing recreation site requires careful evaluation in terms of its proper function in the ultimate parks and recreation system. Each warrants design study by a competent park landscape architect thoroughly grounded in recreation concepts as well as in physical arrangement of space and facilities for recreational use.

A site-by-site analysis of existing sites follows:

Tempe Beach. Once Tempe's only city park, this site has developed through the periodic addition of facilities and activity areas without concern for overall design,

interrelationship of activities, or ultimate function in the future. Its location in downtown Tempe, bounded by the Salt River and major traffic arteries, is too distant from residential areas to serve young children unaccompanied by parents. Although Tempe Beach now represents a high public investment, its location does not warrant the redevelopment and further expansion which would make it an important feature in the future system. Due to its unique combination of uses, physical characteristics and location, it defies classification according to any normal recreation concept.

Daley Park. Mature lawns and shade trees make this an attractive area and furnish a sound base for continued development as a fully-functional unit in the city's recreation system. It presently comprises a general mixture of facilities, adult and youth, passive and active, without adequate definition, organization or separation of activities. The oversized parking lot is a vast, unshaded asphalt area, poorly located in relation to parking need (streets are parked full, while the lot is largely vacant).

Hudson Park. This attractive though incompletely-developed site provides a sound base for development as a handsome and functionally-pure neighborhood park.

Clark Park. But for the dominant location of the lighted ballfield, this site could be developed into a fine neighborhood park. However, its function is not defined and its facilities are scattered without proper separation of age groups and activities. Landscaping is limited to linear arrangement of a few trees planted without benefit of the general landscape plan needed to assure that stage development will create park character. Although neighborhood access to the site is excellent, it is not centrally-located within its intended service area. Parking is poorly located in relation to need.

Cyprus Park. If an elementary school-neighborhood playground site can be acquired and properly designed on land abutting to the east, this site has good potential for passive activities associated with neighborhood parks. Unfortunately, internal circulation within the wholly-developed residential neighborhood to the southwest is

so poor as to negate the possibility of really adequate access to either school or recreation sites. Ultimately, the unlighted ballfield and other facilities for active recreation should be relocated to an adjoining playground, and meanwhile, no additional expenditure should be made for such facilities. Landscaping is limited to a linear and geometric planting of a few trees, out of character with park design and requiring extensive supplemental plantings of trees and shrubs.

Palmer Park. This recreation area, adjoining Evans Elementary School (under construction) represents the first local effort toward school-city cooperation in development of an adjacent school-recreation area. However, there appears to be little design relationship between school and city portions of the total complex. Whereas the facilities for active recreation should have been situated closer to the school building, the location of a lighted ball diamond nearly in the middle of the park site has virtually destroyed its potential for passive recreation. Again, landscaping is poorly designed and out of character with ultimate site function.

Jaycee Park. This long, narrow site contains a quasi-public building and parking area near its middle, effectively dividing it for two different types of recreational use. The 1 and 1/2 acre portion west of the Jaycee building has mature shade trees and is well suited to continued development and use for passive activities. The portion east of the building contains the mixture of uses and functions common to other local parks. Again, the lighted ballfield is poorly located for maximum use of available space. The abutting 2 and 1/2 acre municipal equipment yard should be completely screened from view from the park.

Indian Bend Park. Access to this small site is difficult and since it presently represents very small public investment it should be disposed of and a new site acquired adjacent to Laird Elementary School.

Tempe Papago Park. This extensive area of natural desert and red rock hills was acquired from the United States Bureau of Land Management for public and

recreational uses. Thirty-eight acres on the interior of the site have been allocated to development of Tempe's recently-completed water treatment plant. Three other parcels within the park perimeter are occupied by public and quasi-public uses: (1) The highly-developed PERA Club (Salt River Project employees recreation facility), 83 acres; (2) Arizona State Tuberculosis Hospital, 24 acres; and (3) Salt River Project reservoir and power operations center, 7 acres. Public recreation development of the area is presently limited to Rolling Hills Golf Course, a heavily-used, lighted, nine-hole facility of considerable charm. The area is crossed by the Crosscut Canal, along which development of one of a county-wide system of canal-side parks is proposed. The park is transected from east to west by Curry Road, a scenic but narrow, heavily traveled traffic route between South Scottsdale and downtown Tempe via Tempe Bridge.

The future function of the Papago Park area will be fully discussed later in this report.

PART III  
PLANNING PRINCIPLES AND STANDARDS

A. PRINCIPLES

Public Responsibility for Recreation

The recreation needs and interests of the individual change drastically throughout his life cycle. In infancy, play is restricted to the home and homegrounds, and has parental supervision. As soon as outdoor activities begin to outgrow the confines of home, and from that time on until advanced age again restricts a person to his home, the provision of space and facilities for his healthful recreation are an important responsibility of the public.

Children progress rapidly through stages of completely independent and informal play to partially-organized group activities, and finally to highly-organized team games. As the individual matures, recreational interests become less active and less organized, but nonetheless important to his well-being. During later years of life, outdoor recreation may be limited to such completely informal and mildly active interests as gardening, picnicking, walking and fishing.

Hence, recreation embraces all forms of leisure-time activity -- it is not just sports and organized play -- many people enjoy doing things for pleasure that others do for a living.

Municipal Responsibility

Although there are differences of opinion as to the city's role in recreation, Meyer and Brightbill state, "the objective of public recreation is usually to provide those things the citizens desire that cannot be provided by themselves or others".<sup>1/</sup>

The very breadth of recreational interests and activities suggests one of the basic principles of planning the municipal parks and recreation system -- city government cannot, and should not be expected to provide all recreational opportunity. City

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<sup>1/</sup> Meyer and Brightbill, Recreation Text and Readings, 1953.

responsibility is usually considered to embrace two basic functions: (1) provision, maintenance and operation of a parks and recreation system, and (2) provision and leadership of a balanced recreation program.<sup>1/</sup>

Commercial types of recreational facilities, such as bowling alleys, riding stables and theaters, are rarely provided by government. To satisfy demand for such special facilities as golf courses, swimming pools and race tracks, city government leans heavily on private organizations and seeks only to supplement the facilities they ordinarily provide.

The League of California Cities has given thorough study to the municipality's role in recreation, and the following outline of primary and secondary responsibilities has been adapted from principles adopted by the League's Board of Directors in 1962:<sup>2/</sup>

#### Primary Responsibilities

**Planning:** Develop a recreation system master plan which provides for:

1. Sufficient open space to meet the citizens' leisure needs.
2. Facilities to meet the cultural, social, athletic and hobby interests of citizens of all ages.
3. Preservation of natural recreation assets and historical points of interest.
4. A program of city beautification.

#### Development:

1. Neighborhood district and community recreation programs, facilities and services.
2. City-wide facilities and services.
3. Municipal department responsible for and capable of developing programs and facilities to meet the leisure needs of citizens.
4. Cooperative agreements with other community agencies to insure

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<sup>1/</sup> International City Managers' Association, Municipal Recreation Administration, 1960.

<sup>2/</sup> Parks and Recreation, November 1963.

that all available recreational facilities and programs within the city are utilized to the fullest extent in service to citizens.

### Secondary Responsibilities

Planning: Develop within the administrative framework the structure which will activate the master plan:

1. Opportunity for citizen participation in determining operating policies.
2. Leadership to administer, supervise, develop and operate facilities and programs.

Development: Develop agreements and operational policies for recreational use of public lands and facilities within city boundaries:

1. Public recreational use of school district buildings and grounds when not needed for educational purposes.
2. Recreational use of buffer zones surrounding airports, railroads and freeways, consistent with the primary operation.
3. Provision for recreational use of such other governmentally controlled facilities as reclamation projects, irrigation canal systems, armories, veterans' buildings, etc.

All recreation areas, facilities and services that benefit only local residents are a local public responsibility. However, from a user-benefit point of view, municipalities should be assisted by county or metropolitan agencies when their public recreation sites also serve large numbers of non-residents -- a common occurrence in suburban cities in urban regions. The city's size and financial limitations may render it incapable of providing recreation services to non-residents.

### Equality

The municipal park and recreation system should provide equal opportunities for all citizens, regardless of race, color, economic status or place of residence; no segment of the population can be overlooked. Every citizen wants the best for his children, especially in respect to modern educational and recreational facilities. He also

deserves assurance that the value of his home and the quality of his neighborhood will not be penalized because the neighborhood has been slighted in the provision of recreation space and facilities.

All citizens of Tempe do not presently enjoy equal recreational opportunity. In some of the older neighborhoods recreation space and facilities are seriously deficient, if not entirely lacking. During the recent growth period, it has proven easier to accede to the demands of new residents living where land is more readily available and could be acquired while residential construction was in progress. Although park and playground development must progress rapidly if it is to catch up with Tempe's overall recreation needs, the development program should give special emphasis to those older areas which have felt the need longest and where development of a modern recreation facility would have a definite and positive influence on the stability of residential property values.

To illustrate the principle of equality: a playground's geographic area of influence ends where the "pull" of another playground begins. If one playground is better than another, or if it contains facilities not provided in another, it will attract children who live closer to the other playground despite the greater walking distance. This overloads the better playground, whereupon neither facility can perform its assigned function properly.

Hence, the basic problem in planning distribution of recreation facilities involves locating convenient sites in all parts of the city, and then assuring that the quality of each facility measures up to that of similar facilities elsewhere in the city.

#### Planning and Service Structure

If we accept the principal of equality in the planning of public facilities -- and we must -- then we must provide opportunity for all age groups from pre-school children to elderly folks, for those whose range of travel is very limited by age and ability as well as for those who are willing and able to travel across town, and for those who play only occasionally as well as those who play nearly constantly. The range of recreational interests, age, distance and frequency of participation is extremely broad.

To properly serve this broad range of recreational needs, it is necessary to divide the city into manageable service districts and separate facilities according to the characteristics and interest of the users. This division of the city into smaller service districts is basic to public schools and several other kinds of public and quasi-public service facilities. As a matter of fact, the service requirements of public recreation sites are closely similar to those of public schools, and with minor variations the same system of service areas will serve both functions satisfactorily.

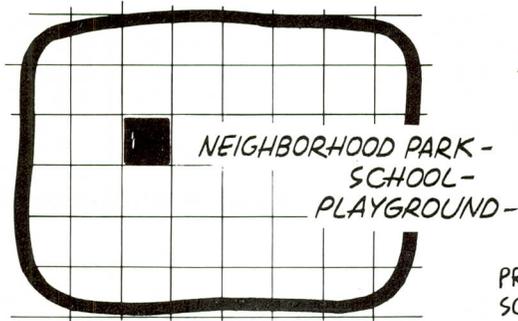
The four-level planning structure proposed for the Tempe Planning Area is illustrated in Figure 5 and described as follows:

1. The Neighborhood -- an area, from one-half to one square mile in size, occupied by 3,000 to 4,500 persons, and containing a centrally-located elementary school, wherein service to elementary school age children receives primary attention.
2. The District -- an area, comprising three or more contiguous neighborhoods and containing an intermediate school, wherein primary attention is given to serving children from ten to fourteen years of age.
3. The Community -- an area encompassing the number of neighborhoods and districts required to support a senior high school, wherein services are focussed on the adolescent and young adult age groups.
4. The Entire City -- exclusively concerned with providing those services which are unique, expensive or otherwise special, and which cannot be provided at lower levels of service.

Ideally, the neighborhood embraces a single elementary school service area. The elementary school, together with neighborhood park and playground, should be centrally located where it can be reached conveniently and safely by children without crossing major streets and where it can provide a focal point for neighborhood social, cultural, educational and recreational activities for all age groups. This neighborly association of people is essential to the social well-being of the family and the community, and is encouraged by group participation in activities of common interest

FIGURE 5.

# SERVICE LEVELS OF THE MUNICIPAL PARKS AND RECREATION SYSTEM



## THE NEIGHBORHOOD ONE ELEMENTARY SCHOOL SERVICE AREA

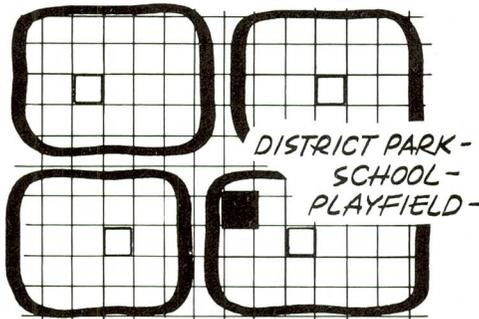
POPULATION: 3000 TO 4500  
ELEMENTARY SCHOOL CHILDREN: 450 TO 720

### RECREATION AREAS:

NEIGHBORHOOD PARK: PASSIVE ACTIVITIES, ALL AGES

NEIGHBORHOOD PLAYGROUND: ACTIVE RECREATION, 5-14 YRS.

PREFERRED LOCATION: COMBINE RECREATION SITES WITH ELEMENTARY SCHOOL TO COMPOSE: NEIGHBORHOOD PARK-SCHOOL PLAYGROUND



## THE DISTRICT ONE INTERMEDIATE SCHOOL SERVICE AREA

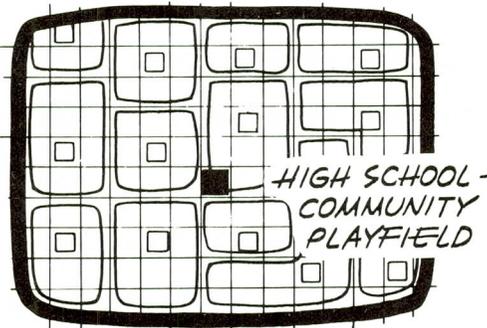
POPULATION: 12,000 TO 15,000  
INTERMEDIATE SCHOOL CHILDREN: 450 TO 720

### RECREATION AREAS:

DISTRICT PARK: PASSIVE ACTIVITIES, ALL AGES

DISTRICT PLAYFIELD: ORGANIZED SPORTS, YOUTHS

PREFERRED LOCATION: COMBINE INTERMEDIATE SITES WITH INTER-MEDIATE SCHOOL TO COMPOSE: DISTRICT PARK-SCHOOL-PLAYFIELD

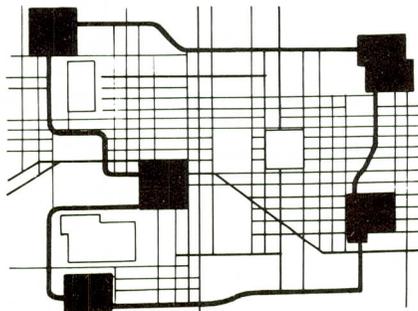


## THE COMMUNITY ONE HIGH SCHOOL SERVICE AREA

POPULATION: 30,000 TO 40,000  
HIGH SCHOOL STUDENTS: 1800 TO 2000

### RECREATION SITES:

COMMUNITY PLAYFIELD COMBINED WITH HIGH SCHOOL PROVIDING SPACE FOR ORGANIZED ATHLETICS FOR YOUTHS AND ADULTS



## THE ENTIRE CITY

RECREATION AREAS SERVING LARGE SEGMENTS OF THE TOTAL POPULATION:

LARGE CITY PARKS, PARKWAYS, GOLF COURSES, SPORTS CENTER, ARENAS AND STADIUMS, MUSEUM, ZOO, BOTANICAL GARDEN, ARCHERY RANGE, ETC.

focalized by the location of school, park, playground, churches and similar supporting facilities within the neighborhood.

However, the neighborhood also contains adolescent and teen-age groups, each with its own set of needs. These age groups are more mobile and inventive enough to discover unwholesome activities. The neighborhood playground does not attempt to satisfy these needs in either scale or range of facilities. It is therefore incumbent upon the public to provide properly scaled and located space and facilities to satisfy many of the recreational needs of these age groups. Recreation sites at district and community levels are planned to serve this need.

But there is still another level of service required -- the City level. At the fourth level of service -- the City level -- large parks and special recreation areas serve citizens living all over the city, providing them with the extensive land areas, expensive facilities and specialized activities which are not justified at lower service levels on the basis of cost or frequency and volume of use.

#### Other Principles Basic to Recreation Planning

Function: All parks and recreation sites should be located, designed, constructed, maintained and operated to perform a specific function or functions in the municipal recreation system.

Location: The location of all parks and recreation sites should be as central as possible to the population they are designed to serve. Where scarcity of suitable land makes a choice necessary, experience has proven that good location is more important than site size, although certain size-minimums must be maintained for efficiency of function, maintenance and operation.

Design: All recreation sites should be designed, equipped and operated for maximum year-round use, and wherever possible, the design of school, recreation and other public sites serving the same age group in the same service area should be integrated. For example, the grouping together of high schools with playfields, swimming pool, branch library and teen recreation center, can provide a community complex where

teenagers can always find something interesting and worthwhile to do regardless of the weather, time of day or season of year.

Appearance: Parks and recreation sites should be landscaped for beauty, sound and light control, ease of supervision and policing, and for positive influence on neighboring property values. Proper park maintenance does credit to the city, protects the original investment, and promotes good housekeeping in the neighborhood.

Program: All sites intended for active recreation should provide space and facilities for both organized and unorganized activities, and each should have a program scaled to the age groups to be served.

## B. PLANNING STANDARDS

Parks and recreation planning standards are necessarily a compromise between what is needed, what is wanted and what can be afforded. Measurement of wants involves interviewing citizens to determine their interests and preferences. Measurement of what can be afforded involves study of income levels, tax rates and methods of financing. Measurement of needs involves reliance upon objective standards which are recommended by national recreation authorities, have been tested through use by progressive cities, and have been adapted where necessary to local conditions of climate, topography, population density and other factors. The following standards are designed as a measure of Tempe's current and future need for recreation sites and facilities.

### NEIGHBORHOOD-LEVEL RECREATION

There should be a recreation area at or near the center of every residential neighborhood. Neighborhood recreation requires play lots, parks and playgrounds, each designed and equipped to perform its special function, whether developed on a separate or combined site.

#### Play Lot

The play lot, or tot lot, is a small area developed for use by pre-school children under supervision of their mothers. Most cities do not consider the individual play lot an essential part of the public recreation system, although it is desirable and common practice to include a play lot in the design of neighborhood parks and playgrounds. Although the separate play lot is a relatively inexpensive unit to develop and maintain, it cannot be provided constant supervision, and public liability may deter its inclusion in the public system. Nevertheless, there is no denying the thrill and pleasure with which small children use new and creative play equipment and other facilities which their families cannot provide at home. The play lot satisfies an especially important need in apartment complexes and small-lot residential districts.

It is recommended that a play lot be included in each neighborhood park and neighborhood playground, and that play lots be required by the City as an integral part of

every apartment complex wherein regulations or size of units permit occupancy by children. Where developed on independent sites or as part of an apartment complex, the size of play lots vary from about 2,500 square feet up to the area of a typical single-family residential lot. They will usually occupy a somewhat larger space when developed as part of parks or playgrounds. The radius of service is usually not larger than one city block, or its equivalent child population in an apartment development.

Desirable features of the play lot are: (1) several pieces of simple, safe play apparatus such as swings, slide, climbing apparatus and sand box; (2) playhouse; (3) spray pool; (4) open turf area for running and games; (5) paved walks or areas for use of wheeled toys; (6) benches for mothers and space for baby carriages; (7) shade trees; and (8) low fence to confine activities and prevent spillage into streets, parking lots or other hazardous areas.

#### Neighborhood Park

The neighborhood park is intended primarily as an attractive place for quiet, passive recreation by residents of all ages. Usually, however, it places emphasis upon adult and family recreation activities.

In general, the radius of the neighborhood park coincides with that of the neighborhood playground -- not more than one-half mile walking distance to every home. However, the type of neighborhood and the characteristics of its population influence the need for park space more directly than for playground space. More than one neighborhood park may be required to service a large neighborhood or one which contains high-density apartments or concentrations of elderly people. Conversely, neighborhoods composed mainly of large single home sites may not require a park.

One acre per 1,000 total population is recommended as a desirable over all minimum for neighborhood parks in Tempe. In general, neighborhood parks on independent sites should be from three to five acres in area, but may function satisfactorily on as little as two acres of space when combined with a neighborhood playground.

The neighborhood park features lawns and landscaping with shaded walks, benches

and game areas, ornamental pools, fountains and gardens. Parks on separate sites should also be equipped with play facilities for pre-school children designed for parental supervision. They should also include areas for such mildly active adult games as horseshoes, croquet and shuffleboard, and such areas may be night-lighted without disturbance to neighbors so long as participation is primarily adult.

### Neighborhood Playground

The neighborhood playground serves the primary play needs of children from five to about fourteen years of age, and affords limited space and facilities for other age groups in the neighborhood. The extent to which it is used by young children, whose parents do not permit them to travel more than a block or two unattended, is largely determined by its location. Similarly, its use by children over twelve will be influenced by the relative availability of larger-scale facilities within walking distance.

Neighborhood playgrounds should range in minimum size from about three to eight acres, depending upon whether they are developed as separate units or in combination with elementary schools and/or neighborhood parks. Size is also related, although not directly, to the population of the area served. At least 5 to 6 acres are required for a fully-developed playground, but the lower limit of 3 acres represents a workable compromise between design and costs of land acquisition in areas where undeveloped land is unavailable. A city-wide standard of 1 acre of neighborhood playground per 800 total population is recommended, a standard long recommended by the National Recreation Association.

The playground should be located as near the center of the neighborhood as possible. Assuming that the elementary school site is not badly mislocated, the neighborhood playground is most desirably situated on or adjoining the school site. However, children should not be forced to walk along or cross heavy traffic streets, railroads, industrial sites or commercial areas between home and playground -- a standard more important for playgrounds than for elementary schools, since children walking to school are usually provided some measure of special protection during certain periods of the day. A maximum walking distance of one-half mile is recommended, and in no case

should it exceed three-fourths mile. Playgrounds must be more closely spaced in densely-built-up neighborhoods and apartment areas. Conformance to walking distance standards may require provision of more than one playground in some neighborhoods, or the separation of neighborhood playground and elementary school site in others.

The neighborhood playground should provide the following features: (1) play lot for pre-school children, located where mothers can rest while supervising and where conflicts between age levels are minimized; (2) apparatus areas for different age levels, separated for safety and supervision; (3) open space for informal games and general play; (4) paved areas for basketball, volleyball, tennis, roller-skating, etc.; (5) fields for softball, junior baseball and touch football; (6) shelter or shaded area for storytelling, crafts, and quiet games; (7) wading and/or spray pool; (8) combination comfort station, equipment storage and program center building.

Active play areas should be set well back from streets and abutting private properties to afford space for development of landscape buffer plantings. Wherever the playground abuts private property it should be fenced to prevent encroachment on adjoining property by children. Wherever it abuts a major traffic artery, it should be fenced to prevent children from spilling out into the street. Fencing may be used effectively to reduce and arrange points of access to the playground, but should not be used to prevent access by the public.

In general, neighborhood playgrounds should be regarded as day use areas and not lighted for night use, except perhaps for low-intensity lights in adult areas. Lighted ball fields, with the attendant noise, confusion and parking problem, are extremely disturbing to nearby residents and contribute to depreciation of property values. Lighted facilities are discussed under the heading of District Playfields to follow.

#### Combined Neighborhood Facilities

Neighborhood Park-School-Playground. Earlier planning reports, and particularly the report on Schools, have pointed out the many neighborhood and community advantages

to be gained by combining the elementary school and recreation sites in a single-basic neighborhood unit. The complex becomes a center where neighborhood residents of all ages can enjoy outdoor recreation and relaxation with their families and friends. The neighborhood park-school-playground is recommended as the basic school-recreation unit to be developed in all new neighborhoods in the Tempe Planning Area. Standards recommended for elementary schools\* and, in fact, those standards presently being followed by Tempe Elementary District No. 3, provide adequate space for a playground serving both school and neighborhood, as well as for the school building, setting and parking.<sup>1/</sup> Additional acreage is required when neighborhood park activities are also to be accommodated in the school-recreation complex. Twelve acres is a desirable minimum standard size for a neighborhood park-school-playground.

Neighborhood School-Playground. The elementary school and neighborhood playground serve the same age group and the same residential area, and have similar location factors. It is a major recommendation of this report that a well-designed and fully-equipped playground for multi-use by school and neighborhood residents be developed on each existing elementary school site. Where existing school sites are not centrally located within the ultimate service area (neighborhood), it will usually be necessary and desirable to develop a second neighborhood playground (and park) site.

Neighborhood Park-Playground. Neighborhood park and neighborhood playground serve the same residential area and have similar location factors. They may be developed as a single recreation unit where location, accessibility and site size can serve both uses well. Space standards for the combined park-playground are about the same as the total proposed for individual units -- 10 acres. It is important that passive activities and facilities associated with park use be effectively separated and buffered from active playground recreation.

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\*See Section I of this report.

<sup>1/</sup> National Recreation Association, Standards for Municipal Recreation Areas, 1962, p. 17.

## DISTRICT LEVEL RECREATION

In the earlier discussion of principles it was pointed out that the need for recreation sites and facilities closely parallels that for educational facilities, particularly in respect to age levels and service areas. The elementary school plant serves the 5-to-11 age group, and is desirably combined with a neighborhood playground giving primary emphasis to recreation for the same age group, residing in the same service area. Similarly, each cluster of neighborhoods comprising a district needs a larger recreation area as centrally located as possible and preferably at or adjoining the intermediate school site.

### District Playfield

The district playfield is a multi-purpose area providing facilities and activities for all ages and serving as the recreation center for several neighborhoods. Emphasis is directed toward active recreation by teen-agers and adults, and provision for the types of activities which require more space than is available at the neighborhood playground. Part of the playfield is developed as an athletic field for organized sports at a scale just below high school level, and it functions as the center of competition among athletic teams which have their "home base" at nearby neighborhood playgrounds. A section of the playfield is usually developed as a playground for children of the surrounding neighborhood.

Ten acres is recommended as the absolute minimum area for a playfield, with fifteen acres considered a more satisfactory standard. There should be one acre of playfield per 1,200 total population.

Maximum walking distance to a playfield should be one and one-half miles, with one mile a more desirable standard. There should be one district playfield for each 15,000 population.

The district playfield should provide most of the following features: (1) separate sports fields for men and women -- baseball, football, soccer, softball; (2) courts for tennis, horseshoes, shuffleboard, basketball, volleyball, etc.; (3) running track and

and space for field events; (4) swimming pool with diving area and wading pool, primarily for family recreation but large enough for competition practice; (5) lawn areas for croquet, archery, clock golf; (6) golf chipping and putting greens; (7) children's playground; (8) a few picnic tables with charcoal burners, for small group or family picnics; (9) outdoor theater or band shell; (10) recreation center building; (11) off-street parking area; (12) landscaped buffer zones and park area.

The district playfield provides well-developed, lighted baseball diamonds for league play and other features should also be lighted for evening use.

#### District Park

In general, the district park provides for the same types of activities as the neighborhood park, except that it is designed to accommodate larger groups and special events for which the neighborhood park is not equipped. It is a passive recreation area for persons of all ages. It should include spacious lawns and landscaping, and be made especially suitable for family and group outings, with extensive picnic and informal play areas.

There should be an average of one acre of district park per 1,200 population, and one district park per 15,000. Locational criteria are the same as for the district playfield, and wherever possible the two areas should be combined in a single unit known as a district park-playfield.

The same benefits accrue from combining school and recreation facilities at the district level as at the neighborhood level. Wherever the location and availability of suitable land makes possible the combination of facilities, district park-playfields should be developed at or adjoining intermediate schools. The resulting district park-school-playfield then corresponds to the neighborhood park-school-playground in function.

The fifteen acre site recommended as standard for an intermediate school, will satisfactorily accommodate most of the district playfield activities, in addition to school building, setting and parking areas. An additional ten acres, making a total of at

at least twenty-five acres, would be required for development of a district park-school-playfield.

## COMMUNITY-LEVEL RECREATION

### Community playfields

Through cooperative development and operation, high school sites in Tempe can serve most of the city's needs for teen-age and adult athletic fields and related active recreation features.

For the most part, this broadening of high school site function merely means the free use of high school athletic fields by the public when not required for school activities. It requires some modification in the approach to site design so that public access to appropriate facilities would be convenient and controlled. It means the addition of certain community recreation features which may not previously have been considered a normal part of the high school plant, such as competition swimming and diving pools. Space standards for high school sites in the Tempe Planning Area are such that sites will accommodate any additional features which might be required for community-level athletics.

## CITY-WIDE RECREATION AREAS

In addition to recreation areas serving neighborhoods, districts and communities within the city, there are certain other types of areas which serve the entire population. These areas include the large city park, the reservation and such specialized areas as the golf course, sports center, amphitheater, and parkways.

There is no realistic opportunity or special need for several of these types of areas in Tempe. Within a few minutes driving time of Tempe, vast areas of natural desert and mountain scenery are preserved by the National Forests and Maricopa County. An active regional park program will satisfy demands for day camping, extensive picnicking, hiking and riding, and other day use and overnight activities. On the other hand, there is a strongly increasing need and demand for more golf courses and for the facilities normally provided in large city parks.

### Large City Parks

The large park affords citizens an opportunity to enjoy broad expanses of natural scenery and a pleasant environment in which they can engage in a wide variety of active and passive recreational activities. The city park is designed and developed for diversified use by large numbers of people, and the desired effect can seldom be achieved on a site less than one hundred acres in size. While the location of these parks should be as convenient as possible to the majority of the population, such factors as natural features, scenery, and availability of sufficient land to accommodate appropriate activities are more significant than location. The optimum size of a city park depends to a considerable extent upon whether it will include extensive land areas occupied by such features as golf courses, lakes, etc. Large city parks are often located where they can serve as buffers between residential areas and railroads, freeways, and industrial districts.

One large city park should be provided for each 40,000 to 50,000 population, and three to four acres of such parks per 1,000.

Natural, open scenic areas comprise a considerable part of the large city park. Such features as group and family picnic areas, hiking and riding trails, zoological garden, arboretum, and nature museum are appropriate. A golf course, scenic parkways, and facilities for field sports are often included. Parking areas, comfort stations, and shelters should be provided at points of user concentration.

### Golf Courses

Depending upon the terrain, a 9-hole golf course requires 50 to 75 acres, and an 18-hole course requires 100 to 160 acres. Golf courses usually occur near the perimeter of the community, since convenience of location is less important than for other types of recreation areas. The standard of one 18-hole course per 50,000 to 60,000 population is most widely recommended, and this would appear minimal in a climate so favorable for year-round play. It is possible that the increasing number of casual golfers would be best served by a larger number of 9-hole courses than by fewer 18-hole courses.

### Overall Recreation Space Standards

The most widely adopted recreation space standard, 10 acres per 1000 persons, has been approved by federal agencies and by state, regional and local planning, recreation and park authorities. Whereas large, densely built-up cities have experienced difficulty in meeting this standard, smaller cities should seek to exceed it. The rapidly increasing recreation demand has led most authorities to the conclusion that the 10-acre standard should be increased by 50% to 100%. The California Committee on Planning recommends 15 acres per 1000 for in-city parks and recreation facilities, in addition to parkways and waterfront development.<sup>1/</sup>

Total acreage, however, is not the best measure of adequacy. Recreation needs can be met only by a comprehensive system of sites which are suitably sized, located and developed to meet specific needs. Some of these sites serve primarily active or organized recreation needs, while others emphasize passive, informal use. The several different types of recreation areas which are needed in Tempe have been described earlier in this part of the report. Their geographic distribution within the system is critical to performance of assigned functions.

Based on all aspects of existing local need, financial capability and other conditions, a minimum of 10 acres of recreation space per 1000 persons is recommended for Tempe. It should be recognized, however, that future needs may well dictate the up-grading of this standard.

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<sup>1/</sup> State of California Recreation Commission, Guide for Planning Recreation Parks in California, 1956.

Figure 6  
RECOMMENDED PARK AND RECREATION SITE STANDARDS

Tempe Planning Area

Recreation Area	Primary Age Emphasis	Site Area	Max. Travel Distance	Area Served	No. Sites/Population	Preferred Location
Play Lot	to 5 yrs.	2000-5000 s.f. typical, to 10,000 max.	One city block or less	300 to 700 population	----- —	Center of block or apt. project
Neighborhood Playground	5 to 12 years	5 ac. min., 7 ac desirable (1 ac/800 pop)	1/4 to 1/2 mi. desirable, 3/4 maximum	One neighborhood	One per 3000 to 4500 pop.	Center of neighborhood, at elem. school.
Neighborhood Park	All ages	3 to 5 ac. (1 ac/1000 pop)	Same as playground	One neighborhood	One per 3000-4500 pop.	Same as playground
District Playfield	12-17 yrs.	10 ac. min., 15 ac. desirable (1 ac/1200 pop)	1-1½ miles	3 or more neighborhoods	One per 15,000 pop.	Center of district, at intermediate school.
District Park	All ages	10 ac. min. (1 ac/1200 pop)	1-1½ miles	3 or more neighborhoods	One per 15,000 pop.	Same as playfield
Community Playfield	Youths & adults	15-25 ac.	3-4 miles	One high school service area	One per high school service area	At high school
Large City Parks	All ages	100 ac. min. (3-4 ac/1000 pop)	15-20 min. driving time	Entire city	One per 40000-50000 pop.	One in every major section of city
Golf Courses	Adults	50-75 ac. 9-hole; 100-160 ac. 18-hole	15-20 min. driving time	Entire city	One hole per 3000 pop.	One in every major section of city

Source: Based on Standards for Municipal Recreation Areas, National Recreation Association, 1962, as modified to coordinate with 6-2-4 grade organization of Tempe Planning Area school districts.

PART IV  
PARKS AND RECREATION PLAN

The proposed Parks and Recreation Plan, Figure 7, is based upon the preceding appraisal of present and future recreation demand, evaluation of existing conditions, and statement of guiding principles. Its objectives are to:

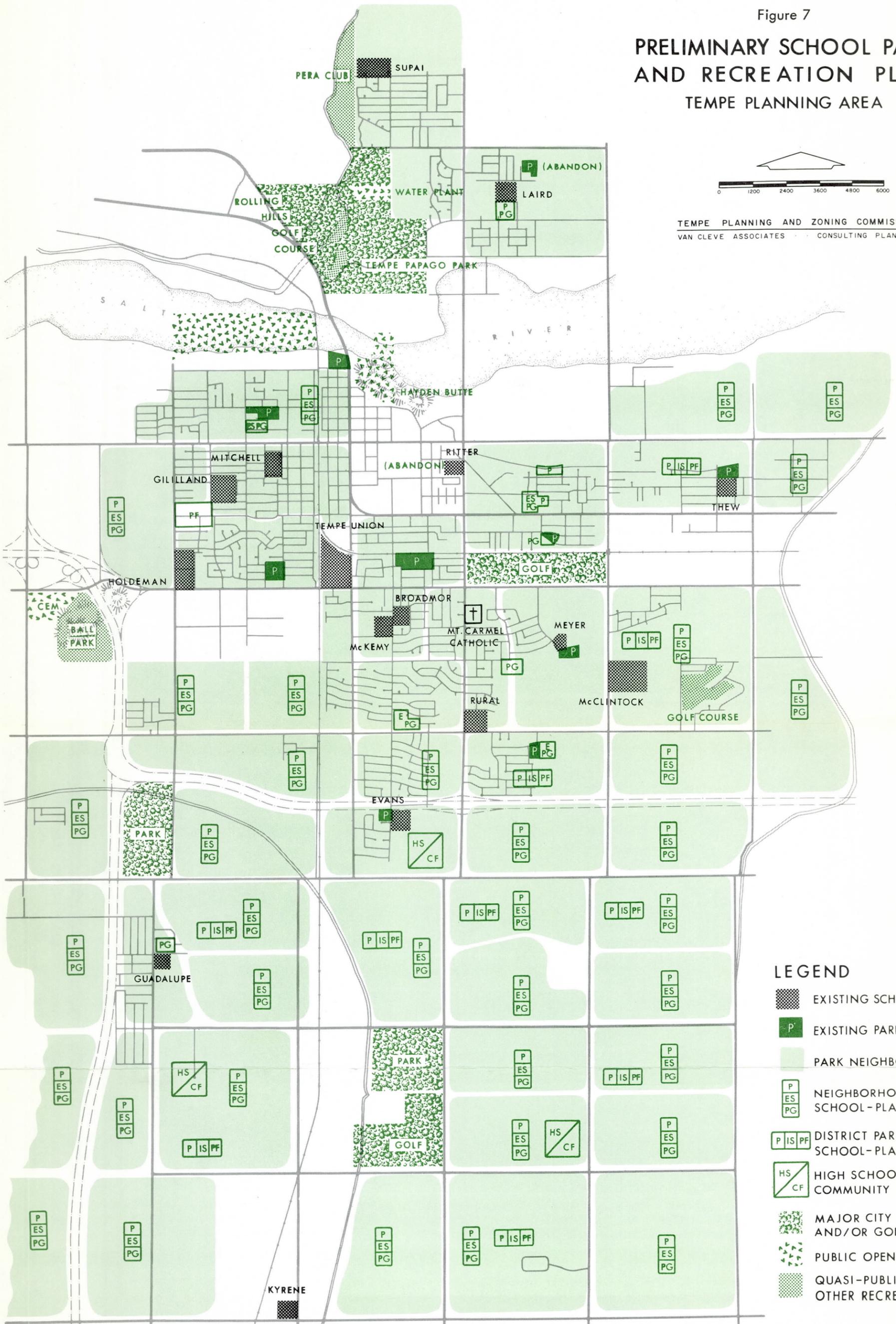
1. Outline a system of parks and recreation areas which will satisfy the needs of existing and future residents of the Tempe Planning Area.
2. Assign each park and recreation site a specific function within the total system, i.e., the type of recreation use, the age groups to be served, and the geographic service area.
3. Recommend the appropriate function of existing and future school sites in serving community as well as school-oriented recreation needs.
4. Recommend the general location and size of future recreation sites which will be required to meet established standards of community service.

The Plan proposes development of a total of approximately 1600 acres of recreation space within the Tempe Planning Area. The proposed system is structured according to the four levels of service required to satisfy the needs of all age groups in all parts of the future city. The system is composed of 53 neighborhood-level recreation sites, 15 district-level sites, 5 community-level sites, and 6 sites serving the entire city.

Forty-one of the 53 neighborhood units are neighborhood park-school-playgrounds. However, undeveloped land adjoining existing elementary schools is unavailable in certain older sections of the city, making it necessary to develop neighborhood parks and park-playgrounds separate from elementary school sites. Similarly, it has not been possible everywhere to plan for combined school-recreation sites at the district level. Figure 8 shows the breakdown of existing and proposed recreation sites according to number and approximate size.

Figure 7

# PRELIMINARY SCHOOL PARK AND RECREATION PLAN TEMPE PLANNING AREA



TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES CONSULTING PLANNERS

- ### LEGEND
-  EXISTING SCHOOLS
  -  EXISTING PARKS
  -  PARK NEIGHBORHOOD
  -  NEIGHBORHOOD PARK-SCHOOL-PLAYGROUND
  -  DISTRICT PARK-SCHOOL-PLAYFIELD
  -  HIGH SCHOOL AND COMMUNITY PLAYFIELD
  -  MAJOR CITY PARK AND/OR GOLF COURSE
  -  PUBLIC OPEN SPACE
  -  QUASI-PUBLIC AND OTHER RECREATION

The preparation of this map was financially aided through a Federal grant from the Urban Renewal Administration of the Department of Housing and Urban Development under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

Figure 8  
PLANNED RECREATION SITES, 1985

Tempe Planning Area

Recreation Area	No. of Sites			Site Acreage		
	Planned	Existing	Needed	Planned	Existing	Needed
Neighborhood Park-School-Playgrounds	41	6	35 <sup>1/</sup>	296 <sup>8/</sup>	51	245
Neighborhood School-Playgrounds	8	6 <sup>2/</sup>	2	62	50 <sup>9/</sup>	12
Neighborhood Park-Playgrounds	1	1 <sup>3/</sup>	0	8	4	4
Neighborhood Parks	3	1 <sup>4/</sup>	2	18	9	9
Sub-Totals	53	14	39	384	114	270
District Park-School-Playfields	10	0	10	150	0	150
District School-Playfields	2	2 <sup>5/</sup>	0	20	20	0
District Park-Playfields	2	2 <sup>6/</sup>	0	29	29	0
District Parks	1	0	1 <sup>7/</sup>	10	0	10
Sub-Totals	15	4	11	209	49	160
High School-Community Playfields	5	2	3	100	40 <sup>10/</sup>	60
Large City Parks	3	1	2	485	285	200
Golf Courses, 9-hole	6	1	5	420	40	380
Totals				1598	528	1070

Notes: 1/ Includes addition of adjacent neighborhood parks at Laird and Meyer School-Playgrounds, and addition of adjacent neighborhood school-playgrounds at Cyprus and Jaycee Neighborhood Parks.

2/ Supai, Mitchell, Broadmore, Rural, Guadalupe and Holdeman Elementary Schools.

3/ Hudson Park, with addition of adjacent neighborhood-playground.

4/ Clark Park.

5/ Gilliland and McKemy Intermediate Schools.

6/ Daly and Tempe Beach Parks.

7/ Near Gilliland Intermediate School.

8/ Not including 4 acres per new site allocated for school purposes.

9/ Not including 21 acres used for school purposes on existing school sites.

10/ Not including 79 acres of existing sites used for school purposes.

### Recreation Function of Public Schools

For the most part, recreation service areas are identical with school service areas as proposed in Figure 14 of the School section of this report. One of the most important proposals of the Plan is that existing and future school sites be fully developed and operated for community recreation as well as for educational purposes. It is proposed that existing elementary school sites be developed as neighborhood school-playgrounds and existing intermediate schools be developed as district school-playfields. To include a neighborhood or district park as part of a combined site will require acquisition of additional acreage; consequently, where abutting land is not available for park development a separate park site is proposed.

Current and proposed site standards of Tempe Elementary School District will provide adequate space, if properly developed, for active public recreation at neighborhood and district levels in addition to that required for school purposes. Similarly, high school site standards provide adequately for playfield development to serve residents of high school service areas. Figure 4 shows that existing sites have from five to eight acres available for outdoor activities, aside from area occupied by building, parking and immediate setting.

Nearly all existing school playgrounds in the Tempe area are presently underdeveloped, with the school district able to provide only the barest minimum of developed play areas and apparatus. Current school tax levels, together with the continuing pressure for new school buildings to meet projected enrollment needs, suggest that it may take many years for the District to accomplish full development of school playgrounds. It will be increasingly difficult to justify the continued acquisition of ten-acre elementary school sites unless each site can be developed to its maximum potential.

At the same time, community recreation needs are already so great, and growing so fast, that the City can ill-afford to invest in space and facilities which duplicate those which could be developed on school sites. In the interest of school taxpayers, who are also city taxpayers, it is mandatory to avoid every unnecessary duplication

of expensive land and facilities.

Two facts are apparent: (1) Unless the City helps the District develop the recreation potentials of elementary and intermediate school sites, it is unrealistic for the District to expect to maintain current site acreage standards, and (2) Unless the District makes adequate space available for development of neighborhood playground and district playfield activities, it will be extremely difficult for the City to meet the recreation needs of its citizens at neighborhood and district levels. Cooperative development and joint use of school sites is the only logical solution.

It is beyond the scope of this report to attempt a recommendation as to appropriate terms of a local school-city agreement which will facilitate maximum joint use of school sites. However, these agreements and processes have been developed and operated successfully in many communities throughout the country, and many types of arrangements are available as guides.

Perhaps the most critical factor basic to an equitable and effective school-city agreement is intent. The need for both schools and recreation space is so great, and the taxpayer so hard-pressed, that there is no longer room for lip service to the principle of school-city cooperation -- the intent to cooperate must be whole-hearted and mutual if it is to achieve maximum results. Both parties to the agreement have much to gain, but both must be willing to give as well as take. Both parties must be willing to lay aside the traditional concepts, competition for tax dollars, and jealousy of prerogatives which prevent effective cooperation.

Aside from the serious intent to cooperate, certain basic points of agreement are required as a point of departure for a workable agreement: (1) general site development requirements of each entity, (2) permanent service area boundaries, (3) basic principles of site location and selection, (4) timing of site acquisition, and (5) recognition of legal requirements and limitations. Next comes the question of whether sites should be purchased and held jointly, purchased simultaneously under divided ownership, or purchased as single units by one entity and a part leased to the other.

Finally, the agreement should include division of financial and administrative responsibility for site planning, development, operation and maintenance.

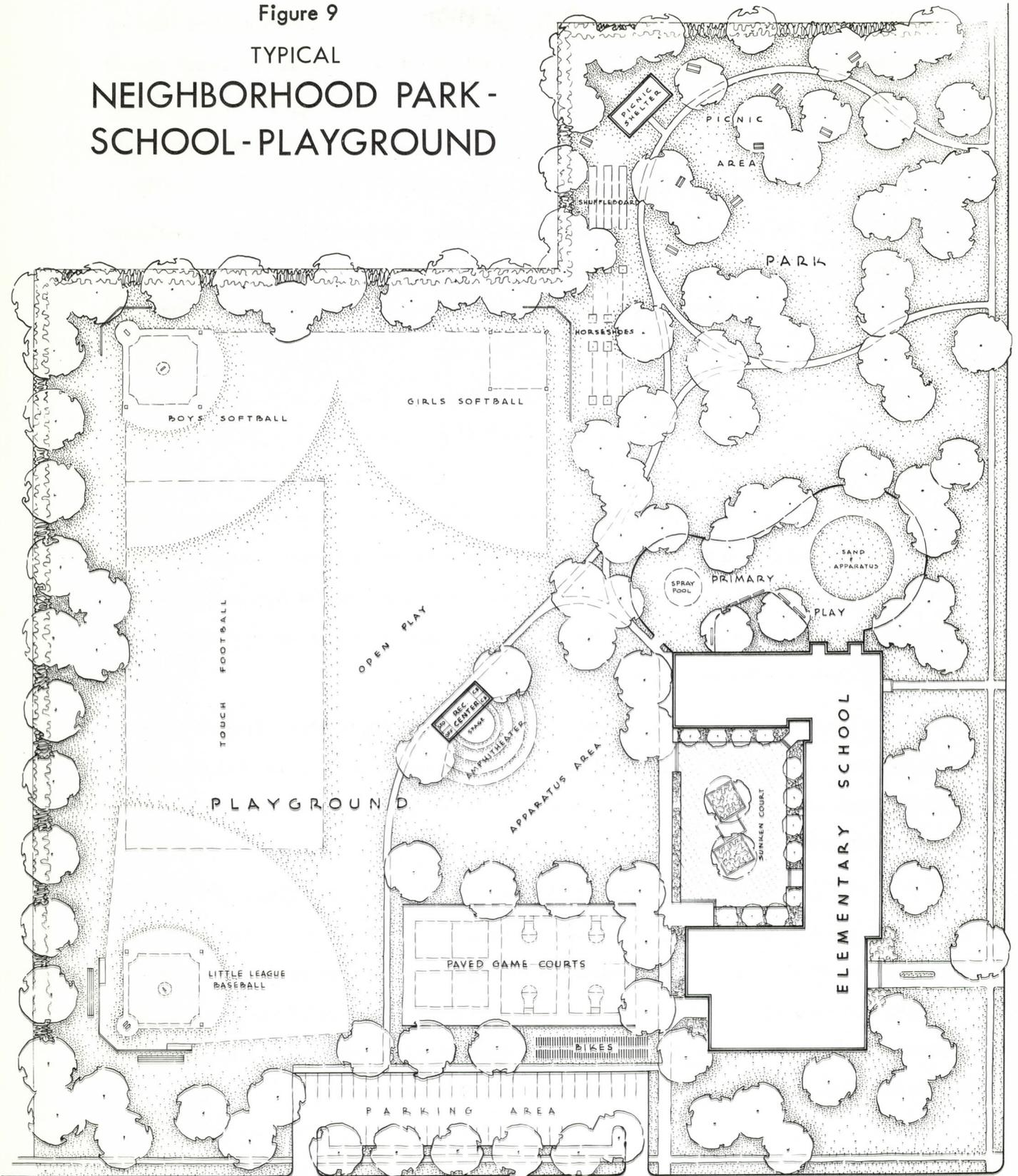
Consideration should be given the possibility of the school district acquiring and retaining ownership of the entire combined site, whereupon it could develop, operate and maintain the school plant and grounds, while leasing the playground (or playfield) portion of the site to the City for development, operation and maintenance. Ultimately, it might prove feasible for the City to maintain the entire site, including school grounds (not school buildings), in exchange for free public recreation use of school buildings.

Critical to success of the entire joint effort is a basic agreement as to the kinds of facilities for which each party is to be responsible and the development of a comprehensive site development plan including all facilities on the total site. To insure that the site will be used most effectively and efficiently for both school and recreation purposes, an experienced recreation site designer acceptable to both parties should be retained to collaborate with the school architect in developing the total site plan. Upon acceptance of a general site development plan by both parties, the school architect can proceed with recreation site development plans.

Figure 9 shows a typical site development plan for a neighborhood park-school-playground. It should be noted that the passive recreation area of the park is insulated from playground activities through careful handling of circulation patterns and landscape development.

It is an open question whether space for development of neighborhood and district park facilities should or need be included in school-city cooperative agreements. Since the school is not directly concerned with this aspect of recreation, and since it may not always be possible to acquire sufficient space for park development on or even abutting the school-playground site, it may be preferable for the City to take full responsibility for acquisition and development of park sites.

Figure 9  
 TYPICAL  
 NEIGHBORHOOD PARK-  
 SCHOOL-PLAYGROUND



## Recommendations Regarding Existing Recreation Sites

Tempe Beach. Future use and any necessary redevelopment of Tempe Beach should be directed toward service as a district park-playfield emphasizing adult use. Topography and location suggest that this would be a desirable location for development of an outdoor amphitheater or bandshell for community gatherings, plays and concerts.

Daley Park. But for the investment in the existing lighted ball diamond, it would be preferable to relocate all playfield activities from this site to the McKemy School site. A thorough site evaluation and design study is needed to direct the adjustment of activity areas and expansion of play facilities and equipment to provide a more definite separation of active and passive recreation and to avoid conflicts between age groups. Additional plantings of small trees and shrubbery masses are needed to complete landscape development.

Hudson Park. Facilities for passive recreation should be expanded on the existing site and the addition of playground and playfield activities should be firmly avoided. The plan proposes acquisition and development of the adjoining triangular parcel as a neighborhood playground. The well-located and maturing shade trees should be extended and supplemented by shrubbery masses.

Clark Park. A thorough evaluation of neighborhood school and recreation needs should be made before the most appropriate ultimate function of Clark Park can be determined. As a minimum, the site requires careful design to insure that future development will affect a separation of active and passive recreation. Extensive landscape plantings are needed and parking should be adjusted for greater convenience.

Cyprus Park. This site should be developed as a neighborhood park and existing ball diamond and other active recreation facilities removed to another site. If adjoining land can be acquired for school-playground development, this site could become part of a neighborhood park-school-playground. The site needs extensive landscape development.

Palmer Park. Thorough evaluation of existing school and park sites and facilities must be made before the most appropriate function of this park can be determined. As a minimum, extensive landscape planting is needed to develop park character.

Jaycee Park. The Plan recommends acquisition of adjoining land for elementary school-neighborhood playground development. When this is accomplished, playground activities should be relocated to the new site, and the existing site developed to function as a neighborhood park. Any future construction of quasi-public buildings and facilities should be located in the west end of the site.

Ritter School. A site for relocation of Ritter School is shown on the Plan. However, this site is not wholly adequate in either size or location. No matter where the new site is located, the crossing of Apache Boulevard cannot be avoided. This neighborhood requires duplication of neighborhood park and playground space on either side of Apache Boulevard.

Existing School Sites. Laird and Meyer Schools can become neighborhood park-school-playgrounds through addition of adjacent neighborhood parks. Cyprus and Jaycee Parks can become neighborhood school-playgrounds through addition of adjacent elementary school-playgrounds. Space for neighborhood park-school-playgrounds already exists at Thew and Evans Schools.

Tempe Papago Park. This 285-acre area of desert terrain has many physical attributes and potentials for development as an outstanding city park. Its location is such that Tempe residents may constitute only a small ratio of its ultimate users, and this factor must be given careful consideration in determining its ultimate character, priority of development and extent of capital investment by the City of Tempe.

Existing in-holdings by Salt River Project and Arizona State Hospital do not seriously affect its ultimate park character. The water treatment plant offers a more serious obstacle to character and park function, but its effects can be minimized through proper landscaping and careful location of the protection fence so that it follows the terrain, rather than straight lines. The projected improvement of Curry Road, an essential

traffic route, should develop it as a parkway with flattened, planted roadslopes and parking overlooks at vantage points.

Rolling Hills Golf Course, located on the west side of the park area, is very attractive and receives heavy use, but it is questionable whether it should be expanded into an 18-hole course. Two factors should be considered: (1) Tempe residents do not and will not constitute a major proportion of use, and (2) Expansion would involve relocation of Campo Allegre Drive or a troublesome back-and-forth pattern of travel and play.

Development of a canal-side park is proposed in the north section of the park area as a part of a county-sponsored canal park and trail system. The availability of canal water offers special opportunity for development of water features and makes feasible the development of a "green" landscape. However, the scale and extent of this park-within-a-park should be carefully restricted to the canal park system concept, unless and until: (1) Tempe is fully prepared to develop and maintain a major park largely for metropolitan area use, and (2) established Tempe neighborhoods are provided fully-developed neighborhood and district recreation facilities. Can Tempe finance another Encanto Park?

The native desert character, expansive views and openness of the Papago site should be preserved and enhanced through careful fitting of development to the terrain. Structures should be of native materials and landscaping restricted to indigenous plants. Development should emphasize accommodation of large numbers of people engaging in various activities which are mainly passive in nature. Extensive picnic areas with widely-spaced ramadas, areas for large group picnics and barbecues, hiking and riding trails, archery course, etc., are typical facilities to be provided in an extensive city park of this type.

PART V  
CARRYING OUT THE PLAN

Organization of the Parks and Recreation Board

The Parks and Recreation Board was created in 1964 by Ordinance 407. Review of the ordinance indicates that it should be amended to facilitate the proper functioning of the Board in pursuit of its primary purposes. The following points should be considered in drafting an improved ordinance:

Membership. Appointment of two council members is considered excessive -- a single council representative would provide adequate liaison between Board and Council. The term of a council member should coincide with his term of office on the Council. Although the creating ordinance need not designate the organizational or geographic representation of non-council members, the major school district should be represented by an administrative staff member and inclusion of a member of the Planning Commission would also prove worthwhile. The existing limitation of membership as to sex is unwarranted.

Duties and Jurisdiction. Ordinance 407 outlines the Board's duties only very generally -- they should be more specific and comprehensive. Whereas the Board's status as advisory to the Council is entirely proper, the advisory principle should not be applied to all decision-making. It is recommended that the Board be given jurisdiction in all but final policy, legal and some personnel matters, including the power to:

1. Select professional staff, consultants and contractors.
2. Acquire property for park purposes, by gift or otherwise.
3. Enter into agreements with school districts and governmental agencies for purposes of acquisition, lease, financing, development, operation and maintenance of parks and recreation sites, subject to Council approval.
4. Improve, drain, landscape and erect buildings and facilities on park properties, within budgetary appropriations.

5. Make park rules and regulations.
6. Determine in parks where sewers, public streets and drives, gas lines, water lines, overhead utilities and quasi-public buildings shall be located.
7. Lease buildings or land for concession operation, and lease land not immediately needed for improvement.<sup>1/</sup>

#### Organization of Parks and Recreation Department

Although activities related to acquisition, development and maintenance have increased steadily during recent years, the Parks and Recreation Department is still primarily occupied with developing and operating the recreation program. This emphasis is apparent in its organization and the qualifications and potentials of its staff. It is a recreation-oriented department, and has produced a recreation-oriented Parks and Recreation Board. While the Department has a very creditable record of performance and has given Tempe a well-managed recreation program, the major job now at hand is the development of the city's physical recreation plant.

Without discounting the continuing need and importance of an active and effective recreation program, the backlog as well as future need for developed parks and recreation sites is so great that organization of a competent parks section of the Department is critical. The present staff is not equipped by training or experience to handle park planning, design and development competently, nor is the Department organized to produce the job that needs to be done. Although the park landscape architect and the recreation specialist must work together in the same general field toward the same broad goals, the one is no better equipped to do work required of the other than the architect is equipped to do structural engineering. A number of specialties must be developed and coordinated within the Department if Tempe is to satisfy the long-term recreation demand.

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<sup>1/</sup> For greater detail regarding creating ordinances, see: "A Suggested Ordinance Creating a Recreation and Park Commission", by C. E. Brewer, National Recreation Association, 1960.

It is recommended that steps be taken to re-organize the functions and operations of the Department so that a parks division and a recreation division will ultimately have approximately equal responsibilities under the direction of a parks and recreation administrator. Figure 10 shows the basic structure of a Parks and Recreation Department, within which modifications can be made as required to fit the continuing growth of the recreation function.

Even when properly organized, the Department should not be operated as an island unto itself. Closer liaison, understanding and cooperation is necessary with city departments responsible for comprehensive planning, streets, traffic, utilities, and with school districts, county and state agencies. Such liaison should be a prime responsibility of both the Board and the Department

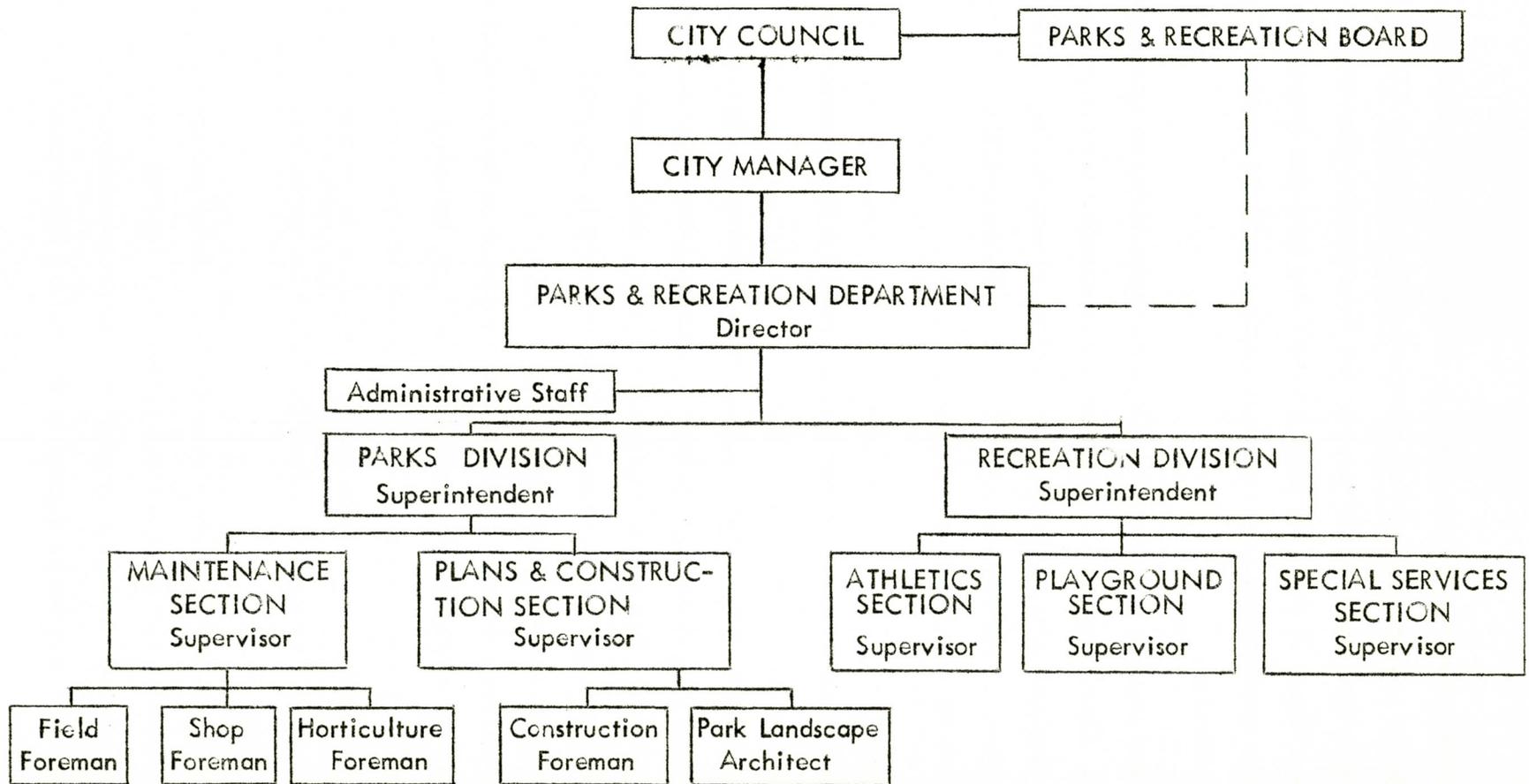
#### Action Program

The following sequence of actions is recommended as most productive on a long-term basis:

1. Initiate discussions between school districts (primarily, Tempe Elementary District No. 3) and City (primarily, Parks and Recreation Board) to investigate individual needs, objectives and goals, and to reach firm and comprehensive agreements regarding future school-city relationships affecting the parks and recreation system.
2. Using Tempe General Plan studies as a guide, develop and adopt a more detailed Master Plan for Parks and Recreation, including selection of specific sites to be acquired and developed during the next five to ten years. This plan should be coordinated with a similar plan for schools and must be accepted by school districts if the system involves joint use of school sites.
3. Simultaneous with preparation of the Master Plan, prepare preliminary site development plans and cost estimates for the first sites selected for development, including completion of partially-developed sites.
4. Prepare a Long-Range Capital Improvements Program covering at least

Figure 10  
SUGGESTED LONG-RANGE DEPARTMENT ORGANIZATION CHART

Tempe Parks & Recreation Department



the next ten years and a financing plan to accompany it. The Capital Improvements Program should be coordinated, time-wise, with the Long-Range School Plan, and the financing plan should consider all possible sources of revenue and outside governmental assistance.

5. Prepare final construction documents for top-priority recreation sites.

#### Acquisition and Development Priorities

Through a step-by-step program, the City of Tempe can achieve its goal of a top-quality parks and recreation system over the next twenty years or so. However, such a system cannot be achieved without hard work -- each and every year -- not spasmodically.

Two basic conditions affect the approach to developing a sound priority system for development of sites and facilities: (1) The backlog of need in older, established sections of the city -- the need to "catch-up"; and (2) The increasing needs related to population growth, and the increasing demand related to more leisure time -- the need to "keep-up". It is unlikely that both "catch-up" and "keep-up" programs can be given equal emphasis at the outset. Although each year's capital improvement budget must include both types of projects, emphasis during early years should be placed on solving the backlog of need. As current needs are satisfied, primary attention will gradually shift to the task of keeping abreast of, and hopefully ahead of, growing needs. As the physical plant grows, an increasing ratio of total expenditures will be required for maintenance and operations, but capital investment should not be permitted to lag.

In general, first priority should be given provision of adequate recreation space and facilities at the neighborhood level. This is the level of recreation service most critically needed in Tempe and most other Arizona communities. The 5-to-14 year age group is the most numerous and demanding and the benefits it derives from adequate space and facilities for safe, healthful, convenient and creative recreation at the neighborhood level will benefit the community significantly in years to come.

First priority at the neighborhood level should be given to provision of playgrounds in older, established residential areas. These residents have waited the longest for adequate, convenient recreation facilities and the creation of new recreation areas within these neighborhoods will have a pronounced and positive effect upon social attitudes, property values and the arrest of blight and delinquency.

Suggested priority of site acquisition to "catch-up" is:

1. Sites required to supplement existing elementary school-neighborhood playgrounds in newer, partially-developed neighborhoods.
2. Sites required to supplement existing elementary school-neighborhood playgrounds in newer, partially-developed neighborhoods.
3. Sites required to supplement existing intermediate school-district playfields.

Suggested priority of site development to "catch-up" is:

1. Development of neighborhood playgrounds on existing elementary school sites.
2. Development of district playfields on existing intermediate school sites.
3. Development of neighborhood parks supplementing school-playgrounds.
4. Development of district parks supplementing existing school-playfields.

Suggested priority of site acquisition to "keep-up" is:

1. Elementary school-neighborhood playground sites in older neighborhoods.
2. Intermediate school-district playfield sites in established residential areas.
3. School-playground and school-playfield sites in developing neighborhoods.
4. Sites for large city parks, golf courses and other city-wide recreation areas.

Suggested priority of site development to "keep-up" is:

1. Development of new neighborhood park-school-playgrounds as needed.
2. Development of new district park-school-playfields as needed.
3. Development of city parks, golf courses and community playfields on a regular, long-term capital investment schedule.

### Capital Improvements Programming

For the most part, Tempe's capital investment in parks and recreation has been characterized by piece-meal expenditures, based upon annual appropriations and a pay-as-you-go philosophy. This has proven an unsatisfactory approach for many reasons, not the least of which is that it sponsors poor design and inefficient and costly construction, and subjects the Council, Board and Department to pressures of the moment.

The process of long-term capital improvements programming, initiated by the new City Charter, is a combined planning and plan-evaluation process. It balances plans and projects against anticipated revenues. It balances the need for one project against the need for another. It keeps current projects within the pattern of future projects. It avoids short-range decision-making. It permits and anticipates all of the various sources of revenues and outside assistance.

With formulation and adoption of a Master Plan for Parks and Recreation, the Board and Council will have a sound base for developing a broader range of financing for parks.

### Financing

Traditionally, general obligation or revenue bond issues have been a principle source of funds for public facility capital improvements. To date, however, Tempe's capital investment in parks has derived from annual appropriations. In some states, cities may organize special assessment districts to finance park improvement, but this avenue is not yet legal in Arizona. Dedications and gifts are occasional sources of funds, and civic and neighborhood organizations frequently raise funds for special equipment. Sale of surplus city property offers another source.

It is a basic principle of corporate finance that physical plant for a rapidly-growing, dynamic enterprise is most appropriately financed through long-term borrowing. Tempe's pay-as-you-go approach to park improvements has failed to catch-up, let alone keep-up, with current recreation needs and demands. And it is questionable

whether today's taxpayers can be expected to pay in advance for facilities which will ultimately be used by a hundred thousand new future residents.

Tempe's current and future needs for capital investment in parks are so great that the general obligation bond issue should be used as a principal means of improvement financing. Bond issue funds would make available the matching funds required for participation in federally-assisted parks and recreation projects.

#### Assistance Programs

The several federal programs making funds available for assistance of recreation projects, for which Tempe could be eligible, include:

Open Space Land Program, Department of Housing and Urban Development: grants up to 50% of cost of acquiring permanent open space and of limited development of such space.

Land and Water Conservation Funds, Bureau of Outdoor Recreation: grants up to 50% of costs of acquiring and developing parks and other outdoor recreation space and facilities.

Urban Beautification Program, HUD: grants up to 50% of the amount by which costs of beautification projects exceed normal local expenditures for the purpose.

Urban Renewal Program, HUD: matching fund grants for acquisition and redevelopment of blighted properties for public purposes, including recreation.

Public Works Planning, HUD: interest-free advances to assist planning of specific public works or facilities, including recreation projects.

Neighborhood Facilities Program, HUD: grants up to 75% of project cost of neighborhood youth centers and similar facilities, with emphasis on projects supporting a community action program under the anti-poverty program and projects of special benefit to low-income families.

Local matching funds may derive from any non-federal source, including bond issues, operating budgets, special taxes, special assessments, gifts and dedications, and state and county assistance.

## Community Support

Planning is essential to gaining community support. Capital improvement programs, when related to continuous long-range planning, are more likely to gain public acceptance. Most parks are developed in stages, and general development plans are valuable guides to orderly development when construction extends over a number of years. Such plans are invaluable in discussions with interested community and neighborhood groups. They build confidence in the public agency.

Garden clubs, quasi-public organizations, and public service clubs frequently participate in park and playground development. Although they rarely have appreciable funds to spend, they can be strong supporters of the park and recreation program. Park landscape development, for example, is a common garden club project which when properly planned can produce significant results. The group should be encouraged to proceed in stages over a period of several years according to a total plan. Its money purchases plants or play equipment which are installed and maintained by the Parks and Recreation Department. A group which participates in park development, however small its participation may be, will most likely extend its interest far beyond its specific area of contribution to envelop the entire parks and recreation concept.

A well-informed public is probably the greatest asset that a parks and recreation operation can enjoy. Good relations with newspapers, radio and television is essential. Planning goals committees and public forums provide channels through which citizens may be informed of parks and recreation goals, objectives and plans.

PART VI  
SUMMARY OF FINDINGS

Demand for Recreation

1. Present and future age composition and other characteristics of Tempe's population suggests a fairly normal balance of recreation demand, without special emphasis on either youth or old age.
2. About 5% of a family's total disposable income is spent on recreation, and this percentage will rise as incomes rise. City people spend more on recreation than rural dwellers.
3. More leisure time and increased recreation demand is resulting from: (a) the shorter work week, (b) later age of entry into work force, (c) improvement of homes and home equipment, and (d) social security, retirement pensions and medical advances.
4. Mobility and ease of travel influence the frequency and distance of recreational travel.
5. Professional, technical and white collar workers participate more extensively in recreation than other employed people, and suburbanites participate more frequently than residents of big cities and rural areas.

Existing Parks and Recreation Facilities

1. Tempe presently has about 400 acres of land designated for public recreational use, a ratio of 11.8 acres per 1,000 persons. However, developed acreage at neighborhood and district levels is seriously below normal standards.
2. Most existing recreation sites are in early stages of development. In general, they are poorly arranged, without adequate definition of function, and lacking in park character.
3. Each existing recreation site should be carefully evaluated to determine its most appropriate function in the ultimate system, and developed according to a competent plan.

### Recreation Planning Principles

1. City responsibility for recreation embraces two basic functions: (a) provision, maintenance and operation of a system of parks and recreation sites; and (b) provision and leadership of a balanced recreation program.
2. The parks and recreation system should provide equal opportunity for all citizens, regardless of age, race, color, economic status or place of residence.
3. Tempe's park and recreation system should be based on a four-level structure, of which the first three levels are closely related to the three-level structure of the public school system.
4. Each recreation site should be located, designed, constructed and operated to perform a specific function in the total system.
5. The location of all recreation sites should be as central as possible to the population to be served, and their size should be sufficient to serve their intended function.
6. All sites should be designed, equipped and operated for year-round use and wherever possible, the design of school and recreation areas serving the same age group in the same area should be integrated.

### Recommended Park and Recreation Standards

1. Each neighborhood, containing 3,000 to 4,500 people, should be provided a neighborhood playground from 5 to 7 acres in size, and a neighborhood park from 3 to 5 acres, located near the center of the neighborhood within one-half mile walking distance for all residents. Park and playground may be combined and wherever possible, should be combined with an elementary school to make an integrated school-recreation complex.
2. Each district, comprised of three or more neighborhoods and housing from 1,200 to 1,500 people, should be provided a district playfield 10 to 15 acres in size and a district park of about 10 acres, located near the center of the district within not more than one and one-half miles walking distance for all residents. Park and playfield may be combined, and wherever possible, should

be combined with an intermediate school to make an integrated school-recreation complex.

3. Fifteen to twenty-five acres of each high school site should be devoted to athletic fields, game courts, swimming pool and similar community playfield features.
4. One large city park at least 100 acres in size should be provided for each 40,000 to 50,000 residents, and sufficient public golf courses to total one hole per 3,000 population. A city park and a golf course should be located in each major section of the city.
5. As overall standard, the parks and recreation system should provide a total of at least 10 acres per 1,000 persons.

#### Proposed Parks and Recreation Plan

1. The Plan outlines a system of recreation areas designed to satisfy current and future needs of the Tempe Planning Area. It assigns a specific function to each existing and proposed site, and recommends the appropriate function of each existing and future school site.
2. The Plan indicates a total of 53 neighborhood recreation areas, 49 of which are proposed as combined school-recreation sites. It indicates a total of 15 district recreation areas, 12 of which are proposed as combined school-recreation sites. In addition, the Plan proposes a community playfield at each high school, the development of two large city parks in addition to Papago Park, and a total of three 18-hole golf courses (or equivalent in 9-hole courses).
3. The Plan proposes a total of 1,600 acres of recreation land, divided 384 acres for neighborhood recreation, 209 acres for district recreation, 100 acres for community playfields, 485 acres for large city parks, and 420 acres for golf courses.
4. It is proposed that each existing and future elementary and intermediate school site be developed to provide all active recreation space and facilities needed

by neighborhood and district residents. Wherever possible, neighborhood and district parks are indicated as adjacent to the school-recreation sites.

#### Carrying Out the Plan

1. Ordinance 407, which created the Parks and Recreation Board, needs amendment to modify membership, outline duties more specifically and expand the Board's jurisdiction.
2. Functions and operations of the Parks and Recreation Department should be re-organized according to a long-range organization plan which provides for development of a parks division having responsibility for park planning, construction and maintenance.
3. A more detailed Master Plan for Parks and Recreation should be formulated and adopted as a basis for capital improvements programming, financing, acquisition, design and development. This plan should be coordinated with a similar long-range plan for development of the school system.
4. First priority in the park acquisition and development program should be given provision of adequate space and facilities at the neighborhood level, particularly to the development of neighborhood playgrounds in established residential areas.
5. The need to "catch-up" with existing demands should receive highest priority in the program, with consistent progress toward "keeping-up" with demands in developing residential areas.
6. The "pay-as-you-go" approach to financing a parks and recreation system has not and cannot be expected to develop an adequate system in a community growing as fast as Tempe. General obligation bond issues, based upon a Master Plan and preliminary plans for specific sites, should be used as a principle means of financing the proposed system.
7. Several federal assistance programs provide matching funds on a 50-50 basis for financing acquisition and development of parks and recreation sites. It is recommended that Tempe proceed immediately with the prerequisite planning

and make application for such assistance grants as soon as local matching funds become available.

8. The frequent participation of garden clubs, quasi-public organizations and public service clubs can be most effective when applied to stage development of sites based on a total development plan.

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SECTION III

OTHER COMMUNITY FACILITIES

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## INTRODUCTION

The conduct of government and provision of essential community services require several types of public buildings and facilities which house a variety of municipal, county, state and federal agencies. Some public buildings serve the entire city from a central location, while others serve separate parts and are distributed accordingly. The city benefits greatly from grouping public buildings of the central type in a civic center complex. A harmoniously-designed group of buildings is widely recognized as a major esthetic and cultural asset to the city. It can be an important symbol of local civic pride, progressiveness and cultural attainment. Tempe has a plan for such a civic center under consideration and will shortly take the matter of its financing to the people.

The joint American Institute of Architects and American Institute of Planners Committee on Design Control established two important basic philosophies applicable to the development of public buildings and grounds:

1. "Whatever may have been the case in other towns and places, in our modern American culture, beautiful communities can be created and maintained only through a deliberate search for beauty on the part of the community leadership and the designers of environment, faced by a lively appreciation of the visual world by the people.
2. Public action toward improving the appearance of communities is necessary, important and urgent."

The City of Tempe is in serious need of a completely new public building plant. Administration and service operations have long since outgrown the old municipal building and are housed in scattered commercial and residential buildings, some dating back to pioneer days. The time has arrived when the City must construct new municipal buildings which will facilitate the production of efficient public services and the high level performance of administrative and operational duties by City employees to meet present and future community needs.

The number, size and character of public buildings are based upon requirements and major functions of the occupying agencies. High land prices and costs of acquiring, clearing and redeveloping built-up properties have frequently led municipal officials into serious errors of judgment in accepting sites which are poorly located, inadequate in size or poorly related to other public functions and activities. The Planning Commission, through its comprehensive planning program, can contribute materially in locational decisions by the City through analysis and projection of long-term service needs based on population growth and distribution.

The objectives of this report are: (1) to determine present deficiencies in municipal buildings and facilities, (2) to determine the general scope of need based on projected population levels and established standards, and (3) to recommend how present and future needs can best be satisfied.

## PART I

### EXISTING BUILDINGS AND FACILITIES

In addition to schools and parks, Tempe's community facilities consist of city hall, hall of justice, central fire station, and separate buildings housing library, library administration center, parks and recreation department, planning department and traffic engineering. Other community facilities include cemetery, equipment storage and maintenance yards, sewage treatment plant and sanitary land fill area. A water treatment plant is nearing completion in Papago Park and a new main fire station is presently under construction. These buildings and facilities are shown in Figure 1.

#### City Hall

Most of Tempe's administration and service facilities are located in the city hall complex. The original city court building, constructed in the early 1900's, served the city for many years before growth and expansion of municipal operations forced construction of additional facilities and purchase of additional lands and buildings.

#### Fire Department

The fire department presently occupies two stations and maintains a 15-man force 24 hours a day. Existing buildings are obsolete, crowded and inadequate, but will soon be replaced with completion of a new pumper and ladder station on University Drive just east of Scottsdale-Rural Road. The new station will provide complete and adequate facilities for the present level of personnel and equipment. A branch station in the southern portion of the city is presently proposed for construction in 1970-72.

Most of the city presently has a No. 5 fire rating, compared with Phoenix's and Mesa's a No. 4 rating and Scottsdale No. 6. The city is burdened with the extra responsibility of providing fire protection service to Arizona State University without compensation. The erection of multi-story dormitories has forced the city to purchase special aerial fire equipment and the proposed construction of a 15-story dormitory will further compound the problem of maintaining adequate equipment and personnel.

**WATER TREATMENT PLANT**

(UNDER CONSTRUCTION)  
20,000,000 GAL./DAY CAPACITY WITH POSSIBLE-  
EXPANSION TO 40,000,000 GAL./DAY CAPACITY

**SEWAGE TREATMENT PLANT**

TO BE REMOVED WHEN 4 CITY  
SEWAGE PLANT IS PUT IN OPERATION

**CITY LAND FILL AREA**

GOOD LOCATION FOR THIS TYPE OF FACILITY

**U.S. POST OFFICE**

NOT LARGE ENOUGH TO HANDLE  
GROWING LOADS

**OLD CITY HALL PROPERTIES**

CROWDED - OBSOLETE FACILITIES

**NEW FIRE STATION**

(UNDER CONSTRUCTION)  
SOON TO BE IN OPERATION

**CITY MAINTENANCE YARDS**

NOT LARGE ENOUGH TO HANDLE PRESENT  
EQUIPMENT - RELOCATE AND CONVERT  
LAND INTO PARKS AND RECREATION AREA.

**TRAFFIC ENGINEERING OFFICE**

CROWDED - OBSOLETE FACILITY

**CITY LIBRARY ADMINISTRATION CENTER**

OBSOLETE FACILITY

**MARICOPA COUNTY CEMETERY**

**BRANCH FIRE STATION**

TO BE CLOSED WITH OPENING OF  
NEW STATION ON UNIVERSITY DRIVE

**DOUBLE BUTTE CEMETERY**

CITY OWNED CEMETERY

**PARKS & RECREATION EQUIPMENT YARD**

TOO SMALL FOR INTENDED PURPOSE

CITY HALL

MILL AVE.

5TH ST.

ST.

NEW HALL OF JUSTICE

LIBRARY

6TH ST.

ST.

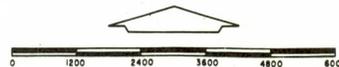
PLANNING DEPT.

PUBLIC WORKS &  
BUILDING INSPECTION

PARKS &  
RECREATION

GUADALUPE ROAD

**Figure 1**  
**EXISTING**  
**COMMUNITY FACILITIES**  
**CITY OF TEMPE**



TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES CONSULTING PLANNERS

The city's responsibility to Arizona State University was a major factor in selection of site for the new main fire station.

#### Police Department

The police department presently occupies crowded quarters in the southwest corner of the city hall complex in a building constructed under the W.P.A. program in 1936. However, space and facilities under construction in the Hall of Justice Building are expected to satisfy police department needs for the next 10 to 12 years.

The city presently employs 45 persons in the police department and maintains one of the lowest crime rates in the Phoenix Metropolitan Area.

#### Department of Public Works

The Department of Public Works presently employs a staff of about 150 in five separate divisions scattered throughout the city in a variety of offices and yards. Administration and Engineering Divisions share an obsolete adobe residence south of City Hall with the Building Inspection Department. Traffic Engineering and part of the Construction and Operations Division share an obsolete, crowded building on 7th Street. Remaining personnel in Construction and Operations, and Properties and Services Divisions are employed at the city maintenance yard adjoining Jaycee Park, at the sewage treatment plant or at the sanitary landfill.

#### Library

Tempe's library facilities are presently housed in two converted residences, one of which is used for general offices and work shop. The 4,000 square feet of existing floor space is inadequate for a city of even 15,000 population. Buildings are extremely deficient in appointments and in such poor physical condition that the very existence and continuance of library service is jeopardized.

The library is also seriously deficient in terms of service. Volumes in children, youth, adult fiction and non-fiction sections number about 10% of recommended minimum standards. The reference section is also extremely deficient according to standards of the American Library Association. Services are further affected by the fact

that lack of space has forced the curtailment of acquisition. Lack of seating and adequate room for browsing has virtually reduced the library to a walk in - walk out facility.

### Hospitals

The only hospital in the Tempe Planning Area is the 60-bed Tempe Community Hospital, owned and operated by the Seventh Day Adventist Church. It falls far short of meeting current needs of the city for hospital service and consequently, a majority of Tempe residents use hospital facilities located in Mesa, Phoenix and Scottsdale.

An exhaustive study for the Mesa Southside District Hospital was made in 1965 by Hamilton Associates, Hospital Consultants of Minneapolis. Their report points out the hospital deficiencies in the Tempe-Mesa Area and recommends that:

1. A joint Mesa-Tempe Community Hospital should be constructed in a general location equidistant from the two communities, near Mesa Junior College and proposed Superstition Freeway.
2. The proposed hospital should supplement the licensed acute beds in the Southside District and Tempe Community Hospitals, and should be constructed before 1970.
3. Initial construction should provide approximately 225 beds, expanding to 365 beds in 1970-80, and to a total complex of 750 beds by 1990.

Establishment of a legal bonding district which can satisfactorily carry out the consultants' recommendations is still in the formative stages, but is progressing steadily.

### Cemetery

Double Buttes Cemetery was established in the late 1880's on an 80-acre parcel and was acquired by the City in 1958. Terrain and soil conditions prevent the use of about half of the property, and only 60% of this suitable land has been developed. Like most municipal cemeteries, development and upkeep are handicapped by insufficient funds, and are further complicated by unfavorable soil and topographic conditions. From 170 to 190 internments take place each year, only about 13% of which

are Tempe residents. Consideration has been given to expansion of the cemetery as part of a land transfer connected with the proposed baseball complex east of Bell Butte.

#### Maricopa County Facilities

The only County facility in the Tempe Planning Area is a cemetery for indigents on the east side of Bell Butte, just east of the Tempe Cemetery. This 40-acre cemetery has recently been reduced to slightly over 20 acres by right-of-way acquisition for Interstate Highway 10.

#### State Facilities

The only state-owned and operated facilities in the Tempe Planning Area are those connected with Arizona State University and with rest stops on state highways.

#### Federal Facilities

The only federal facility in the Planning Area is the United States Post Office at Mill Avenue and Fifth Street.

Post office services now require about two and one-half times as much space as they did when the building was first occupied five years ago. The existing facility lacks off-street parking for employees and patrons, and parking for post office equipment is well below established standards.

#### Summary of Existing Conditions

Expansion of the City's building plant has failed to keep pace with population growth, with the result that most city space is old, obsolete and crowded with several departments separated from administrative center and housed in converted residential and commercial buildings without adequate employee and customer parking.

Without question, a population of 47,000 cannot be provided efficient city administration and service from such a physical plant. Although the present situation will be relieved somewhat with completion of the Hall of Justice, water treatment plant and new fire station; the amount, quality and location of city office space will still be seriously deficient to serve the current population.

PART II  
STANDARDS FOR PUBLIC BUILDINGS

Relationship of Functions

Unfortunately, there are few technical standards to guide the planning of municipal administration buildings and service installations. In fact, general standards would not be particularly useful since each city has its own growth rate, population characteristics, administrative organization, and interpretation of service responsibilities. Thus, each city is left to develop its own standards for service and space needs.

The city benefits in both function and efficiency when most of its departments and agencies are housed in a single building or group of buildings. Detailed analysis of organizational and locational criteria for each city function is required to determine those which can advantageously share buildings and sites. Such an analysis was conducted by the Tempe Planning Department in 1965 and presented in its Civic Center Study Report earlier this year.

Arrangement of buildings in a complex enables the economical joint use of such auxiliary facilities as off-street parking, lobbies, corridors, rest rooms, mechanical equipment, storage and janitorial space. At the same time, the more specific locational criteria for such facilities as fire and police stations, branch libraries, shops and maintenance yards, may dictate that they be located separately according to their individual needs.

In its Civic Center Study, the Tempe Planning Department studied current needs, established basic standards, and projected public building needs to 1985. These 1965 and 1985 needs are shown in Figure 2.

Site Selection Criteria

Selection of the best general location and specific site for any community building requires careful analysis of many factors. It is desirable that several alternative locations and sites be compared according to a check list of locational criteria

Figure 2  
PROJECTED SPACE NEEDS FOR PUBLIC BUILDINGS AND FACILITIES, 1985

City of Tempe

City Function	1965 (47,000 pop.)		1985 (158,000 pop.)				
	Number Employees	Floor Area (sf)	Number Employees	Floor Area Employee	Floor Area Needs (sf)	Parking Spaces	
						Employees	Visitors
<u>Hall of Justice</u>							
Police Department	42	2040	283	60	16,400	106 <sup>7/</sup> <sub>3/</sub>	0 <sup>8/</sup>
Municipal Court	3	980	10	540	5,400	10 <sup>3/</sup>	88 <sup>8/</sup>
Circulation & Mechanical	---	---	---	---	4,400	---	--
Totals	45	3020	293	92	26,200	116	88
<u>Municipal Building</u>							
Building Inspection	7	475	21	140	2,940		
City Manager	4	552	10	225	2,250		
City Clerk	3	580	10	240	2,400		
Finance Department	25	2080	82	145	11,890		
Law Department	3	317	10	225	2,250		
Parks & Rec. Department	6	1050	15	330	4,950		
Personnel Department	(incl, w/ City Mgr.)		9	125	1,125		
Planning Department	3	625	12	230	2,760		
Public Works Department	20	1330	61	---	9,860		
Administration	4	450	12	250	3,000		
Engineering	15	730	34	140	4,760		
Construction & Operations	1	150	12	140	1,680		
Property Service	--	---	3	140	420		
Lobby, Etc.	1	326	6	350	2,100		
Totals	72	7,335	236	200	46,825	354 <sup>4/</sup>	157 <sup>8/</sup>
<u>Council Chambers</u>	--	--	--	---	5,100 <sup>1/</sup>	7 <sup>3/</sup>	118 <sup>9/</sup>
<u>Central Library</u>	--	--	--	---	56,250 <sup>2/</sup>	11 <sup>5/</sup>	248 <sup>9/</sup>

Source: Building space needs: Tempe Planning Department --- Parking Space Needs: Van Cleve Associates  
 1/ 0.034 sq. ft. per capital population      4/ 1 space per 1½ employees      7/ 1 space per 3 employees + 1 space per 2 patrol units  
 2/ 0.375 sq. ft. per capita population      5/ 1 space per 2 employees  
 3/ 1 space per employee      6/ 1 space per 3 employees      8/ 1 space per 300 sf gross floor area  
 9/ 1 space per 3 seats

prepared especially for the specific project being considered. Such a checklist should include at least the following factors, listed in general order of importance:

1. Convenient and long-term accessibility for employees and visitors, both pedestrian and vehicular.
2. Ability of site to accommodate adequate off-street parking facilities.
3. Ability to permit flexibility of building arrangement and installation of spacious lawns and landscaping.
4. Suitability of present and future site environment -- environment should suggest the progressiveness of the city.
5. Good relationship to other public and quasi-public sites and freedom from land use conflicts are important.
6. Land acquisition and improvement costs.

### PART III

## PROPOSED PUBLIC BUILDINGS AND FACILITIES

### Proposed Civic Center

The Civic Center Site Selection Committee was appointed by the City Council in 1964 and authorized to conduct a study to:

1. Investigate the need and feasibility of a Civic Center for Tempe.
2. Recommend the most desirable location for a Civic Center.
3. Recommend the type of complex to be developed, the consideration to be given basic structural design, and the functions to be included in the Center.
4. Recommend the alternative methods of financing various components of the Civic Center complex.

Results of the Committee's study were presented to the Council in May 1965. The recommended site is an irregularly-shaped area of about 17 acres lying at the base of Hayden Butte and comprising most of the land extending from Mill Avenue to College Avenue between Third and Sixth Streets. The site's relationship to Hayden Butte and its extensive frontage on Mill Avenue contribute significantly to the potential of developing and outstanding civic development. The site lies at the traditional heart of cultural, social and economic activities.

The site presently contains some 75 structures, most of which house light and heavy commercial uses concentrated along Mill Avenue and Fifth Street. While some of the commercial establishments to be displaced by the Civic Center are appropriate uses in the downtown area, most of the industrial and automotive service uses would be more appropriately located elsewhere in the community. More than 40% of existing structures, mostly old commercial building along Mill Avenue, are in poor condition.

The site has excellent access to and from all parts of the city and metropolitan area, and is well served with gas, electric, water, and storm and sanitary sewerage service. The topography is fairly flat.

In addition to site selection, the Committee recommended preparation of a master plan for the Civic Center giving consideration to the following design elements:

1. The Tempe Civic Center should be designed to serve an expected population of approximately 120,000 persons; However, the site is adequate to accommodate the needs of the more recently projected 1985 population.
2. The interrelationship of functions within the Center, their convenience to the public, and the esthetic quality of the complex should govern the location and arrangement of buildings, parking, drives, walks and open spaces.
3. Internal circulation of pedestrians and vehicles, location of access points and off-street parking areas, and flow of traffic to and around the Civic Center should be governed by convenience to the public without disrupting the overall esthetic qualities of the development.
4. The design and arrangement of buildings and functions should compliment the historic landmark of Hayden Butte which forms a natural backdrop for the complex.

Upon acceptance of the Committee's report, the Council directed that the Tempe Planning Department conduct a design and development study of the recommended site, a study which was subsequently accomplished and a report published in January 1966. The Department reached the following conclusions:

1. The Hall of Justice is presently being renovated to house police and municipal court operations. The building will satisfy needs until 1977, after which an addition will be needed to accommodate enlarged municipal court operations.
2. The City's present complement of employees is close to national and local standards, but current space needs greatly exceed existing facilities. All of the administrative offices and operations except police, fire, municipal court, central library, and field operations should be housed in the proposed Municipal Building.

3. Present City Council Chambers are completely inadequate, making difficult the conduct of meetings and limiting their effectiveness.
4. The present library is extremely deficient according to national standards. A new Central library, planned according to national standards and local needs, should be an important element of the proposed Civic Center, and will satisfy City needs to 1985 without construction of branch facilities.
5. A future need for branch operations of the following federal, state and county agencies is anticipated:
  - Federal: Post Office, F.B.I., Internal Revenue Service
  - State: Motor Vehicle Division of State Highway Department, Welfare Department.
  - County: Superior Court and Offices, Justice of Peace Court and Offices, Sheriff's Station, Vehicle Licensing Bureau, Deputy County Attorney, Juvenile Probation Office, and Health Unit.
6. A small auditorium and convention center is feasible and is proposed as part of the ultimate Civic Center development.

A sketch of the Illustrative Site Plan prepared by the Planning Department is shown in Figure 3. For complete information concerning the plan and description of proposed buildings, see the Civic Center Study Report, available from the Tempe Planning Department.

#### Civic Center Recommendations

The site is dramatic, accessibility excellent and utility services adequate. The general design and esthetic features of the plan are commendatory. The amount of open space is proper, although considerably more "green" areas should be introduced into the design.

It is recommended that the proposed site be enlarged by addition of the remaining property east of the proposed Central Library to Forest Avenue between Fifth and Sixth Streets. This extension would permit the closing of Fifth Street between Mill and

3RD ST

4TH ST

5TH ST

6TH ST

AVENUE

MILL

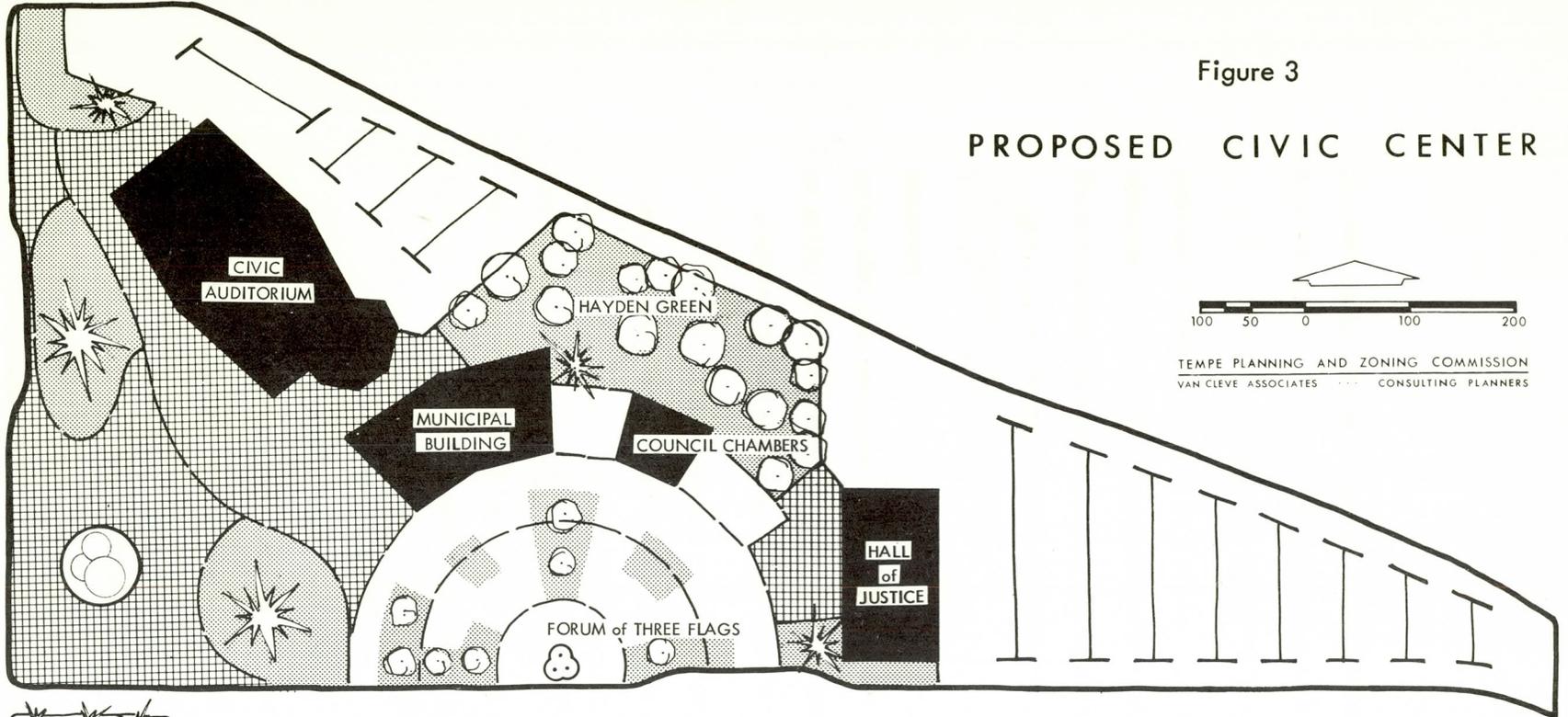
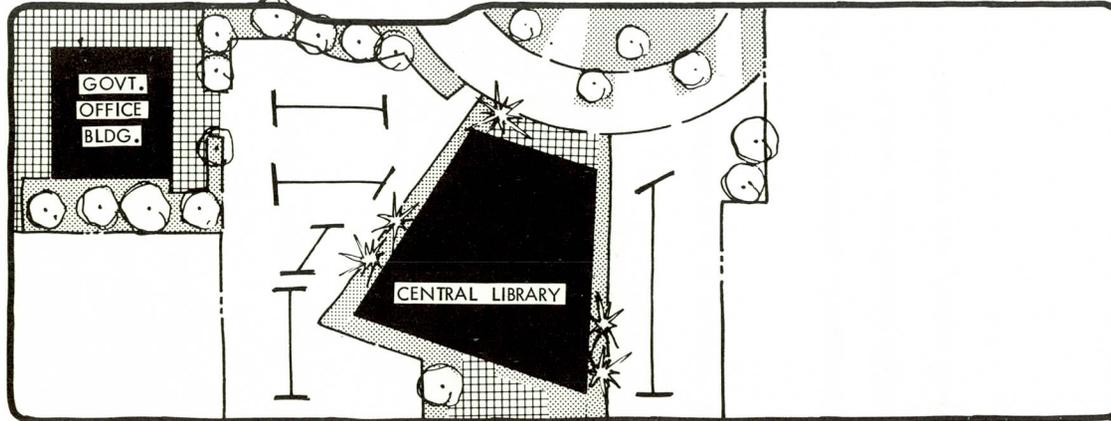


Figure 3

# PROPOSED CIVIC CENTER



TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES CONSULTING PLANNERS



FOREST AVE

MYRTLE AVE

Forest Avenues so that the circular theme of the Forum of Three Flags and the radial arrangement of buildings could be completed. Some of the additional space could be devoted to such uses as museum and art gallery, and the remainder developed for parking.

Off-street parking is considered minimal and appears seriously deficient to accommodate needs of Convention Center and Government Office Building. Some rearrangement of buildings would be necessary if the Post Office is to be housed in the Office Building, since that facility requires short-term parking space as well as special loading and handling area for post office vehicles.

It is the citizens' responsibility to establish the facilities necessary to house municipal employees and operations. The adequacy, character and beauty of such facilities demonstrate the culture, progressiveness and dedication of the citizens. Approval and construction of the proposed Civic Center will redevelop blighted properties, stimulate a general improvement of downtown Tempe, and encourage private investment in a central location.

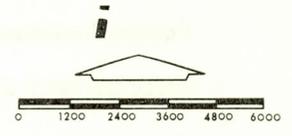
#### Fire Stations

Standards of the National Board of Fire Underwriters recommend provision of a hose or engine company within 3/4 mile of high-value districts, 2 miles of residential districts and 4 miles of low-density districts. They also recommend that a ladder company be located within one mile of high-value districts and within three and four miles of residential and low-density districts respectively.

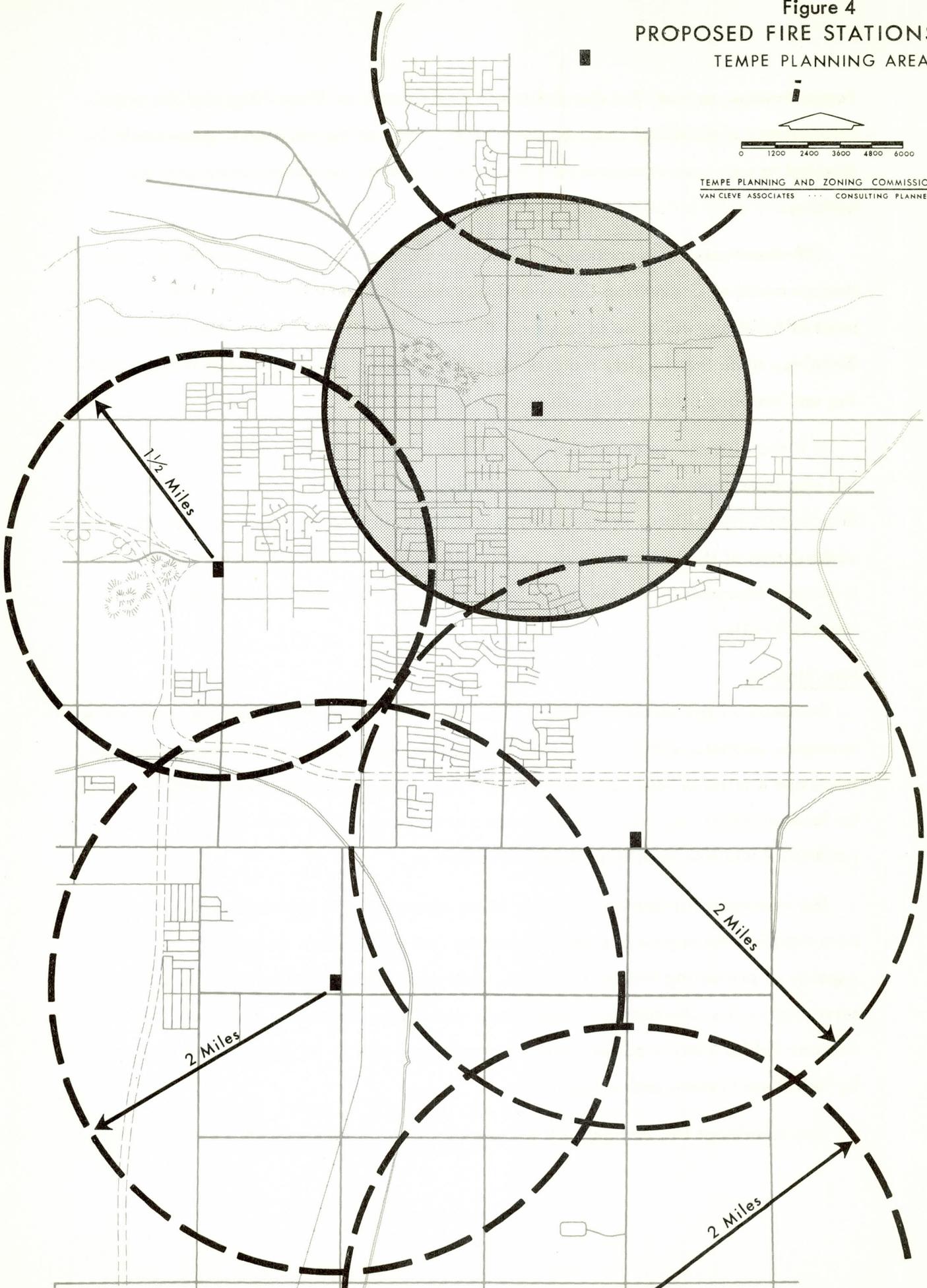
The new main fire station presently being constructed on University Avenue will be a combination engine and ladder company and will include an aerial ladder truck capable of protecting 8-story buildings. Although the new station will adequately serve high-value districts of Arizona State University, Downtown Tempe and the Arizona Public Service power plant, approximately half of its service area is occupied by Salt River bottoms and vacant land.

Two additional fire stations will be needed within the foreseeable future: (1) an

Figure 4  
PROPOSED FIRE STATIONS - 1980  
TEMPE PLANNING AREA



TEMPE PLANNING AND ZONING COMMISSION  
VAN CLEVE ASSOCIATES CONSULTING PLANNERS



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engine-ladder company located in the vicinity of 56th Street and Broadway serving Palo Verde Industrial Park and future high-value developments; and (2) an engine-ladder company located in the vicinity of McClintock Road and Baseline serving McClintock High School and new residential areas of the city.

Additional stations should be located and constructed according to established standards as the need arises. The City should negotiate with the City of Scottsdale and Rural Fire Department to establish a fire station in the general vicinity of Hayden Plaza East to provide the most economic and adequate protection to North Tempe. Similar arrangements should be made with the City of Phoenix to provide fire protection service to those parts of Tempe lying west of Papago Park and north of Salt River. Cooperative service arrangements with the City of Mesa could avoid duplication of facilities in areas near common city boundaries.

Figure 4 shows the recommended general location of future fire stations.

#### Department of Public Works

It is recommended that all maintenance and repair shops, equipment and materials storage and similar activities of the City be relocated to a single new yard and shops situated on reclaimed land somewhere north of First Street. It is also recommended that Site selection for such a facility give careful consideration to future possibilities of using the remainder of the landfill area for park or other public open space purposes.

A second repair and storage yard will ultimately prove necessary to serve the area south of Baseline Road. This yard should be located in the Kyrene industrial area where it will not conflict with residential uses.

Similarly, a second water treatment plant will ultimately be required to serve the 1985 population. This plant should be located adjacent to the Western Canal in the Kyrene industrial area.

#### City Cemetery

Analysis of recent interment records indicates that most recent interments have been non-residents. Private cemeteries in Phoenix, Mesa and Scottsdale accommodate most

interments of Tempe residents. Existing conditions and appearance of the City Cemetery contribute to its lack of use by local residents. Its location near Interstate 10 dictates that the City initiate a major beautification and maintenance program, and encourage development of a private cemetery on adjoining vacant land to the south.

#### Hospitals

It is recommended that the City continue to work cooperatively with the City of Mesa toward developing a joint community hospital in a general location meeting recommendations of the Hamilton Report.

#### Federal, State and County Facilities

The Government Office Building proposed as part of the Civic Center would house most, if not all, of the federal, state and county branch offices to be developed in Tempe. Postal authorities indicate that they will be leasing additional space within the very near future and hope to relocate to a building having 20,000 to 30,000 square feet of floor area within the next three years. Neither the location of the proposed facility nor the future use of the existing building has as yet been determined. The extreme existing need for more and better Post Office space should be a matter of serious concern to the City. With adoption of the practice of leasing rather than owning post office buildings, private enterprise pressures caused a downgrading of the locational criteria of the Post Office Department. As a result, this traditional core area facility has often been relocated out of downtown areas on sites which were less accessible and in conflict with general planning and service principles and purposes. The City of Tempe should make every possible effort to retain the main post office facility in downtown Tempe in or near the proposed Civic Center.

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