

A JUNIOR COLLEGE FOR TULSA, OKLAHOMA

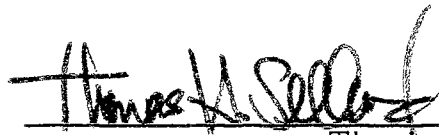
BY

DANIEL DRAKE CARNE

Submitted to the Faculty of the
School of Architecture
of the Oklahoma State University
in partial fulfillment of the
requirements for the Degree of
BACHELOR OF ARCHITECTURE
December, 1971

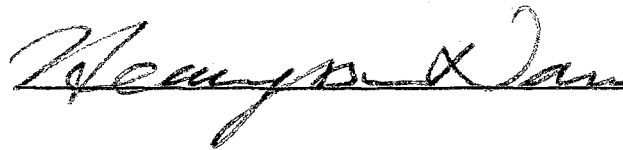
A JUNIOR COLLEGE FOR TULSA, OKLAHOMA

Thesis Approved:



Thesis Adviser





Head of The School Of Architecture

"Universities are not just the most
sophisticated of all our institutions,
they may be, today, the most relevant."

Newman

A JUNIOR COLLEGE

ARCHITECTURE 6326

DECEMBER 1971

DANIEL D. CARNE

A Junior College	1
Introduction	16
Enrollment	16
Site	16
Space Requirements	18
Functional Analysis	20
Transfer Student	22
General Education/Transfer	23
Occupational Education	25
Remedial Education	26
Guidance and Counseling	27
Community Service	28
Interdepartmental Relationships	29
Departmental-Major Facilities Relationships	30
Design Considerations/Theory	31
Bibliography	39
Drawings	42

A JUNIOR COLLEGE

With the rapid development of the many and varied types of junior colleges in the last twenty years has come an understandable amount of confusion in answering the question-what is a junior college? One can approach the definition from various points of view: by title of the institution, by number of years offered, by programs, by control and/or finance, and by other special means. In the area of titles, we hear of the junior college, college, community college, teachers college, extension center (including division or branch), seminar, and technical institute. In the area of control and/or finance, there are the private (church-related, independent, including proprietary and Y.M.C.A.); and the public (local, district, county, branch, and state). In the area of years offered, we observe junior colleges with one-, two-, three-, and four-year programs. Three- and four-year junior colleges, are usually those with one or two years of high school organized with two years of collegiate work. In terms of programs, junior colleges are identified as comprehensive or community (those offering a general variety) and as special institutions using terms like business, technical, agricultural (those offering only special programs in these areas). In keeping in tune with my project this paper shall deal with the public comprehensive junior college.

To further localize this particular junior college we need to expand the title to a public open-door comprehensive community junior college and examine each of these adjective titles. To use the Dallas County Junior College definition, open door refers to an admission requirement meaning - "that anyone who is a high school graduate, or the equivalent thereof, or has sufficient maturity and experience may attend the junior college." Public refers to the area of control and finance. The Tulsa Junior College is governed by the Board of Regents for Tulsa Junior College who in turn are responsible to the public and the Oklahoma State Regents for Higher Education. The

junior college is tax supported. Comprehensive refers to the course offerings of the junior college—from public seminars to technical-occupational programs offering associate degrees, to courses to be used in a transfer capacity to a four year college. A community college derives its purpose and direction from the needs of area or community in which it is located. Cosand offers a good definition: "the community college is concerned with the educational needs of the community or region it serves. It accepts its responsibility for leadership and proposes to develop and maintain a collegiate program sufficiently flexible to adjust to changing educational needs. To fulfill these needs it will offer academic, technical-vocational, remedial, and general cultural courses all directed toward the betterment of the student, and thus the community." (Cosand, page 147).

As can be seen by the lengthy attempt at defining a particular type of junior college the image of the junior college, circa 1971, is somewhat unclear. Cosand has looked ahead to the day when the junior college will be an intergal part of our educational system. "By 1980 community colleges will have an identity of their own, based upon solid accomplishments. For too long they have been obsessed with imitating the academic four-year college. Ultimately, community colleges and technical institutes will be content—and proud—to-be themselves. Their campuses, built to unique specifications, educationally and physically, will become centers of learning, where students, young and old, can fulfill themselves whatever their educational backgrounds.

"The community college of 1980, open day and night, will serve a vast population. The community college of 1980 cannot close its doors to time or to people. The community college must be just as much concerned with the problems of the old as with the problems of youth.

"Perhaps one of the most encouraging aspects of the community college in 1980 will be its secure and genuine relationship with business, industry, labor, and the professions. The equipment in the laboratories, of the latest type, will be provided by industry. There will be full cooperative use of laboratories and clinical services, medical, dental, and industrial, with consequent alleviation of tremendous personnel shortages.

"From another vantage point, this type of cooperation will encourage faculty to stop their self-centered fragmentation. Instead, they will seek interdisciplinary action. Barriers erected by the traditional academic departments, and within departments, are ridiculous and must be eliminated—a move that is now under way. The isolation of the subject-matter specialist will be a thing of the past in the community college of tomorrow and, I hope, in all of higher education. The english teacher will be concerned with the students in technical education, the philosophy teacher with the physical-education major, the artist with the retailing student, and the mathematics instructor with the musician. A faculty should be a whole. All must work together in mutual respect if all their responsibilities are to be fulfilled.

"These goals will require the highest type of leadership on the part of the administration. The new breed of administrator must be dedicated to the principles of the comprehensive community college, knowing that he is there to lead and to serve, but never to dictate. The paternalism so prevalent in past years will be definitely outmoded, if only because faculty members will have none of it. The faculty wants a voice, and they will have one—a big one, raised to support better educational programs.

"These colleges will realize in 1980, I hope and believe, that there are many methods of teaching and that each teacher may have a method which is best for him. An administrator

will not demand that all teachers teach in the same way, but that they make use of every accessible and appropriate teaching aid: slides, computers, tape recorders and many other audiovisual materials. The student is there to learn, and the teacher must fill his needs by becoming the best possible teacher-not simply a dispensary of facts or a fountainhead of words, but a professional who has learned the skills of true teaching. I would expect the community college of 1980 to be staffed with professionals who are confident of their own abilities and who do not need crutches to prop up their pride. The artificiality of many of these crutches is appalling: trivia-all mitigating against professionalism. By 1980 assistants will permit teachers to devote more time and energy to the profession of teaching.

"If we expect this professionalism, we must provide a nourishing climate. Teachers and administrators alike will need to have leaves of absence from their educational responsibilities so that they can work off campus in those fields where an up-to-date knowledge of the latest techniques and equipment is essential to good teaching. Business, industry, labor, and the professions will finance this type of leave and, by this cooperative effort, the community will benefit." (Cosand, pages 143-145).

A junior college must have a philosophy or a purpose which gives meaning to the definition of the junior college. In terms of a motto, the purpose might be stated - to counsel and to educate - to prepare. This motto is not all-inclusive in that it basically applies to the young student who is seeking to find a direction or is trying to follow one he has already chosen. The junior college must also be aware of the needs of special interest groups and those just seeking to broaden or add to their education. The purpose of this junior college is to prepare the individual to take his place in society.

"Clearly, the ideal of democracy is to permit each individual to be educated to the level of his highest potential. This is of central importance not only because of its value to the state and to society but, more particularly because the keystone of democracy is the almost sacred value placed on the single human personality. Development of the individual, each citizen and each citizen-in-preparation, is and must be the goal in and of itself, entirely apart from any contribution such achievement may make to the social order of the state. 'Every democracy must encourage high individual performance. If it does not, it closes itself off from the main springs of its dynamism and talent and imagination, and the traditional democratic invitation to the individual to realize his potentialities becomes meaningless.'" (Johnson, page 248).

"To function effectively in society, an individual must have a system of moral and spiritual values, namely, a philosophy of life. Moreover, the system of values held by the individual must conform basically with those established by society. Raup points out that 'what is moral originates in the community, and the authority for designating the good and the right is the responsibility of the individuals comprising the community.'

"Because education is a social institution, it follows that the school should have at least some of the responsibility for inculcating and perpetuating the values of society. The Harvard committee agreed that 'it is impossible to escape the realization that our society, like any society, rests on common beliefs and that major task of education is to perpetuate them.'

"This does not admit that all the values of society at large are moral, nor that the individual must accept blindly society's values as his own. Indeed, democratic values stress both toleration and conviction, and the individual is free to establish his own values while cooperating with another whose values may differ.

"Community colleges have a two-fold purpose for teaching values. In the first place, a system of moral and spiritual values is part of occupational competency. A person who has no moral or spiritual values, or whose values are entirely alienated from those of society, can not assume a responsible position in the work world. Since occupational competency is a leading goal of the community college, the teaching of values takes on real significance.

"In the second place, the public community college, as an agent of society, is charged to perpetuate its common beliefs and values. Fortunately, this includes the values of freedom to inquire, to challenge, and to experiment, but not to dictate or dominate." (Reimer, page 48).

"I would hope that, by the 1980's, community colleges would help students to find values by which to live in our increasingly complex society - that students would learn to leave the world a richer place; to contribute and not to consume; to lift and not to lean; to give as well as take. This can become a people's renaissance, brought about to a great degree through a peoples college, and could revolutionize traditional attitudes toward the poor, the ill-fed, the delinquent." (Cosand, page 141).

Although the forces that have molded the junior college into its present form are many, there are four main forces that can be identified. The first was the actual proposal of the junior college itself by a succession of deans and university presidents. The second was the financial ability of the prospering country. The third force was the practical feasibility of instituting the idea, the ease with which the junior college machinery could be set in motion. The fourth force was the general public's acceptance of the idea of providing an easy access to higher education for all who could desire it and profit by it.

The private junior college was the first type to frequent education scene. One source reports that Monticello college was the first junior college, opening in 1835, and the second was the Missionary Institute of the Evangelical Lutheran Church, later to become Susquehanna University, in Selinsgrove, Pennsylvania, in 1858. Another writer puts Leicester Junior College in Massachusetts, which offered two years of college instruction in 1852 as the first.

"These first colleges were established as extensions or replacements of private academies offering secondary and sometimes elementary instruction. Generally church-related, the academies saw the two-year college idea as a relatively easy way of broadening their curricula and extending them upward, to keep their students for a longer period of religious instruction, to provide additional financial support through more tuition and aid, to extend the prestige and fame of the college through offering courses in higher education, to become affiliated with higher education goals and purposes, and to become eventually a four-year college by way of the two-year college step instead of taking the giant leap forward to a full-blown liberal arts college. Private control and fiscal independence probably helped these schools develop earlier and more quickly than their public counterparts. Generally small in size and limited in their programs and objectives, these first colleges helped to foster the idea of the public junior college. Other contributions were the use of small classes, individualized guidance programs, intimate dormitory living with stress on social education, homogeneous curricular offerings, and close student-faculty relationships." (Kelley and Wilbur, page 486).

William Rainey Harper, President of the University of Chicago at the time, did much to advance the case for the public junior college. He proposed a revolutionary plan

to change the educational system. Instead of eight years of elementary school, four years of secondary school, and then college, he proposed a seven-seven system. In this he would include the first two years of a college education. The two years would not be considered college, but the student would then enter college as a junior. He was in effect drawing a line between the second and third years of college. He was instrumental in establishing several junior colleges in the Illinois area - Chicago, Peoria, Joliet.

These first public junior colleges were basically extensions of the high school, sharing common facilities and staffs. States began enacting laws establishing public two-year junior colleges as early as 1907 (California). By 1922 there were 207 junior colleges, 70 public and 137 private, but the public sector enrollment had surpassed that of the private. Public junior colleges did not outnumber private types until the late 1940's.

University extension centers or two-year branches of four-year institutions were established just prior to the twentieth century. There were thirteen universities with branches by 1920. Institutes such as technical and military, first appeared in 1915. These were and still are basically specialty oriented, such as vocational-technical schools.

The junior colleges up to this point were basically oriented towards offering courses that would transfer to the major four-year colleges. This was due to the financial inability to provide terminal or occupational type programs. The growth of the occupational programs marks another era in the development of the junior college.

The number of occupational courses increased from 100 in 1921 to 4000 in 1941. This increase was due mainly to the increased awareness of the need for terminal programs giving students a marketable skill. As early as 1917, Alexis F. Lange of the University of California wrote: "The junior college will function adequately only if its first

concern is with those who will go no farther, if it meets local needs efficiently, if it enables thousands and tens of thousands to round out their general education, if it turns an increasing number into vocations for which training has not hitherto been afforded by our system." (Kelley and Wilbur, page 489). From there, various grants and acts such as the Smith-Hughes act which set up state agencies for the development of occupational programs fed the occupational-program movement. Also the junior college seemed the natural place for these terminal programs since the universities were primarily interested in academic studies and professional preparation.

Three significant events marked the beginning of the latest period in the development of the junior college. In 1948 the President's Commission on Higher Education for American Democracy declared "the time has come to make education through the fourteenth grade available in the same way that high school education is available." (Kelley and Wilbur, page 489). Proposed were free public community colleges offering both terminal and general education programs to meet the needs of the particular community. So far, California is the only state to accept this suggestion.

Also in 1948, the state of New York enacted legislation establishing a system of state-wide junior colleges and officially called them community colleges. Across the country that same year, the Strayer Report was released in California. The report did much to strengthen the concept of the two-year junior college as an integral and needed part of the American educational system. The report warned against turning two-year colleges into four-year colleges, and strengthened the concept of the community college and the unique contributions that it could make.

Since then the comprehensive community college offering transfer courses, occupational education, general education, remedial education, guidance and counseling, and community

service has developed. In 1948 there were 500,000 students enrolled in 580 two-year colleges of all types. In 1968 there were almost two million students enrolled in 993 two-year colleges.

As previously mentioned, the comprehensive junior college will offer the student options in six various areas. The six areas are transfer education, occupational programs, general education, remedial education, guidance and counseling, and community service. All programs may be carried on full or part-time.

The transfer program is the most often assumed purpose of the junior college. A student will take courses similar in content and quality to those he would be taking during the first two years if he were attending a four-year college. A student in many cases may take the entire first two years of a four year bachelor program at a junior college. Where the student stays for the full two years and has taken at least 60 hours, he will receive an associate degree in arts or science. Generally though, the student will just supplement his course of study at the university with basic courses taken at night or during the summer or maybe during a semester when the student has decided to work instead of attend the university.

The occupational program might also be termed technical, vocational, and in most cases terminal education. These programs are receiving much emphasis in the junior college system. It is through these types of programs that the junior college reaches out looking to satisfy the particular needs of the community where it is located. The junior college seeks to train students in one and two year programs to fill jobs in business and industry relative to the job needs of the immediate community. This particular junior college (Tulsa) is close to the major hospital and computer center areas and is located in downtown Tulsa. Thus it will offer occupational programs related to the needs of the

areas. The neighboring industries and businesses are used to supply knowledgeable instructors who are familiar with the latest techniques and procedures. And wherever possible the students are taken out of the university to the particular business or industry for a firsthand lesson. Also in many cases the junior college will offer short-term extension courses for the occupational advancement of persons already employed.

The general education programs contrary to the belief of many is just the opposite of occupational education. Occupational education is solely for procuring a job or advancing in one already held. The main purpose for most general education courses is one of personal development. These courses are mainly taken by adults solely for curiosity or satisfaction's sake.

The remedial program might be more kindly named-preparatory and developmental education. This is an area being investigated by many junior colleges since most major universities shun this responsibility. It seems to coincide with the open-door policy by adapting to the students needs and abilities. The program is designed to provide each student with the opportunity to make up any scholastic or subject-matter deficiencies he might have coming out of high school.

A counseling and guidance service is emerging as one of the major responsibilities of the junior college. Records show that many students entering college for the first time either have no firm idea of what they really want or if they have declared a major will switch at some later date. Students enrolled at four year universities will change their major an average of three times before receiving a degree. Most students entering junior colleges will declare themselves for transfer programs while records show that less than one-fourth will actually transfer to a four-year school. This type of program would seem beneficial in helping the student to find himself and his abilities and interests and

there-by avoid repetition, boredom, and wasted time.

The sixth offering of the junior college lies in the area of community service. The community junior college can become a hub of activities offering rooms for meetings, lecture series, concerts, forums, display areas for exhibits and many other types of activities depending upon the imagination and coordination of the public and the school administration.

In beginning to close one might look at six basic characteristics of the community junior college and their trends. (1) "The junior college is assuming major responsibility for preparing students for upper-division work at universities and other senior institutions." (Johnson, page 250). With college and university enrollments skyrocketing, junior colleges are beginning to take over sole responsibility for the first two years of ones college education. This will leave the college or university free to concentrate on upper division work and graduate and research study. In Florida in 1964, a new university offering only upper-division, professional and graduate work was opened. In 1967 a second "upper-division university" was opened. A trend in this direction would significantly enhance the role of the junior college.

(2) "The junior college is assuming major responsibility for technical-vocational education . . . In 1965 it was estimated that by 1970, "no less than 58% of our manpower will be employed in positions requiring at least a junior college education." (Johnson, page 250). In 1930 an elementary education sufficed for 58% of the working force. In 1966 the American Association of Junior Colleges launched a \$1,500,000 five-year occupational education project. The project was directed at establishing community needs and ways the junior college could benefit them.

(3) "There is a definite trend toward the comprehensive junior college, which includes in a single institution preparation for employment and education for transfer. . . the evidence suggests that the comprehensive junior college, like the comprehensive high school, is both desirable and feasible. . . Indeed, Merson goes so far as to suggest that, 'one can measure the strength of a community college by the diversity of its programs.' He further observes: 'fortunately, increasing numbers of two-year colleges are broadening their offerings to correspond with the range of interests of those they enroll, and with the needs of society.'" (Johnson, page 251).

(4) "The junior college is an open-door college." (Johnson, page 251). In a national survey of junior colleges with over 400 enrolled, eight out of ten junior colleges admitted any high school graduate. Half of those admitted anyone over 18, "who could profit from the instruction offered." The trend is definitely for the junior college to open its doors and extend a hand to anyone who wants to learn.

(5) "Guidance is recognized as an important responsibility and, according to some educators, a goal of the junior college." (Johnson, page 252). As mentioned before, guidance must go hand-in-hand with the open-door policy. The pressure of society to obtain a degree has fostered the need for this area of concern. The junior college offers three advantages in meeting this problem of getting a degree, as suggested by Johnson. "First, we have a flexibility in our programs which makes it possible for students to transfer from one curriculum to another; second, we have a variety of offerings adapted to the qualifications of students with diverse types and ranges of achievement; and third, we have testing and counseling services through which experts can help students find what they really want as the junior college performs its guidance functions." (Johnson, page 252).

(6) "The junior college is a community college. In our increasing technological society

there is an increasing need for specialized education. Today the community junior college is becoming versatile enough to meet these needs whether it be in petroleum technology in the oil fields of Texas, in agriculture in the wheat fields of Kansas, or in fashion design in the garment manufacturing center of New York City. Man is also experiencing increased leisure time. Man must provide the incentive and the junior college can offer a broadening of man's educational experiences. Also the increasing mobility of our society makes the community junior college as a commuter center even more accessible and popular." (Johnson, page 252).

One of the traits of the junior college movement is that it is a commuter facility. Other than the administration staff, some of the instructional staff and maintenance personnel, most of the junior college occupants will participate on a come-and-go basis. They will arrive at the junior college facility, attend their class/es, and they leave. They will drive, be driven, or rely on public transportation to take them to the college. In planning the junior college, transportation routes need to be considered early so as not to isolate the facility from its potential users. Parking requirements are a major consideration in the design. Parking spaces are needed for about one-fourth of the F.T.E. student enrollment. (F.T.E. - full time equivalent).

Generally little time will be spent on the junior college campus other than when in class for the part time commuter student. Other than full-time students, time spent at the junior college other than when in class will probably consist of waiting for a class to start, maybe coming a little early to review or study for a test, time spent for a coke with a friend or instructor, or an open period between two classes. There will be students who will use the junior college and its facilities as a place to study but they will be a relatively small per cent of the student enrollment.

The junior college offers much hope for the future. It offers an education for many at a minimal expense. It prepares one for a job, to transfer to a four-year institution, or just supplements ones education. And most important, it is student oriented, no more grad students who are just putting in time. Most junior colleges require their instructors to have a minimum of a master's degree. And hopefully, this talented corp will not be there just to educate, but to prepare the student.

A Public Open-Door Comprehensive Community Commuter Junior College for Tulsa, Oklahoma

INTRODUCTION

My undergraduate thesis deals with the research and design of a junior college for Tulsa, Oklahoma. The title above gives some idea of the complexity of a junior college. A Public Open-Door Comprehensive Community Commuter Junior College may be quickly defined as one financed by taxes, donations, and students tuition and fees; with enrollment open to anyone who will benefit from such instruction; and offering a wide variety of courses, from transfer - to occupational - to civic offerings, which is oriented towards satisfying the needs of the immediate community who will attend the junior college on a commuter basis.

ENROLLMENT

This particular school will be designed for 5000 F.T.E. students. An F.T.E. student is an "average student" who is enrolled in 15 credit hours of class. To determine the F.T.E. enrollment one takes the total number of credit hours of all students combined and divides by 15 to determine how many "average students" will be attending the school.

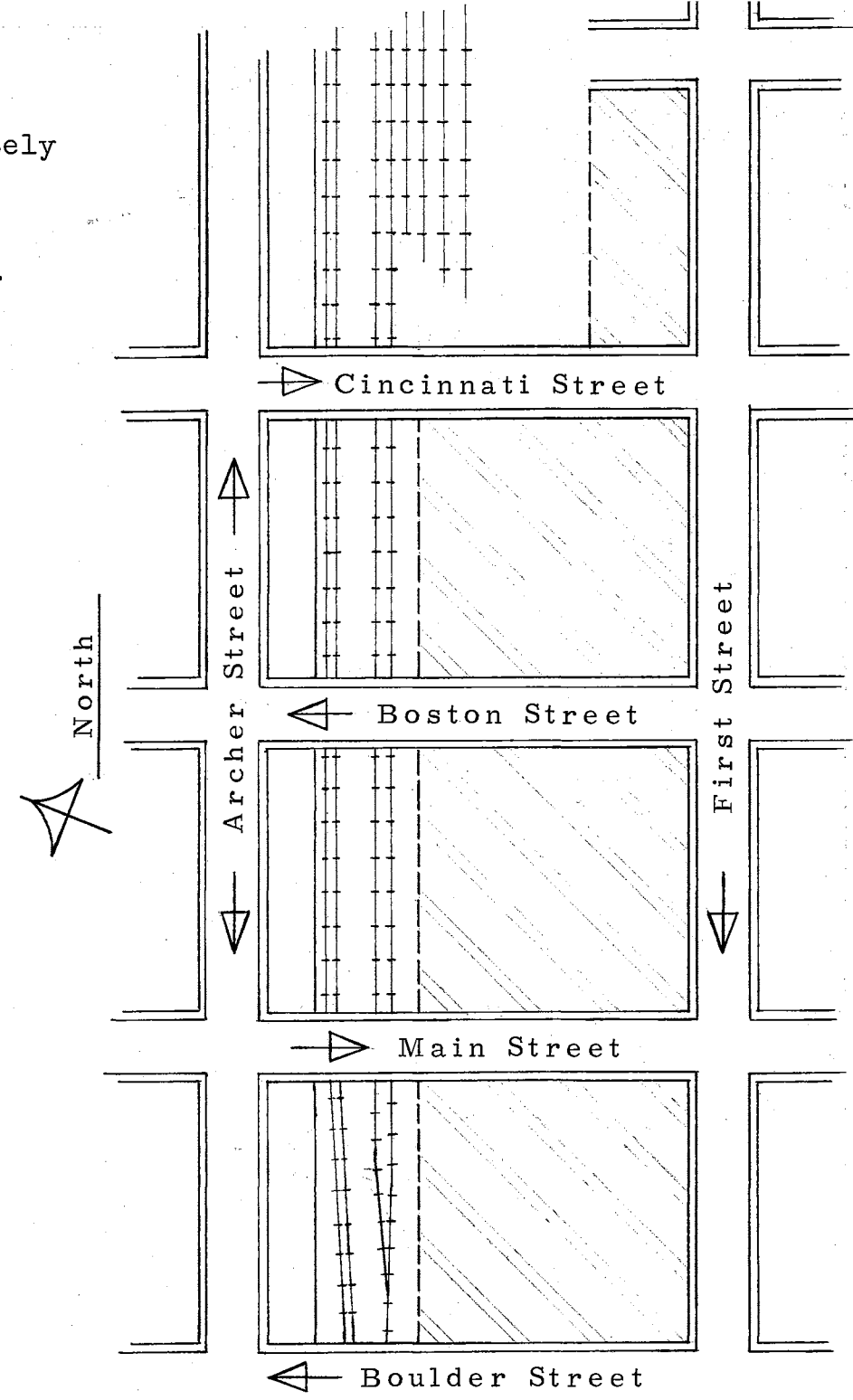
SITE

The site is the one provided by the Tulsa Junior College Board of Regents for Higher Education in their future expansion plans. The area is located on the north edge of downtown Tulsa. The site slopes gently down from south to north. The boundaries are Boulder on the east, Detroit on the west, First street on the south, and the St. Louis - San Francisco

Railroad tracks on the north. This covers approximately three and a half square blocks. The area bounded by Detroit and First only extends halfway to the tracks which accounts for the half block. In available surface land this is approximately 340,000 square feet or about seven and one half acres.

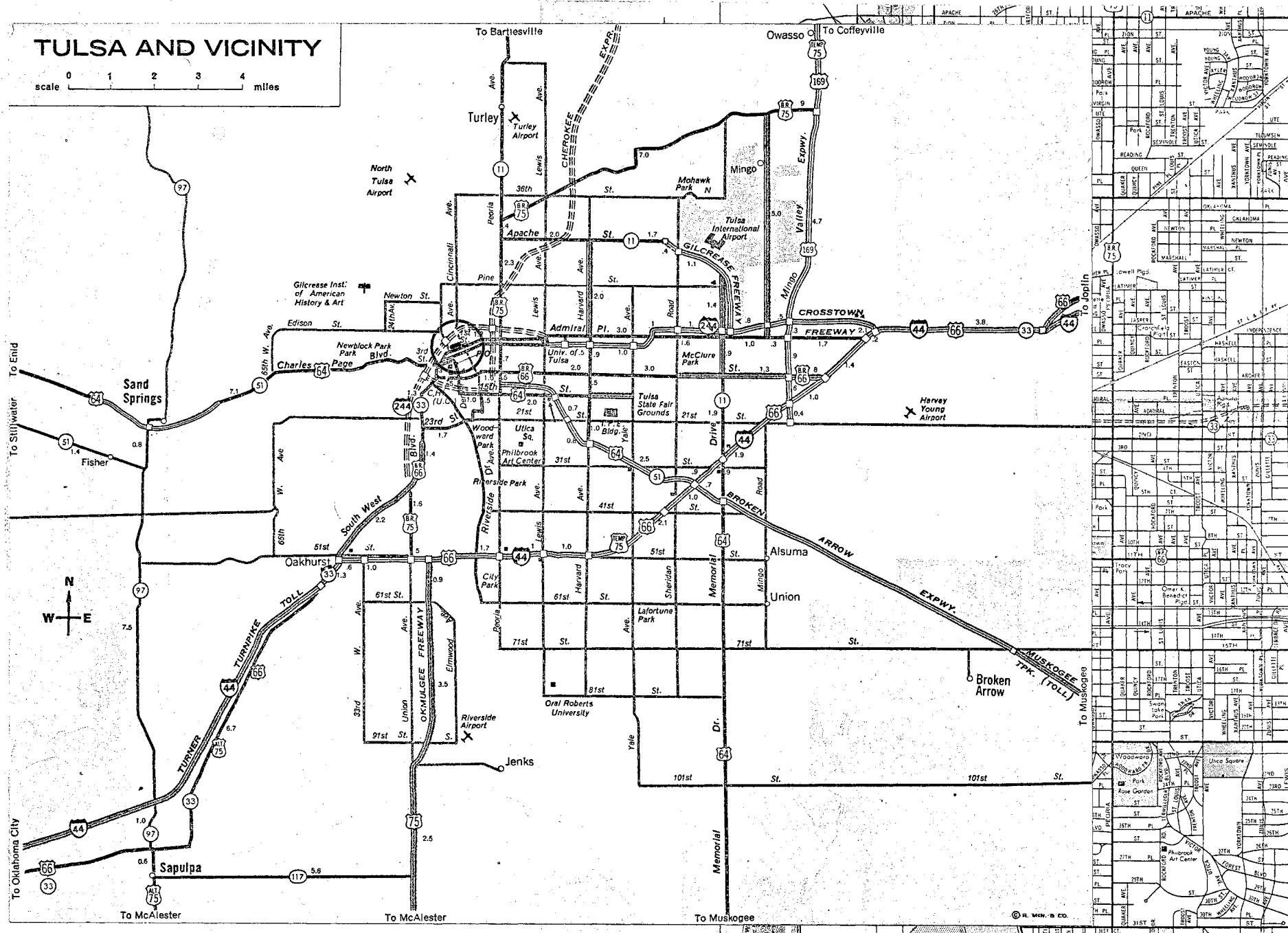
The streets from east to west are Boulder, Main, Boston, Cincinnati, and Detroit. These streets do not cross the site but go over it in the form of overpasses. The high point of these overpasses occurs at the north edge of the site and is about thirty feet above ground. This is true for all but Detroit which has no overpass but stops 120 feet north of First at the railroad right-of-way. The map outlines the site and denotes the direction of vehicular traffic.

To the north, east, and west of the site are light industrial and warehousing areas. These areas are generally in fair to poor condition. The north boundary of the site is the railroad tracks. These consist of two major through tracks with two major spurs and several minor service spurs. Less than five trains per day will use these tracks so noise will not create an extreme problem for the college. The presence of the tracks will however force the



TULSA AND VICINITY

scale 0 1 2 3 4 miles



school to have a front and a back. For safety reasons, the school must not open directly onto the tracks. Therefore the north side of the building will have only emergency fire exits. In one respect, this will be somewhat beneficial. Immediately north of the tracks is an area populated by the wino sect. This shutting off of the ground level on the north side should help to prevent unwanted "learners" from using the school as a warming station and hotel. So as to not completely shut the junior college off from the north some sort of entrance should be incorporated on the Main street overpass.

Immediately south of the site are street level parking lots. Metro Center, Inc. has the deed to this land and is planning a shopping center-office complex with an outdoor interconnecting mall. If done nicely this will provide a pleasant complement to the south side of the junior college.

SPACE REQUIREMENTS

To determine the spatial requirements a trio of sources was used: the Illinois Study, personal consultations with Mr. Roger Smith, Vice President for Planning and Development for the present Tulsa Junior College system, and my own guesstimating. Unfortunately the projected spatial requirements for a junior college of this size were unavailable at the time of my research as the Tulsa Junior College authorities were conducting a similar study and could not release their information until it had been published in final form. In several cases certain figures on percentages for facilities were offered by Mr. Smith and accepted as verbatim, e.g. 20,000 square feet for the administrative area if it is to serve both as the main administrative office for the system and include an area for the specific branch junior college.

According to Mr. Smith each branch junior college in the Tulsa Junior College system

will offer a full college transfer program and some basic occupational programs along with its guidance and counseling and remedial development and civic functions. Also each branch will offer specific programs relating directly to the community needs in the area it is located. Each branch will have certain common facilities such as a gym, theater, olympic size pool, branch administrative offices, and a media center. Major facilities will be extended out among the various branches such as, the main area administrative offices, an auditorium for 3-5000 people, a spectator gymnasium, a football field, and central purchasing warehouse.

The school is planned for a hypothetical 5000 F.T.E. students. An F.T.E. student will take 15 credit hours and be in class an average of 18 hours a week. The extra three hours is accounted for by the extra class hour requirement of a laboratory class. 5000×18 equals 90,000 class hours per week the facility will be used.

I divided the Tulsa Junior College program into seven major divisions: Business, Communications, Cultural, Scientific, Fine Arts, Medical, and Fire and Police Technology. Through consultation with Mr. Smith, percentages of probable enrollment in the various divisions were established. Then taking the individual course offerings and using the Illinois Study specific class allocations were determined.

To determine the number of classes and laboratories needed the maximum likely building occupancy was used. Mr. Smith stated that for a 5000 F.T.E. student body there would probably be a maximum of 3000 students on hand at any one time. The number of labs that would be needed if all courses offering labs met at the same time was used as a base figure. This figure (35) times the average number of students per lab (24) shows that 840 students could be in the laboratory classes at one time. This leaves 2160 students in classrooms. This figure divided by the average number of students per

classroom (33) gives a figure of 65 classrooms. This figure was revised upward in the event that all 35 labs are not in use when the 3000 students were in the building. This would occur somewhere between 9:00 A.M. and 1:00 P.M. and/or 5:30 P.M. to 8:00 P.M, the hours of heaviest student enrollment. The Tulsa Junior College is seeking to expand its operations to a 16 hour day, 6 days a week.

To determine the academic division space needs the following procedure was used. The Business division will account for 14% of the course offerings or approximately 12,600 hours per week. Of this 12,600 hours, 76% is needed for classroom time or 9600 hours and 24% for laboratory classes or 3000 hours. Classrooms are available in three sizes: in maximums of 15, 45, or 250. The Business Division requires 14% of its classrooms to be of the 15-student capacity, 83% of the 45-student capacity and 3% of the lecture size or 250 capacity. This will take 7660 square feet of classroom area. Seven labs requiring 8640 square feet are also needed. A ratio of one F.T.E. instructor per 22 F.T.E. students was used giving a total of 227 F.T.E. instructors needed. These were then proportioned out to the various divisions. Offices are needed for 35 instructors at 150 square feet per office and two seminar rooms for the division are needed at 600 square feet each. Thus the total for the Business Division is 22,150 square feet of academically related space.

From here the other divisions were figured accordingly. The other academic spaces as well as support facilities were figured and are presented on the next page.

FUNCTIONAL ANALYSIS

As stated earlier the comprehensive junior college offers programs based around the concerns and needs of the student or user in six areas; transfer, occupational, general, remedial

	<u>square feet</u>
Academic areas	
Classrooms	46,000
Laboratories	74,000
Offices, Seminars	43,000
	163,000
Media Center(s)	80,000
Theatre	14,000
Little Theatre	4,000
Physical Education/Recreation	44,000
Administration	
Area	12,000
Local	8,000
	20,000
Student Center	
Cafeteria, Book Store, Lounges, etc.	50,000
Support Facilities	
Restrooms, Hallways, Stairs, Elevators	120,000
Parking	510,000
Warehousing	10,000
	<u>640,000</u>
	1,015,000 square feet

or deficient, guidance and counseling, and community service. Each of these areas will be divided into four categories to help further understand the type of situation this student will be involved in. These categories will be: (1) a brief description of the particular type of student, (2) a listing of any special needs or considerations he might

have, (3) a chart showing how his time will be split up in relation to the academic divisions, and (4) a chart showing his use of the junior college's major facilities.

DEPARTMENTAL RELATIONSHIPS

- 1 = required to take more than one course in this division/semester
- 2 = required to take at least one course in this division/semester
- 3 = would probably take a course in this division as an elective/year
- 4 = might take a course in this division as an elective
- 5 = will probably take no courses in this division.

MAJOR FACILITIES RELATIONSHIPS

- 1 = will use more than once a day
- 2 = will use at least once a day
- 3 = will use every other day
- 4 = will use once a week
- 5 = will use once a month (maybe)

TRANSFER STUDENT (full time)

The full time transfer student has enrolled with the idea of receiving the Associate Degree in Arts or Science and then finishing his baccalaureate degree at a major university or college. The Associate Degree requires 60 hours of junior college credit. He will take the basic required freshman-sophomore type courses; e. g. english, math, science, history. He will also take some electives in areas that relate to his baccalaureate degree or that interest him. Being a full time student he will spend more time at the school when not in class than any other type student as he will probably not be trying to squeeze his classes in around a full time job. This student is most

comparable to the "average student" at a major university except that he commutes.

Needs

This student is basically interested in the non-technical courses and thus needs accessibility to the basic educational preparatory courses. He will need space to study, relax, eat, or play when he is not in class.

Departmental Relationships

Business	3-
Communications	2
Cultural	1
Fine Arts	4
Scientific	3+
Medical	5
Fire/Police	5

Major Facilities Relationships

Union	1
Lounges	2
Media Centers	1
Physical Education	3
Administration	4-
Theatres	5-

GENERAL EDUCATION/TRANSFER (part time)

These two are grouped together because although they are there for different purposes they

will generally follow the same routine. These people will be taking one or two courses. The general education student will probably be an over 30 adult, seeking to increase his "learnedness" or broaden his horizons. The transfer student will generally be of college age seeking to supplement his baccalaureate program at the university. Neither are seeking a degree at the junior college or will have requirements to satisfy for the junior college.

Needs

Both type students will probably be fitting these courses in around their work or family life and thus will not have time to spend finding parking slots or walking great distances to their classes. Thus they will have a direct relationship to the parking facility and the main circulation elements. Time being of the essence, neither will probably study at the junior college so will only need a place to wait for class to start if he is early, and maybe a place to grab a coke after class.

Departmental Relationships

Business	2
Communications	2
Cultural	2
Fine Arts	3-
Scientific	2
Medical	3-
Fire/Police	3

Major Facilities Relationships

Union	2
Lounges	1
Media Centers	3-
Physical Education	-
Administration	5
Theatres	-

OCCUPATIONAL EDUCATION

This student is somewhat similar to the full time transfer student in that he will spend much time either at school or on-the-job training. This student will be department oriented as he is seeking a specific Associate Degree. The degree requirements will keep him in school for one to two years.

Needs

The full-time student in the occupational education program will have needs similar to those of the full-time transfer student. The part-time student will have similar circulation needs to the part-time transfer student.

Departmental Relationships

Business	1
Communications	1
Cultural	2
Fine Arts	3
Scientific	2-
Medical	1
Fire/Police	1

Major Facilities Relationships

Union	1
Lounges	1-
Media Centers	1
Physical Education	4
Administration	4
Theatres	-

REMEDIAL EDUCATION

This student will work closely with a number of professional persons as he is lacking in some area(s) to be able to participate at the junior college level. Preparatory education might be a more appropriate title. This student will work with the people in this department and the people in guidance and counseling. After his specific deficiencies are determined the staff will work with the various academic divisions, where his actual work will be done and coordinated by the division head. There he will try to make up for courses he might not have taken in high school or ones he might have done poorly in.

Needs

Much of the students time will be spent on a self-help basis with the technical media facilities of the school so that he can progress at his own rate. The department facilities need to be located near the guidance and counseling facilities. Parking and circulation requirements are here again evident.

Departmental Relationships

Business	-
Communications	1
Cultural	1
Fine Arts	-
Scientific	1
Medical	-
Fire/Police	-

Major Facilities Relationships

Union	2
Lounges	2-
Media Centers	1+
Physical Education	5
Administration	3-
Theatres	-

GUIDANCE AND COUNSELING

This department is concerned with helping the student find himself and his abilities and then helping him program his academic route. The staff will administer aptitude and interest tests. They will provide emotional and psychological counseling. They will also give coursework guidance acting in an advisory status. And as mentioned previously they will work with the remedial or preparatory program.

Needs

Depending upon the function being performed the size and type of space required will vary.

Spaces for intimate counseling on a one-to-one basis will be needed. Areas to test and talk to various groups will also be needed.

Departmental Relationships

There will be some advisory capacity in each division that will be conducted through the main guidance and counseling office.

Major Facilities Relationships

Union	1
Lounges	3
Media Centers	-
Physical Education	-
Administration	1
Theatres	-

COMMUNITY SERVICE

The extent of this area is hard to imagine. It will depend upon the facilities available and the persuasiveness of the intended users. Possible examples might be using the junior colleges display areas for exhibitions, the gymnasium for product demonstrations, or the library for art displays. Civic or service groups might hire their own instructors or attend lectures and use the junior college as a classroom facility.

Needs

Parking and circulation again surface as major concerns. Also an easily understood directional aid system needs to be available for these infrequent visitors. As mentioned above they will need access to classrooms, lecture halls, the auditorium or gymnasium, and exhibition areas.

An area will be needed where patrons can be picked up and dropped off.

Departmental Relationships

There will be no direct departmental relationships, only a need for the possible use of some of the classrooms.

Major Facilities Relationships (per visit)

Union	2+
Lounges	3
Media Centers	2-
Physical Education	2-
Administration	4
Theatres	2-

INTERDEPARTMENTAL RELATIONSHIPS

To understand this matrix, one must ask the question - Will a person taking the majority of his courses in an academic division in the vertical column take a course in an academic division in the horizontal column? The key is 0 = no, 1 = probably not, 2 = maybe, 3 = yes. This was used to get an idea of the proximity needs for the various divisions in relationship to their course overlap. (see table next page)

This shows that large proportions will take courses in the communications and cultural divisions. Therefore they should be located close to each other and be readily accessible by the student, for example.

	Business	Communications	Cultural	Fine Arts	Science	Medical	Fire/Police
Business		3	3	1	2	0	0
Communications	1		3	2	1	0	0
Cultural	1	3		2	1	0	0
Fine Arts	1	3	3		1	0	0
Science	1	3	3	1		2	2
Medical	1	3	3	1	3		0
Fire/Police	1	3	3	1	2	1	

DEPARTMENTAL -MAJOR FACILITIES RELATIONSHIPS

Use the same scale here as presented on page 22. This was used as a guide to orienting the major facilities in relation to the academic divisions. (see table next page)

This shows that the physical education facilities are in the least demand and therefore should be located on the periphery, for example.

	Union	Lounges	Media Centers	Physical Education Center	Administration	Theatres
Business	2	1	2	5+	4	-
Communications	2	1	2	5+	4	-
Cultural	2	1	2	5+	4	-
Fine Arts	2	1	3	5+	4	1
Scientific	2	1	1	5+	4	-
Medical	2	1	2	5+	4	-
Fire/Police	2	1	2	5+	4	-

DESIGN CONSIDERATIONS/THEORY

Of first concern in dealing with this problem are the special characteristics of this site. The site was considered as having three relatively square plots. The fourth "half-slot" was designated as a ground level parking lot. It was felt that any academic use of this

portion of the site would overextend any internal circulation pattern that might be developed. It was also considered unfeasible to connect the three areas other than on the ground level under the bridges because of the structural problems that would be encountered in trying to span the streets and the ensuing financial cost to do so. Considering the types of facilities that would be needed the physical education facilities and the Fine Arts division were each given a plot of their own because of their space requirements and the physical configurations of their respective elements.

The physical education facilities were expanded some so as to be available to as many as possible. Hopefully this area might be used by some of the downtown working people on a fee basis with the college. Instructors will be able to invite visiting instructors and professional people to participate in something more than "intellectual enlightenment."

Concerning the Fine Arts facilities, the large theatre will require approximately two and a half stories of vertical space and the small theatre about one and a half. Giving them their own site and surrounding them with the rest of the Fine Arts Division will allow greater flexibility in their design.

This leaves the main academic divisions, the administration and adjunct departments allocated to the central block so as to be readily accessible from either outside block. Including these types of activities in one building, causes some loss of exterior visual definition but the land area square foot restriction of the one block area ruled supreme. Hopefully a more integrated feeling will be developed by not isolating the staff and the students.

Parking at a commuter college poses another problem. Again with economy in mind the parking problem was solved. Two floors of parking will be supplied under the entire three block

site as well as the ground level parking on the half-block. Elevators will then be used to transport the students and staff to the college above.

The site also prescribes the necessity of having a front and back. As mentioned earlier the railroad tracks and the wino area provide the north boundary of the site. Thus the only readily accessible vehicular entrance to the site is along First Street. A circular ramp to the parking lot was provided off the Main Street bridge to provide some sort of entrance for the people coming to the junior college from the north. This is the only bridge crossing the site coming from the north.

This junior college is designed for a hypothetical maximum of 5000 F.T.E. students. In the event that the 5000 figure is surpassed any expansion desired is going to have to be vertical due to limited available ground area of the site.

In the school of junior college design there are two main themes in terms of organization: the departmental organization versus the functional organization. The departmental theme might be described as the "fading status quo" whereas the functional theme might be the "new".

The departmental organization has its basis in identity. Each department is given a specific building or area. Each department has its own classrooms, labs, offices, and departmental areas. For the student majoring in a certain academic area this approach does give him a sort of home base from which to operate.

The functional approach groups related activities such as labs, teaching spaces, faculty offices, and administrative areas, and makes them readily accessible for all to use. In terms of classrooms or teaching areas this allows for much less repetition and much more

specialization in the types of spaces that can be offered. This is accomplished by programming the use of all spaces on a computer.

"The coupling of functional campus organizations and computer programming has resulted in savings of up to 30% in the requirements for both space and teaching faculty. Facilities can be scheduled to be occupied some 90% of the time and to 80% of their capacity."

(Newman, page 45). Mr. Smith has suggested that the Tulsa Junior College is striving for 70% utilization of its spaces.

Functional organization does have a drawback though, according to psychologists, it does encourage efficiency but "has resulted in a loss of orientation and identity on the part of the students, and in some instances, on the part of the faculty." (Newman, pg 45). To combat this much more space for individual study and socializing is needed.

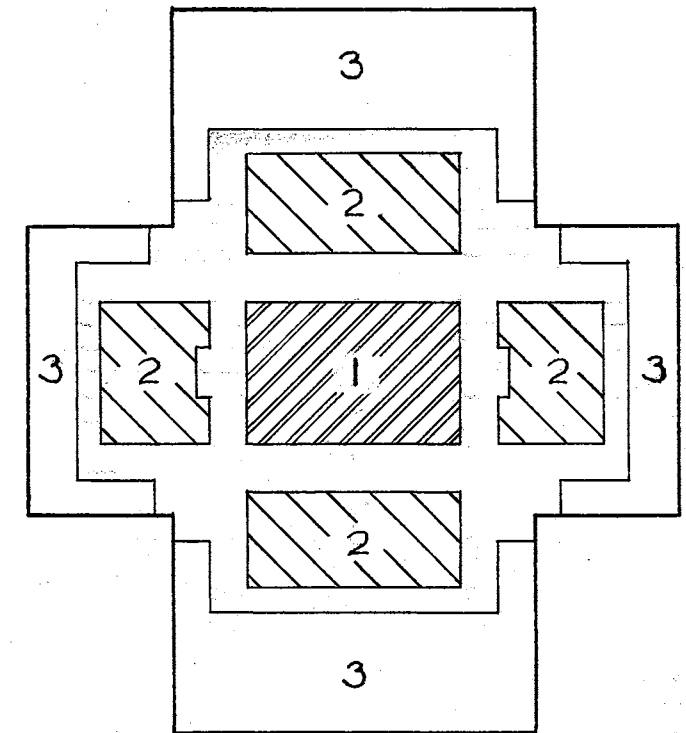
Coupled with this organizational theme is the need to be able to physically implement it. This is done by incorporating a suitable circulation system. A hierarchy of organization is needed. Those activities which are the most used are placed centrally. Those spaces least used are placed peripherally. So there is a progression in the placing of activities according to their usage. Large teaching facilities and those with a rapid turnover such as lecture halls, audio visual labs, and classrooms are located centrally. Non-teaching facilities of high use such as lounges are also made readily accessible. Those spaces less frequently used or of special design for particular courses are located peripherally, either horizontally or vertically.

My junior college plan has incorporated points from both the departmental and functional views. The circulation system uses two interconnected rectangular shaped (plan view)

hallways. This gives a hierarchial progression of three areas. Area one and the inside of area two can be used for classrooms, lecture halls, and audio-visual equipment for individual use. The outside of area two and area three can be used for specialized class facilities and laboratories. The media center and library are located in the north wing on floors four, five and six. The departmental theme was incorporated in the placing of labs and departmental offices. The offices were placed in area three with the specific labs needed by that department in close proximity. Floor allocations were determined by the space needs of the entire department. This allows each department to operate on a floor basis providing some means of identification for the user.

Vertical circulation in the main block will enter and exit on the east and west sides of area one. After arriving at a floor, one will immediately go to one of the four lounge areas located at the intersection of the two hallways. This will provide a place for the student to relax while waiting for class and can act as a meeting area for friends before and after class.

The ground floor of the building is a non-teaching area. It is the student center and acts as the greeting area for



Activity Arrangement

Floor One	Student Center
Floor Two	Administration, Remedial Education Guidance and Counseling Central Storage Health Center
Floor Three	Scientific Division
Floor Four	Medical Division Cultural Division Media center/Library
Floor Five	Communications Division Media center/Library
Floor Six	Business Division Fire/Police Division Media center/Library

the college. It is basically a service area where one can have a coke or cup of coffee, grab a quick lunch, buy a book, play some ping pong, meet a friend, find out where room 407 is, attend a luncheon or meeting, or just relax, read a magazine, or just watch people.

Three sides of the entire facility are surrounded by green areas. As much natural life as possible will be incorporated in these areas. They will act as buffers between the hard surfaced rectangular world of the downtown area. Weather permitting this will also provide a small campus for the student outside of the classroom to throw a frisbee, catch a pass, or take a nap. It could also be used as an outside classroom. The green areas should provide

a nice psychological welcome to the classroom.

The structural system for building will be a two-way slab over a concrete beam and column frame. The columns will be spaced on 30 foot centers. The frame will be exposed on the exterior and infilled with brick and glass. A mechanical area regulating the environmental control systems will be provided on the first level of parking. The main heating and air conditioning source will be provided by the new Thermal System, Inc plant in downtown Tulsa. A central plant will be needed in the mechanical plant.

My design is a blend of ideas. The facilities needing large areas and greater than average height were given spaces so as not to restrict them or hinder other areas. The building attempts to block off certain areas but yet to extend a welcome along another face. The hierarchial location of activities facilitated by a circulation system provides the basis for organizing the design of the main academic spaces. This will provide for a departmental identity and allow individual and communal study or relaxation . . . Hopefully, a design that will allow a qualified faculty to prepare the student for his next step in life.

"Campuses have a more significant role to play as social institutions than they do as precursors of avant-garde urban form, a point we

architects tend much too readily to forget. To the youth of the suburbs, as well as to the youth of the second wave of rural migrants, the New Campus may well provide a first introduction to dense environments. For many it will also be a place of transition and acclimatization to complexity and vast numbers. If it can also provide a stimulating life, these students may go on to demand similar structures and similar stimulation in their cities."

Newman

BIBLIOGRAPHY

A Primea for Planners, American Association of Junior Colleges, 1967.

Architectural Record, November 1967, page 155-170.

Architectural Record, September 1968, page 165-184.

Architectural Record, October 1968, page 138-141.

Architectural Record, February 1970, page 101-118.

Blocker, Clyde E., School and Society, "Cooperation Between Two-Year and Four-Year Colleges",
16 April 1966, page 218-222.

Candill, Rowlett, Scott, In Education the Most Important Number is One, December 1964.

Candill, Rowlett, Scott, Probes, A Search for Uniqueness of the Community College, January
1967.

Cosand, R Joseph P., "The Community College in 1980", 134-148

Economic Base Study for Planning Tulsa Junior College, Oklahoma State Regents For Higher
Education, State Capitol, Oklahoma City, 1970.

Frankie, Richard J. and Dubois, Eugene E., School and Society, "The Community-Junior College
in Historical and Cultural Perspective", January 1971, page 45-47.

Guide Posts for the Planning and Development of Dallas County Junior College District, 1966.

Illinois Study

Inductive Design Programming, T. S. Dean, T. H. Selland, Oklahoma State University, 1971.

Johnson, B. Lamar, School and Society, "Change and the Junior College", April 1969, page 248-254.

Kelley, Win and Wilbur, Leslie, School and Society, "Junior College Development in the United States", December 1969, page 485-497.

Landrith, Harold F., School and Society, "Prescription for Junior College Dropouts", January 1971, page 49-51.

Loughlin, Richard L., School and Society, "The Community Colleges and Civilization", 16 March 1968, page 176-77.

Mahoney, Dan, Tulsa Junior College Report, Oklahoma State University School of Architecture, 1971.

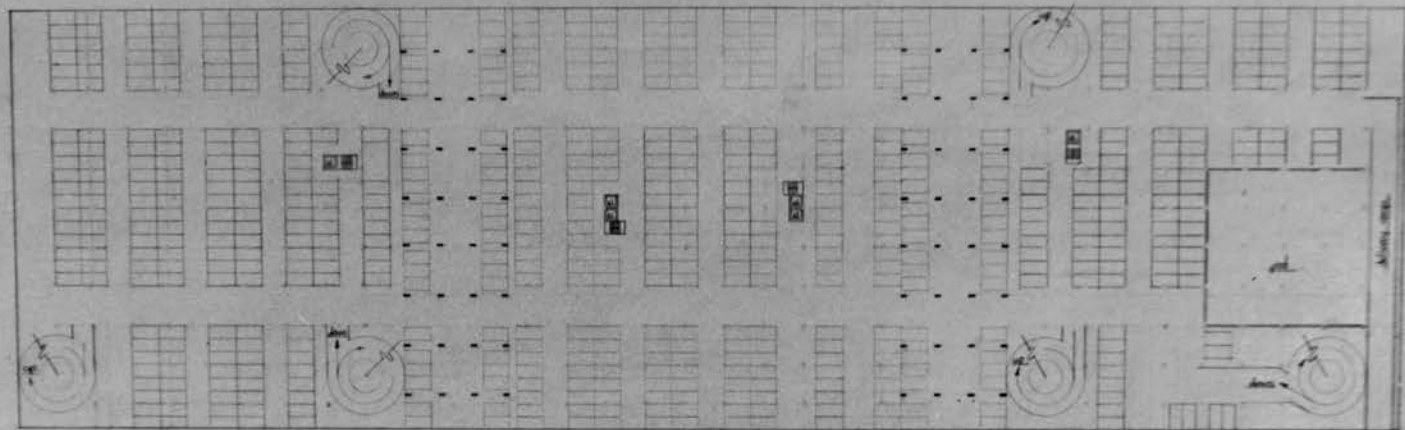
Newman, Oscar , "The New Campus", Architectural Forum, May 1966.

Reimer, Milton K. School and Society, "Areas of Concern for Comprehensive Community Colleges", January 1971, page 47-49.

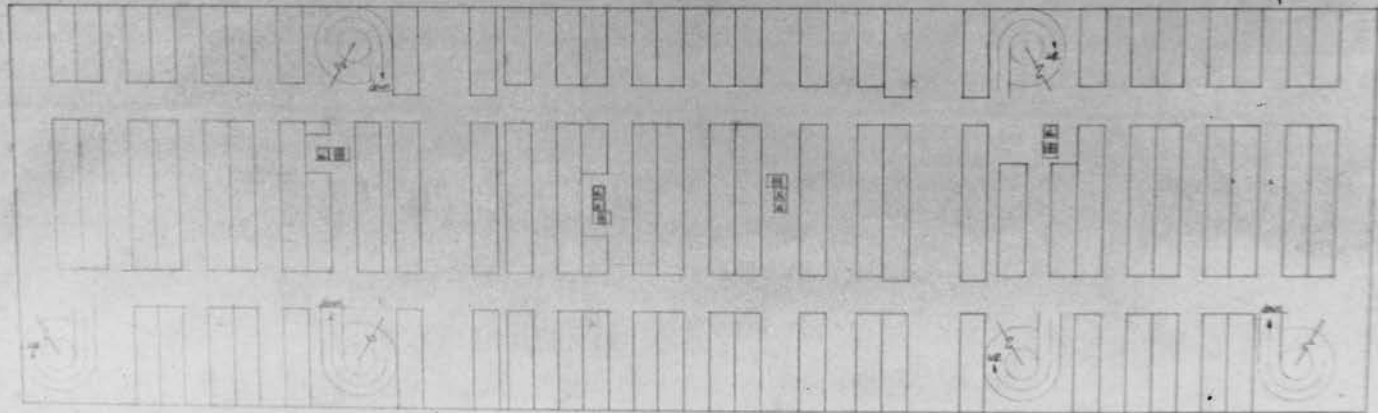
Smith, Roger, Vice President for Planning and Development, Tulsa Junior College, 1971.

The Tulsa Junior College - Consultants Papers, Oklahoma State Regents for Higher Education,
1969, State Capitol, Oklahoma City.

Tulsa Urban Renewal Authority, 11th Annual Report, 1971.

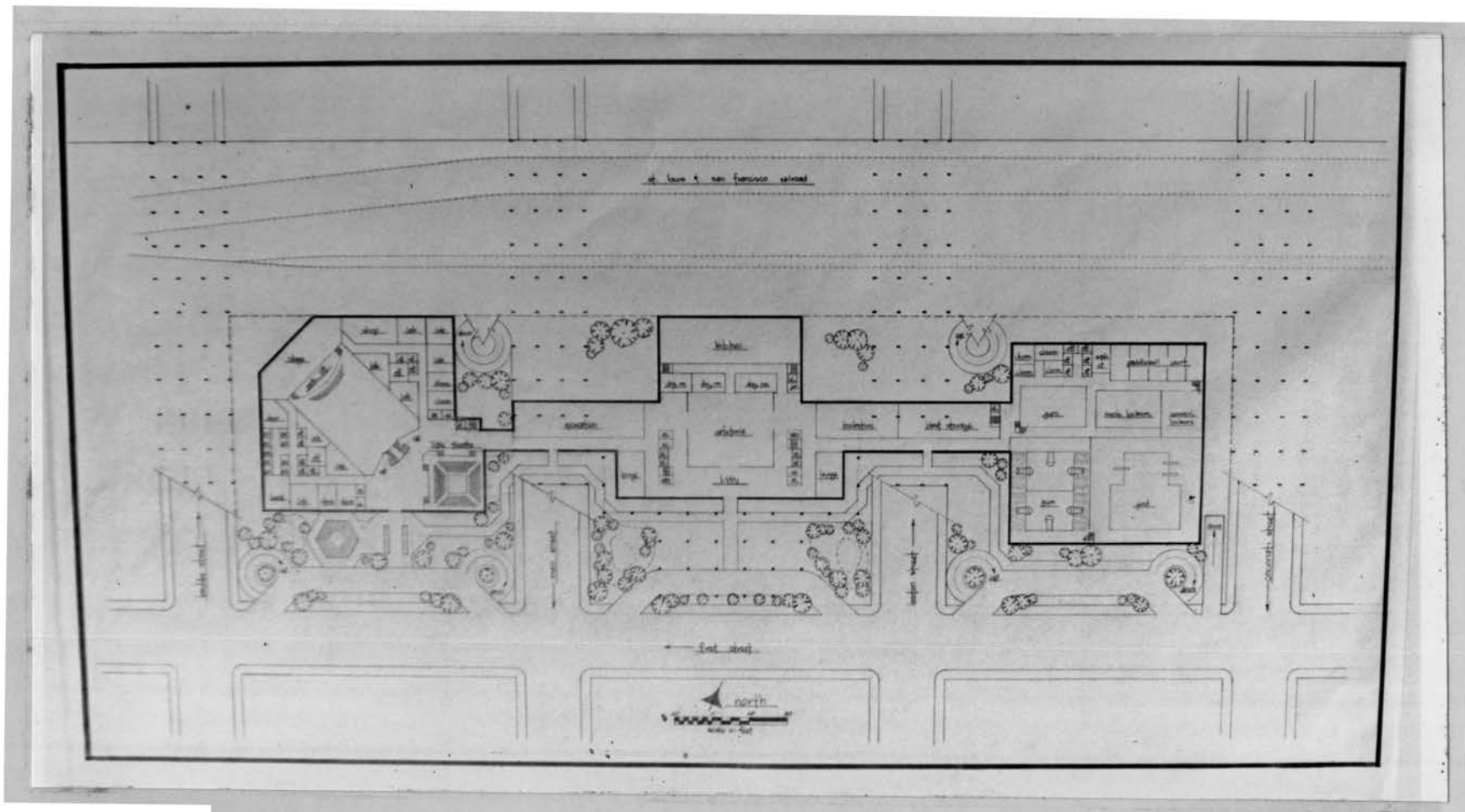


Parking Garage - Structure One



Parking Garage - Structure Two

Parking Garage-Two Levels



FIRST FLOOR (Ground Level)

Fine Arts Division

Art

Music

Theatre

Student Center

Cafeteria

Bookstore

Lounges

Recreation

Information

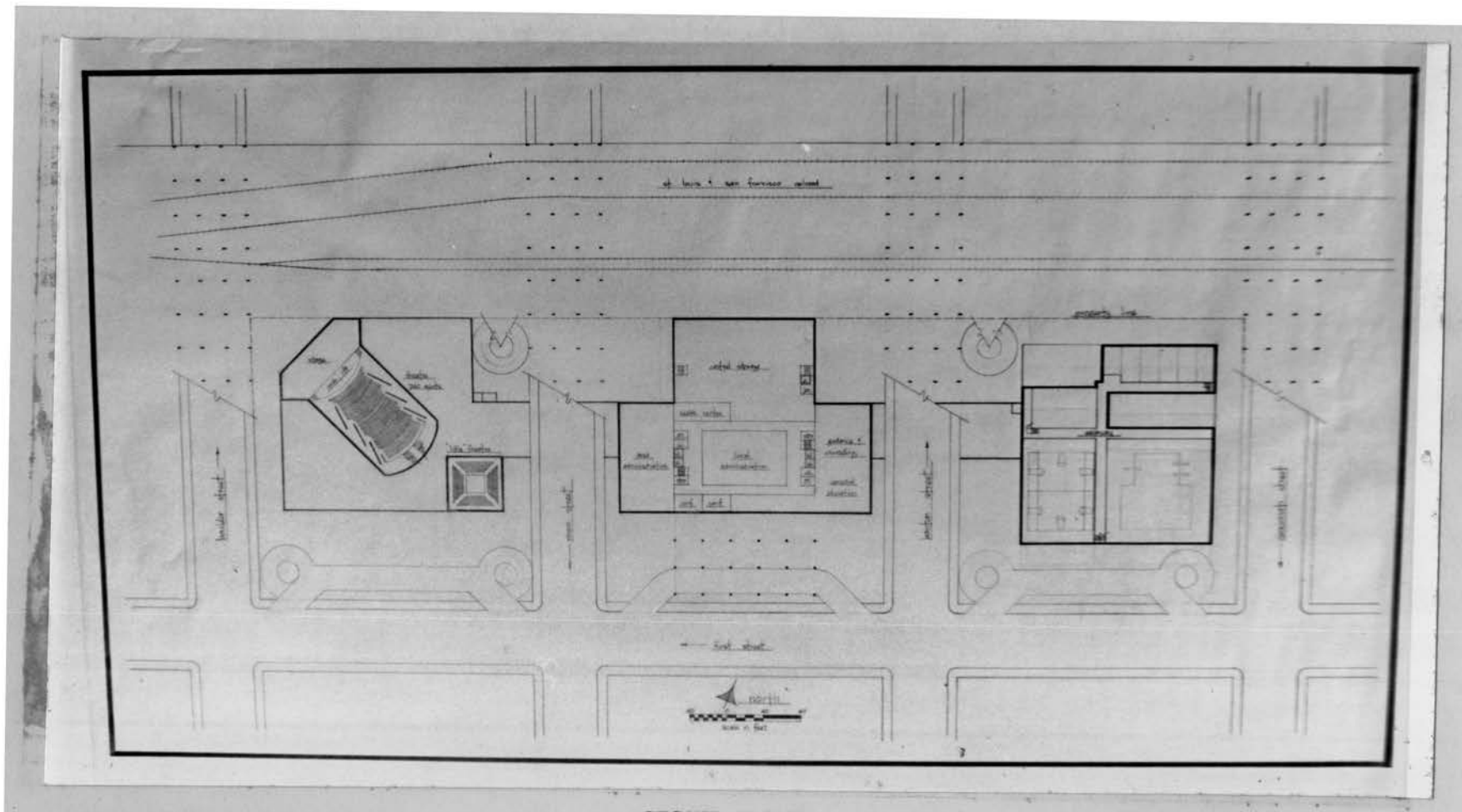
Physical Education

Gymnasiums

Swimming Pool

Paddleball, squash courts

Lockerrooms



SECOND FLOOR

Theatre

Administration

Walkway (Observation)

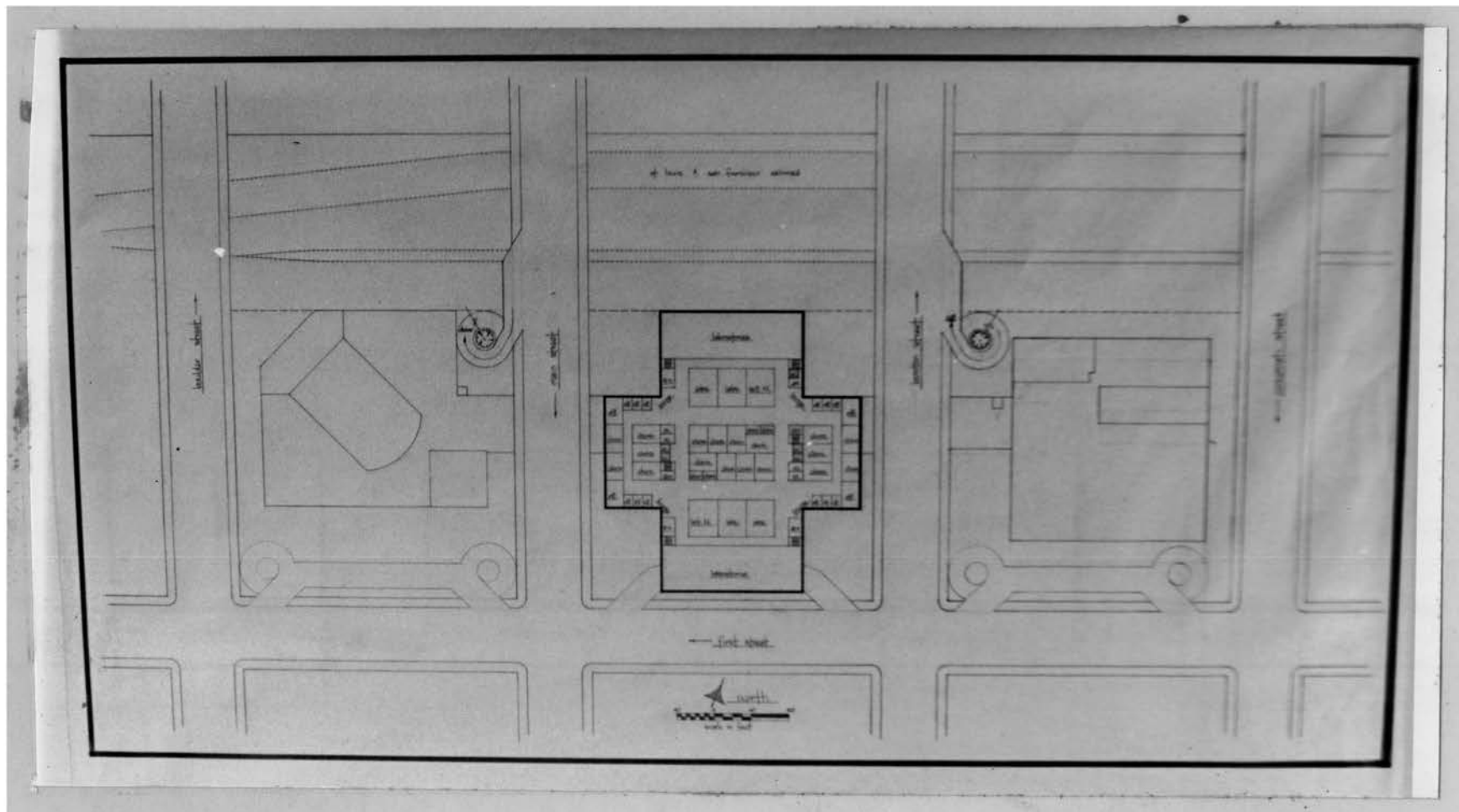
Area/Local

over athletic areas

Guidance & Counseling

Remedial Education

Central Storage

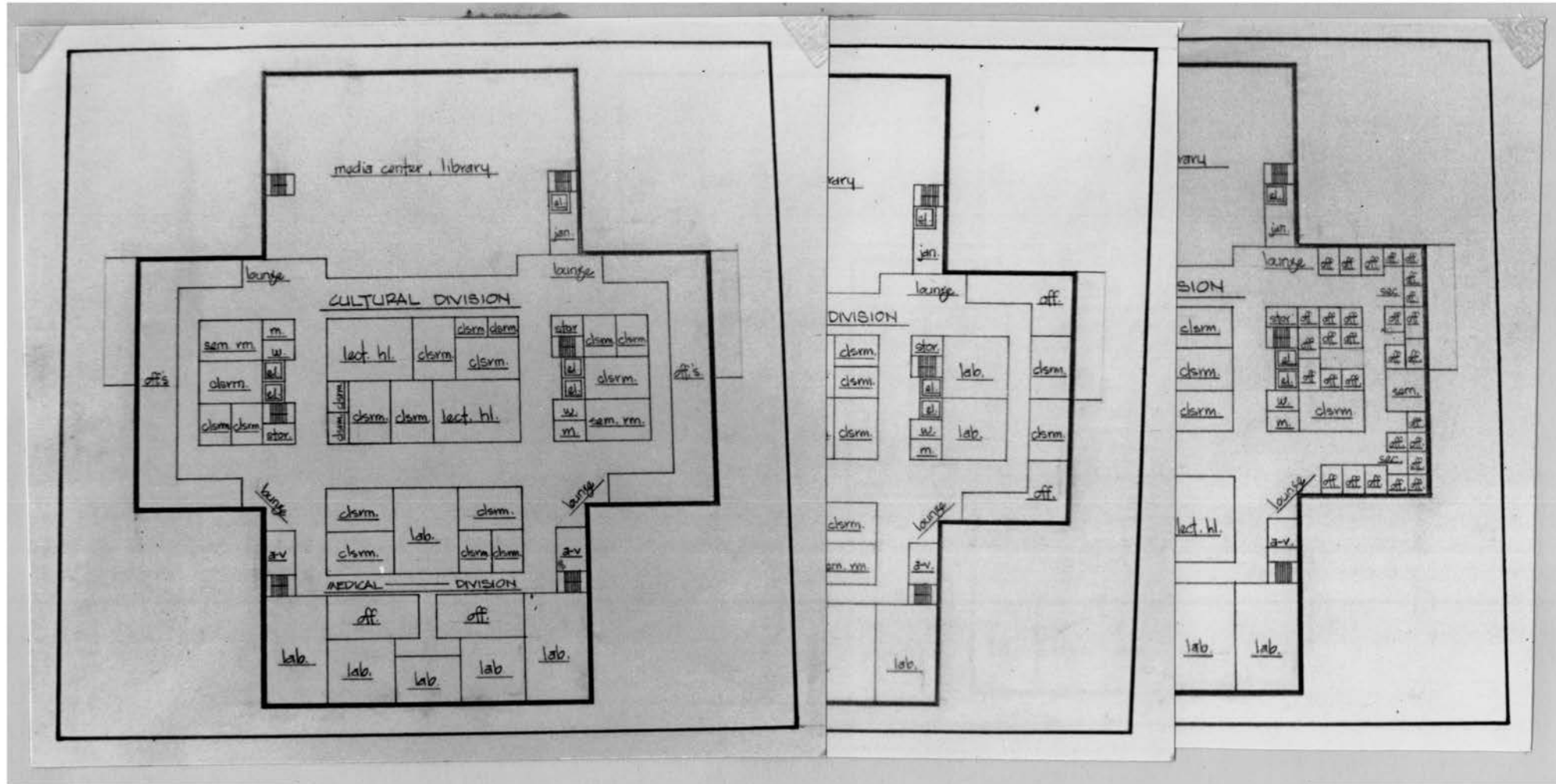


THIRD FLOOR

Entrance ramp to
Parking Garage
from Main Street

Scientific Division

Exit ramp from
Parking Garage
onto Boston Street



FOURTH FLOOR

Cultural Division

Medical Division

Media Center

FIFTH FLOOR

Communications Division

Media Center

SIXTH FLOOR

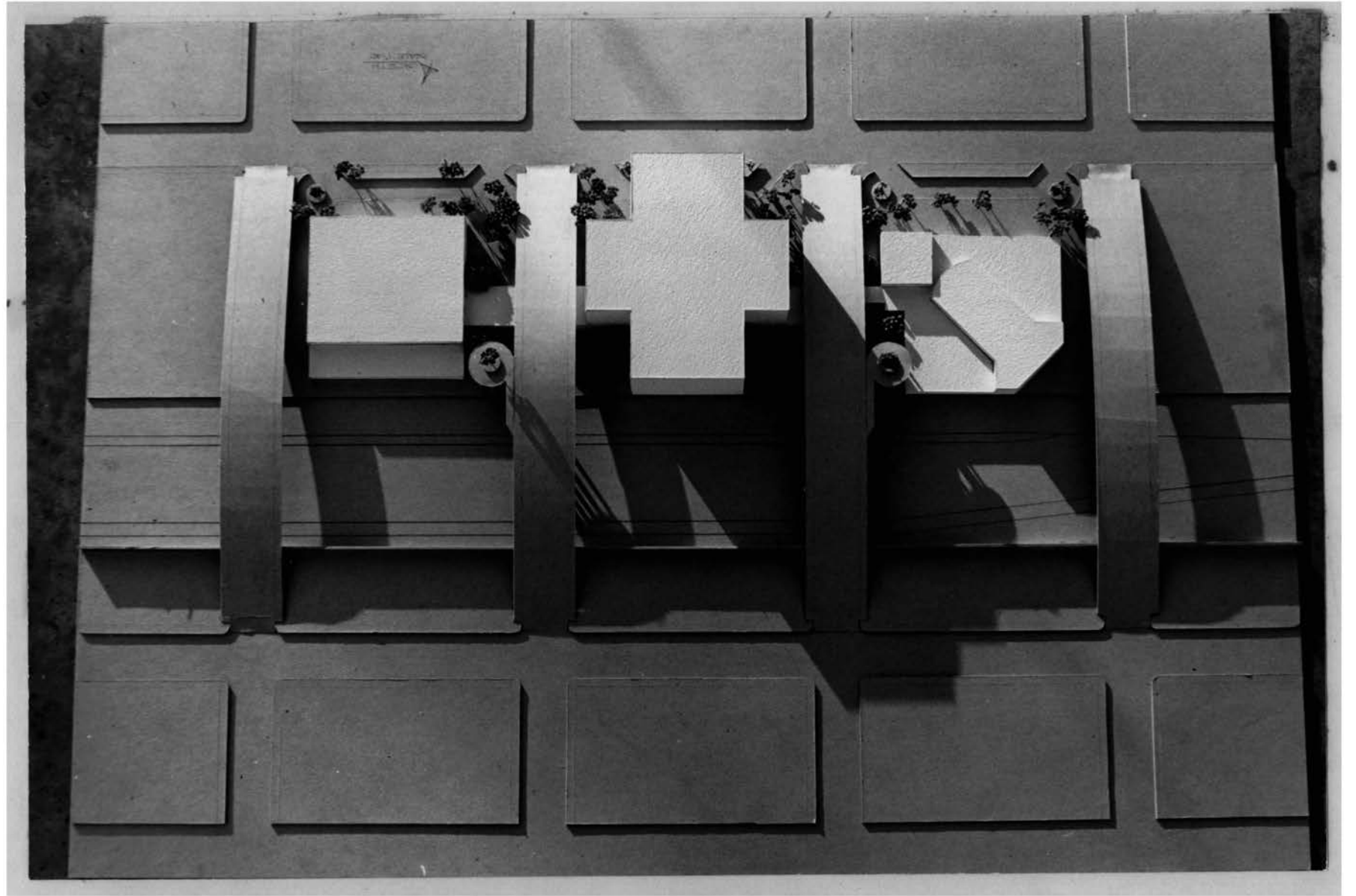
Business Division

Fire/Police Division

Media Center

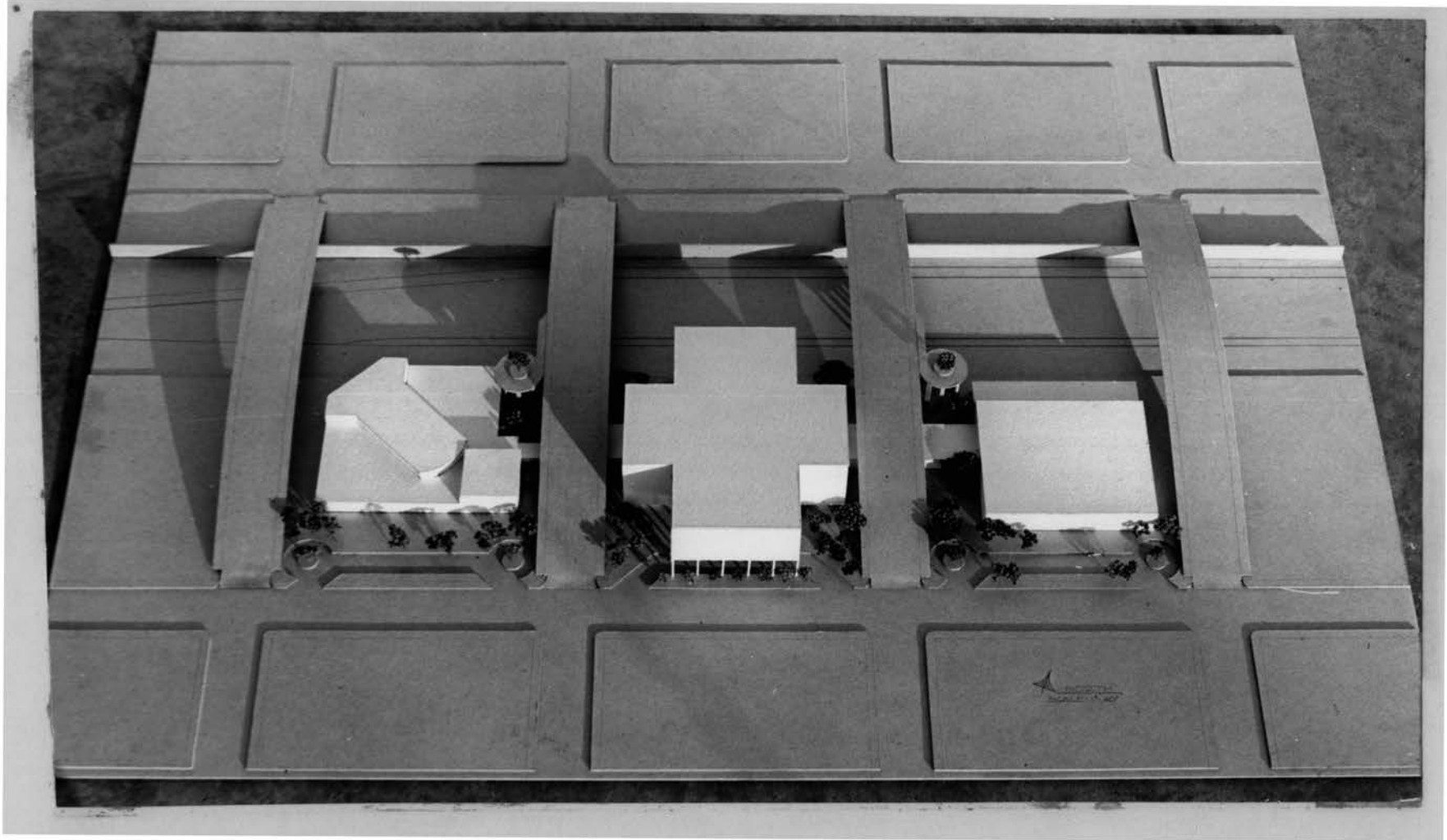


SOUTH



NORTH

NORTH



SOUTH