

/ A MIXED USE DESIGN FOR A SITE
IN KANSAS CITY, KANSAS

by

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B. Arch. University of Bombay, 1978

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF ARCHITECTURE

Department of Architecture

KANSAS STATE UNIVERSITY
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Major Advisor

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BACKGROUND

The Urban Design Studio project undertaken with professor Ray Weisenburger during the fall 1980 semester, was a design feasibility study of a site in Kansas City, Kansas. The site is mainly under the single ownership of Mr. Ray Jenkins. The city planning staff of Kansas City, Kansas has identified the site as having a potential for development.

The site is flanked by Interstate 70 on one side and Interstate 635 on another side and is adjacent to the Indian Springs Shopping Center. Land forms primarily involve steep slopes and rugged terrain, which comprises most of the site. The objective of the Studio was to undertake a Design feasibility study for the site, which offers a very attractive location being quite close to the Central Business District of Kansas City, Kansas. 200 acres of virtually untouched land offers a very choice location and a great potential for development.

The planning staff has undertaken several studies of the area, and have come up with some guidelines for development. The Urban Design Studio felt that the housing densities recommended by the planning department were too low and therefore looked into the feasibility of increasing it.

The Kansas City planning report calls for medium density development along the ridges and low density development along the nominal slopes.¹ Land forms restricts construction primarily because of the steep slopes involved. Recommended restriction on active use would permit only 60% of the site for building. The Studio identified areas where development can take place, and designed the internal circulation system for the entire site. This report will be using the same site masterplan.²

This report will essentially be dealing with the southeast part of the site designated for mixed use. The design will not be an isolated design for that part of the site, but with reference to the design of the entire site, and surrounding area.

PROJECT GOAL

Though nearly all urban agglomerations throughout the world are growing dynamically in size and in the number of inhabitants, the quality of urbanity is diminishing. The urban experience is the enjoyment of human freedom as experienced by a nearly inexhaustible access to a multiplicity of choice.

The 'urban' city has always attracted people. It not only implies availability of choice with regard to money types, places of employment, education enrichment of spirit and mind by expression of art and the possibility of amusement, but it also permits at different times and for different moods and temperament, the choice between privacy and sociability.

Within the limited and delineated space of a city there exist patterns in which certain functions may be grouped. Time and energy consuming travelling distance then bring about a fragmentation which is expressed in segregation along economic, sociological, as well as functional lines. This segregation has been made feasible by the automobile, and aided by government policies like zoning regulations and landuse restrictions.

This means that certain urban functions like working functions of all types, shopping, etc., have to be separated from residential use. This causes enforced mobility. Most of the activities characteristic of downtown are also increasingly to be found in peripheral areas, but they are all scattered centers for shopping in one place, office in another and recreational services in another. If they were all concentrated in one location this would not only eliminate a lot of automobile traffic but also give identity to the surrounding area.

PROJECT IMAGE

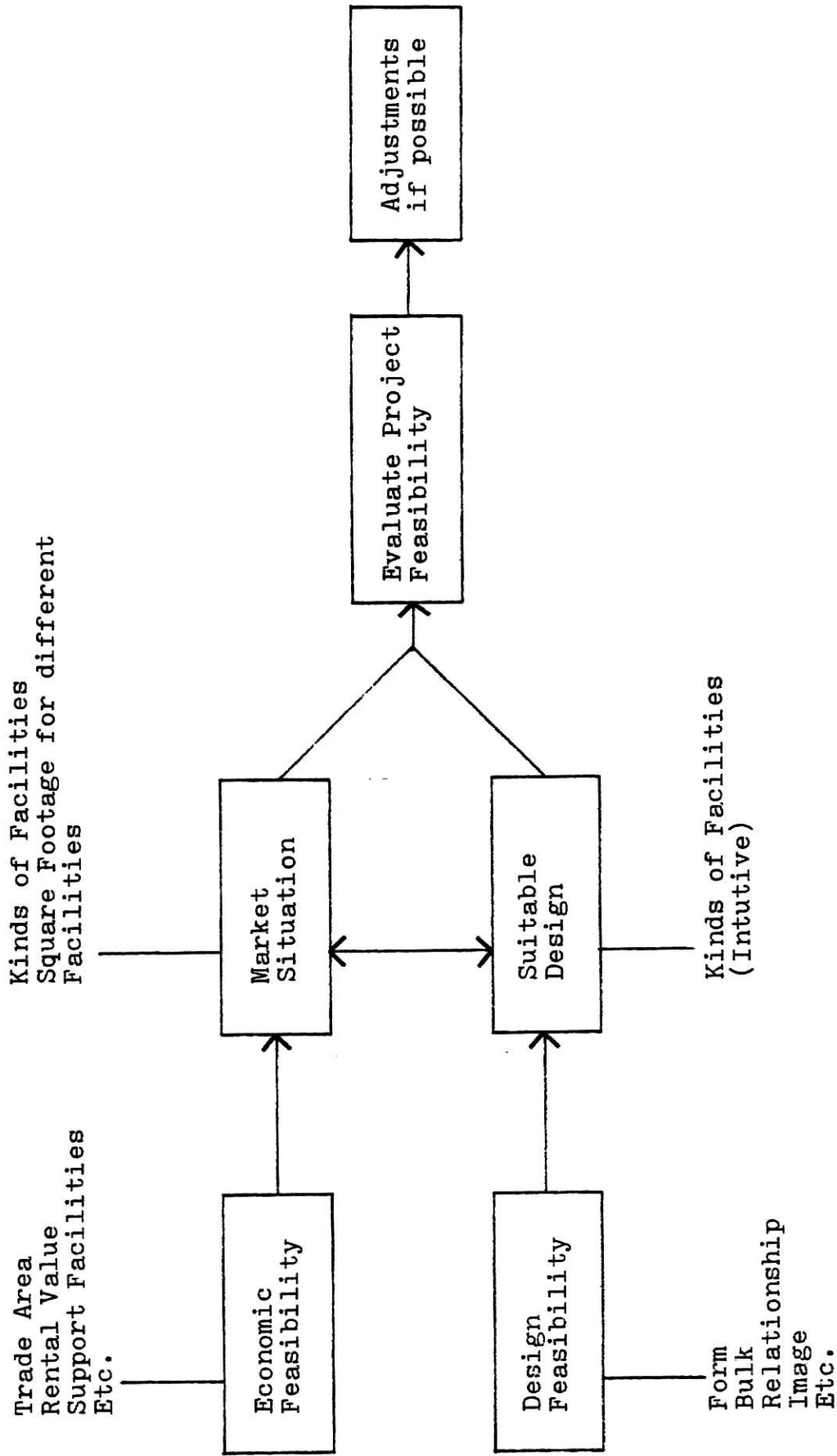
The location of the site dictates, that it should be used intensively for multiple use. In such a project certain standards of selectivity must be established. Certain functions especially those serving auxiliary nature will prove unsuitable for inclusion into any central urban structure. As far as the project is concerned, selectivity must be applied depending upon specific roles within the entire urban organism. Standards of selection must be established relative to the project's role as part of the urban structure. There emerge a few practical guidelines for the planning of the multiple landuse project. If it is the aim of this project to establish the characteristics of urbanity, then the land should be used very efficiently.

Functions served will be shopping facilities, offices, cultural and entertainment functions and all the necessary service amenities such as parking garages, delivery roads and technical services for the urban functions.

The total available land area and each parcel thereof is utilized on various vertical levels for different functions in an integrated manner. For this reason the concept of the individual land ownership in relation to

each participant of a mixed use project cannot be maintained. An identical piece of land may be used on subsurface levels for technical equipment, for transportation, for delivery etc. On two or more levels above the ground for store, banks etc., and on upper levels for apartments, offices etc.

With increasing complexity and specialization of the modern world, this unified image is possible only when a large piece of land is in one ownership to co-ordinate all elements of large scale development into a three dimensional image.



Development Process

MIXED USE DEVELOPMENT

The concept of mixed use is not new. The ancient Greek Agora, the market square and the mix of residential and commercial use in many 19th century European cities are examples. The recent developments in mixed use began in the 1950's. The strip and regional shopping centers emerged in response to the automobile. Multiple shopping opportunities under one roof emerged due to suburban growth. The next step was to involve office and residential areas within these complexes, thus bringing work and living closer to the commercial area.

Initially, mixed use developments were confined to larger metropolitan areas, but these developments are spreading on a smaller scale to medium and small sized cities. The ULI report on Mixed Use Developments³ classifies it as having:

1. Three or more significant revenue producing uses (such as, retail, office, residential, hotel/motel, and recreation.)
2. Significant functional and physical integration of project components.
3. Development in conformance with a coherent plan (which frequently stipulates the type and scale of uses, permitted densities and related items.)

One of the primary concerns of mixed use developments is potential for profit. As the ULI report points out, the

profit which mixed use developments offer is higher than the financial returns of conventional forms of development because of the economics that can be obtained by building on a large scale. This is primarily because of the integration of functions, stronger demand, and higher rent than a single purpose development. Other benefits of this type of development are the stimulation of commercial redevelopment and the attraction or holding of middle income residents in town, thus stemming the flight to the suburbs.

MIXED USE DEVELOPMENT CASE STUDIES

The ULI (The Urban Land Institute) report Mixed Use Developments: New Ways of Land Use describes many successful mixed use developments. These developments have been shown to provide many benefits to the communities in terms of taxes and profit as well as creating jobs for the area. Some examples of completed mixed use developments are:

1. Colony Square- Atlanta

Colony Square is a mixed use project containing office, retail, transient and residential uses. Planned in 1966 and completed in 1974 the project's seven major structures encompass two million square feet of built area located on a 12 acre site.

Location is one of Colony Square's most unique feature, in that it is neither downtown location nor purely a suburban environment. Midtown has been one of the finest residential, retail and commercial district in Atlanta and now it has a new dimension in Colony Square.

The mixed use concept at Colony Square is perhaps best expressed in the developer's own words.

The mixed use concept creates a synergistic effect (i.e. the effectiveness of the whole is greater than the sum of the parts) The quality of the working environment is increased by the living environment, the living and working by the retail activities. The intensity and

diversity of the development also allows for a greater degree of support functions on the part of the management, larger staffs for service, security and maintenance. Simply stated, the concept is one of a controlled environment, where people can work, shop, live, entertain and enjoy recreation with ease and in an atmosphere that is both convivial and secure.⁴

2. Crown Center - Kansas City, Missouri

Crown center is a large mixed use complex developed on an 85 acre site about 12 blocks south of the Kansas City, Missouri CBD. Development began in 1968 and uses include office, hotel, retail facilities, residential towers and entertainment and recreation components.

The intensive and careful planning process resulted in a total environmental design, which considered all aspects of personal needs in daily life and an individual's relation to their surrounding. These fundamental principles were translated into a four phase mixed use development program and revitalization of the mid town area.

Crown Center is located in the geographic heart of Kansas City, just a few minutes south of the downtown. Virtually possessing many characteristics common to a dense urban area and outlying suburban locations as well. The location character is reflected in Crown Center's mix of mid rise buildings accentuated with high rise towers.

Crown Center's rapid growth and success in terms of revitalization of formerly blighted urban area and generating acceptable economic returns for its developers appears to be the result of three factors.

- a. Adequate financial resources.
- b. A realistically planned and phased masterplan, offering a complete human oriented on site environment.
- c. Support from the Kansas City government.

The project is bringing thousands of new jobs into the Kansas City area, and is generating strong impetus for new investment and revitalization in the nearby downtown area.⁵

USES AND MIX

Diversity in a mix use development means integrating three or more significant revenue producing uses (for example office, residential, retail and hotel). Each serves as an anchor by individually attracting people for a variety of primary purposes. The mix makes possible, the multiple purpose trip.⁶

Diversity in a mixed use development also means drawing people after closing of the business day. A variety of eating and drinking facilities is one means, it can also be achieved through emphasis on entertainment and programming of events.

Office Component

Almost every mixed use development contains an office component, the reasons are:

1. Office uses can easily fit into any mixed use development.
2. Office use often produces market synergy for other components (example retail, hotel and residential).

Retail Component

Speciality shops may be a drawing card for the entire metro area and retail uses are a good way to extend the activity cycle and add excitement and diversity to the project.

Hotel Component

A large majority of the mixed use developments incorporate

transient use. Hotels can enhance the project's image and be a very profitable project component.

Residential Component

Residential uses are a highly desirable component of mixed use development. Living within walking distances of working place, also eliminates automobile traffic.

Eating and Drinking Places

These establishments are among the most common and expedient means of keeping mixed use developments alive after hours. These could be a conventional hotel affiliated good food restaurants or a combination of distinct types.

PROPOSED LAND USE

The Kansas City, Kansas Planning department has deemed commercial and residential uses to be appropriate directly adjoining the intense commercial node in this area. This would allow these usages to capitalize on the accessibility and identity of the commercial activity magnets.

Approximately 33 acres are designated for mixed use. The proposed uses in the project are:

1. Residential
2. Retail
3. Office
4. Hotel
5. Restaurants
6. Recreation
7. Parking

DESIGN STRATEGY

- Site Analysis : The site will be examined to study the feasibility to accomodate the requirements of the project.
- Site Plan : Generate a site plan - Illustrate massing, building placement, circulation scheme and total area.
- Design Development : Schematics will be refined into plans, showing space connections, circulation and exterior image.
- Presentation : Plans, Sections, Elevations and Model.

CLIMATIC CONDITIONS

Local circumstances influence the development pattern for the Indian Springs site primarily by inclusion in the Midwestern Temperate Zone, which is ordained by the midcontinental (North American) location. Characteristic of this category are the exceptionally warm and humid summers with daily temperature levels averaging 72 degrees F. during the hottest month, which is August. Ambient temperatures have varied historically in the project area from approximately 113 degrees F(1936) to -22 degrees F (1888), with the average annual temperature of 55.6 F. The three dominant air flows for the Kansas City area are hot currents from the arid Southwest, humid warm flows from the Gulf of Mexico, and much cooler air masses originating from the polar Northwest. This complex meteorological situation of strong air movements which lack vegetative or structural impedance create a pronounced variability in temperature, precipitation, and the abnormally high incidence (2.4 mean frequency) of periodic tornadoes to be expected on and around the Indian Springs site.

Cumulative rainfall for the immediate project area averages a relatively high 36.5 inches per annum. Seasonal

tendancies for precipitations are: spring (29%), summer (35%), fall (24%), winter (12%). The greatest annual rainfall ever recorded was 60.25 inches (1961) and the smallest 21 inches (1953). The largest accumulation of precipitation (24 hour period) was 7.45 inches (1969). Hail storm averages are approximately 4 per year. The humidity range varies from 48% to 72% depending on the seasonal and hourly context. Snow and sleet accumulate on an annual average in the amount of 19.8 inches with deposition depending on topographic and wind variables.

Annual wind speed reflects a mean of 10 mph with occasional gusting winds of 70 mph (1950) primarily during severe thunderstorms, an estimated 50 rain storms in the mean per annum generally originating from air currents originating in northwest and southwest?

SITE SIZE/CONFIGURATION

Area : Approximately 33 Acres

Boundaries : The site is bounded on the north by Orville Avenue, on the south by I-70 and on the east by I-635.

Existing Land Use:

Two buildings which contain professional offices- Major portion of the site is vacant.

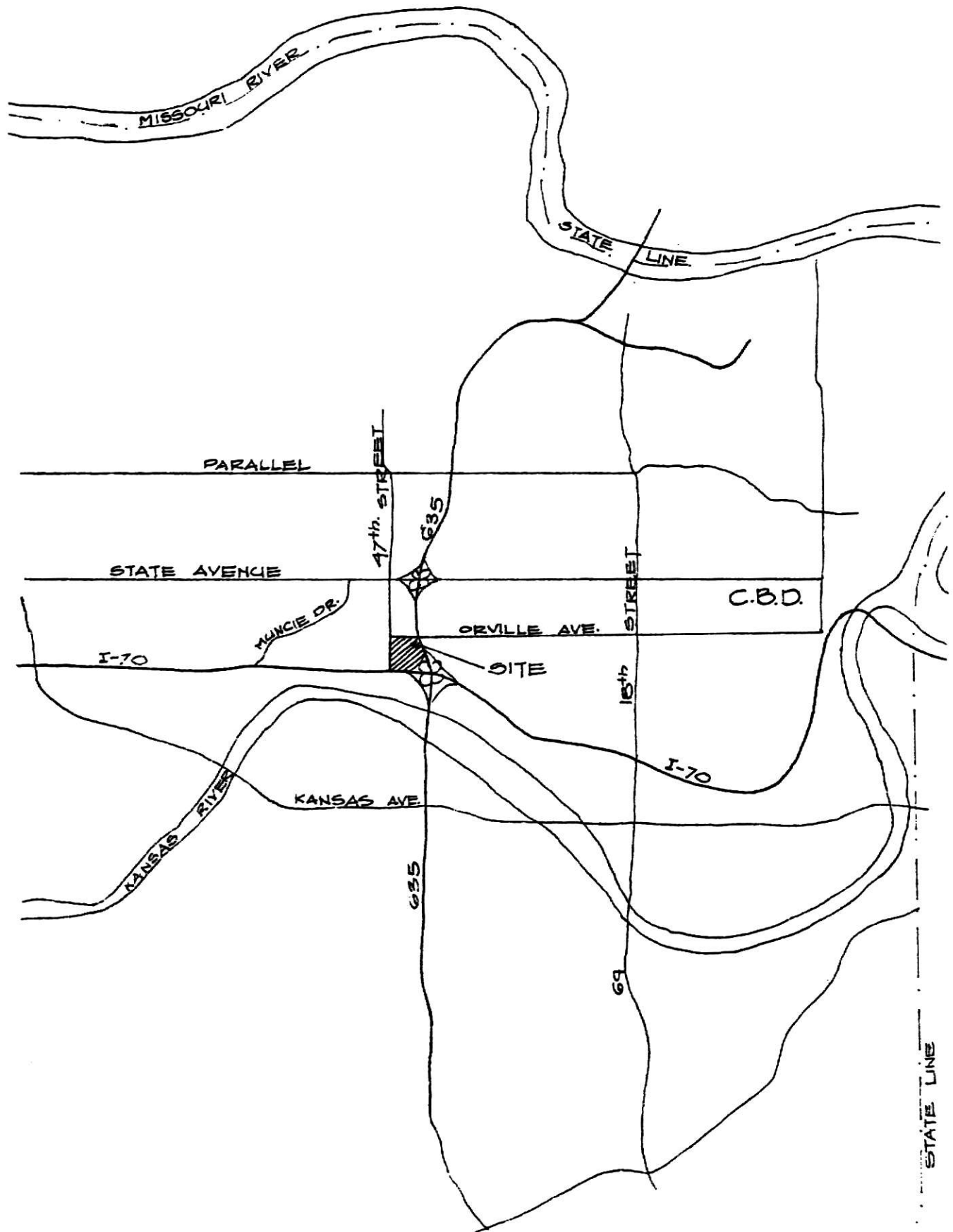
Physiographic Analysis of site:

The parcel's location is its most important significant feature. The northwest quadrant of I-70 interchange is highly visible from either interstate.

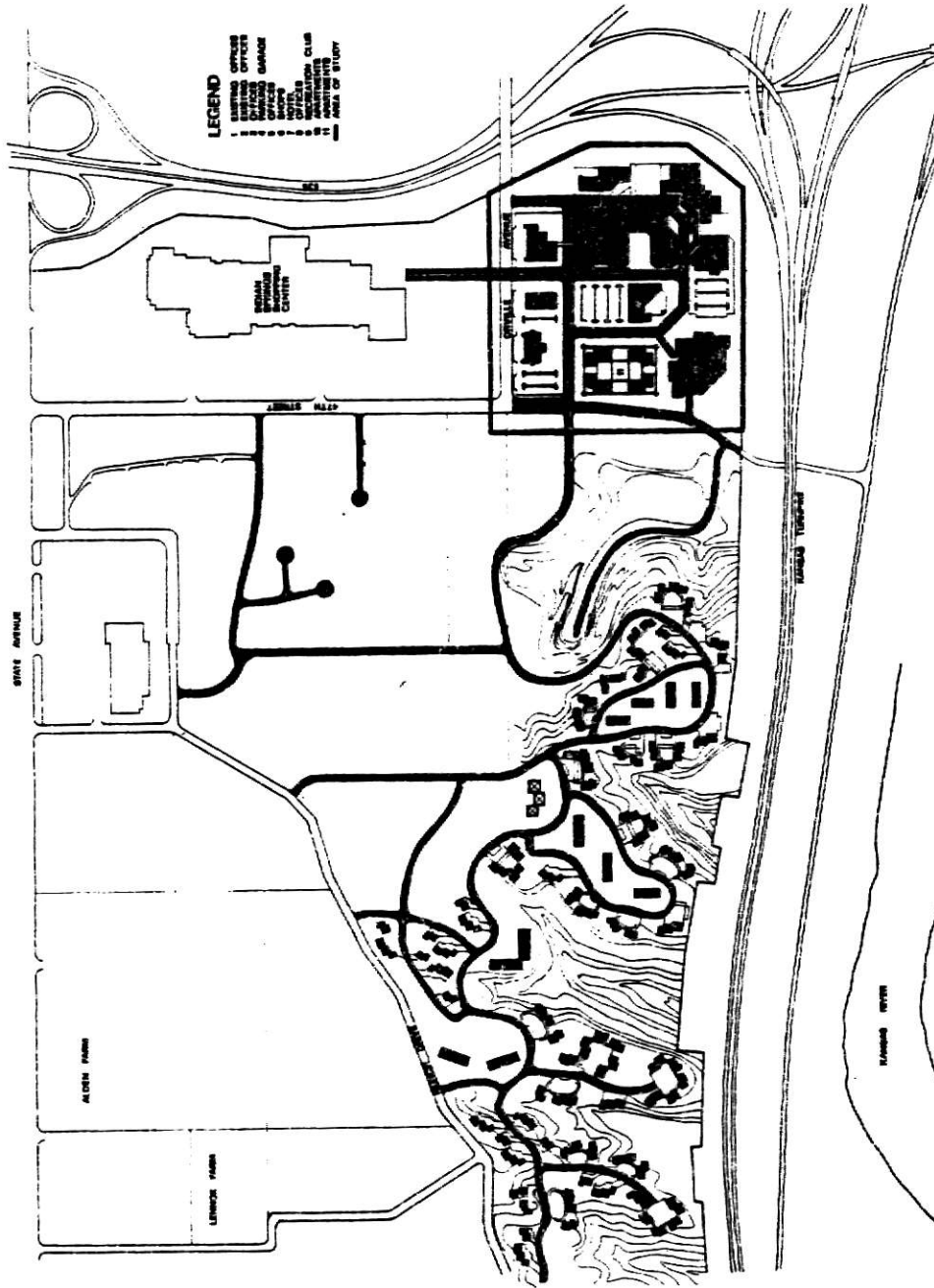
The terrain slopes 90 feet towards I-635.

Limited tree cover.

Suitable soil over most of the site.

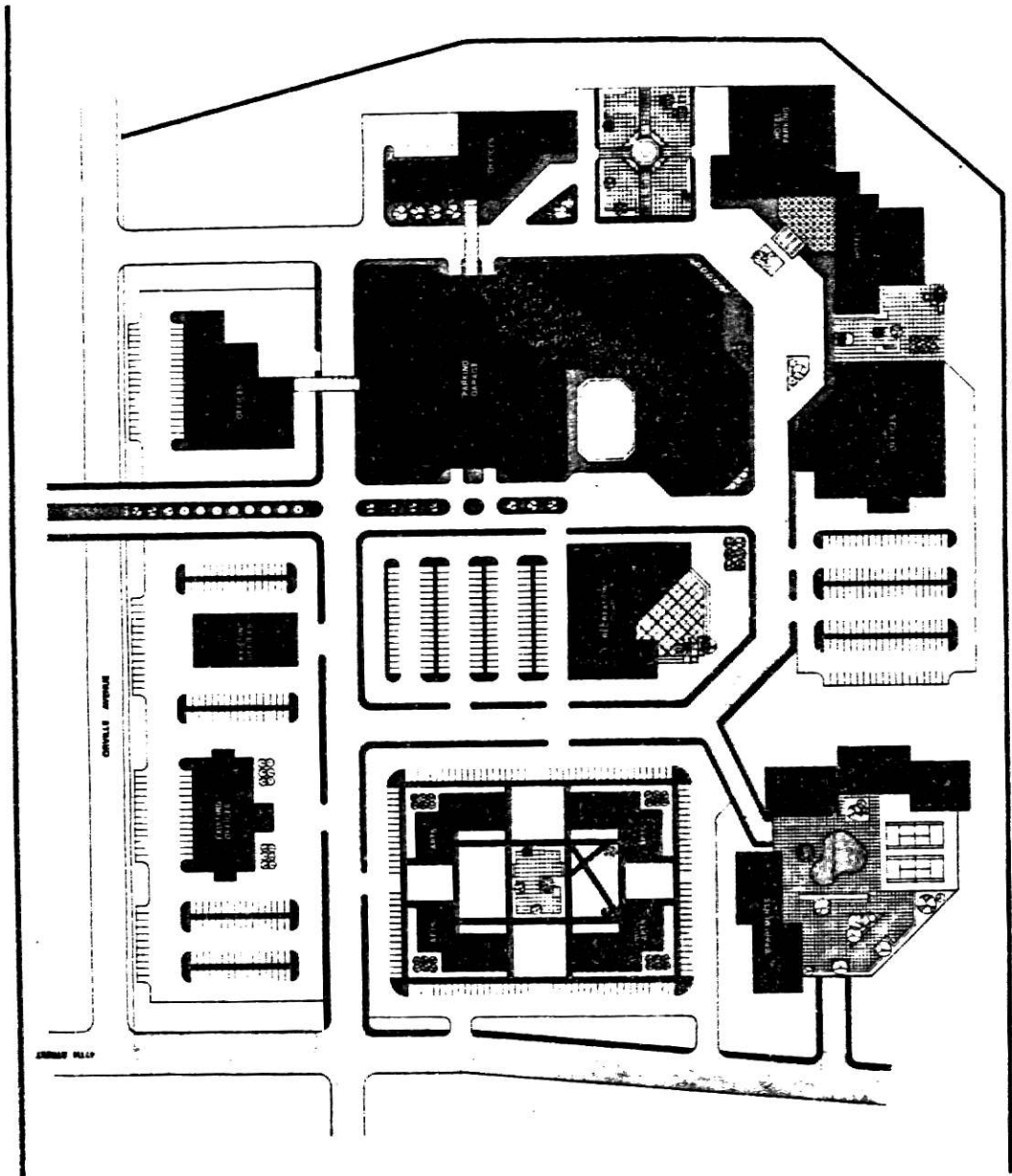


Location Map



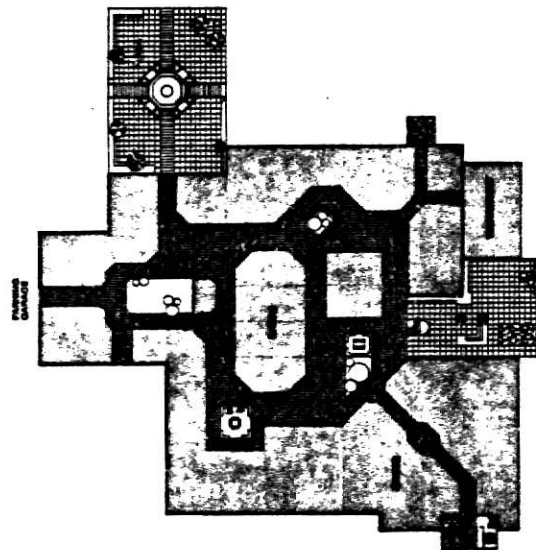
MIXED-USE DESIGN PROJECT KANSAS CITY, KANSAS

A PAPER OF ARCHITECTURAL RECORD BY RAY & RAY
 1000 PINE STREET, UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN 48106

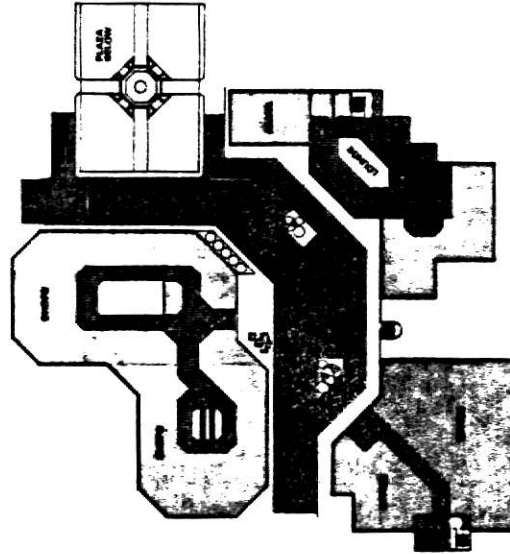


PLAN 1

MIXED-USE DESIGN PROJECT KANSAS CITY, KANSAS
A MASTER OF ARCHITECTURE REPORT BY ALAN S. LANE
KANSAS STATE UNIVERSITY, MANHATTAN, KANSAS, DECEMBER 1982

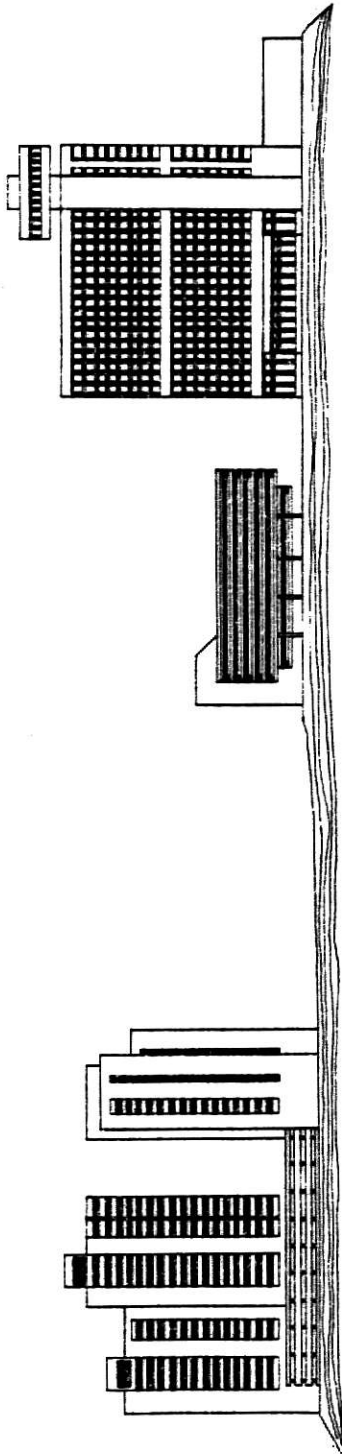


PLAN AT LOWER LEVEL
 1" = 10'

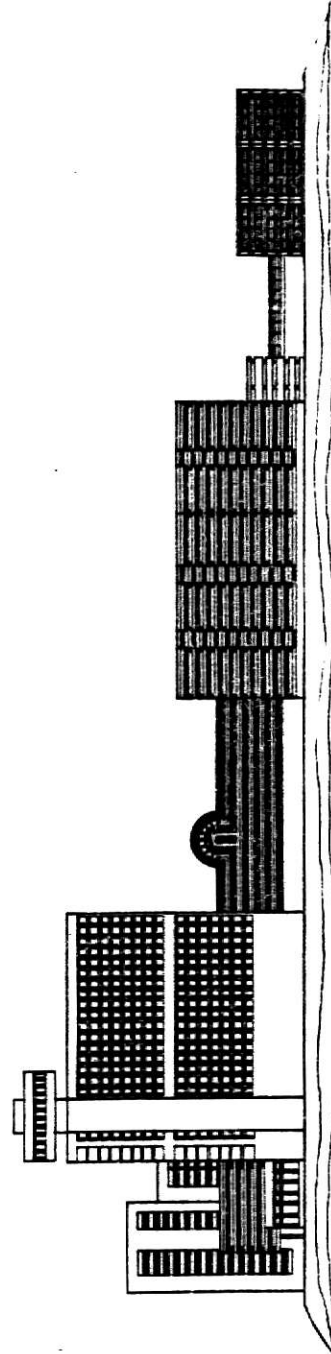


PLAN AT UPPER LEVEL
 1" = 10'

MIXED USE DESIGN PROJECT KANSAS CITY, KANSAS
 A MASTER OF ARCHITECTURE REPORT BY RAJIV S. MAHA
 KANSAS STATE UNIVERSITY, MANASSA, KANSAS, DECEMBER 1989



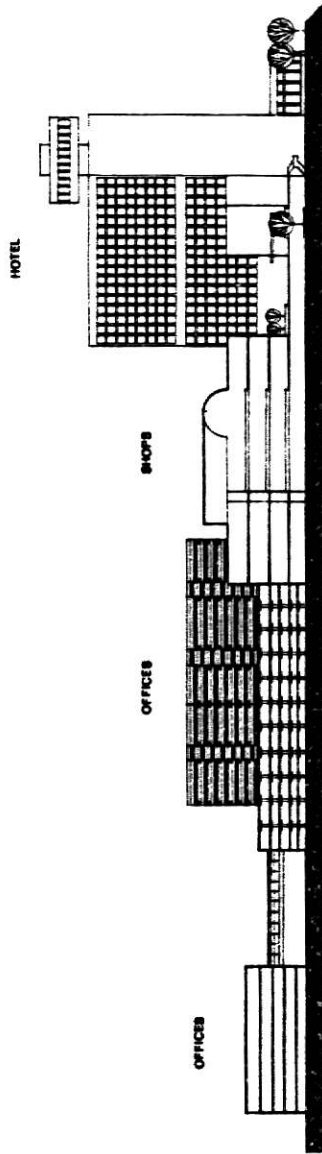
SOUTH ELEVATION



EAST ELEVATION



MIXED-USE DESIGN PROJECT KANSAS CITY, KANSAS.
 A MASTER OF ARCHITECTURE REPORT BY RALPH S. MAYE
 KANSAS STATE UNIVERSITY, MANHATTAN, KANSAS, DECEMBER 1992

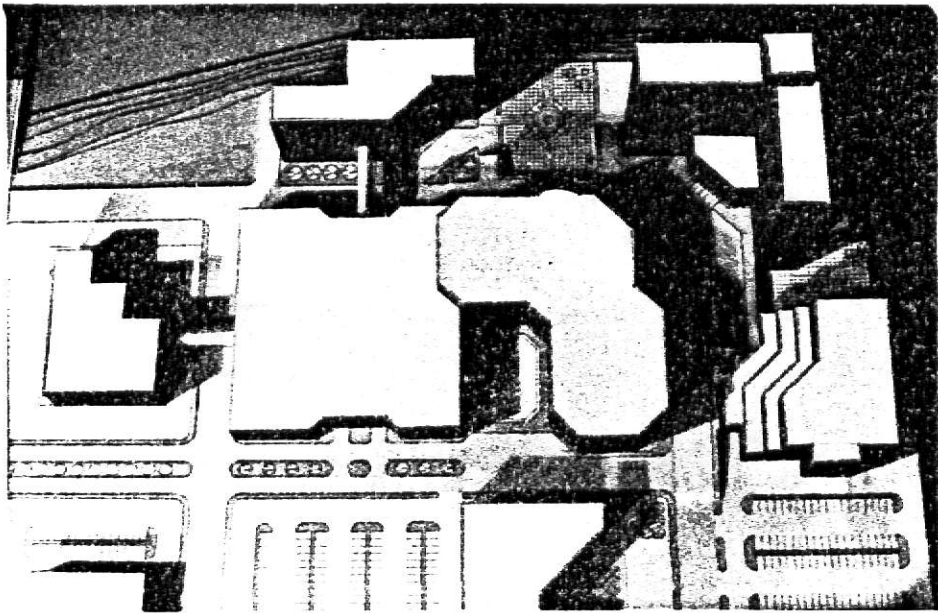
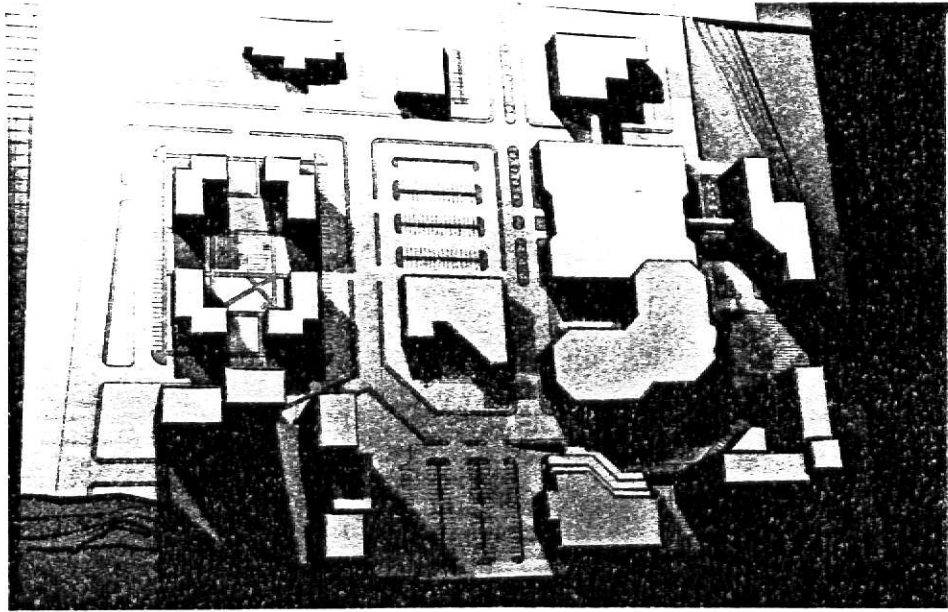


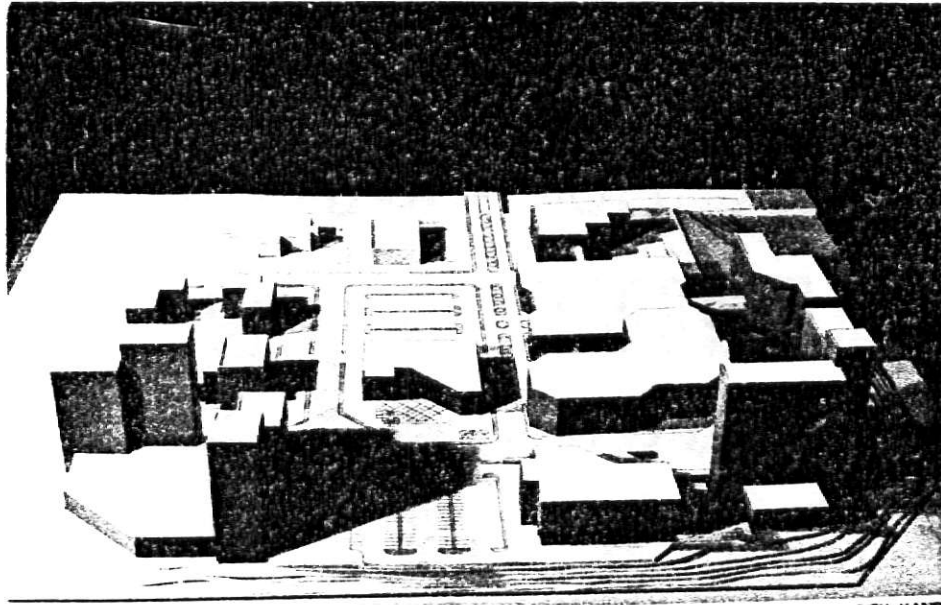
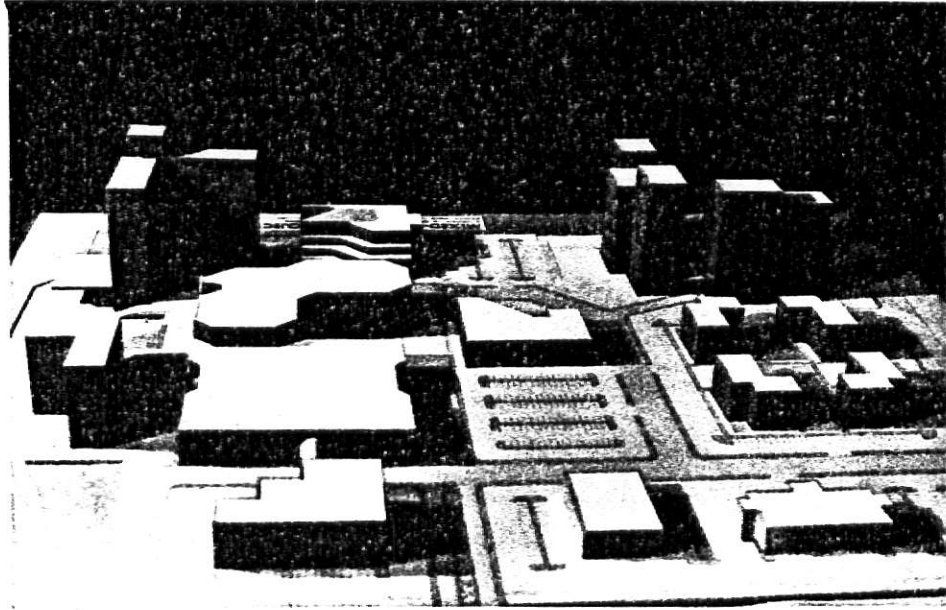
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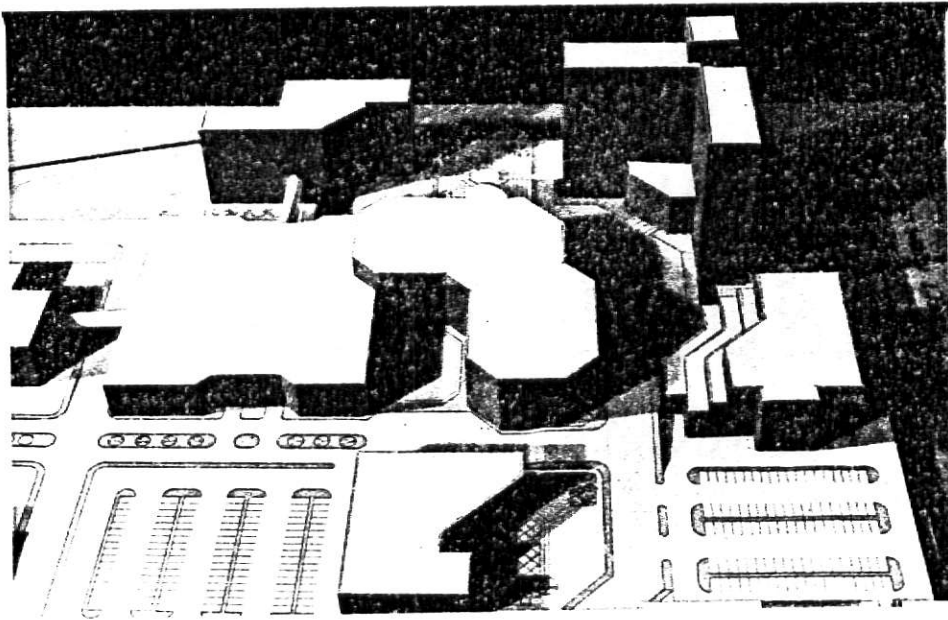
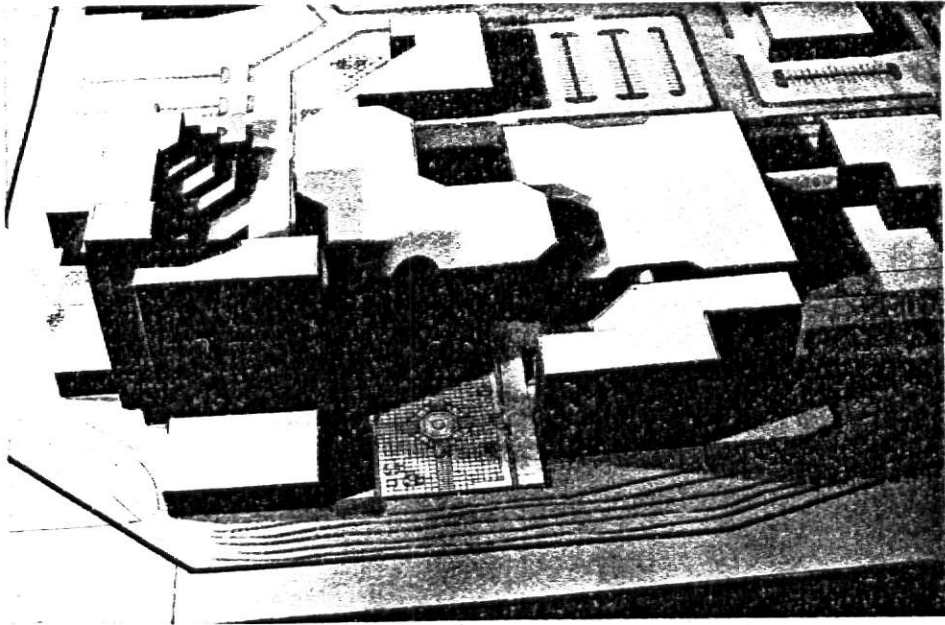


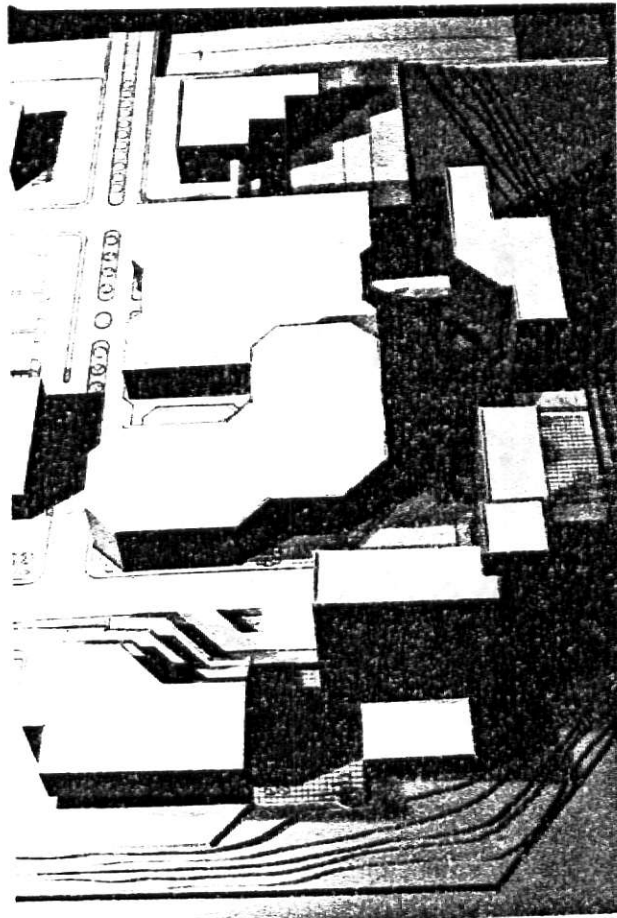
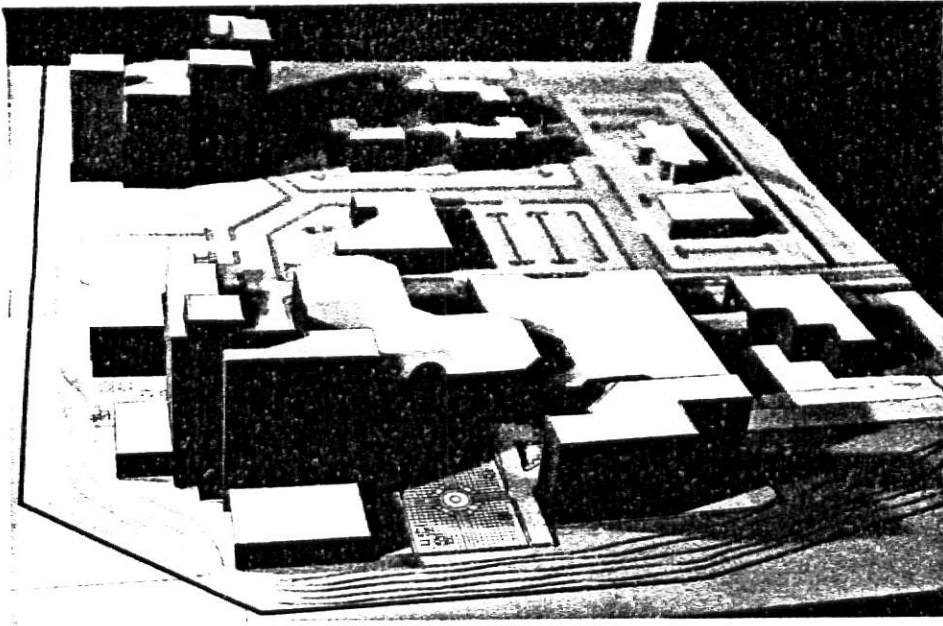
SECTION BB
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MIXED USE DESIGN PROJECT KANSAS CITY, KANSAS
A MASTER OF ARCHITECTURE REPORT BY RAJIV S. NARAYAN
KANSAS STATE UNIVERSITY, MANHATTAN, KANSAS DECEMBER 1992









PROJECT DATA

Acreage : 33 Acres

Components

Residential Units	: 600 Units
Existing Office space	: 50,000 sft.
Proposed Office space	: 500,000 sft.
Retail space	: 150,000 sft.
Transient Facilities	: 500 rooms
Recreation	: 50,000 sft
Parking	: 2000 cars

DESIGN STATEMENT

Positioning Project Components

The project centerpiece are three buildings located at the southeast corner. A 500 room Hotel which commands a view of the Kansas river and is located at the junction of the two major roads abutting the site, an office building, and a four level retail building. These buildings are connected at the lower level with an assortment of retail and recreational uses, which provide an all weather connection. These form a focal point for the development and make a strong visual impact from the highway.

The upper level of the retail building serves as a prominent entrance to the lower level concourse. Small plazas are designed to relate to the surrounding buildings and the shopping areas. Each building contains a vertical circulation core leading down to the lower retail area.

A large multi storey parking garage is connected to the retail complex. The two office buildings, to the north and east of the parking garage, are connected to the parking garage by means of a skywalk.

The residential component of the project is located on the western edge of the site, so as to keep it on the residential side of the whole development. It consists of four medium

rise buildings, which fit into the scale of the existing buildings on the site. These are landscaped and have on site parking around the buildings. The high rise residential towers in the southwest corner of the site, sit on a platform of parking garages. The top deck of the garages is landscaped with trees, and can be used by the residents.

A recreation and health club is located directly accross the residential buildings. The club serves the needs of the residents in the project, as well as the residents in the whole development.

The two existing buildings on the site are retained.

Circulation

Though the location of the site is very good in terms of having two major roads abutting the site, the access to the site presents a problem. To get to the site from the Interstate, one has to exit on State Avenue and then take 47th Street which leads to the project. This problem will be offset by the size of the development, since the project will be sizable and very visible from the major roads.

The circulation within the site is a gridiron pattern and the roads are two lanes in each direction. There is no on street parking at any time w thin the project boundaries.

The project is connected to the Indian Springs Shopping Center by a road which passes over Orville Avenue.

Parking

The major parking in the project is in a 1200 space parking garage, which serves the retail component and the two office buildings adjoining it. These two buildings are connected to the parking structure by means of a skywalk, which provides an all weather connection. The parking for the highrise residential towers is in a three tiered parking garage at the base of the buildings. Similarly the parking for the Hotel is in the multi tiered parking garage at the east side of the Hotel.

The parking for the rest of the buildings in the project is ground level parking, grouped around the buildings and landscaped.

People Oriented Places

The central objective of the project is creating and maintaining an exciting environment for people. Trees and fountains for the central areas to provide a sense of closeness with nature, and creation of breathing space through large atriums and plazas. The two landscaped plazas, which open out at the lower retail level serve as elements to relate the structures to a human scale. The

Design has consciously tried to avoid large open plazas, which often do not generate activity and remain largely unused, instead a number of small open spaces have been created around the whole site.

EVALUATION AND CONCLUSION

The committee consisting of Professor Ray Weisenburger, Professor F. Gene Ernst and Professor Eugene McGraw had the following comments:

1. The development does make a strong visual image as seen from the Interstates.
2. The area around the Hotel, Shopping Center and the Office building, which are connected at the lower level, creates a strong focus, and is designed efficiently.
3. The mid-rise residential area is too rigid and surrounded by parking, which could have been avoided.
4. The east west street which continues into the rest of the development, should be lined with trees, to give it a sense of continuity, and draw the people into the mixed use development.
5. The project should consider a higher density and avoid large ground level parking areas.

Conclusions

The potential for development around the Indian Springs area, could in the future make it a city center of Kansas City, Kansas. The 33 acres area should be further studied for more intensive development. The existing buildings on

the site could be demolished, and a higher density development, considered in future phases of the development. The area west of 47th Street could be developed as a commercial area and the connection between the 33 acre site and Indian Springs Shopping Center, be emphasized by buildings spanning Orville Avenue, to integrate the Indian Springs area.

NOTES

1. Department of Planning and Development Reports. Indian Springs Vicinity Analysis Kansas City, Kansas. p. 7
2. Rashid Makhdum, Kenneth Stein and Rajiv Mane, Urban Design Studio - Coronado Community Development Kansas State University, Manhattan, Kansas.
3. Robert E. Witherspoon, John P. Abbet and Robert M. Gladstone Mixed Use Developments - New Ways of Land Use Washington D.C. The Urban Land Institute, 1976 p. 6
4. Ibid., p. 129
5. Ibid., p. 162
6. Ibid., p. 47
7. Department of Planning and Development Reports. 47th and Orville, Indian Springs Vicinity Study Kansas City, Kansas.

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ABSTRACT

The land in the Indian Springs vicinity, in Kansas City, Kansas presents the city with a significant challenge. The area possesses various positive attributes which traditionally forecast impending development. The centralized location of this district is evidenced by the major streets that bound it; I-635 on the east, 57th Street on the west, State Avenue on the north and I-70 on the south. I-635 also provides direct accessibility to and from Johnson County to the south.

The City itself has served as an indicator that development is imminent. Capital improvements in the form of street reconstruction to Orville Avenue, 47th Street, and the Muncie interceptor sewer line, evidence that the policy makers place high priority on the area's development.

In order to speculate on the course of development, land to accommodate it must be available. In this case approximately 200 acres of unusually rugged, virgin land adjoining Indian Springs west to 57th Street exists between State Avenue and I-70. The area generally then has great potential for development. A complex physical arrangement supplying a total range of amenities; living, working, shopping, recreation etc., can evolve.

The land itself should be examined to reveal the intrinsic

opportunities and constraints to urban development.

Retention of the natural features of this site is imperative. Uncontrolled development cannot be allowed to wipe out the character of the Indian Springs area. Sporadic development handled with little skill and taste will not realize the full potential of the area. To capitalize on the natural character of the site would surely be to the advantage of both, the City and private interest.

This report studies the parcel of land, which the Kansas City, Kansas planning staff has identified for mixed use development. This portion of the site, about 33 acres, is naturally divided from the rest of the site by the quarry operation. It is on the high grounds south of the Indian Springs Shopping Center, overlooking the quarry and calls for mixed development, perhaps in high rise form, to form a focal point for the area.

At present the owner is involved in piecemeal development, constructing a building, here and there without any comprehensive site plan. It would benefit both, the owner as well as the city, to explore the potential of the area.

This report identifies the uses that could go into the development and their relationship to each other and to the area as a whole. It is a site development plan for the area showing uses, and the eventual form they might take.