

Essaouira, Morocco: Redevelopment Through the Introduction of a University

by

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Submitted to the Department of Architecture  
in Partial Fulfillment of the Requirements for the  
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## **Abstract**

This thesis addresses the urban redevelopment of Essaouira, Morocco as it relates to its economy, urban tissue and cultural identity. As architects we herald the importance of context; a loaded term which describes an environment, built and natural, habits of people and local traditions, all attributes which play a vital role in the development of a design strategy. Interestingly when context becomes culturally unfamiliar architects struggle to characterize the attributes which define that specific context. In selecting Essaouira one of my goals is to develop a methodology towards understanding a context. This thesis attempts to reveal the past, present and future attributes which define Essaouira after which provide a synthesis for the redevelopment of Essaouira through the introduction of a university. The thesis commences with an analytical study of Essaouira, including historical development, development policy, migration patterns, building typologies, land use, pedestrian and vehicular movement and present conditions. It is safe to say that in my two visits to Essaouira I have walked down every street both in the old and new sections of the city and have begun to establish an intuitive sense of the city. While the analytic and synthetic aspects may appear quite independent from one another, in fact the thesis developed through a meandering back and forth between the two, providing questions, then answers and questions once more.

Thesis Supervisor: Attilio Petruccioli

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## **Acknowledgements**

In all of our endeavours our thoughts and ideas are shaped by the interaction we have with others, thus I appreciate all the discussions I have had with students and faculty members over the past two years. I would like to thank Andrea Leers and Jane Weinzapfel for providing me with the flexibility to continue both my academic and professional pursuits. I would to extend my thanks to Akos Moravanzsky and Reinhard Goethert for their insight and advice regarding the development of my thesis project. The world of Essaouira was introduced to me by Attilio Petruccioli, to which I offer my thanks in regards to the advice and expertise he provided me throughout the development of this thesis as well as his friendship. Of course I could not forget my parents who have always provided me with encouragement and instilled in me a desire for a continuous search of knowlege. Most importantly I am forever thankful to my wife, Uche, for the encouragement, understanding, peace of mind and love that she has provided me throughout our years.

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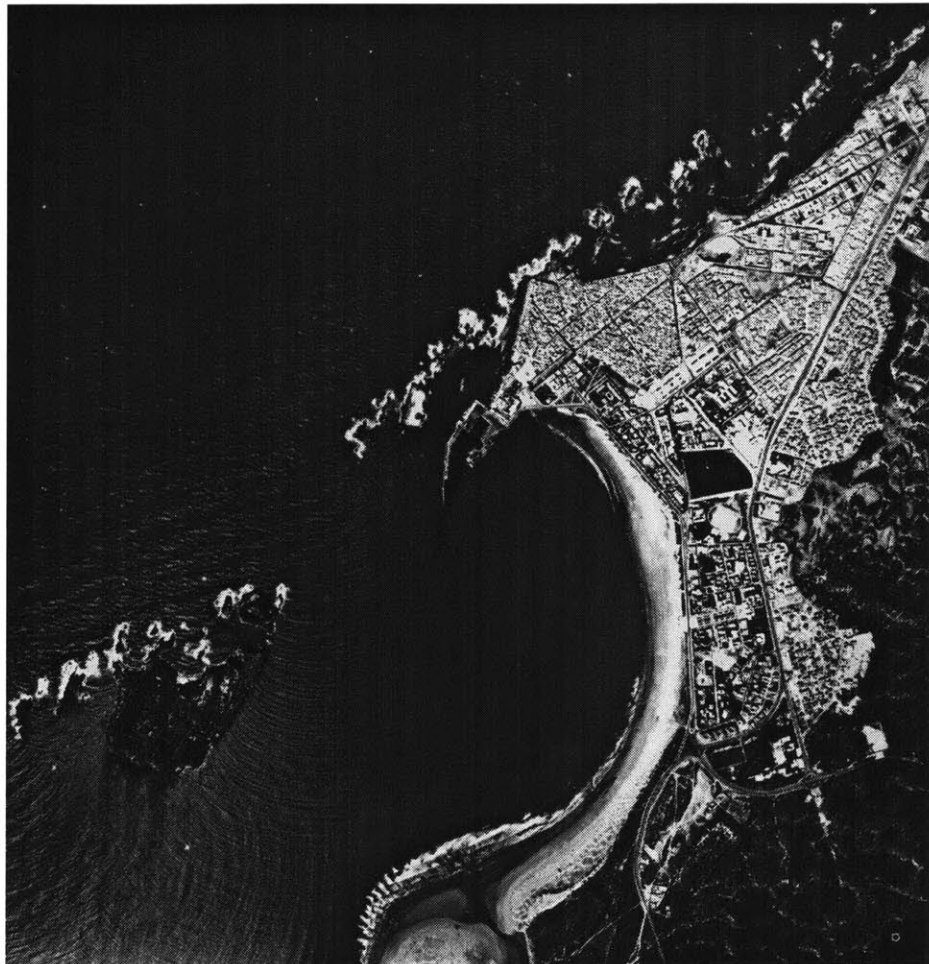


Figure 1: Aerial view of Essaouira

## Essaouira: Historical Background

Today Essaouira is a quaint coastal city a buzz with the chores of everyday life occasionally interrupted by the seasonal purge of beachgoers and tourists. Its image today stands in contrast to its inception in the 17th century by Sultan Muhammed III as the royal port of Morocco; a distinction it carried until the beginning of French colonialism. Between the 1770's and 1870's Essaouira was the most active seaport of Morocco, serving as the primary point of trade for all of Morocco. As we will see the primary factors which brought Essaouira into existence and then prominence are those same factors which have led Essaouira to decline, leading to its current uncertainty in the present.

In Morocco, as well as most other places, port cities are susceptible to social change. In the case of Essaouira, it became the primary point of social interaction between the local population of Morocco and the Europeans. In designating Essaouira as the royal port the principal aims of the Sultan was as follows: 1) to contain foreign influence and limit the volume of trade, 2) defend Islam from the Infidel, 3) secure south, 4) end monopoly of trade at Safi, Agadir, Rabat, Mamoura and Tetuan accorded to the Royal Danish Merchant's company and 5) control movement of foreigners. Apparently Essaouira was not initially the most inviting place, a sentiment echoed by British vice-consul Mr. Grace:

*"The situation of Mogadore (Essaouira) is the most desolate that can be imagined, and nothing but the advantages afforded to trade and the superiority of the harbour over the others of the empire could ever reconcile merchants to an establishment here. An unbroken chain of high sandhills, totally bare of vegetation, meet the eye along the coast, and for miles inland the same aspect is presented, with the exception of here and there, a small cultivated spot between the hills"*<sup>1</sup>

The initial inhabitants of Essaouira were a mixed group. Despite being a commercial port, a sizable contingent of military personnel were amongst the first inhabitants to ensure government authority. In addition to the soldiers there were groups of people

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<sup>1</sup> Schroeter, Daniel;, The Merchants of Essaouira; pg. 12

from Agadir (forced north to settle in Essaouira) and Bani Antar (originally from the west flanks of the high Atlas mountains). Most importantly the Sultan selected wealthy Jewish families in Morocco to send representatives to Essaouira to establish trading<sup>2</sup>. With their vast European connections these merchants were able to quickly establish Essaouira as the royal port. Overall it is important to note that while a small community may have existed (this is still inconclusive) prior to the creation of Essaouira as we know it today, much of Essaouira developed overnight.

As international trade served as Essaouira's primary economic base it is only natural that the merchants of Essaouira became the principal men of power within the city, particularly those who worked directly for the Sultan. The Jewish merchants found themselves in an interesting position. On the one hand their contacts with foreign merchants placed them in an intermediary position that enabled them to have an effect on changing economic structures. Yet as foreigners they could not hold positions of political power, either local or national. Thus to gain favors or financial support many of these merchants became highly dependent upon the Sultan, thus assuring him their loyalty<sup>3</sup>. As trade increased Essaouira continued to grow in prosperity and size. The commercial treaty with Britain signed in 1856 liberalized trade and increased the number of foreign merchants. Additionally foreign merchants were now allow to travel and reside within the interior. Through the combined contributions of foreign trading firms and the makhzan, Essaouira reached its heighest point of economic prosperity in the 1860's<sup>4</sup>.

Essaouira's high level of prosperity would only prove to be short lived. The bombardment of Essaouira by the French fleet in 1844 became a decisive factor in the economic history of Essaouira. Soon it became apparent that foreign intervention was inevitable, particularly after two events: 1) the treaty with Great Britain in 1856 and 2) the Spanish invasion of Tetuan in 1859-60<sup>5</sup>. From this point on the Moroccan govern-

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2 Schroeter, Daniel;, The Merchants of Essoauira; pg. 13

3 IBID; pg. 24

4 IBID; pg. 28

5 IBID; pg. 117



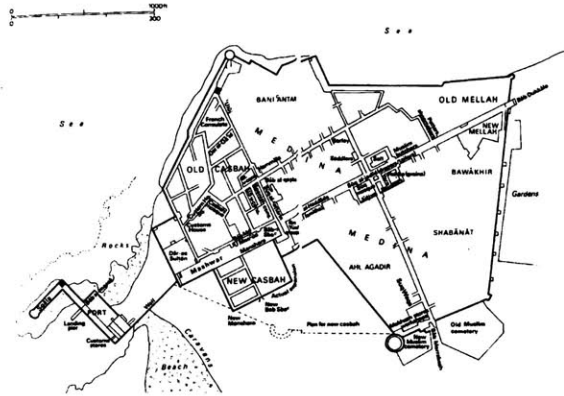


Figure 2: Essaouira: quarters and places of business

ment was no longer able to control the influx and influence of foreigners in trade. “The isolation of Morocco had now ceased”<sup>6</sup>. The growth of foreign intervention (particularly French) continued until France declared Morocco a protectorate in the early 1900’s. Along with these events was a shift of economic trading northward from Essaouira to Casablanca and Rabat. No longer was Essaouira the royal port, as it helplessly witnessed the death of its primary economic base. At this point many merchants moved on to other locales to re-establish their livelihood or simply disappeared into the sand. Even when Morocco eventually claimed its independence the economic shift northward proved permanent. Those foreign merchants who remained were eventually forced out in the re-establishment of a Muslim hegemony.

### Essaouira: Urban Development

The overall urban development of Essaouira as a city followed eight distinct stages. The first stage which may or may not have had any impact on the development of Essaouira was the legendary town plan by the French architect and planner Cornut<sup>7</sup>. The second stage which realistically served as the starting point of the medina as we know it today was the construction of the Casbah and the port (fig. 2). This leads us to the third stage which involved the construction of two neighborhoods: Bani Artar and Bawakhir. The fourth stage followed with the creation of the Abl Akadir neighborhood. The medina reached its completion in 1807 with the addition of the mellah. For the most part the medina exists as it did when completed in 1807. The final three stages of the urban development of Essaouira take place outside the medina walls. The sixth stage occurred during the colonial period and unlike other colonized cities was quite minimal. The seventh stage beginning around the 1940’s was the creation of an industrial zone (fig. 3). The industrial zone continued to grow eventually leading us into the eighth and most recent stage of housing developments. In its present day layout Essaouira consists of four distinct zones: 1) the medina, 2) the municipal and

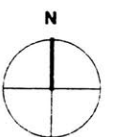
<sup>6</sup> Schroeter, Daniel; The Merchants of Essaouira; pg. 124

<sup>7</sup> Park, Thomas; Administration and the Economy; pg. 20



Scale 1:5000

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1000 meters



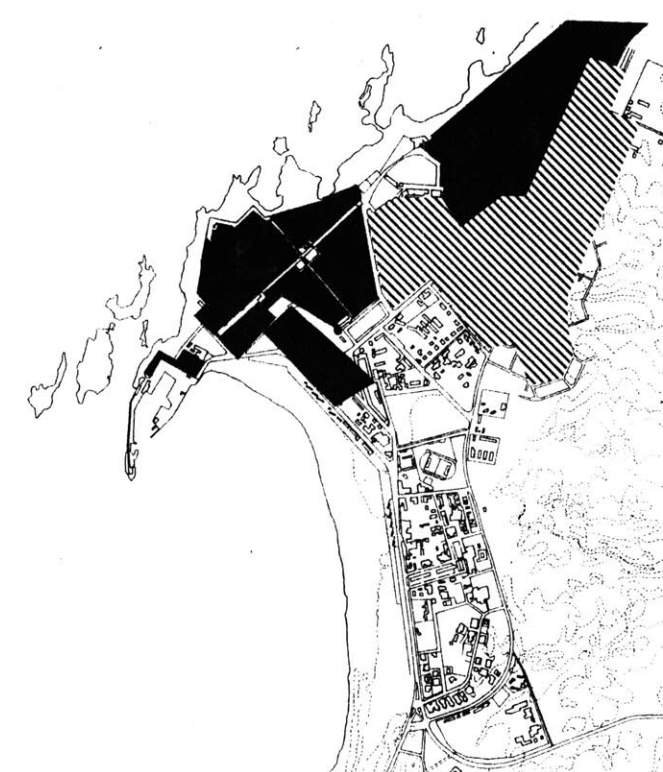
1 Construction of the Casbah and Port



3 Construction of the Abl Akadir Quarter



5 Construction during Colonial Period



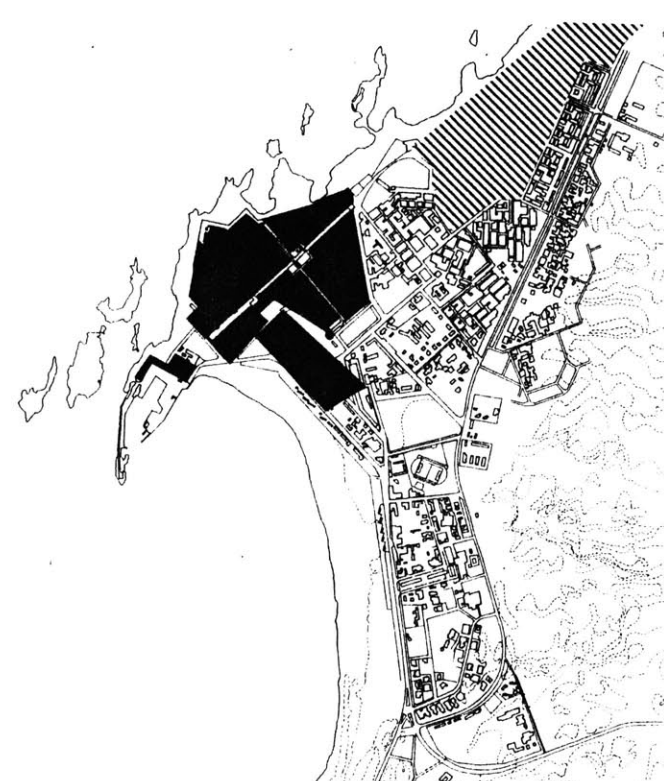
7 Construction of the New City Residential Zone



2 Construction of Antar and Bawakhir Quarters



4 Construction of the Mellah



6 Construction of the Industrial Zone



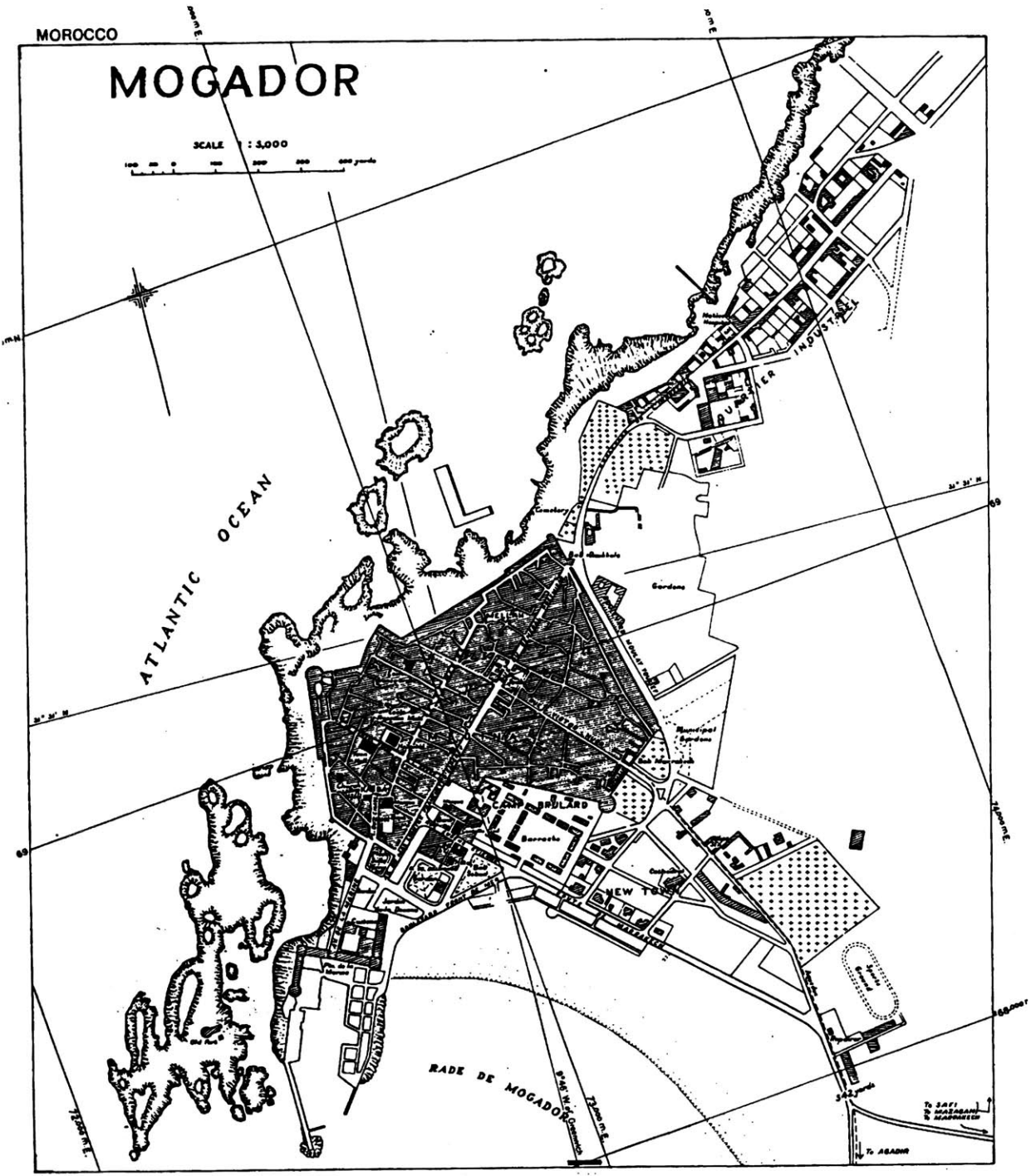


Figure 3: 1948 Map of Essauira

recreational zone, 3) the industrial zone and 4) the residential zone.

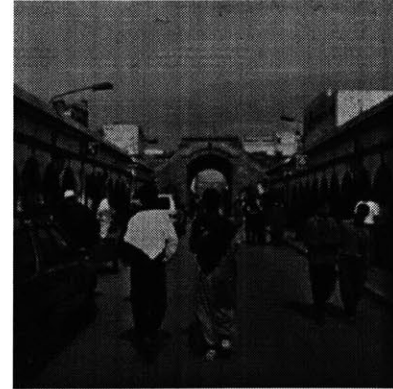


Figure 4: Main Commercial Street

### The Medina:

Given the central role trade played in the development of Essaouira, more specifically the medina, the level of cohesion is not necessarily surprising. Despite an apparent uniformity that persists throughout each quarter of the medina there are various levels of hierarchy which structure the medina. The first and most obvious is the cardo-decumanic system of major commercial avenues (fig. 4) which separate the medina into its four parts. Along these major avenues are a series of gates which establish a rhythm to the city extending between each entry point along the exterior medina wall. This hierarchy continues through the extension of secondary and tertiary streets which extend off the major avenues (fig. 5). In addition, there existed a formal hierarchy of street related to the traffic of goods; today serving only as a memory to a gone by era. This formal procession began with the arrival of the foreign trader by sea. His first glimpse of the town would occur as the ship passed between the islands and port. Once a trader had landed he and his goods would proceed through the port until passing through Bab al-Marsa. This large open secured store area (mashwar) served as a temporary unloading area for each merchant's goods prior to being accessed at the custom house. At the proper time goods would next be brought through Bab Muhammad U Masod and proceed to a large square at the center of the Casbah. Located here were both the custom house and Sultan's Palace. Today the customs house serves as a large commercial store and the Sultan's Palace has been demolished. (The removal of the Sultan's Palace has a major effect on the perception of the Casbah as the center square can now be approached directly from the port, instead of the processional path goods once traveled.) Once the goods had been accessed by the customs house they would be conveyed down the streets of the Casbah to the merchant's store room. In many instances these store rooms were the ground floor of the merchant's residence with the upper two stories serving as living quarters<sup>8</sup>. As the medina continued to grow, the

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<sup>8</sup> Schroeter, Daniel; *The Merchants of Essaouira*; pg. 64

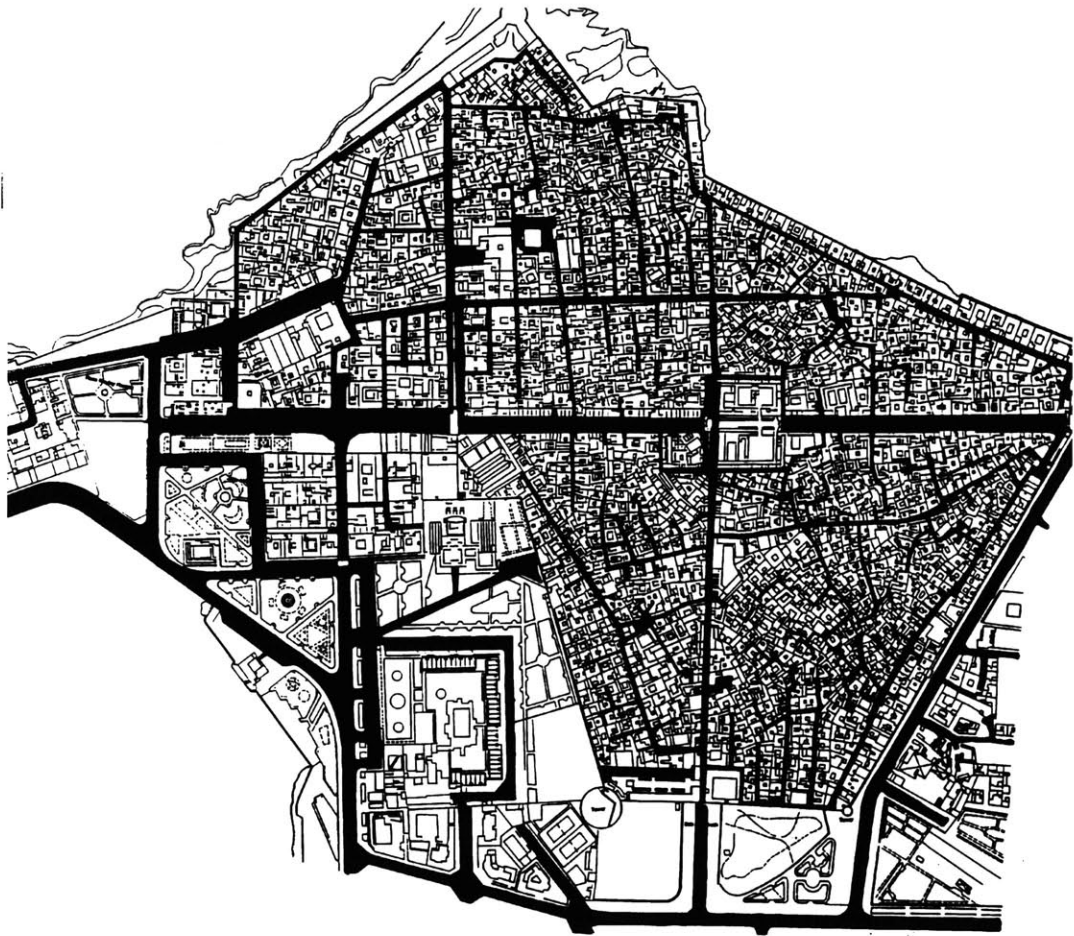
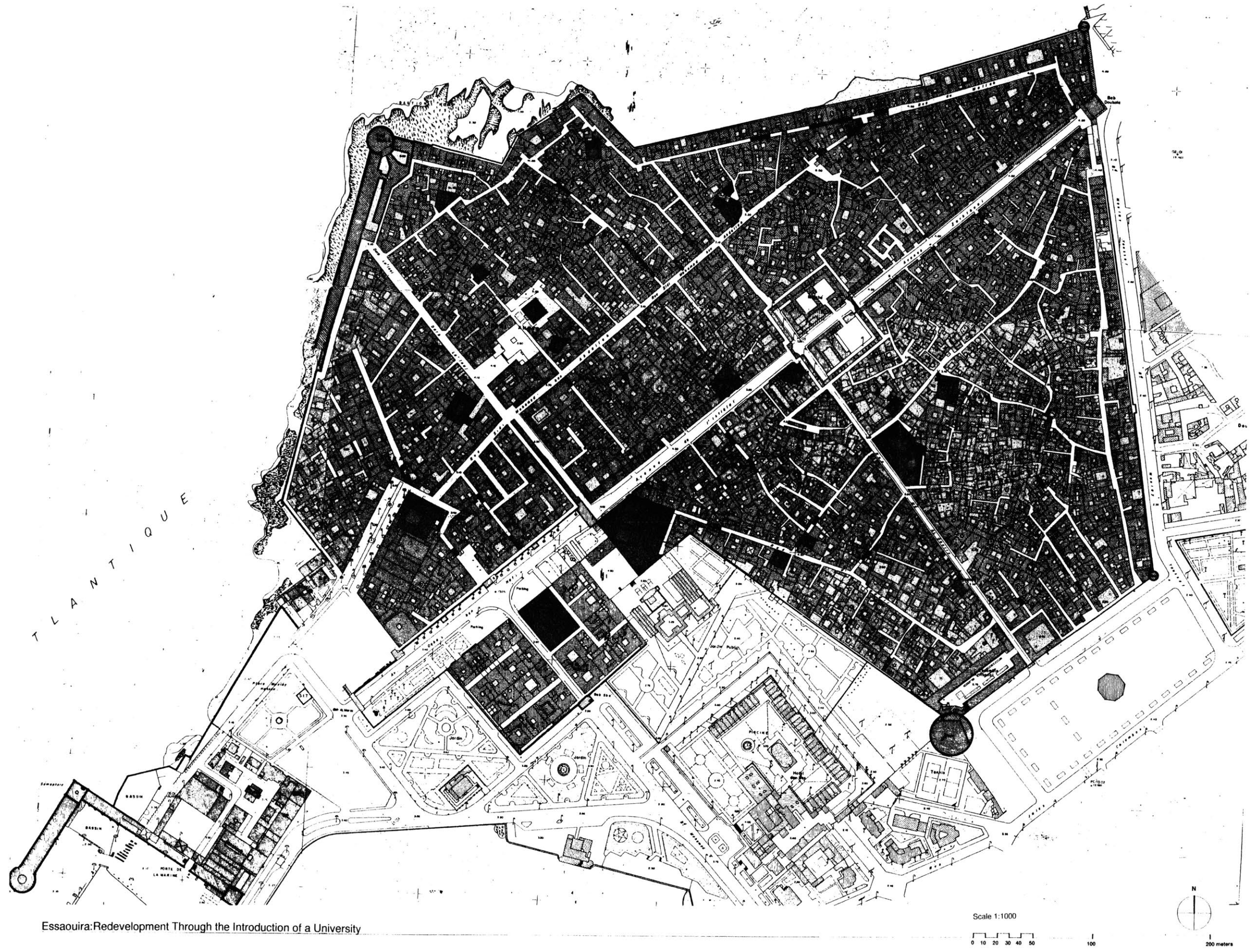
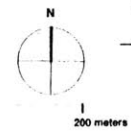
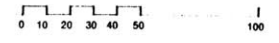


Figure 5: Street hierarchy within the medina



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character remained the same with a hierarchy of primary, secondary and tertiary streets. Many of the smaller streets are a series of covered and open streets sometimes leading to small plazas. These plazas (ranging from two to four times the street width) are areas of informal activity including children playing games and the daily chores of life. Large plazas were foreign to the medina until the demolition of the Sultan's Palace and the development of the new city.

**The Municipal and Recreational Zone:**

Located south of the medina gates Bab Sba and Bab Marrakech begins the municipal and recreational zone. Originally this area was developed during the colonial period in the early 1900's, but for the most part this development was quite minimal. This area has grown quite significantly since then including today a tennis club, hospital (fig. 6) , library, governors residence, plazas, a school (fig. 7) and the regional government center. Most of this development has not been directly adjacent to the ocean leaving room for tourism and recreational development along the sea, including: hotels, restaurants, beach houses, and art pavilions. Recently a series of villas have been constructed along the dunes, marking the migration of wealthy families from the medina to these new developments. Unlike the medina in which most streets are only accessible by pedestrians, the municipal and recreational zone allows for both pedestrian and vehicular movement.

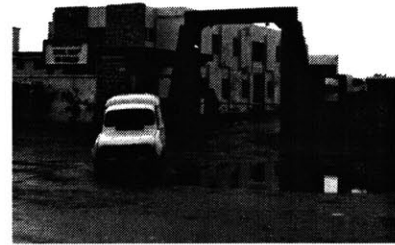


Figure 6: View of hospital



Figure 7: View of school



### **The Industrial Zone:**

Directly beyond Bab Doukala is an open space bustling with activity. Bounded by cemeteries along the sea and commercial and residential buildings elsewhere this dirt plaza becomes the center for a variety of informal day long activities. As a market space for used goods, pushcarts of various foods and the occasional street performers and carnivals, it competes with the more formalized souqs within the medina. This space is also important in that it denotes the beginning of the industrial zone which moves northeast from Bab Doukala. The industrial zone consists of primarily commercial structures with some residential structure along its southern edge. Unlike industrial zones in larger cities which may include refinery plants and alike, the industrial zone in Essaouira consists of agricultural cooperatives, automobile repair shops, and light manufacturing industries which with their combined bulk could not be placed within the medina. Interspersed within the industrial zone is a trace amount of residential structures as well as the city bus station, a hotel or two, a prison and a couple of cafes. Most of the construction consists of cast-in-place concrete dating back to the 1960's and 1970's. Today most structures are in poor condition (worse than many of the structures in the medina) resulting in crumbling concrete and exposed rusted rebar. Yet despite its condition the area of the industrial zone has great potential considering its adjacency to the ocean, medina and new residential zone.

### **The New City Residential Zone:**

Located directly east of the medina the residential zone extends north and south along its adjacent edge with the dunes. The growth of this residential zone results from a moderate population growth within the area and the deteriorating condition of the medina leading to the migration of people to beyond the medina walls. The variety of residential types, including La Skala, La Lagune and Trames Sanitaires districts, re-



Figure 9: Housing in new city

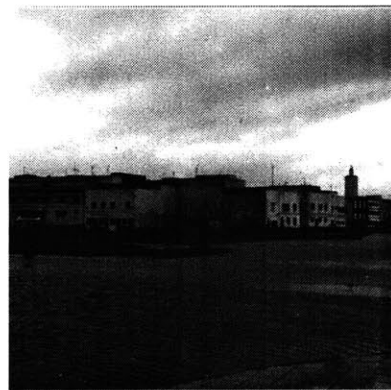


Figure 10: Housing in new city adjacent to Bab Marrakech

flect a diverse set of economic needs amongst the people. These residential types provide subsidized rental apartments, purchased lots which are incrementally built upon and purchased lots which immediately and completely built upon. The nature of this residential area is quite different from the medina. Unlike the medina with its narrow streets and primarily pedestrian traffic, the new residential zone allows for both pedestrian and vehicular movement and thus is much more spread out (fig. 9 & 10). Additionally the diversity of use which can be found in the medin with its residences, shops, mosques and schools is lacking in the new residential zone. With only a few shops interspersed amongst the residences the new residential zone despite its large population seems quite barren. Finally, any interjection of life the new residential zone might gain with its close proximity to the medina is hindered by the industrial zone which serves at the very least as a subconscious barrier for movement between the two zones.



Figure 11: Partitioned house within the medina



Figure 12: New floor addition to a house in the medina

### Essaouira: Current Conditions

The present day situation of Essaouira is much of a quandary. While the medina and the surrounding new city remain an active and lively place, with the medina almost completely intact, one needs to only scratch below the surface to see the fierce struggle for continued existence. We must remember that there was a singular economic base that supported Essaouira throughout the years: overseas trade. While it is true that other industries existed and still continue today, such as fishing and wood crafts, both are in steep decline. The fishing industry has and will continue to decline due to foreign competition such as the Japanese with their modern equipment and the depletion of its regional fish supply. Woodcrafts have a limited growth capacity linked to its demand. In fact, today only thirty percent of the jobs are what can be considered

permanent the remaining seventy percent are temporary (business which do not have a permanent location)<sup>9</sup>. Thus Essaouira finds itself lacking a major supporting economy resulting in its struggle for survival. The manifestation of this struggle takes various forms, though can primarily be seen in the physical deterioration of Essaouira and the urban political policies that have or have not been implemented.

In terms of Essaouira's physical deterioration, once a community is short of funds one of the very first things to go is maintenance and repair. This fact can be witnessed all throughout Essaouira. As Essaouira is no longer involved with overseas trade many of the merchant houses within the medina have now been subdivided (fig. 11) to meet the demands of a growing population. In many instances a three or four floor house is divided so that there is one family per floor, including the ground floor which formerly was used for storage and now serves housing needs. Just as often these same houses are divided up even further as several families share a floor, with each family residing in a room. Families sometimes try to alleviate this condition by adding another floor (fig. 12). However, in many instances the structures are not designed for this additional load. Add to this increase in

population the general deterioration of structures and infrastructure including sewage, plumbing and electricity, the evidence of large scale decay cannot be hidden (fig. 13). Thankfully this decay has been slowed down by the fact that most of these structures have benefited from their sturdy construction, which can be credited to the local construction technologies. This same decay can be seen outside the medina as well (fig. 14). In the municipal and recreational zone, buildings such as the library, hospital and beach front properties are in a state of disrepair. The school has seemingly been aban-



Figure 13: Collapsed house in the medina



Figure 14: Typical deterioration of new construction

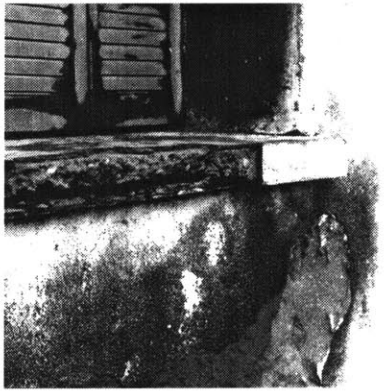


Figure 15: Typical deterioration of new construction

done and today serves to house squatters. As the bus station serves as the first point of arrival to Essaouira, its location within the 'shanty town' appearance of the industrial zone can only prove to be disappointing. Despite the fact that many of these structures were built during the 1960's and 1970's the poorly implemented use of modern construction technologies such as cast-in-place concrete has led this zone to deteriorate much more quickly than the medina. Finally the residential zone remains unfinished as funds have disappeared for the completion of paved roads, planting of vegetation and diversification of usage.

Aside from the obvious shortage of funds much of this physical deterioration could have been at least delayed had there been an active local policy to preserve the medina and alike. Seemingly once it had been decided by local authorities to address the overcrowding population of the medina by moving people to the new residential zone the medina and its condition was forgotten. While overcrowding still exists many structures (particularly in the mellah) remain abandoned or have been neglected for so long that they have become unstable for use. The local authorities goal seems to be to focus the available funds on moving the people outside the medina, leaving the medina to be developed for alternative use (possibly tourism) at a later date.

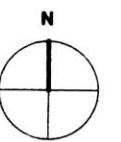


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## Case Study 1: King Abdul Aziz University

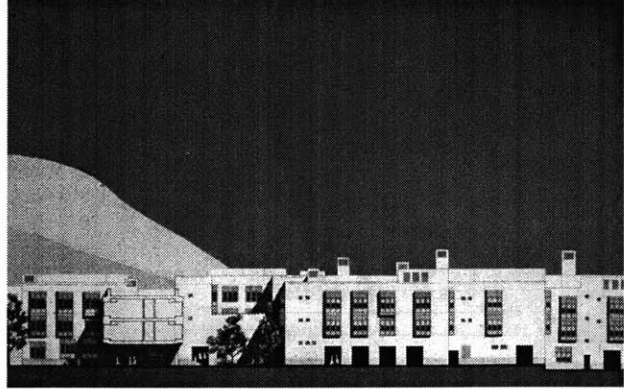


Figure 16: Women's student housing, elevation

The King Abdul Aziz University is located in Mecca, Saudi Arabia and is designed by Skidmore, Owings and Merrill. The university attempts to accomplish two tasks: provide accommodations and facilities for 35,000 students and to create an organic layout throughout the university so that it appears to have grown over time. The university patterns itself after the medina, creating a hierarchy of solely pedestrian streets and courtyard spaces moving from the more public to the more private. These patterns of pathways and open spaces are further defined by the fact that there must be a separation between men and women, hence, essentially there are two universities. Unlike the Free University in Berlin (Case study #2), this university avoids monotony in form through its diverse use of materials, varying proportions, and shifting geometries. Obviously the architects did a significant amount of research in regards to traditional typologies and how to represent such in a more modern language. This includes studies regarding construction technologies and associated environmental aspects (cooling, heating, etc.). Despite Saudi Arabia's wealth the architect wanted to rely on passive heating and cooling technologies. As it was not feasible to use traditional construction technologies for a university of this scale, numerous systems of modern construction materials were tested until an acceptable system was developed (stone construction insulated with 3" of Styrofoam on the outside) . Similar to the Free University of Berlin is the separation the university creates between the faculty/students and surrounding community. While the university is considered to be part of Mecca, it is located in an unpopulated region, and appears as an oasis.

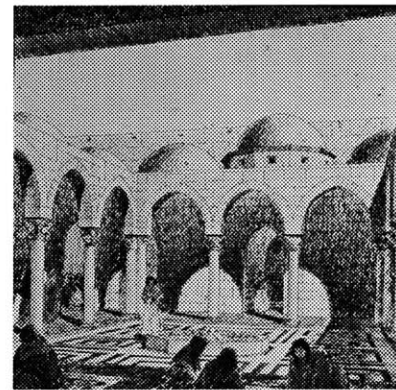


Figure 17: Women's campus courtyard

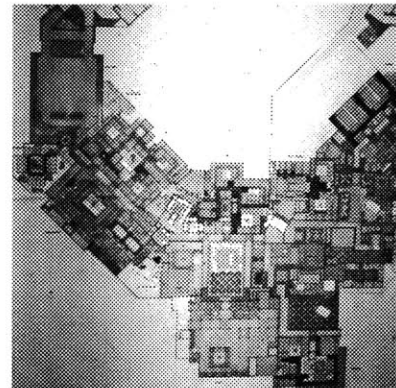


Figure 18: Campus plan

## Essaouira: Redevelopment - Searching for a Catalyst

I mentioned previously how Essaouira today is a dynamic place full of life, this feeling only to be tempered by the uneasy question of its future. Much of the activity that takes place today revolves around daily chores of living: food production, maintenance of vehicles and appliances, household repairs etc.. Not that any of this should be discounted as Essaouira has survived while other cities of its time have perished, yet when compared to its illustrious past one desires so much more. Essaouira like most cities has been a foci of social development. It is important that in this new era as Essaouira struggles for survival, that its physical and social ills be studied, understood and acted upon to ensure continued urban health<sup>10</sup>. In the past as a royal port overseas trade served as the primary economic base, a developing force which united the people in their vision of Essaouira, both at the present and for the future. Today without an economic base of any significance Essaouira wanders aimlessly in terms of development, akin to a sailboat sitting in a lake stranded by the absence of wind. Additionally, it is not uncommon that when people are busy trying to deal with problems (economic, urban growth, etc.) they are not overly concerned with the preservation of a tradition, in this case the continuation of the physical aspects of the medina<sup>11</sup>. For this reason the more recent developments of Essaouira have favored the private developer who follows his own agenda; whether or not it benefits Essaouira at a general level is mere coincidence. Such examples can be found in the construction of villas south of the medina. Not only do they represent a form of gentrification as these areas become only available to the wealthy populace of Essaouira, but they represent a shift of focus and development away from the medina. In the past wealthy merchants held a vital role in the economic and social makeup of the medina.

The question still remains what can the future hold for Essaouira? One thing seems for certain is that if Essaouira continues on the same road without an economic base and urban policy the medina and its surroundings will continue to decay until at which point Essaouira becomes a city of the past or requires massive restructuring with much of its past urban tissue in ruin. The first obvious point of action would be

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<sup>10</sup> Daifuku, Hiroshi; The Conservation of Cities; pg. 9

<sup>11</sup> IBID; pg. 10

the introduction of a new economic base that would provide capital for development. Economic change in both growth and structural layout is one of three dimensions in the process of modernization. The other two dimensions are social and cultural changes in patterns of behavior (sometimes linked to the influx of foreign workers and customs) and the creation of institutions capable of dealing with the rapid change in the production process<sup>12</sup>. Equally important is to establish a development plan which addresses not only existing problems but anticipates future development. For the purpose of this thesis it was assumed that the most effective economic bases would not rely on the local province (which has very limited resources) for funds but instead would search out either private investors / developers or rely upon assistance from the national government. With this in mind it was envisioned that three types of economic and urban development could occur: tourism, industrial or academic. While each of these have the potential to serve as long standing economic bases they each portray a different attitude towards the redevelopment of Essaouira and future development.

For those cities, rural areas or hide aways that have something special to offer and are in need of an economic boost tourism is in many instances the preferred solution. Essaouira with its quaint medina and sandy beaches has already become a recreational destination during the summer as well as a year round find for the more serious tourist. While it is unclear what percentage tourism adds to the local economy it would be certainly difficult to imagine a viable Essaouira today without this tourism. The local authorities rely upon this point to gain the support for the continued development of tourism in Essaouira. It seems that for many Agadir (located three hours south of Essaouira) serves as the model for tourism development with its modern structures and wealthy European visitors. The fact that there is currently an un-official hands-off policy in terms of dealing with the deteriorating condition within the medina (except for those areas frequented by tourists) seems to at least indirectly imply an ulterior motive. Yet more to the point a good portion of the original medina in Agadir has been replaced by more modern structures. To do the same in Essaouira would eliminate all the qualities that currently make Essaouira such a wonderful place as it is. This also

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12 Serageldin, Ismail; Higher Educational Facilities; pg. 14



ignores the fact that many such old and worn quarters of a city have an important and functional role in urban ecology. “It is in such areas that shops selling worn, but still useful machinery, old books and used furniture can be bought and sold”<sup>13</sup>. Another downside to relying on tourism as a primary economic base is that in many cases tourism proves to be cyclical: that is it experiences high and low points based upon global economic conditions, political events etc. While this is not necessarily sufficient to eliminate tourism as a primary economic base it does at least suggest that alternative avenues be explored and even relied upon when possible. Additionally, as any depressed area is subject to a degree of gentrification when it receives a significant economic boost, tourism in many instances represents the worst type of gentrification. In many instances property is owned by wealthy individuals or groups of investors, either national or foreign, who have little interest in the development of Essaouira beyond its tourism value. Not only does this perpetuate an ‘us versus them’ relationship, but places many local residents at a disadvantage in terms of guiding the development of Essaouira as they have less leverage. Additionally as one might expect, given the economic condition of Morocco in general, foreign investors are at an economic advantage over local investors which potentially can lead to a more segregated urban development.

If tourism is not necessarily the best response then what of industrial development as an economic base. As we have seen much of Essaouira’s development can be accredited to the shipping/trading industry. On the contrary Essaouira’s tenuous condition today can be accredited to the migration of the shipping/trading industry northward to Casablanca. Yet unlike the past any new industry which would have a major economic impact would most likely not be located in the medina but along the peripheries of the new city or within the industrial zone. Whatever form the industry may take, whether it be manufacturing or research, high-tech or low-tech, industrial development does offer a different attitude in terms of urban development.

First and most obvious is the placement of the industry. Located beyond the medina

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<sup>13</sup> Daifuku, Hiroshi; The Conservation of Cities; pg. 11

Morocco Education and Demographic Index (as of 1980)											
GNP per capita	Area (1000 sq. kilometers)	Population in 1976	Projected Population in 2000	Adult Literacy		Number Enrolled in School as Percentage of Age Group					
				1960	1980	Primary		Secondary		Higher	
				1960	1980	1960	1980	1960	1980	1960	1980
\$550	447	18.3	34	14	28	47	65	5	17	1	3

source: Ismail Serageldin, *Planning Educational Systems in Contemporary Islamic Societies in Higher-Education Facilities*

Figure 19: Morocco: Demographic and education indices

industrial growth would foster development in adjacent areas (assuming of course that said industry does not have a negative perception such as nuclear power for example). As this would promote a shift away from the medina there is no guarantee that the medina itself would benefit in terms of economic infusion or a more coherent urban redevelopment plan. Whereas the new city certainly may gain a greater sense of coherency from industrial development there also runs the risk of the creation of satellite towns as industrial development moves further away from the medina. Unlike tourism in which many people come and go, including foreign residents who tend to be seasonal residents, industrial development has the advantage that it relies on local labor, and even in the case in which it recruits foreign professionals, they become more stable members of the community than do tourists. For this reason industrial development can be more mindful of their local counterparts. This can result in the investment in schools, parks, transportation systems and commercial areas. In the United States we have witnessed many instances in which the automobile industry has invested in cultural and recreational projects within their local communities. The flip side however, particularly in developing countries is that industries can be quite harmful to a local region, not only in terms of environmental pollution but by influencing urban policy to its advantage and through the displacement of populations.

A third means of establishing a new economic base for Essaouira is through the introduction of an academic institution such as a university. As the percentage of people who obtain a college education is still relatively low in Morocco (fig. 19) this becomes a very viable alternative in light of the governments desire to further industrialize. Additionally universities promote basic skills now considered essential, including literacy and civics, vocational training and cultural development<sup>14</sup>. Universities in Morocco are for the most part funded by the national government, such as the case with the University of Fez, thus relieving the burden of support from the local province. While a university may not generate as much of a financial economic base as an economy based upon either tourism or industry it provides the most stable economic base. Like tourism and industry a university would provide numerous jobs for the

14 Serageldin, Ismail; *Higher Educational Facilities*; pg. 17

Average Student Expenditure Patterns	
Distribution of Expenditure	Percentage
Rent	17
Furnishings	6
Food and Beverages (at home)	14
Food and Beverages (in restaurants)	9
Tuition / Fees	6
Other Education	2
Clothing	9
Recreation / Entertainment	12
Personal Services	3
Professional Services	2
Books and Supplies	8
Miscellaneous	12

source: Ira Stephen Fink, *The Economic Impact of Institutions of Higher Education on Local Communities: an Annotated Bibliography*, University of California Press, 1976

local populace and like tourism would introduce an infusion of income based upon the spending (rent, food, supplies, clothes, entertainment etc.) of a primarily non-local populace, including faculty, students and visitors (fig. 20 & 21). Additionally, it encourages purchases from local sources by local businesses in support of their college-related business volume and the expenditure of college-related income by local individuals other than faculty and students<sup>15</sup>. Whereas the focus of tourism would fall primarily on the medina and beaches and the focus of industry would fall primarily upon the new city, a university located in Essaouira can exist in both the medina and new city. This would provide a means of addressing the disconnection between the two. Additionally, unlike tourism or industry, a university has the potential to offer a community valuable functions such as cultural institutions like schools of dance, art, theater and music, as well as libraries, auditoriums and classroom spaces. While a university town can create an “us versus them” mentality it is far less polarizing to a community than tourism for the simple fact that most students are poor and thus will intermix at a more even economic level within the local community. A university, specifically the more technical universities, has the potential to promote industrial growth within the region,

Figure 20: Average student expenditures

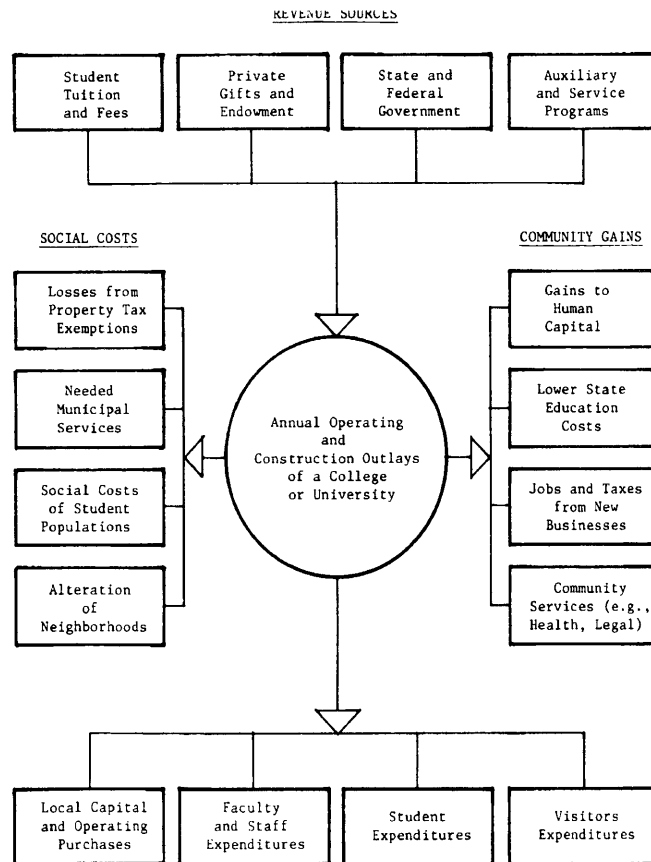


Figure 21: Revenue sources for local community

15 Fink, Ira Stephen; The Economic Impact of Institutions of Higher Education on the Local Community; pg.2

thus providing another economic base for the town. Industries would be drawn to regions with universities because they provide access to a highly educated pool of labor.

Given the lack of resources the province of Essaouira has at its disposal the potential for significant urban redevelopment and restoration of both the medina and new city appears rather remote. Even if the local authority did have the resources available restoring Essaouira without creating a needed new economic base would eventually result in the creation of a historical timepiece rather than a thriving city with eyes towards the future. For this reason it became important to explore various (yet not all) possibilities for creating a new economic base. While Essaouira would most likely benefit economically from any of the economic bases thus far explored, tourism, industry and academic institutions, the introduction of a university would seem to benefit Essaouira the most for the following reasons. Whenever a city or town becomes dependent upon a primary economic base there exists the potential for abuse that could be harmful for that city. These abuses can take the form of urban planning policies, economic (tax) policies and/or environmental policies. In the case of tourism Essaouira might find that in order to compete at a level which creates a significant economic base it needs to further modernize, which could result in a drastic restructuring of the medina. In terms of industry one might find that an industry which had settled in the new city has suddenly grown out of proportion to that of the surrounding neighborhoods, or through its economic clout is able to ignore environmental problems it creates. A university on the otherhand while it would certainly seek to take advantage of urban and/or economic policies, would be far less pressed than tourism or industry to take it too a point where it becomes harmful to the city. It is also important to recognize that a university is quite diversified in its space usage and thus becomes very versatile in fitting into existing conditions. For this reason a university in Essaouira can impact both the medina and new city, whereas tourism and industry are limited to one or the other. A third issue is that of accessibility by the local community. Aside from the jobs that both tourism and industry create much of the services and structures that are a part of these economies are inaccessible to the local community, for the simple reasons of money (in the case of tourism) or non-usable services (in the case of industry). Again if planned properly a university can provide a

community with numerous facilities, such as cultural institutions, academic facilities and improved services such as medical services. For these reasons (and more to be discovered later on) the introduction of a university was selected as a means of exploring issues involving the redevelopment of Essaouira.

## Case Study 2: Free University of Berlin

The Free University of Berlin by Candilis, Josic and Woods is a mega-structure of the 1960's which attempts to "discover structuring principals which might be applicable to the organization of the physical environment" in this case a university. The intention of the scheme is to provide the maximum possibility of contact within the university 'community' while ensuring privacy for each specific functions. The university consists of solely pedestrian pathways which link courtyard spaces, class rooms, laboratories, terraces, auditoriums and office spaces. These horizontal links occur primarily on the ground floor and along the roof terraces thus creating an overall 'public zone'. The basement and first floor becomes more private offering places for storage, classrooms and offices. While there is a degree of hierarchy as seen in the two primary pathways and the central courtyard space there is a numbing sameness the extends throughout the plan. As there are a diverse group of spaces in name, in form they become relatively similar in size and proportion. For its external expression it is clear that this is a building which stresses its internal organization and intermixing as the external elevations display a more continuous homogenous rhythm. This external rhythm is without hierarchy leaving the outside community to guess not only where to enter but whether to enter. While this expression towards the immediate community can certainly be considered negative, it does provide a certain freedom in the scheme in that it can be placed anywhere as a sort of plug in architecture, emblematic of Archigram and its moving cities. In a sense it is a more 'honest' scheme in that it presents itself clearly as a 'special community' where as the King Abdul Aziz University mimics the character (and hence availability) of the medina yet still remains a 'special community'.

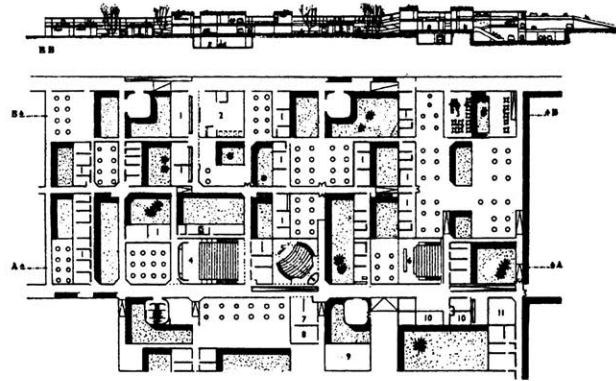


Figure 22: Plan of university

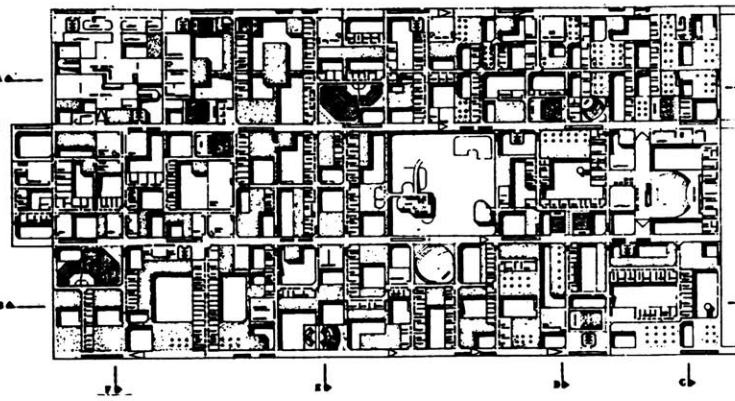


Figure 23: Plan of university



Figure 24: Tunis, plan of medina (after Lezine)

### Essaouira: Planning for a University

In planning a university certain criteria needs to be established such as size, type, location, phasing and accessibility. From the onset it was decided that the university would receive funding from the national government and would be located within Essaouira in order to impact urban development/restoration and provide facilities for the local community. In many instances the university's location within Essaouira stands apart from other universities in the Middle East and Africa, such as the Middle East Technical University in Ankara, Turkey, which are isolated entities with walls and designated entry points (with or without armed guards). This introduces interesting conceptual questions regarding the organization of the university.

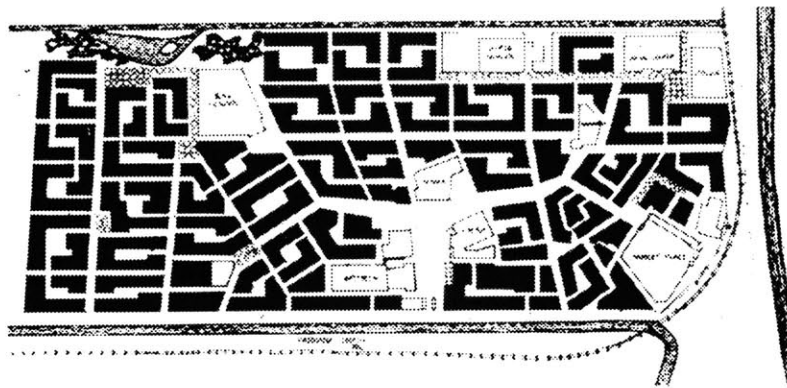


Figure 25: Plan by Hassan Fathy, New Gourna (after Fathy)

*“Do we deal with a new university as a village? If so, we can turn to several very exciting transformations, such as the one by Hassan Fathy (fig. 25). Or do we deal with the university on a larger scale of complexity, as a city? If so, we can the medina be an idea (fig. 24)?”*

In fact by locating a university within Essaouira there is an opportunity to establish a university model which details layers of interaction between faculty/students and the local community. The model is quite simple the framework of which consists of three primary attributes: the center, mid-level and antenna. The center consists of the primary facilities of the university, including: classrooms, auditorium, laboratories and office spaces. This becomes the principal location for use by the faculty and stu-

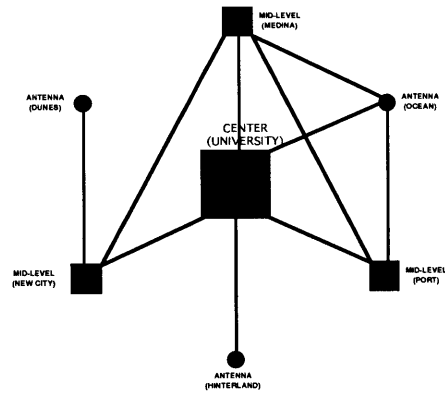


Figure 26: Diagram for model of university

dents. The mid-level describes points of intersection. Faculty/students and the local community intermix through the shared use of facilities like libraries, classrooms, recreation fields and cultural institutions such as schools of music, art and theater. The locations of interaction are not fixed; it can occur at the center or at various mid-level nodal points (whether they be in the medina or new city). Additional mid-level conditions can occur through the interaction between faculty/students and an industrial community. In this case there would be a shared interest in facilities such as laboratories and libraries (or other informational systems). The final attribute is that of the antenna which influences the university through its understanding of the territory. For example, three attributes of Essaouira's context is its location adjacent to the ocean, sand dunes and agricultural hinterland. These attributes can be used to influence the university such that it provides facilities for oceanographic research, agricultural engineering and research based upon sand dune ecological systems. As seen in figure 26 not only do these attributes exist independently but can relate to one another in a variety of ways.

In terms of size it was decided that a large university would have greater urban impact and thus would offer more avenues of exploration. Specifically the university is to accommodate roughly 7000 students and 600 faculty members, approximately 10% of Essaouira's population, which translate into roughly 75,000 square meters of academic space (fig. 27) and 50,000 square meters of student housing (assuming that 50% of the students will live in university housing). It was also decided that the course of study at the university would fall into three categories: 1) concentrations which focused upon the environmental advantages of Essaouira, such as its location along the sea and its sand dune microsystems; 2) concentrations which provided cultural amenities to Essaouira, such as dance, theater, music and art; and 3) concentrations which focus upon more technical education such as engineering and the sciences, which eventually would provide a professional labor pool which potentially could attract industry to the region. As the physical specifics of the university were still undetermined at this point the question of phasing the development of the university (considering its large scale) was delayed to a time of further development.



**University of Essaouira: Program Requirements** (based upon 7000 students, 700 faculty)

**Academic Requirements (square meters)**

Discipline	Offices	Class Laboratories	Non-Class Laboratories	Support Spaces	Total
Architecture	750	2000	650	0	3400
Engineering	5000	6000	15000	0	26000
Humanities	1400	50	0	150	1600
Management	1200	0	100	0	1300
Mathematics	1200	0	600	150	1950
Physical Sciences	4500	5000	13250	700	23450
Social Sciences	650	300	100	0	1050
<b>Total</b>	<b>14700</b>	<b>13350</b>	<b>29700</b>	<b>1000</b>	<b>58750</b>

**Special Use Requirements**

Facility Type

Libraries:		
Humanities		1300
Sciences		2000
Student Center		3000
Performing Arts Center		2000
Athletic Facilities		3000
Parking		6000
<b>Total</b>		<b>17300</b>

**Housing Requirements**

Housing Type	# of Units	Size per Unit	Total
Single Student	1500	20	30000
Married Student	500	45	22500
<b>Total</b>			<b>52500</b>
<b>Overall Total</b>			<b>128550</b>

*(University program based upon programming requirements for Rensselaer Polytechnic Institute as provided by Doxiadis Associates in Campus Planning in an Urban Area)*

Figure 27: University program

University of Essaouira: Schematic Master Plans	
Scheme A: (medina 75%, new city 25%)	
Pros	Cons
Favors redevelopment of the medina	More expensive to build
Allows for expansion of university in new city	More demolition-greater disruption
Reemphasise medina as center of economic, cultural and intellectual activity	Questionable whether 75% of university will fit in and around medina
Economic integration	May lead to gentrification of medina
Allows for continued residential growth in new city	Scattered placement of university does not promote unified image of university
	Longer period of construction
	New city still lacks clarity in urban layout

Figure 28: Scheme A, pros & cons

The next course of action was to develop a strategy in locating the university within the city of Essaouira. Given the potentially large scale of the university it seemed most likely that the university would not necessarily be clumped all together. For the purpose of this thesis the more interesting avenues of exploration suggested that either a majority of the university be placed in or immediately around the medina with a minority portion located in the new city, or a majority of the university be placed in the new city with a minority portion located in the medina. From this strategy three urban schemes were developed in locating a university within Essaouira.

The first scheme to be discussed focuses upon locating the majority of the university in or immediately around the perimeter of the medina and locating a minority portion of the university in the new city. In selecting sites both in the medina and new city the following criteria was used to determine viable locations (this criteria is used for all three schemes): 1) empty lots, 2) abandoned buildings, 3) structures beyond physical repair, 4) facilities which have either outgrown or under utilize the use of a structure and 5) ill-planned development which does not meet the needs of the community. This resulted in a scheme which focused upon areas of the medina ranging from the mellah to the port, infilling gaps along the perimeter of the medina wall. Facilities such as housing, classrooms, office spaces, administration and cultural institutions are located within the medina where as additional housing, recreational spaces and more specific and secured facilities such as laboratories are placed in the new city. This scheme is advantageous (fig. 28) in that it refocuses development on the medina and reaffirms it as the center of Essaouira, providing facilities which can be shared by the university, local community and in certain cases tourist. On the other hand this scheme has several disadvantages, most notably: 1) it does not address the condition of the new city in terms of its chaotic development and its disconnection from the medina, 2) development within the medina is more costly, disruptive and potentially slower paced than that of the new city considering the medina's compact layout, 3) has limited future opportunity of expansion within the medina, and 4) potentially could displace many medina businesses and residents.



Essauira: Redevelopment Through the Introduction of a University

University of Essaouira: Schematic Master Plans	
Scheme B: Municipal and Recreational Zone (medina 25%, new city 75%)	
Pros	Cons
Cheaper to build than in medina	Shifts emphasis away from medina
Less demolition and disruption	Limits future residential growth in new city
Develops coherent layout in new city	More 'European image'
Shortter period of construction	Located in area of new city least likely to deteriorate
Strengthen relationship between medina and new city	Limits potential recreational growth related to tourism
Allows for residential redevelopment of medina	Locate on potentially more valuable land
More opportunities for expansion	
Unified image of university	
Most likely to be favored by local authorities	
Redevelopment of existing facilities such as hospital, school and recreation area	

The next two schemes focus upon locating the majority of the university in the new city with a minority portion located in the medina. The same criteria as mentioned above was used to determine viable locations of development. The first of these two schemes focuses upon the municipal and recreational zone of the new city. This scheme uses the main commercial avenues in the medina and their successive series of gates as a means of organizing the university beyond the medina wall and connecting more directly to the medina. Specifically Rue al Qourry is extended beyond Bab Marrakech (fig. 30) until it terminates at a large green space/ plaza at the intersection of Avenue Casablanca. In many ways this scheme and the subsequent scheme attempt to recognize the duality of the urban fabric of Essaouira as it contains elements of the typical "Islamic city" as in the medina as well as elements of the typical "European city" as in the new city. Along this central spine academic facilities are organized to infill incomplete blocks and develop open areas. Located at the intersection of this spine and Avenue Casablanca are academic facilities, student housing and recreational facilities such as soccer fields. The advantage of this scheme (fig. 29) is that it attempts to create a more coherent layout in the new city while at the same time reconnecting itself to the medina. Additionally it attempts to redevelop existing institutions such as the hospital and recreation center, both places that the university and local community can intermix. As many of the buildings in this area are more spread out construction will be easier as well as less costly. A disadvantage to this scheme is that it shifts the focus away from the medina to the new city, only reinforcing the continued deterioration of the medina. It attempts to counter this through the placement of cultural institutions within the medina to serve as magnets to draw people (students and locals) back in. Somewhat of a break-even point is the fact that by developing usable land in the new city potential future residential development is limited either forcing redevelopment of the medina or the further growth of satellite towns.

Figure 29: Scheme B, pros & cons



Figure 30: View from Bab Marrakech plaza towards medina



Ssaouira: Redevelopment Through the Introduction of a University

University of Essaouira: Schematic Master Plans	
Scheme C: Industrial Zone (medina 25%, new city 75%)	
Pros	Cons
Cheaper to build than Scheme A or B	Shifts emphasis away from medina
Less demolition and disruption	Image effected by 'shanty town' appearance of industrial zone
Develops coherent layout in new city	Not as interwoven into urban fabric as Schemes A & B
Shortter period of construction	Limits potential residential development in new city
Streghen relationship between medina and new city	
Allows for residential redevelopment of medina	
More opportunities for expansion	
Unified image of university	
Helps people instead of authorities (Scheme B)	
Increases quality of life in industrial zone and adjacent residential areas	

The third and final scheme focuses upon locating the university in the industrial zone of Essaouira. As mentioned previously the industrial zone consists of agricultural cooperatives, automobile repair shops, and light manufacturing industries which exist within deteriorating concrete structures creating a 'shanty town' appearance at best. One of the greatest impacts of the industrial zone is that it separates the new residential zones from the medina. By taking advantage of open spaces and selective demolition the new university can be used as a tool of urban redevelopment and as a vehicle to reconnect the residential zone with the medina. This scheme becomes a path of connection beginning in the mellah, with housing and some cultural institutions, extending to the university in the industrial zone located just beyond Bab Doukala (fig. 37) and ending with further housing developments in the residential zone. This scheme has the advantage (fig. 31) that it attempts to reorganize a portion of the new city into a more coherent layout while at the same time creating a connection with the medina. This scheme has similar disadvantages to the previous scheme in that it shifts the focus away from the medina to the new city. Also considering the deteriorating condition of the industrial zone the partial success of locating a university here depends upon future development of this zone, thus the creation of a more welcoming atmosphere.

Figure 31: Scheme C, pros & cons

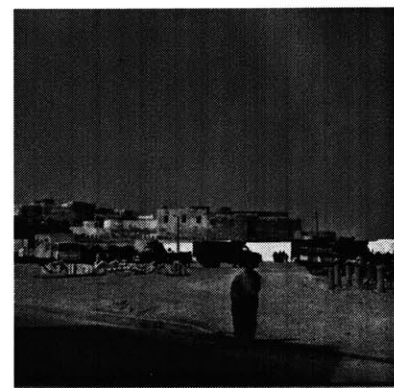


Figure 32: Informal plaza outside Bab Doukala

After exploring these various schemes in conjunction to what I learned from my visits to Essaouira, I was able to priorities factors of urban development concerning the establishment of a university. First, any redevelopment should effect both the medina and new city. Second, planning should allow for a flexible phased growth of the university, in which each part can exist independently while at the same time follow a general logic in the organization of the entire university. Finally, the university should attempt to better integrate the medina with the new city. The merit of the first scheme



Essauira: Redevelopment Through the Introduction of a University



Figure 33: View from municipal zone towards medina

is that it focuses attention upon the redevelopment of the medina. Yet considering the dense layout of the medina this scheme is forced to locate facilities as the opportunities present themselves thus creating a more scattered university therefore less identifiable. Additionally, very little attention is placed upon the new city as little meaningful reorganization can take place. The merit of the second two schemes is that they actively attempt to reorganize the new city while connecting to the medina. While these two schemes run the risk of turning their backs upon the medina the introduction of cultural institutions and housing are used as a vehicle to redevelop the medina and influence future development. Of the three schemes the later two seem to better address the criteria as mentioned above. How to decide between the two? Scheme B has the advantage that it would most likely be the most favored amongst the local authorities. As it is located between the medina and the complex of the provincial government it is therefore along the access route (fig. 33) in which local authorities travel to and from the medina. On the otherhand, the location of the university in the industrial zone as shown in Scheme C would seem to benefit the community of Essaouira the most as opposed to the select few of the local authorities. For this reason developing the university within the industrial zone seems to be the better choice as it benefits the people. Additionally, as it is unlikely that the conditions in the municipal and recreational zone will deteriorate significantly considering its close proximity to tourist areas and the complex of the provincial government, the 'shanty town' appearance of the industrial zone would certainly be helped by the new university.



## **University: Development of Scheme C**

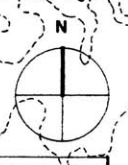
The initial strategy for developing the university in the industrial zone was for the university along with its counterparts in the mellah (initially a strip along the Atlantic Ocean) and the new residential zone to act as a informal path connecting two ends from the medina to the new residential zone. The majority of the development would take place with the university in the industrial zone with the hope that its would serve as a magnet. The site selected for the university is trapezoidal in shape and roughly 250 meters by 450 meters. Given the sites large size the initial idea for the university was for it to contain almost all the aspects one would expect of a university: academic facilitie including, laboratories, classrooms, auditoriums, offices, stores related to student needs and even some residential units. In many ways the university became as Van Eyck would put it “a city within a city”. The organization of the university was linked to a central pedestrian spine which was seen as the continuation of Avenue Zarktouni, the main commercial avenue in the medina. I was very much impressed by the madrassa in Marrakech (fig. 34) in terms of the combination of light and dark spaces and the variety of proportions found in space, and desired to introduce this texture to the university. Yet before too long I realized that there were problems. First, given the size of the university, there existed a much greater opportunity to affect various areas of the city than was reflected by this initial stage of development. Secondly, the university seemed too homogenous; there needed to be more diversity in its usage. Finally, to be more realistic the development of the university had to take into account the availability of funds, ranging from partial funding to full funding. After additional analysis with these three points in mind the following strategy was developed (ordered in terms of importance and financial viability): 1) restructuring the mellah including residential / student housing and cultural institutions; 2) developing a diversified university in the industrial zone, including academic, commercial and industrial facilities, and offer a plan for phasing construction; 3) redeveloping the port to include an Oceanographic research center; and 4) developing additional residential / student housing and private research centers in the new residential zone.



Essauira: Redevelopment Through the Introduction of a University

Scale 1:5000

0 50 100 200 300 400 500



1000 meters

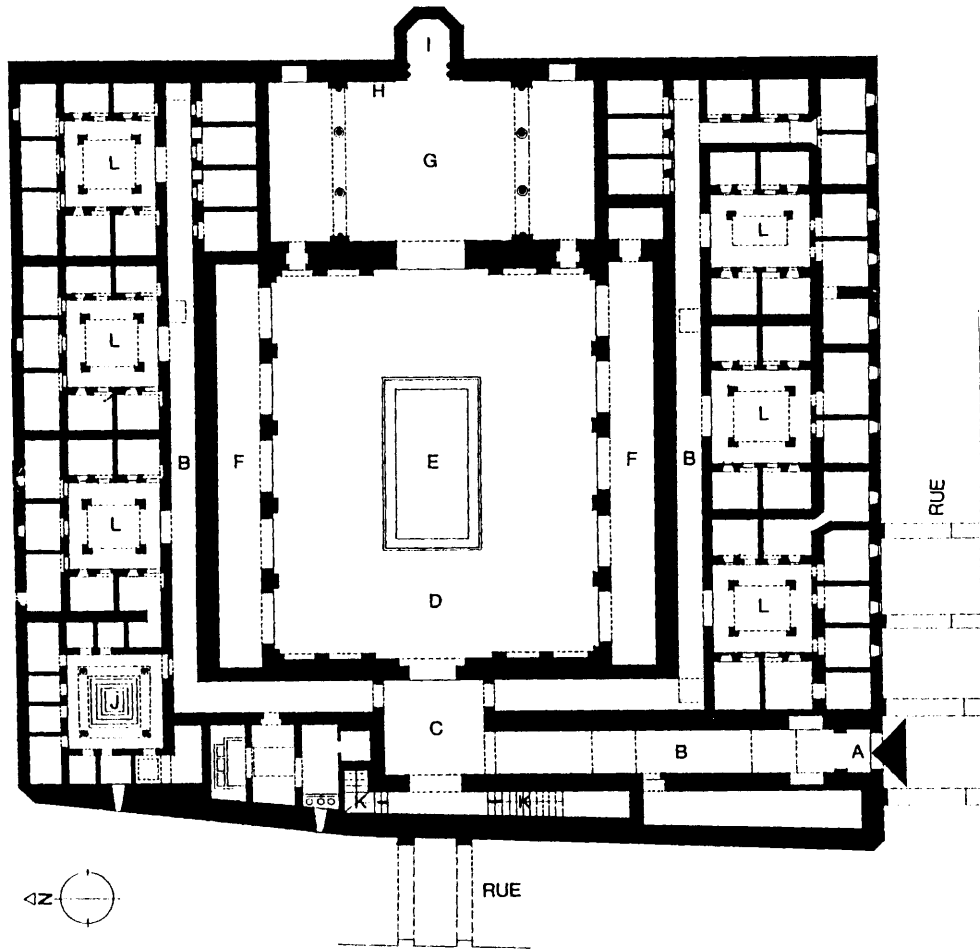


Figure 34: Plan of madrasa, Marrakech

## University: The Mellah

There are two primary reasons that the mellah should serve as the initial point of development for the university. First, it establishes a direct and positive policy towards the redevelopment of the medina; contrary to the pre-existing hands-off policy. Secondly, of the four quarters of the medina the mellah, despite being the most recent development, has deteriorated the most. The fact that it lies along the path of travel the connects each portion of the university helps as well. The mellah is primarily a residential quarter with an intermixing of the typical small commercial businesses that you find throughout the medina. As it originally was a primarily Jewish quarter there are relatively few Islamic religious institutions, in fact there is one Zawia and one Koranic school. Both are adjacent to one another and are located along the south western edge. Presently the mellah suffers from overcrowding, abandonment and deterioration of the infrastructure and individual buildings. A significant portion of the center of the mellah has deteriorated beyond the point of restoration. Additionally the strip of buildings along the Atlantic Ocean have been damaged beyond repair by the undercutting of the ocean tides (fig. 35 & 36). On the positive side, many of the building that can be restored require minimal work beyond infrastructure repair. The mellah's position along the Atlantic Ocean provides excellent views, yet strangely many of the existing buildings do not take advantage of this (much of this may have to do with the cold winter winds).



Figure 35: Collapsed house in the mellah, adjacent to ocean wall



Figure 36: Abandoned lot in the mellah

The strategy for developing the mellah focuses upon the infill of residential and cultural institutional structure in place of those buildings which have gone beyond the point of restoration. As the so called heart of the university will be placed just outside the medina gates of Bab Doukala it is important to re-emphasize the medina through the placement of cultural institutions such as schools of music, dance and the arts as

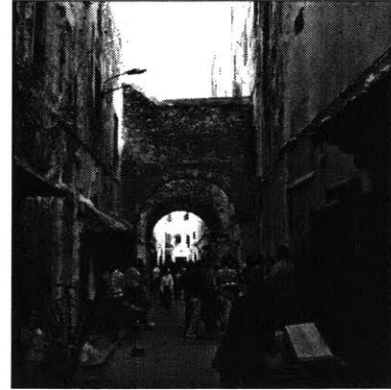
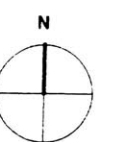
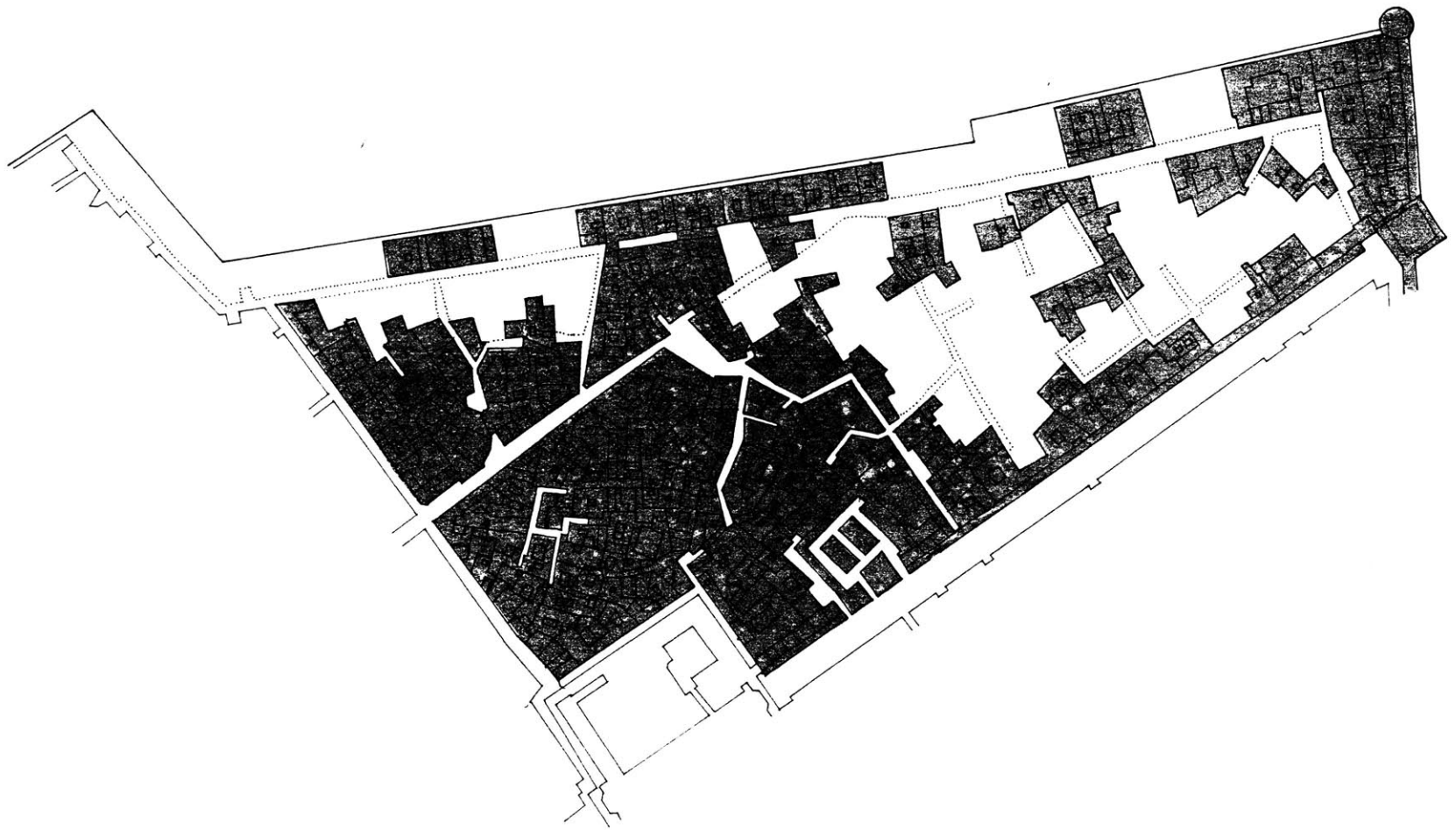
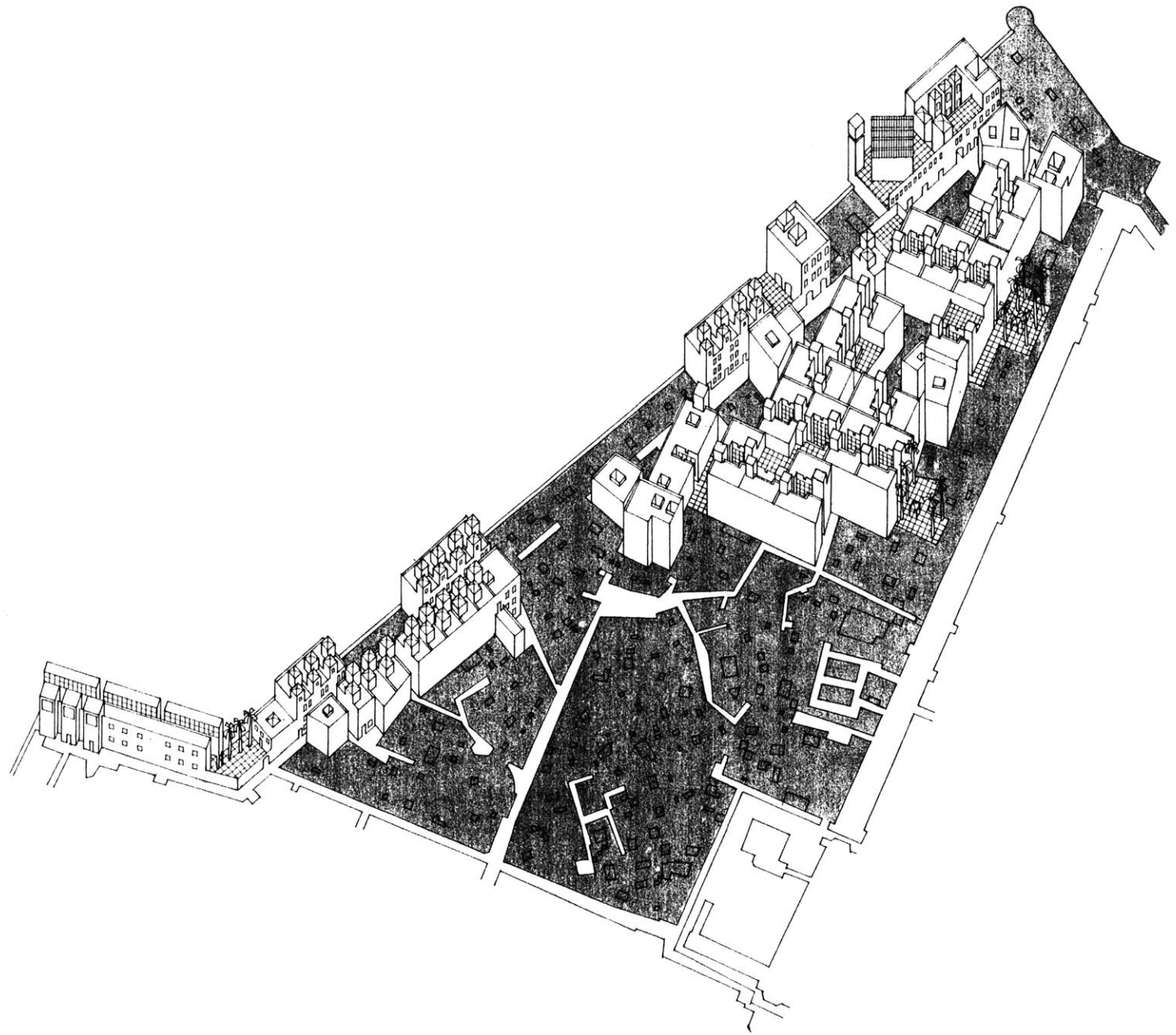


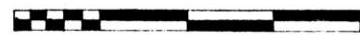
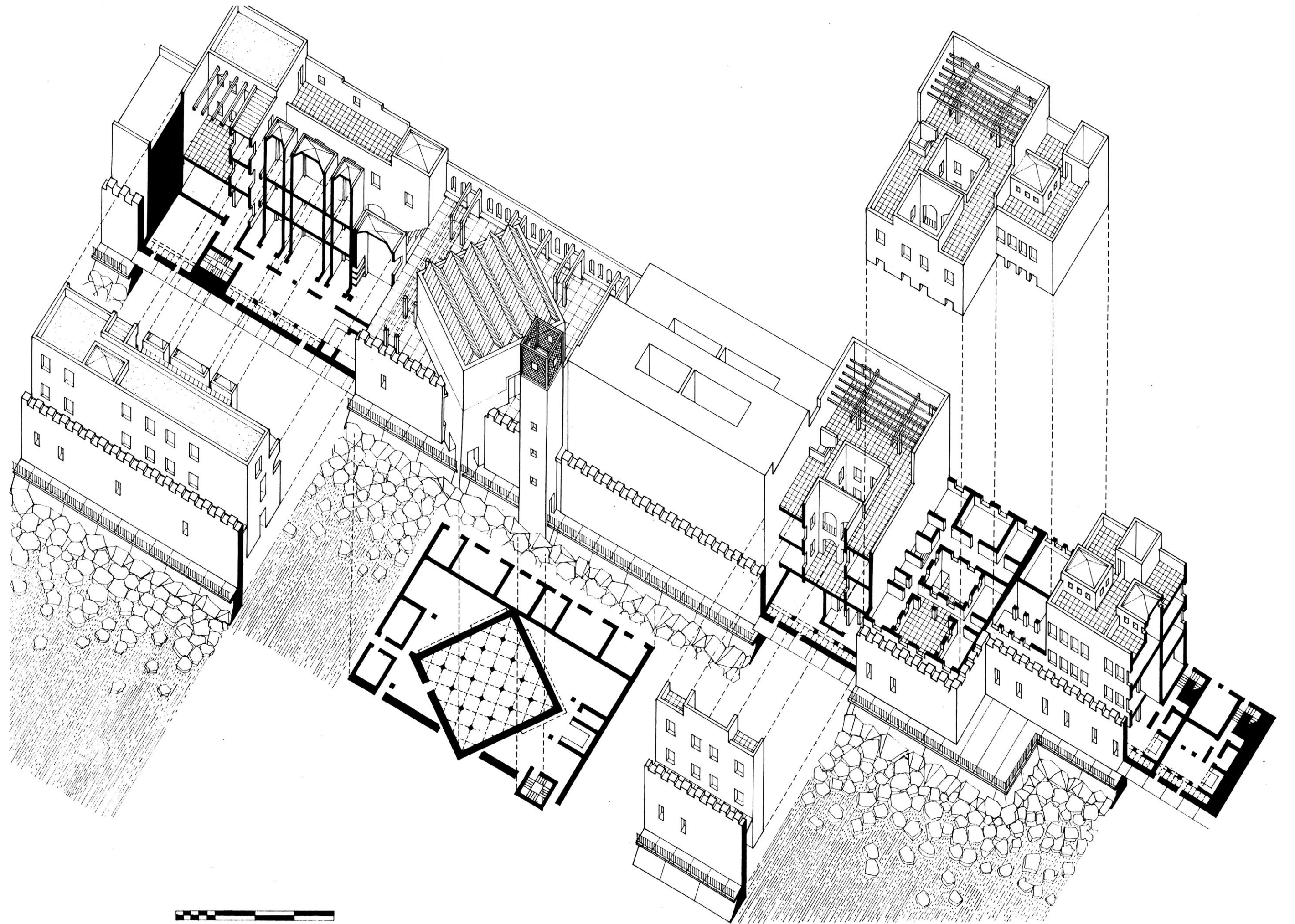
Figure 37: View of mellah strip

well as a library , mosque and faculty / student / local residences. The hope is that this will attract people from the new city into the medina, promote reinvestiture in the restoration of existing structures and serve as a place of shared contact between faculty/ students, the local community and in some instances tourists. The cultural institutions in conjunction with new residential structures for faculty and the local community will be located in a strip (fig. 37) adjacent to the ocean. These new residential buildings will be similar to the pre-existing residential typology in that they will incorporate the use of a courtyard, yet in this case the courtyard will be enclosed to protect against the cold winter winds. Additionally for those structures along the ocean, openings will be made to take advantage of the view. Unlike the households of past residences which comprised of one extended family (mother, father, sons, daughter, grandparents, and sometimes uncles and aunts) these new structures would range in accommodation from the single individual in one apartment to families occupying two floors. It is quite plausible that given the location along the ocean the restoration of adjacent buildings would follow a similar pattern of accomodation.

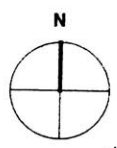
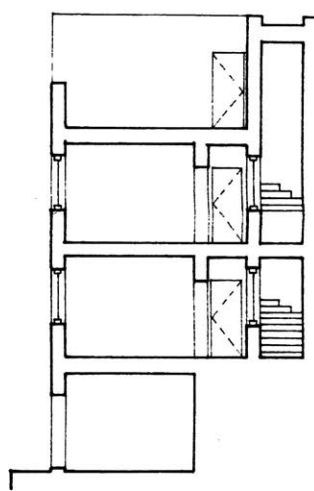
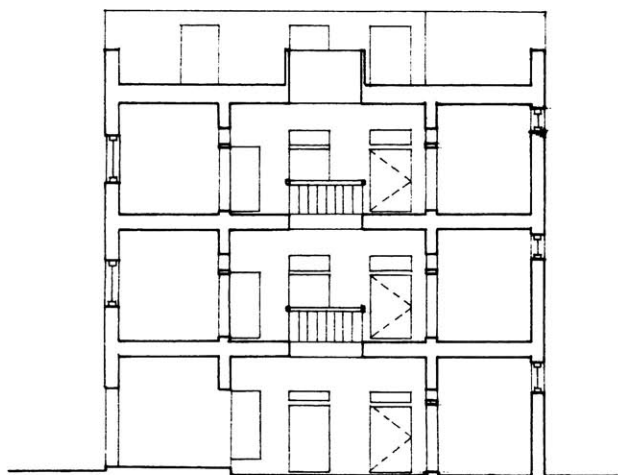
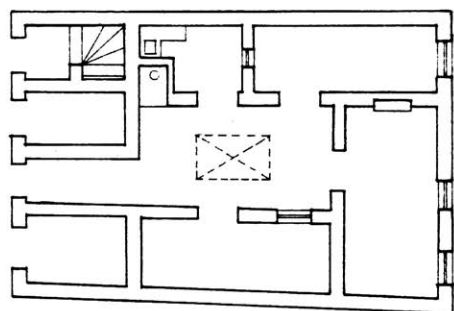
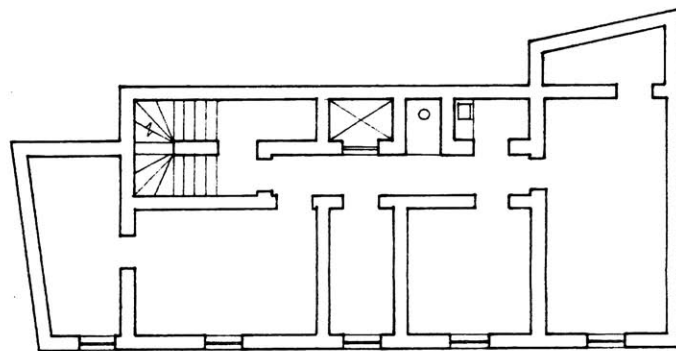
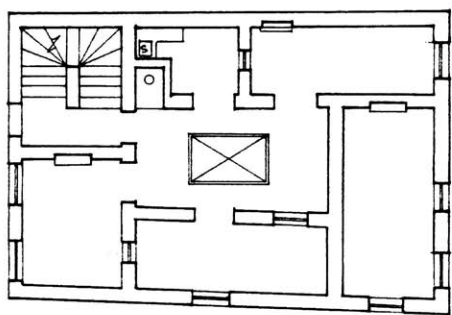
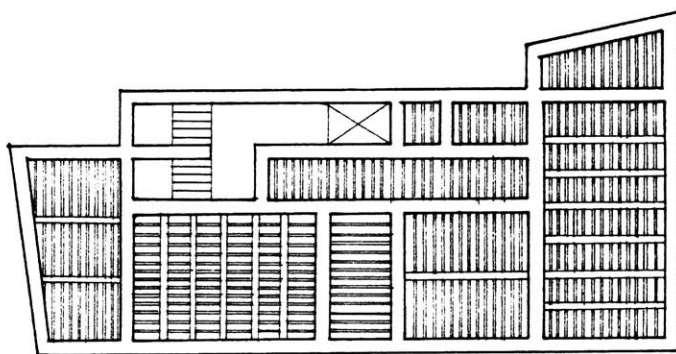
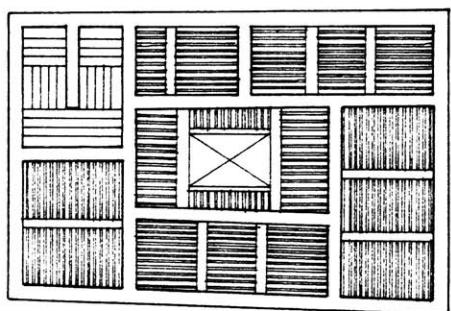
The interior portion of the mellah to be developed would be primarily for student housing. The pattern of the housing layout follows along similar lines to the pre-existing dense layout, with the exception of the addition of several small plaza spaces. These plaza spaces would be seen as gathering areas for the students and adjacent local residents, particularly the children. There exists a precedent for these types of places in the medina; in fact a small plaza exists in the mellah already. These places are quite successful, active yet reassuring in their enclosure and separation from the main avenues. Typically they consist of some small commercial facilities on the ground floor, residences above, a public water source and many kids. There are three specific aspects to note regarding the student housing. First, the pre-existing typology was adapted such that student rooms revolve around a central space (sometimes open to above or below, sometimes not). Common facilities such as the kitchen are located on the ground floor. Secondly, the residences are paired opposite one another and joined on the first floor by an open court. These are seen as additional places where students can gather.











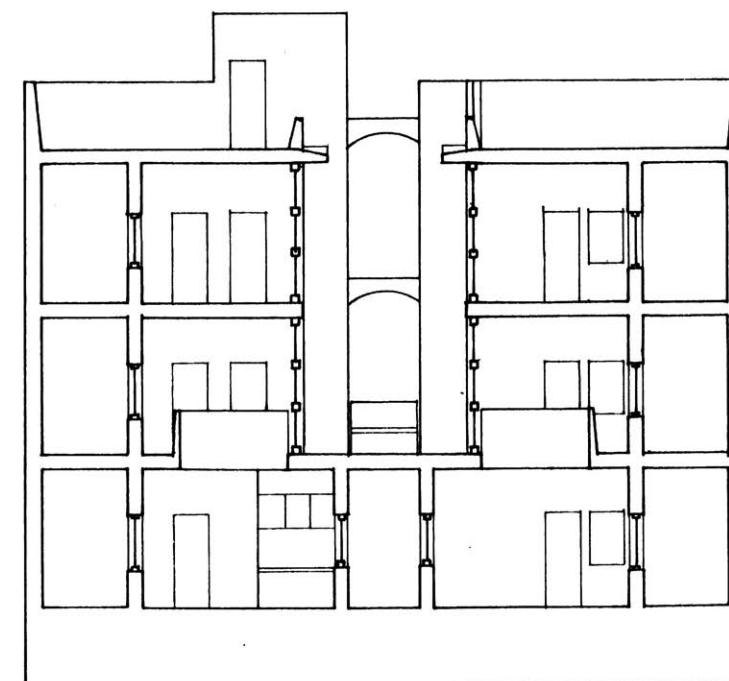
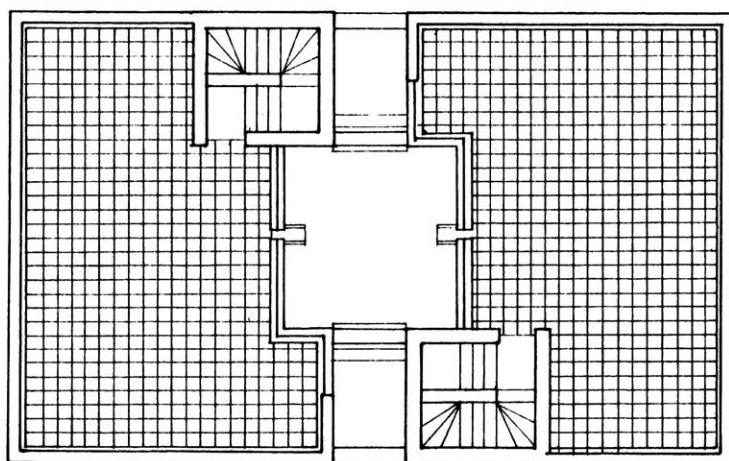
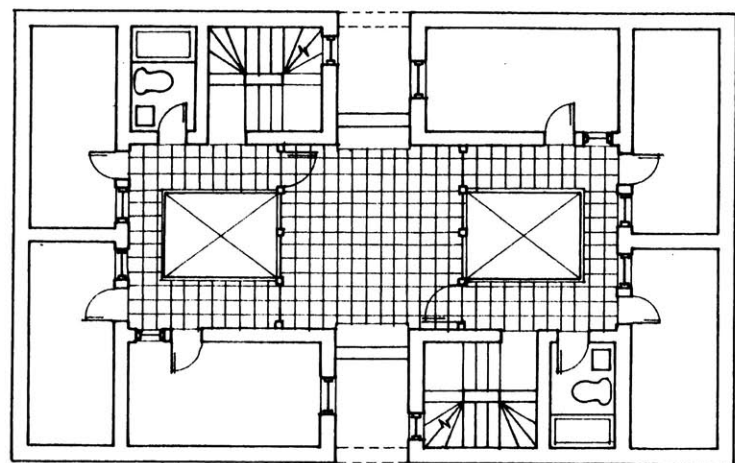
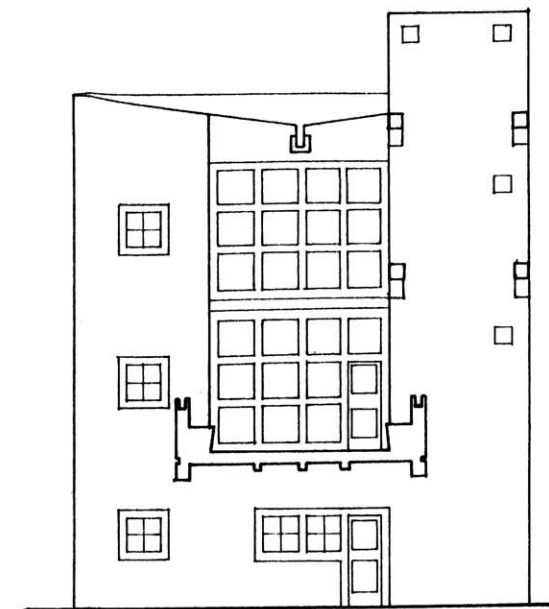
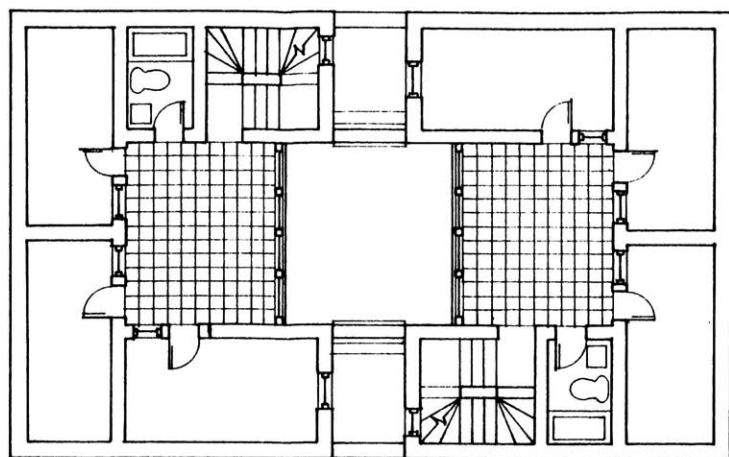
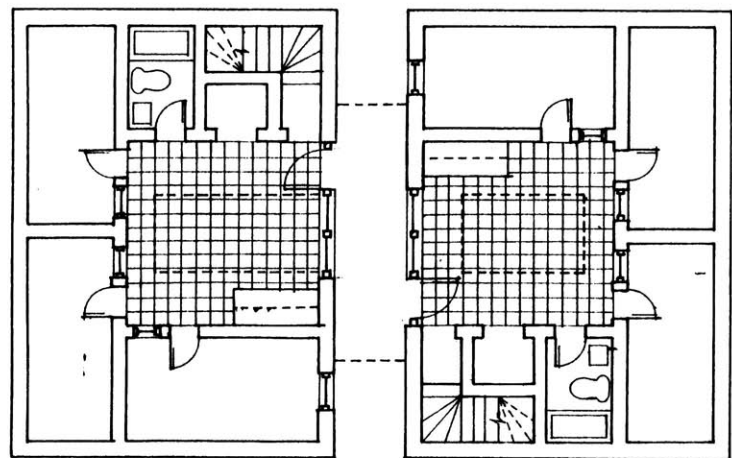




Figure 38: View of bus station in industrial zone (during flooding)

Finally, groups of student residences are linked together forming a street which insulates noises from non-student residences. A student canteen is placed along the Mellah strip as a means of intermixing the two areas. During the summer months student residences would be available to tourists, thus serving the needs of tourism and further developing the medina.

Aside from the ‘built’ portion of this development there are several policy changes the local authorities can make. Considering the fact the student housing in the mellah and new residential zone makes up for only 40% of the student population it is assumed that students will rent apartments from private real estate owners. Naturally since students are quite poor rent must remain reasonable, yet there should also be a minimal level of quality. The local authorities in conjunction with the national government can address both issues by establishing programs of restoration and aid. Quite simply local residents would be encouraged to restore deteriorating residences (in addition to remaining in the medina) with the award of matching funds or grants with the condition that a portion of the building be rented out to students. Not only will this create greater opportunities for students but will encourage students and local community to intermix. Of course there will need to be some set standards and definitions in regards to what is acceptable in terms of restoration and living conditions as well as mechanism to prevent owners from immediately selling their restored property.

### **University: the Industrial Zone**

The second phase of development involves the central portion of the university in the industrial zone. As mentioned previously, the site is trapezoidal in shape, roughly 250 meters by 450 meters. Currently there are the following buildings located on the site: industrial buildings (auto repairs, warehouses, light industrial manufacturing), commercial buildings (bus station - fig. 38, restaurants, and small grocery stores), cooperative buildings (primarily agricultural) and institutional buildings (a prison and small mosque). Many of these buildings have been poorly constructed with more contemporary methods (primarily cast-in-place concrete and cmu block) and have de-



Figure 39: View along prison towards medina



Figure 40: View along prison away from medina



Figure 41: Empty lot opposite prison



Figure 42: View of bus station in industrial zone (during flooding)

teriorated to a point in which there is severe spalling of the concrete revealing rusted rebar reinforcement. While the initial strategy for this portion of the university was for it to contain primarily academic facilities, it was decided that this approach was too homogenous. From this developed a strategy of diversity. Not only would the university include academic facilities, but it would also include commercial, industrial and institutional facilities a portion of which would consist of existing buildings. This has two primary effects: 1) at an urban level the university is woven into the fabric of the industrial zone, not only in terms of use, but also in terms of its physical and social aspects; and 2) the decreased percentage of academic facilities located in the industrial zone allows for the greater distribution of facilities throughout Essaouira as planned. In terms of the university model previously described the size of the university permits a diversity in the physical manifestation of the type of spaces. The diagram shown in figure 43 indicates an outer layer of places (shops, cafes, etc.) which is public, thus accessible to all. The next layer is semi-public which would include facilities like classrooms and lecture halls. The third layer is private and would be accessible only for special use such as laboratories and office spaces. The inner most layer is again private, but is even more specialized available only to faculty and administrators.

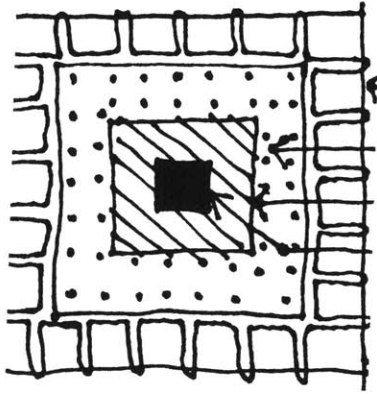
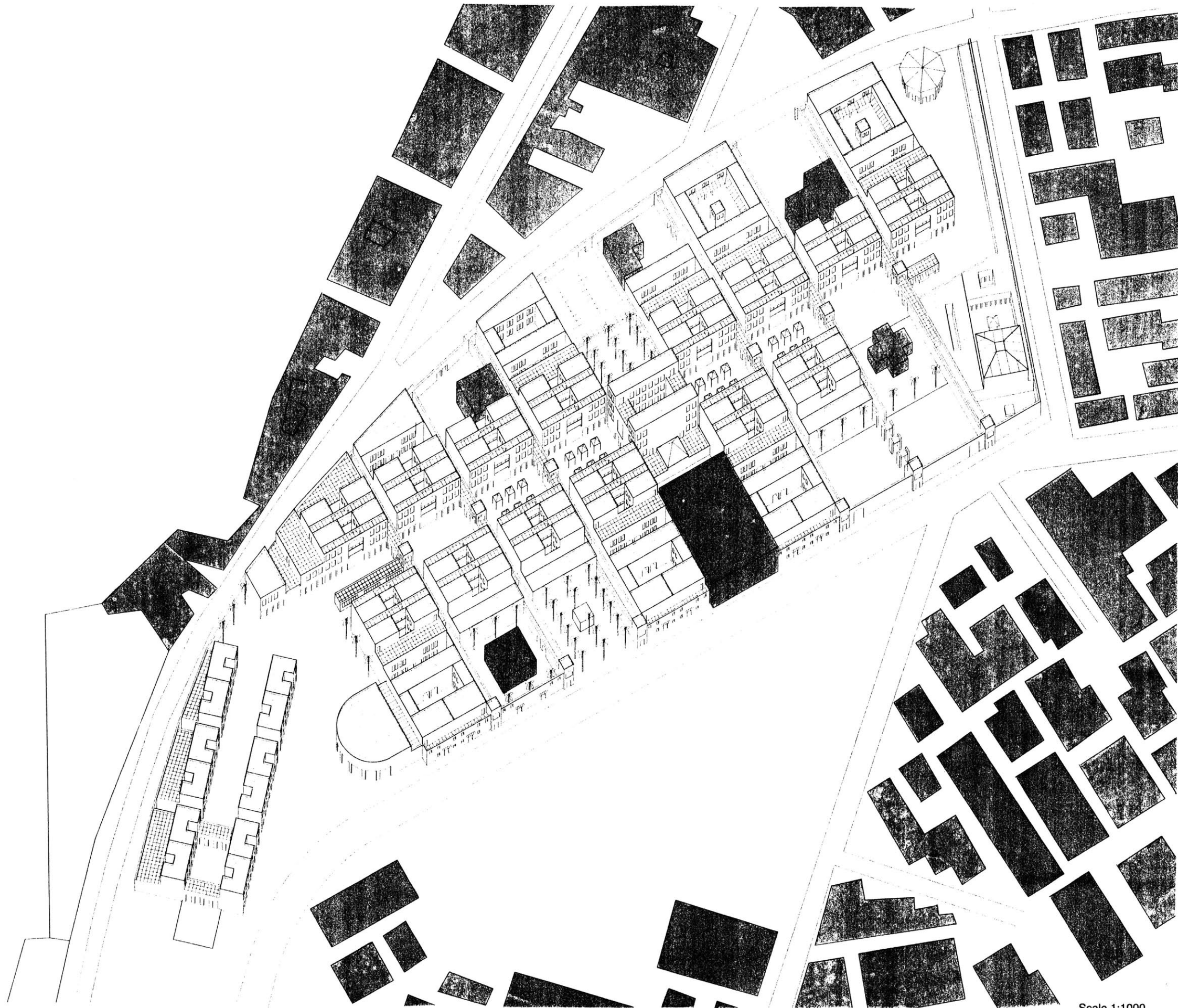


Figure 43: Diagram indicating layering of public/private access



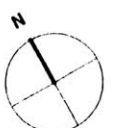
Figure 44: View of the mashwar in the medina

There is a duality to the university as it is seen as a magnet which attracts people but also acts as a thoroughfare which allows people to move through it both along its longitudinal and transverse axes. The university begins with a series of commercial and office spaces which formally front Bab Doukala. These buildings define a path of open and closed spaces which lead you to the pedestrian spine of the university. The pedestrian spine is approximately thirty meters in width and segmented by a sequence of walls approximately forty meters apart that serves as a means of organizing the university (the pedestrian path is influenced by the meshwar - fig. 44). Along this pedestrian spine at the ground floor are commercial facilities such as stores (both for student and local resident supplies), cafes, hammans and a bus station. These facilities are set back along a colonnade which begins to establish a degree of transparency along the facades of the buildings. Adding to this transparency are courts along the upper floors which open upon the pedestrian spine allowing those on the street to glimpse into the academic facilities beyond, and the students above to observe the street life below. At the center of the spine is a library which divides the pedestrian spine in two. The academic facilities are located behind this first layer of commercial facilities and are accessible from the intersecting narrow pathways. These pathways consist of two parallel walls which are accessible not only from the pedestrian spine but from the flanking sides of the university thus allowing people to transverse the university. The first layer of academic facilities which students can access from the pathways are a series of classrooms organized around open courtyard spaces. These courtyards are those visible from the pedestrian spine. Moving further back from these classrooms are layers of laboratory spaces, offices and additional classrooms, each including some sort of courtyard to allow natural light. The pattern of these layer undulate with the rhythm of existing buildings and commercial facilities that fall along the sides of the university. While the center is defined by solely pedestrian access, both pedestrian and vehicular roadways run along the sides of the university. These roads provide access for the commercial and industrial spaces which line the perimeter of the university and then extend into the new residential zone, providing access routes

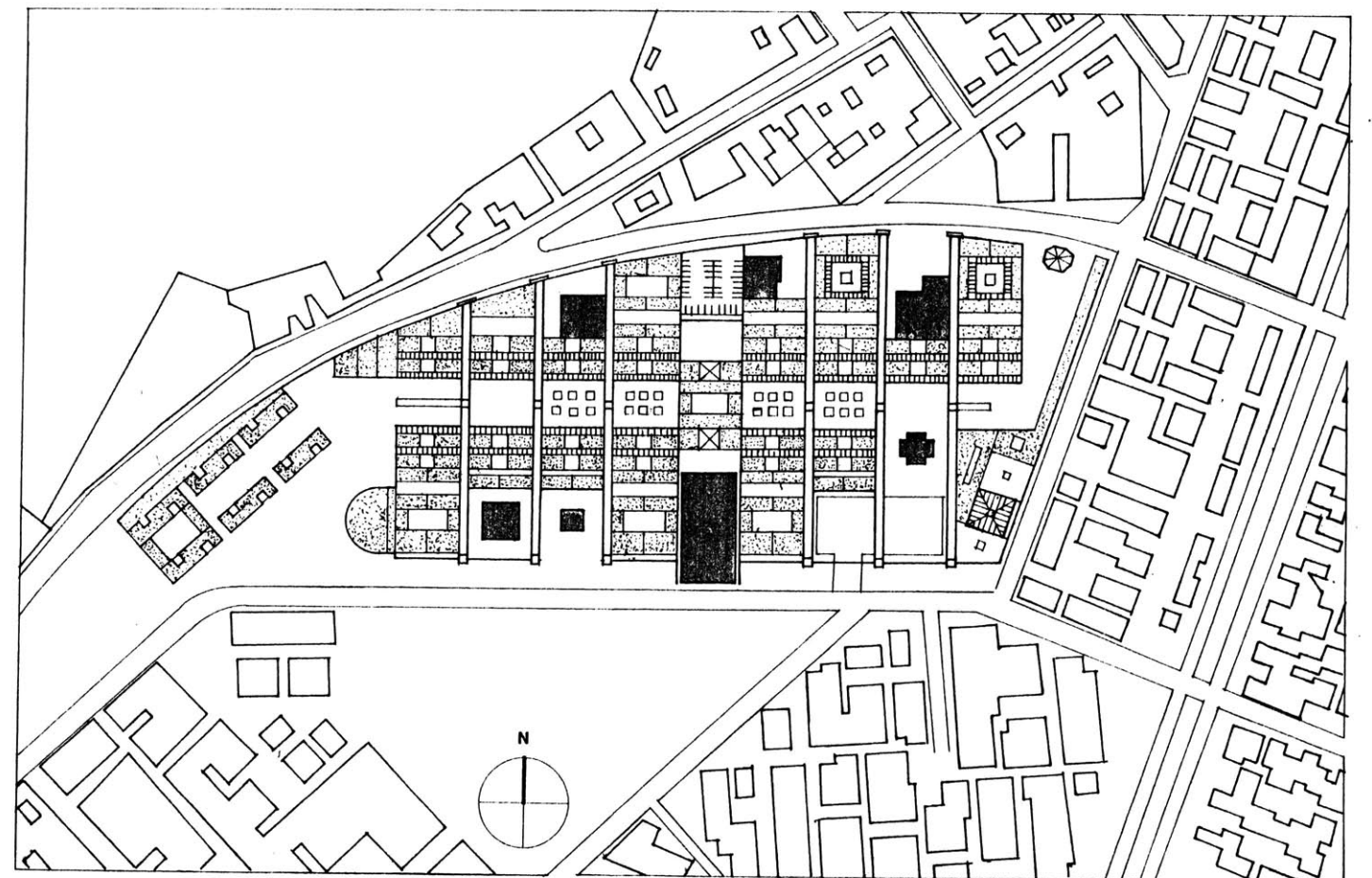
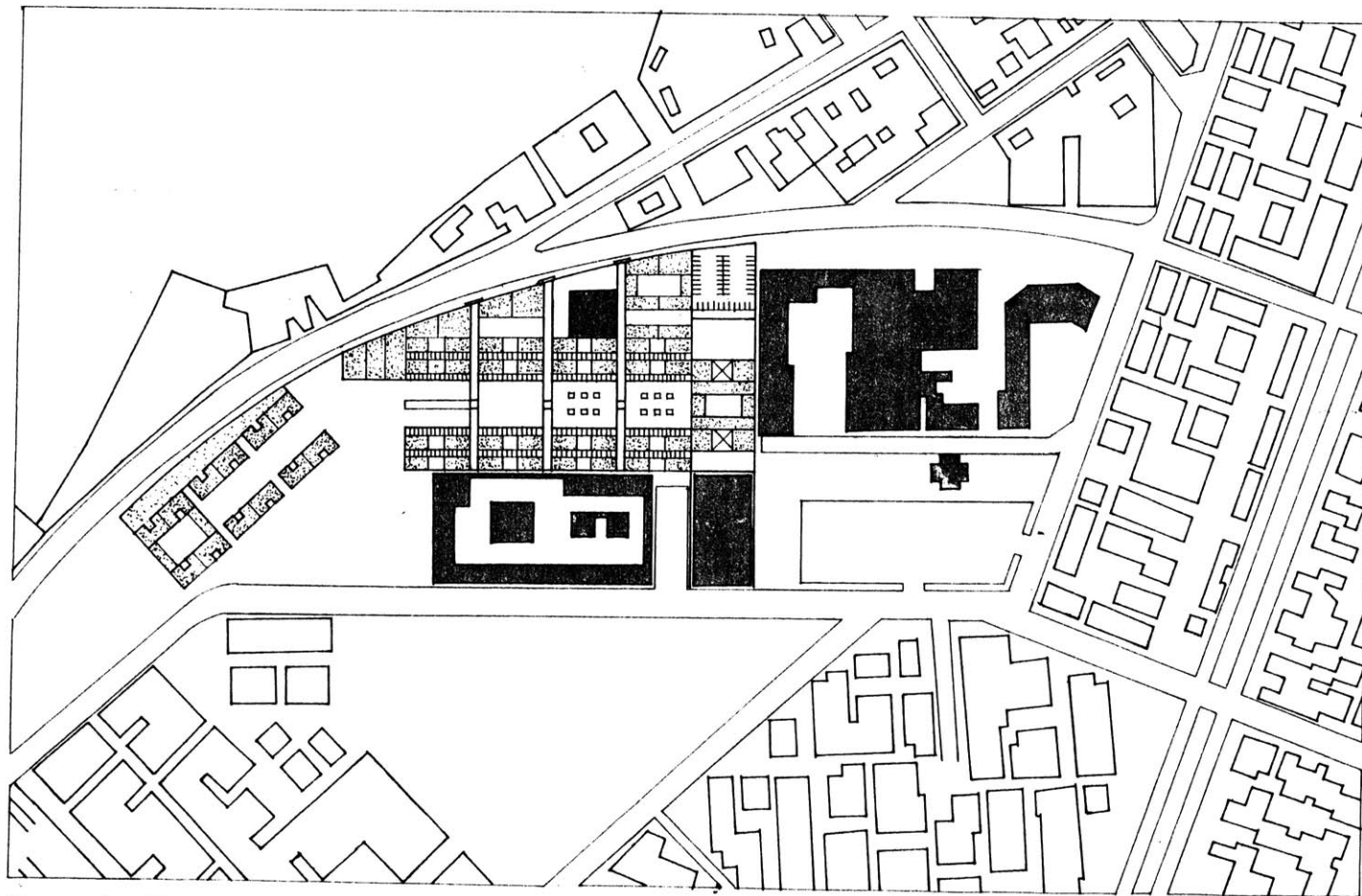
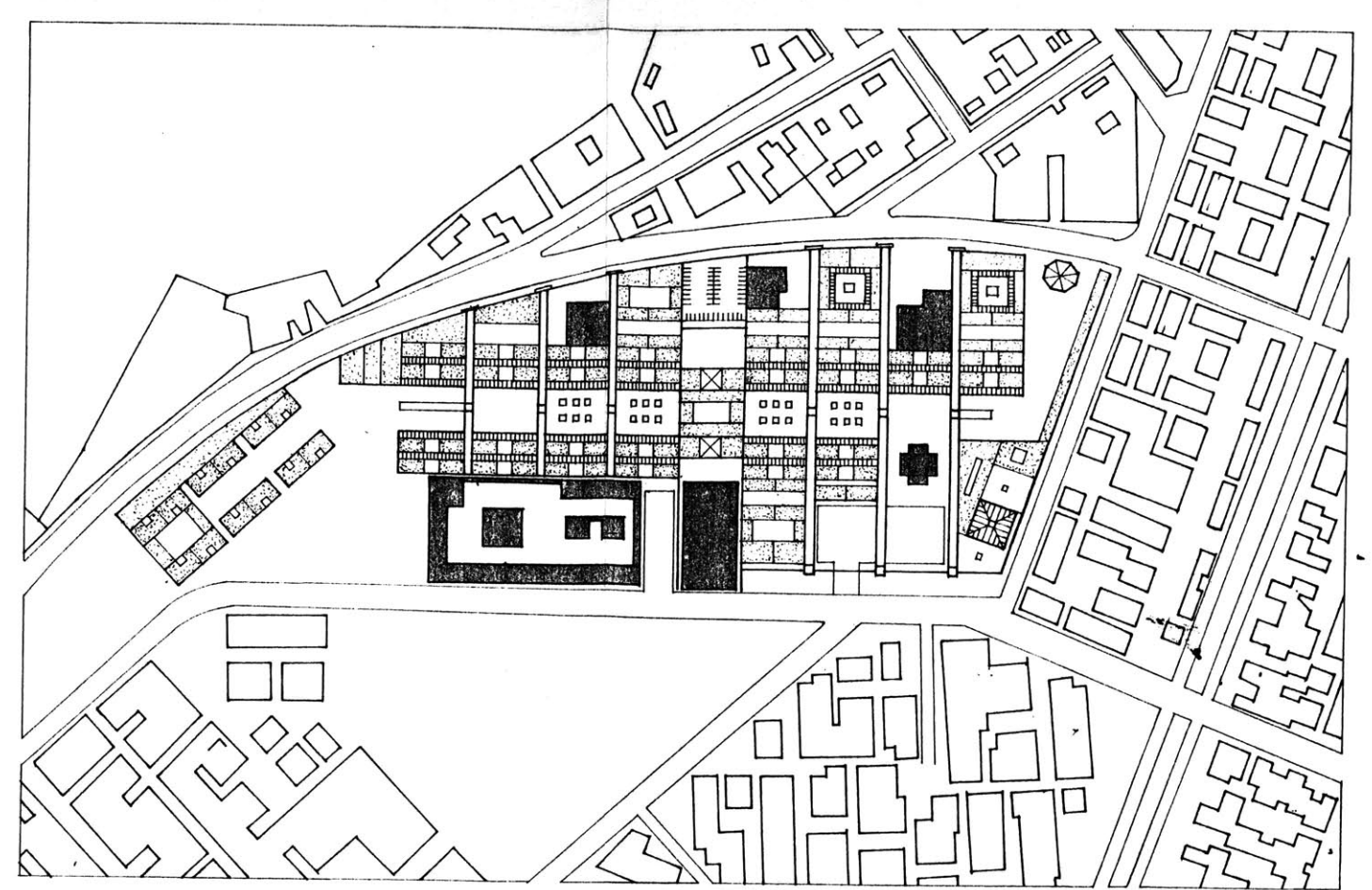
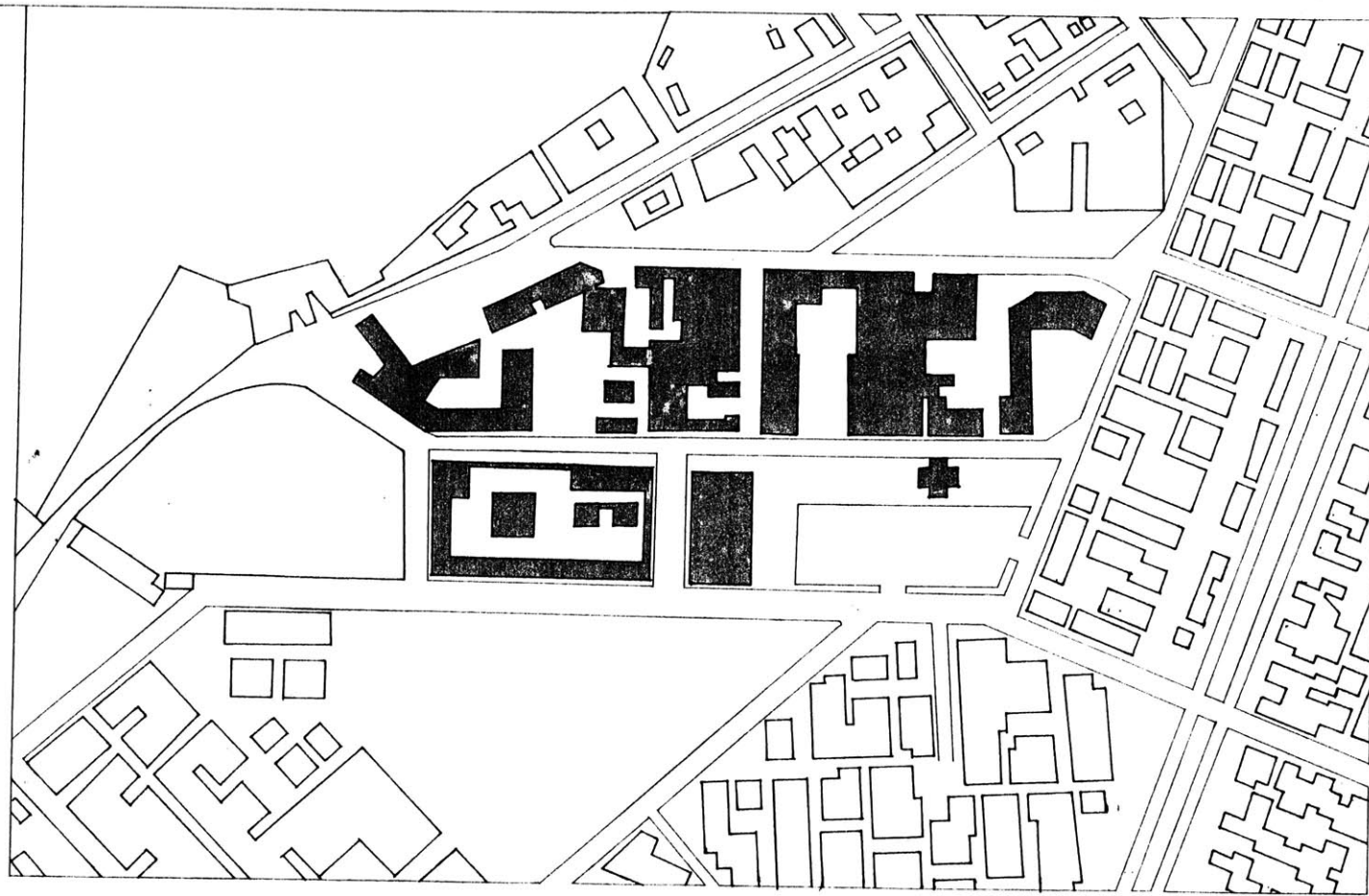


Essauira: Redevelopment Through the Introduction of a University

Scale 1:1000



1000 mete



Essaouira: Redevelopment Through the Introduction of a University

Scale 1:2000

0 50 100 200 300 400 meter



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**page 56**





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**page 57**

for the overall fourth stage of the university. The skin that surrounds the university is punctuated by the transverse pathways, openings to commercial facilities and large gaps in the wall revealing existing buildings. The end of the university culminates with a gate opening, a series of small shops and a mosque complex.

As I mentioned previously the size of the site for the university, commercial, industrial and institutional facilities is quite large and realistically would require a plan for phasing its construction. This said, the phasing is divided into four stages which can survive independently if the total construction is left unfinished. The first two stages focus upon developing the northern portion of the university, including a defined pedestrian spine, and the demolition of some buildings. The later two stages complete the southern portion of the university, including additional demolition of existing buildings. In the overall strategy for implementing portions of the university throughout Essaouira it is envisioned that at the very least the first stage should be complete before, the third phase of development involving the port begins. Yet it could also work that the university is complete prior to redeveloping the port facilities. Most realistically the fourth phase in the new residential quarter could not begin until the university completes its third stage of development.

### **University: the Port**

The third phase of development focuses upon the port complex of Essaouira (fig. 45 & 46). Historically the port was the point of reception of a continual stream of overseas trade which served as the economic life line of Essaouira. Now that this trade no longer exists the port primarily serves the needs of the fishing industry, with some degree of tourism. If not for historical reason then for symbolic reasons the port should be redeveloped in some manner. The port complex consists of 1) the port, that presently can only serve the needs of the local fishing industry, and 2) the port complex which is currently used for fish processing, storage, repair and office spaces. The development strategy is to take advantage of the decrease in the fishing industry and thus size of the port complex related activities, by introducing an Oceanographic Research Institute and further tourism facilities. As the port is very much a point of



Figure 45: View of the port

departure or destination along a path that connects with the Sultan's Plaza, this area should be considered as well in terms of development.

The concept for developing the port complex is relatively straight forward. First a pedestrian path is re-established through the center of the complex, continuing to the Sultan's Plaza. Next an 'arm' of building structures is extended along the eastern side, similar to the existing arm of the Portuguese bastions. Along this 'arm' are located the research facilities which are connected to adjacent pools. A third portion of the complex will be redeveloped for restaurants to be shared by the tourists and local community. Beyond the port complex is the expansive Sultan's Plaza (fig. 47). Today this serves as an entry point and tourism area of the medina. Yet originally this was the location of the Sultan's palace (demolished in 1953) and thus one could not enter the medina at this location. In its present condition the plaza suffers from its exposure to the winds off the ocean and from its lack of definition. The proposal for the plaza is quite simple, add a wall with openings along the western side, thus enclosing the plaza. Not only will this make it more inviting for various activities to take place, but inconjunction with the port complex defines a plaza spaces which views out onto the ocean. For the most part this plaza area will remain the same except for a change in paving and the addition of trees.

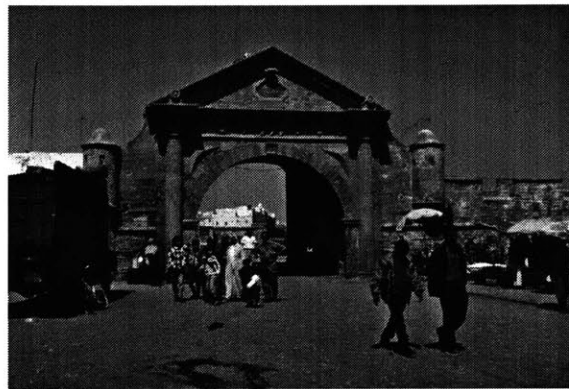
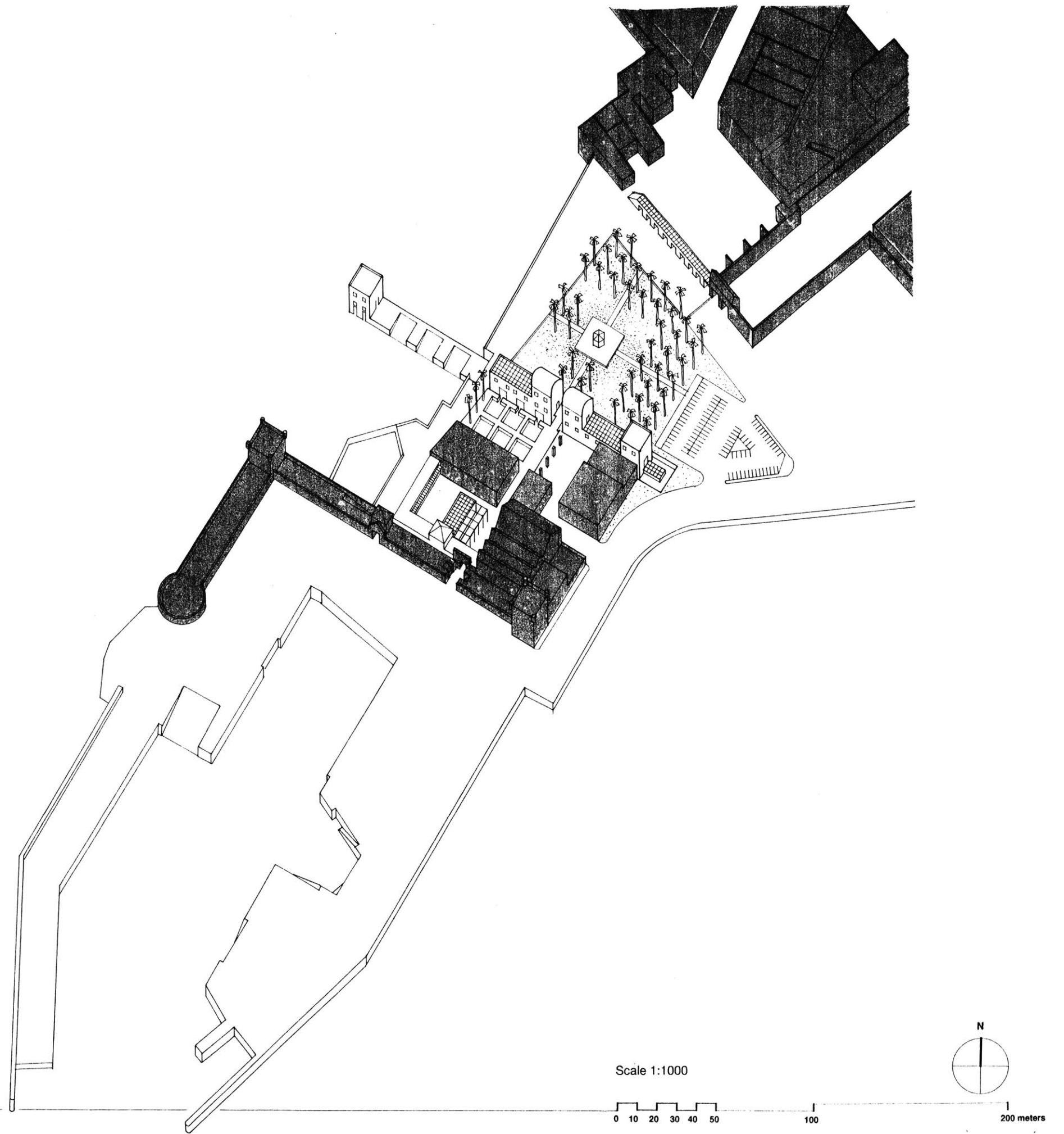


Figure 46: View of the port gate



Figure 47: View of Sultan's Plaza



## University: the New Residential Zone

The final phase of development is located in the new residential zone and is somewhat dependent upon the completion of the entire university in the industrial zone. At this point it is envisioned that 1) added student housing will be required and 2) the availability of a significant college level educated labor force will attract private industries to Essaouira. The initial site to be developed is located between the extension of the two roads that parallel the sides of the university and between the dunes and existing resi-

dences. This phase of development is seen as the termination of the path that now extends from the port, through the medina and industrial zone and finally to the new residential zone. An important part of this development is that both student and local residential housing be introduced and intermixed. It is envisioned that the development will take place in stages. The first stage is the construction of student housing. This stage is followed by the construction of the initial research facilities. These facili-

Rank	Attributes	Significant or Very Significant
1	Labor Skills / Availability	89.30%
2	Labor Costs	72.2
3	Tax climate within region	67.2
4	Academic Institutions	58.7
5	Cost of Living	58.5
6	Transportation	58.4
7	Access to Markets	58.1
8	Regional Regulatory Practices	49.1
9	Energy Costs / Availability	41.4
10	Cultural Amenities	36.8
11	Climate	35.8
12	Access to raw material	27.6

source: Robert Premus, *Location of High-Technology Firms and Regional Economic Development* (Washington, D.C.: U.S. Congress, Joint Economic Committee, 1982).

Figure 48: Attributes sought after by high-tech companies

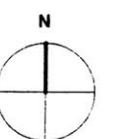
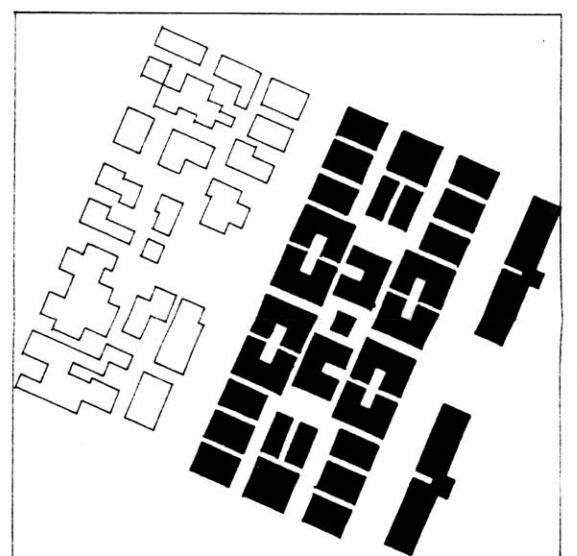
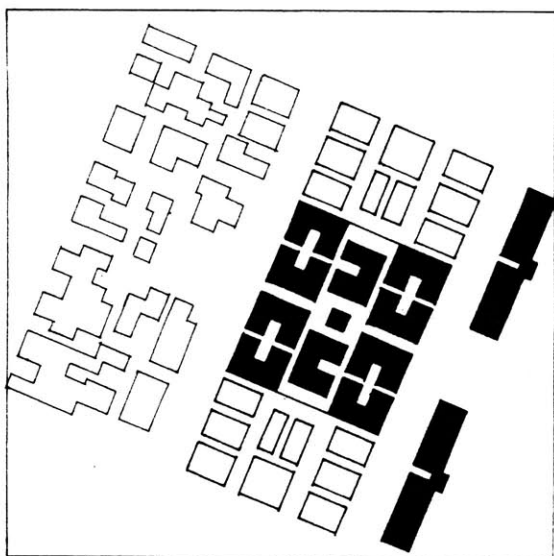
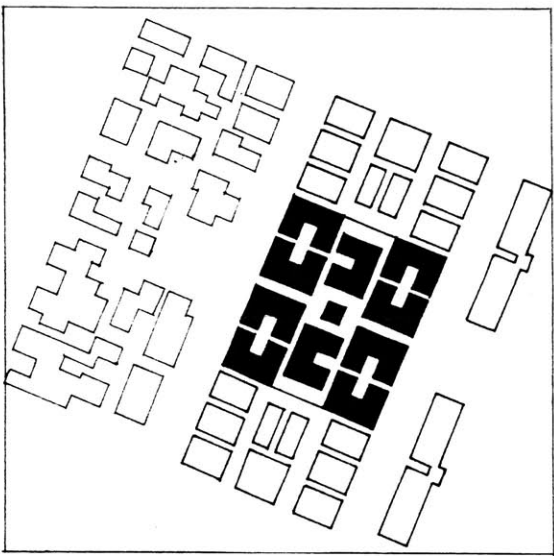
Rank	Attributes	Significant or Very Significant
1	College Graduates	95.90%
2	Degree Programs for Employees	92.1
3	Access to Libraries and Information Systems	85.5
4	Cultural Activities	69.1
5	Faculty Consultants	66.7
6	Faculty Research Activity	57.8
7	Access to Laboratories	52.3
8	Part-time Teaching Opportunities for Employees	22.3

source: Robert Premus, *Location of High-Technology Firms and Regional Economic Development* (Washington, D.C.: U.S. Congress, Joint Economic Committee, 1982).

Figure 49: Attributes sought after by high-tech companies

ties are placed along the edge of the dunes and serve as a wall preventing the further eastward expansion of the city into the environmentally sensitive dune environment. After this stage private residential buildings will infill the open areas. These residences would be available to both employess of the research center and the local community. As required the series of three stages can continue southward.

The importance behind this phase of development is that a new industry connected to the university can potentially be developed. What suggests that this type of development is feasible is the fact that of all private research and development areas (in the United States and Europe) a large percentage of them are located near academic institutions. As figure 48 & 49 indicate two reason for locating an industry is the availability of labor and facilites. Once this area develops Essaouira will have three economic bases: academic, tourism and industry.



## **Conclusion:**

The overall development of a university in Essaouira represents a means of redeveloping the medina and new city while attempting to establish a new economic base for Essaouira to build upon. Some may argue that for a city like Essaouira it should be restored primarily to its original form. Yet to do this denies the fact that its form was very much a product of its function as a royal port. Once Essaouira ceased to be the royal port it began a period of deterioration extending to the present day. Restoration without considering a future economic base, even if support is received externally, will eventually yield the same result, deterioration through lack of maintenance and repair or the creation of a historic timepiece. Yet in order to continue maintenance additional funds are required. Thus the dilemma, to gain financing you need to increase diversity in the economic base. But once this has been accomplished you must consider the built formation of the economic base and how it will effect the city. From this a strategy can develop and potential economic bases can be prioritized in terms of their positive and negative effects on the urban form. In the case of this thesis it was decided that a university would be the most beneficial. It is versatile in terms of where it can be located, the manner in which it can be distributed throughout the city and its potential to attract future industries.

This thesis introduces a model for the university which stresses the integration of the university with the existing urban fabric of the city. Thus the university serves as a vehicle for redeveloping Essaouira providing new facilities, restoration and services both institutional (medical etc.) and cultural (schools of art, music, dance etc.). The intergration of the university within Essaouira creates a diverse and dynamic series of relationships, ranging from the built form and urban fabric to the interaction between faculty, students, the local community and tourists. These series of relationships stand in stark contrast to the more typical model of the university within the region (University of Aleppo, Middle Eastern Technical University in Ankara and the King Abdul Aziz University in Mecca). Here the relationship between the university and the city is



more static, in which the university is isolated (many times walled and with an armed guard) from the city thus limiting the interaction between students and the local community and the impact of its built form on the existing urban fabric.

Once it was determined that a university would be located in Essaouira a strategy was developed to guide its implementation. This strategy followed a logic which prioritized areas of development based upon the impact on the urban fabric and social and cultural structures and in conjunction with their overall financial feasibility. This resulted in four areas of development : 1) residences and cultural institutions in the Mellah, 2) the main university in the industrial zone (including academic, commercial and industrial facilities), 3) an oceanographic research center in the port along with the redevelopment of the Sultan's Plaza and 4) residences and private industries in the new residential zone adjacent to the dunes. Given the economic uncertainty of Morocco each of these points of development can exist independently, yet together follow an overall logic related to the planning of the university. At the very least this can serve as an example of how independent concentrations of redevelopment can take place yet still work together to create a focused whole, an aspect which currently is missing from development in Essaouira. Aside from the financial flexibility that the phased growth of the university provides, it also serves to provide a period of mediated transition. This transition period helps to soften the social and cultural impact that a university would bring to Essaouira, especially considering the fact that Essaouira is not as diverse as larger cities like Marrakech and Casablanca. In the end the university is seen as a means of economic and urban revival, bringing Essaouira one step closer to the glory of its past and two steps closer to its future.

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## Sources

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