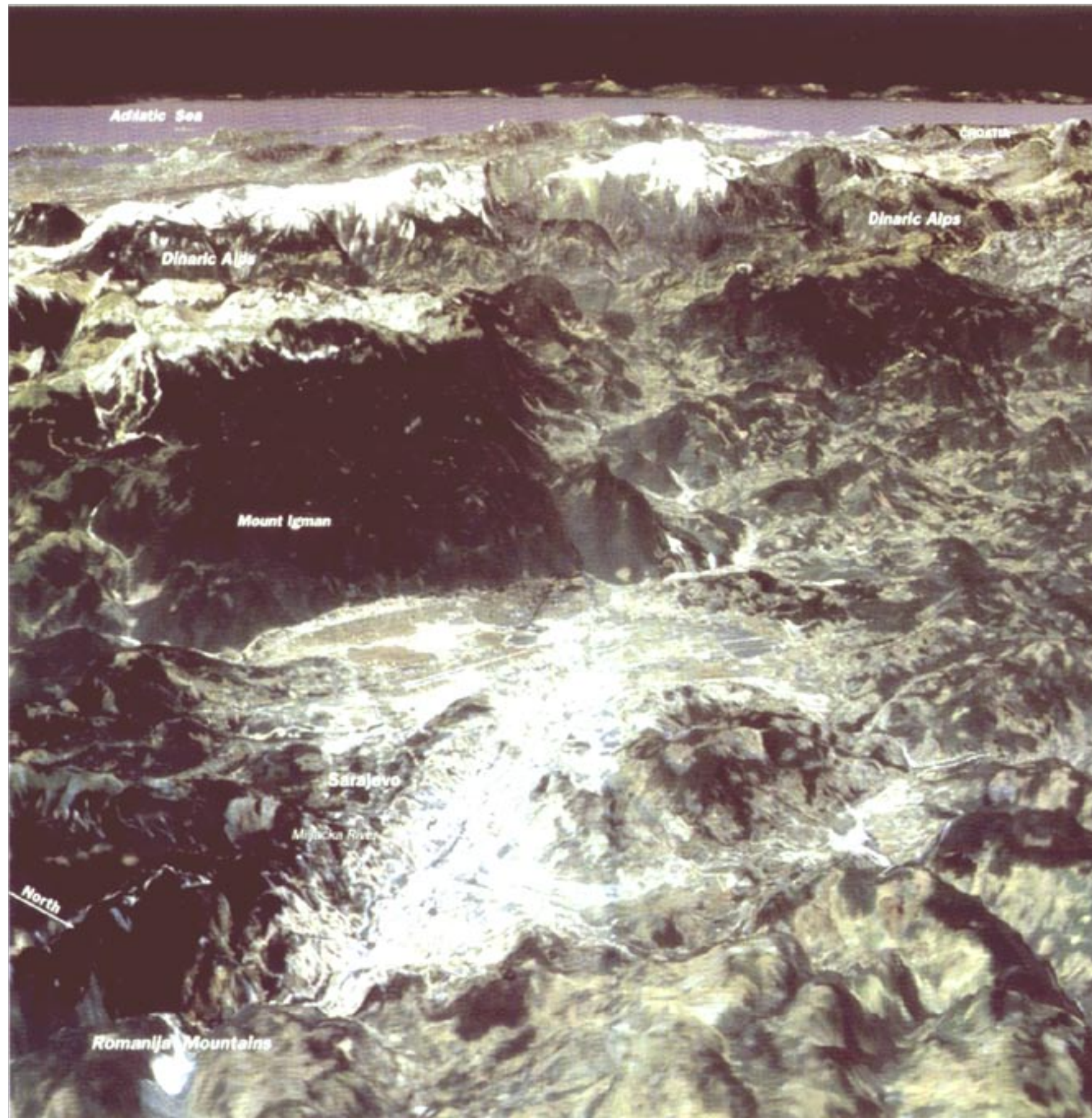


University of Sarajevo

MASTERPLAN FOR A NEW CAMPUS



SUMMARY

Following the devastation of war, Bosnia-Herzegovina has been faced with the challenge of rebuilding a new, independent sovereign state from the ruins of the federation of which it was once a part. The institutions of public life are being reconstructed to restore the much admired pluralist civilization of pre-war years. Critical to this recovery is the re-establishment of a cultural and intellectual life nationwide, led by the University of Sarajevo.

Founded in 1949, the University of Sarajevo has for some years been faced with two major challenges to its pursuit of closer integration with the European and international university system:

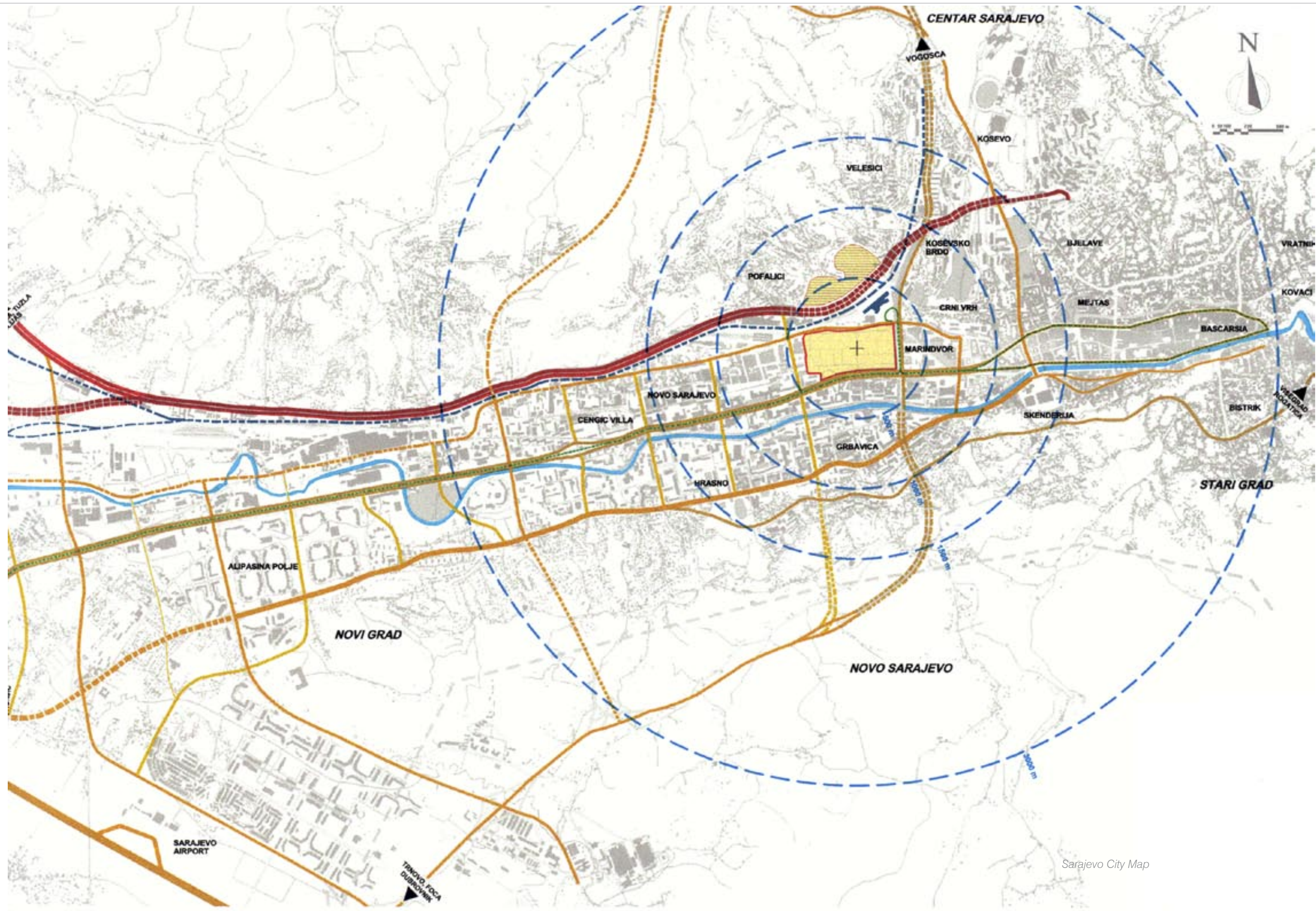
Firstly, there has been a need to reorganize the University, to integrate the faculties within a stronger University structure. The physical consolidation of facilities – presently scattered throughout the city - into a single, central place is a necessary adjunct to this effort.

Secondly, there is a need to upgrade the teaching facilities, many of which are inappropriately located or do not meet international standards, deficiencies exacerbated by the physical destruction of the war.

To these ends the University is embarking on a bold new venture to consolidate and modernize its facilities on a new urban campus close to the center of the city of Sarajevo. Subscribing to the Bologna Declaration of 1999, the University has committed itself to joining the “Europe of Knowledge”, a shared structure of curricular and pedagogical values and competencies. This pan-Europeanism calls for common academic standards and structures so that students and faculty can transfer from one institution to another, benefiting from a community of nations and cultures beyond its boundaries.

A dense urban campus accommodating eleven faculties, research institutes and common facilities is to be built on the 22 hectare site of the former military barracks at Marin Dvor at the western edge of the nineteenth century city. The Marin Dvor campus will serve 12,000 students and 1,500 faculty within the fabric of downtown Sarajevo. Planned as an urban campus, the buildings are designed around pedestrian walkways, plazas and courtyards, creating a calm, safe and contemplative setting for academic and cultural life.

Based on a Master Plan completed in 2001, the campus will be developed in three phases over a period of 5 to 15 years.



Sarajevo City Map

URBAN FABRIC

The Marin Dvor site was originally developed at the end of the nineteenth century as a strategic location for the military barracks at the edge of the city and at the confluence of the two river valleys. The train station, built soon afterwards was located adjacent to the barracks for similar reasons. In the twentieth century, the city has grown westwards, mainly in the modernist idiom of high rise residential and commercial development.

The strategy that recognized the site as ideal for the mobilization of troops and protection of the old city is equally valid for the development of the new university immediately adjacent to the central city and highly accessible by road and rail.

The planning and spatial form of the new campus derives inspiration from the existing urban fabric in two respects. Firstly, viewed as an outgrowth of the Austro-Hungarian urban form of medium-rise courtyard buildings, the planning of the new campus has adopted a human-scaled urban density with three- and four-story buildings forming an external edge to the street form, enclosing inner courtyards that become the focus of faculty life.

Secondly, the charm and intensity of the pedestrianized main street in the old city linking the Ottoman and Austro-Hungarian sections of the old town serves as a model for the new campus that is similarly planned around a matrix of pedestrian streets, plazas and courtyards.



City Context Map



Bascarsia



Austro-Hungarian Blocks



Ottoman scale



Austro-Hungarian scale

SITE ANALYSIS

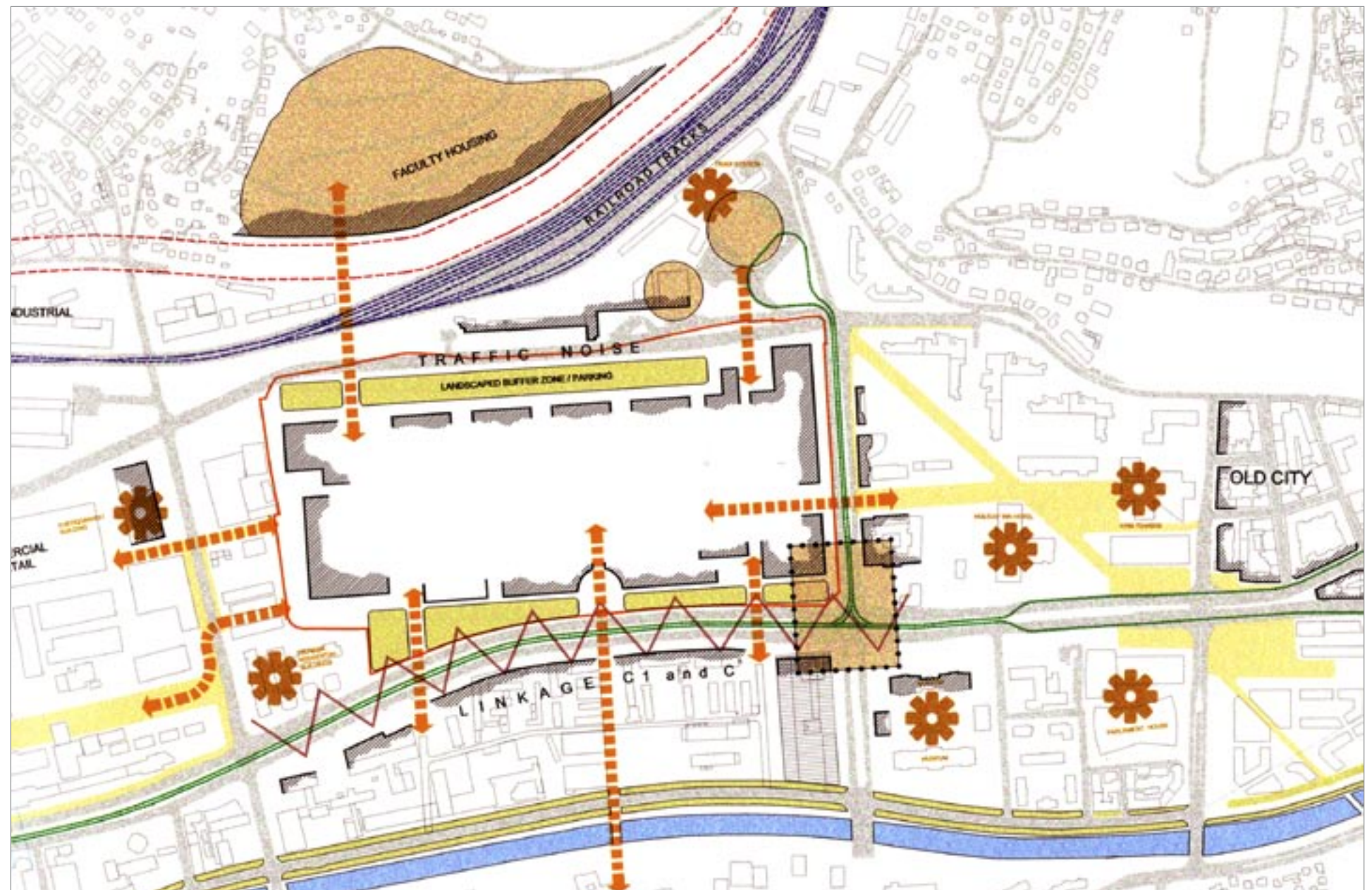
In August 1997, the University of Sarajevo became the owner of Quadrant C-1 at Marin Dvor, the former Marshall Tito Barracks buildings and land at the western edge of the old city. The site is 22 hectares, approximately 660 meters east to west and 300 meters north to south and mostly flat. It is well-served by transportation links, bounded on the north by the railway station and on the south by the major highway and trolley lines on Zmaja od Bosne.

The site is bounded by the nineteenth century Austro-Hungarian city to the east and by the twentieth century modernist city to the west. To the north, on the far side of the rail tracks, the ground rises steeply to hills overlooking the river valley and the city. As with other areas surrounding the river valley, this hillside is being developed as a residential area.

The northern and southern edges of the campus are flanked by transportation corridors. To the north the rail lines and the train station and a proposed new highway suggest this edge to be the most appropriate for major vehicular access. On the south, the arterial highway separates the new campus on one side from the older faculty buildings on the southern side. A critical planning issue is therefore the creation of safe pedestrian links across the highway while at the same time recognizing that this edge presents the most visible aspect of the new campus to the general public.



Military Barracks, View from East



Campus Perimeter Analysis



Military Barracks, View from North

LEGEND

- PATH (Existing/Potential)
- BUILT EDGES
- PROJECTED HIGHWAY
- TRAMWAY
- RAILWAY
- LINKAGE
- PEDESTRIAN
- OPEN SPACES
- SPECIFIED ZONES
- LANDMARKS

PROGRAM AND ADJACENCIES

The program for new building on the campus has been developed to accommodate Faculties in the Schools of Social Sciences; Technical Sciences; Natural and Biotechnical Sciences and the Scientific Research Institutes. Accommodation is also provided for Academies for the Arts; Cultural and Recreational Facilities and outdoor recreation as well as the Rectorate and Residential Facilities. The accommodation required for the whole campus totals approximately 214,000 square meters covering 30% of the site area with a maximum building height of 20 meters.

The organization and adjacencies of the major program elements are generated partly by function, partly by site characteristics and partly by the formative concept of clustering programmatic groups around a matrix of pedestrian links and outdoor public spaces.

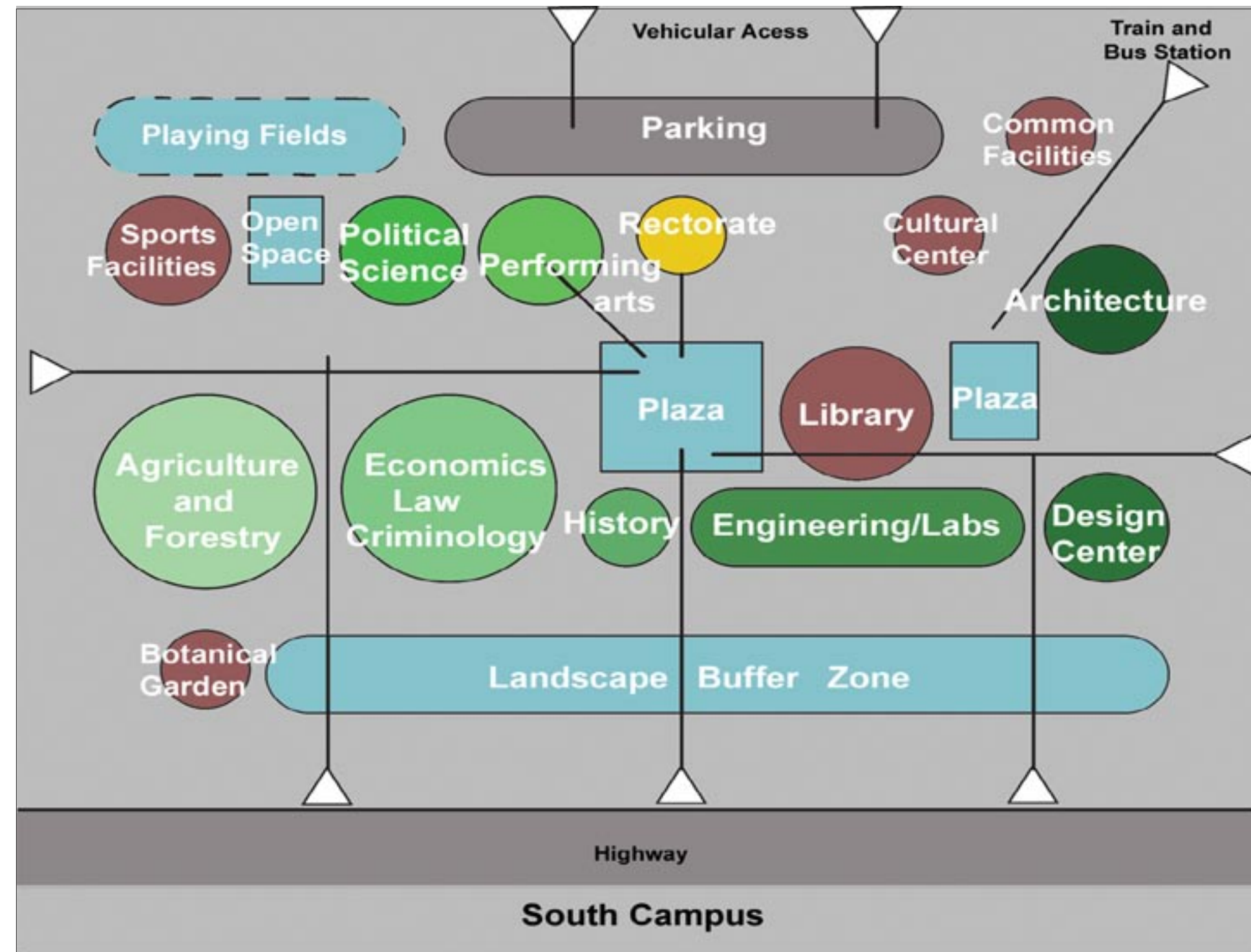
Those programs that require public access for major events are grouped on the northern side of the site, close to vehicular access points, car parking and public transportation. These include the sports facilities, the Center for the Arts and to a lesser extent, the Library and the Social and Cultural Center (which will also benefit from close proximity to the bus and train stations on the north-east corner of the site).

On the southern edge of the site, adjacent to the major highway and the technical campus on the other side, the new campus will have a green buffer zone fronted by program for the Natural and Biological Sciences (Forestry, Agriculture and the Botanical Gardens); Social Sciences (Politics, Law and Economics); the Technical Sciences (Engineering, Specialized Laboratories, the Design Center and Architecture).

At the heart of campus activity is a major outdoor gathering space or University Plaza, adjacent to the Rectorate, the Library and the Performing Arts Center.

On the eastern end (closest to the city and the train station) a smaller plaza is required to serve as an outdoor focus for the social and cultural center, small stores and adjacent faculties.

On the western end a public green space that is both buffer and threshold should link outdoor athletic spaces to the central pedestrian thoroughfare.



The New Campus Affinity Diagram

SOCIAL SCIENCES

1. Faculty of Economics
2. Faculty of Criminology
3. Faculty of Political Sciences
4. Faculty of Law

TECHNICAL SCIENCES

5. Faculty of Architecture
6. Faculty of Transport and Communications
7. Faculty of Civil Engineering
8. Specialized Laboratories

NATURAL and BIOTECHNICAL SCIENCES

9. Faculty of Agriculture
10. Faculty of Forestry

ARTS

11. Academy of Theatrical Arts
12. Academy of Music

INSTITUTES, RECTORATE, RESIDENTIAL OFFICES

13. Institute for Scientific Research
14. Rectorate, Residential Offices
(Common Support Functions)

CULTURE, SPORTS, SERVICES

15. University Library, Media Center, Computing and Network
16. Social And Cultural Center
17. Design Center
18. Sports Facilities
19. Services, Utilities
20. Shelter
21. Enclosed Botanical Garden

OUTDOOR SPACES

22. Outside Performance Stage
23. Outdoor Sports Facilities



Original Concept Sketch

CONCEPT DEVELOPMENT

In response to the program requirements and the physical analysis, three conceptual models or campus archetypes were developed and evaluated on both functional and philosophical criteria. The preferred approach is the Courtyard Scheme.

The Quadrangle Scheme is essentially the American model in which buildings are located individually within a field. The concept is non-urban in the sense that edges and borders are open and space flows feely around individual buildings. In the location at Marin Dvor, this campus typology is more akin to the Modernist city fabric to the west of the site than it is to the more structured and organic city to the east.

The Park Scheme responds to the physical conditions of the arterial highway on the southern boundary and the location of campus buildings and cultural institutions on the other side, organizing itself around the main, central open space and the central cross-axis linking the campus to the south. The east-west curved street connecting the buildings is secondary to the main space and is thus not the central focus of social interaction but merely a service road.

The centrality of the open space and the implied uniformity of elevation surrounding that space imply a Beaux-Arts formality and completeness to the campus organization that may not exist in reality, particularly as the complex relates to the campus and institutional buildings on the other side of the highway.

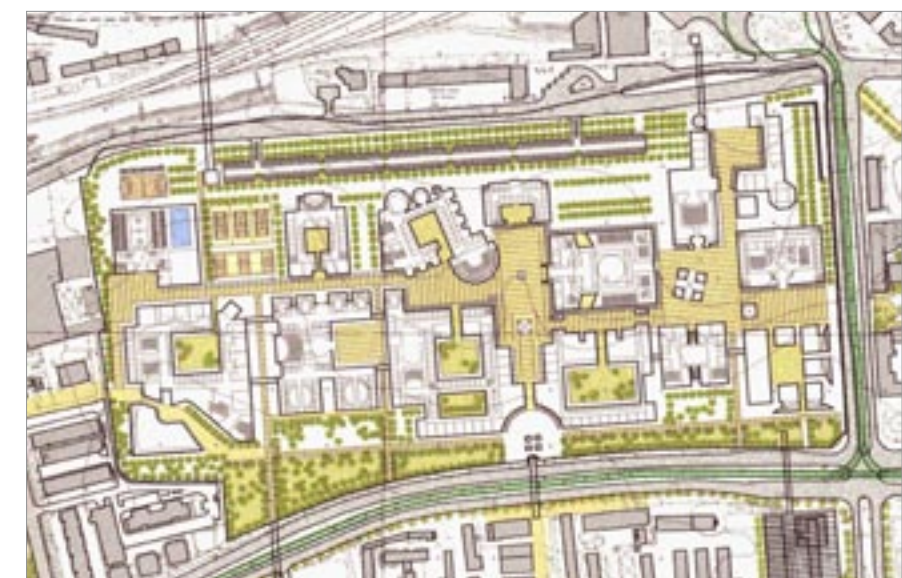
The Courtyard Scheme is essentially an urban model generated by the concept of the street and spaces off the street as being elements of a spatial continuum and social axis to which all the parts relate. The organizational hierarchy of street, plaza (large, external space) and courtyard (a smaller surrounded space) opens up the opportunity of a wide variety of spatial and social experiences or narratives, at different scales. The street is the central focus, the spine from which all other spaces and built forms derive their relationship to the whole. The massing, form and scale of the building blocks and courtyards is compatible with the urban blocks built in the Austro-Hungarian mode.



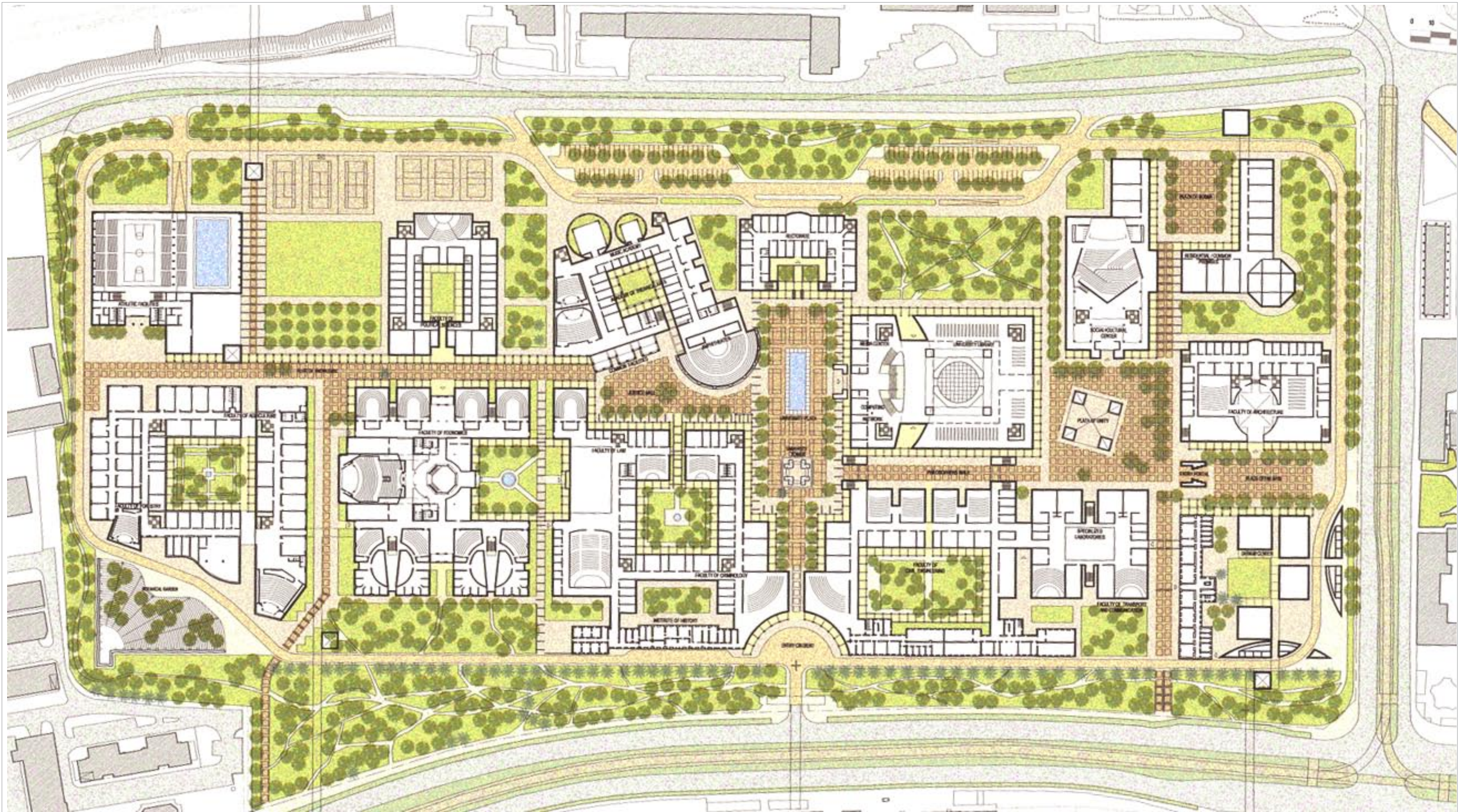
The Quadrangle Scheme



The Park Scheme



The Courtyard Scheme



MASTERPLAN

The campus development is organized around a north-south / east-west circulation grid. The main, formal entrance to the campus is on the south side linking to other university and cultural facilities on Quadrant C over the urban boulevard. A secondary entrance is located at the north-east corner of the campus linking to the train and bus stations. There is a pedestrian connection at the mid-point of the eastern boundary connecting over the road to the Marin Dvor residential and commercial area and the old city. On the west end of the axis there is access to the campus from the residential and commercial area of Novo Sarajevo.

The plan maintains a strong edge on the west and east boundaries. On the north side parking and planting are used as a buffer zone; on the south side the existing park isolates the campus from the highway. The formal entrances on the south side and at the north-east corner are complemented by east and west secondary access points marking the ends of the strong axial pathway. Views of the surrounding city and hills are framed by view corridors as well as from the plazas and the ornamental park.

The organizational hierarchy of street, plaza and courtyard provides orientation and a variety of scales of public space. The street will be the focus of the campus reinforcing the benefits of multidisciplinary university life.

Reflecting the requirements of the program, the heart of the campus at the crossroads of the north-south and east-west axes, contains the core academic and administrative facilities, organized around the main plaza. The Library is located on the east side of the central plaza; the Rectorate and Administration offices and the Institute of Oriental Studies form the northern edge of the plaza; and the Academies of Arts, Music and Drama form the western edge.

Additional core functions surround the secondary plaza in the eastern half of the campus. On the northern edge, leading to the north-east entrance there is the Social and Cultural Center and a mix of retail and university functions. The west side of the plaza is the secondary entrance to the Library and Media Center; the east side of the plaza is defined by the Faculty of Architecture Building. At the east entrance the Faculty of Architecture is faced by the Design Center which will be open to the public.

The Sports Complex includes the sports hall and sports fields, located in the northwest quadrant of the campus, forming another major open space.

Joining these common functions are the main streets, onto which the enclosed courtyard form of individual faculties are attached. The south entrance leading to the main plaza is flanked by the Faculty of Law (on the west side) and the Departments of Civil Engineering and Transportation and Communications (on the east). The western half of the campus is flanked on either side of the main axis by the Faculties of Forestry and Agriculture and Economics (in the south-west quadrant) and the Faculty of Political Science (in the north-west quadrant).

The street serving the eastern half of the campus links the Technical Science disciplines: the Faculty of Civil Engineering; Specialized Laboratories; Transportation and Communications; and the Faculty of Architecture.

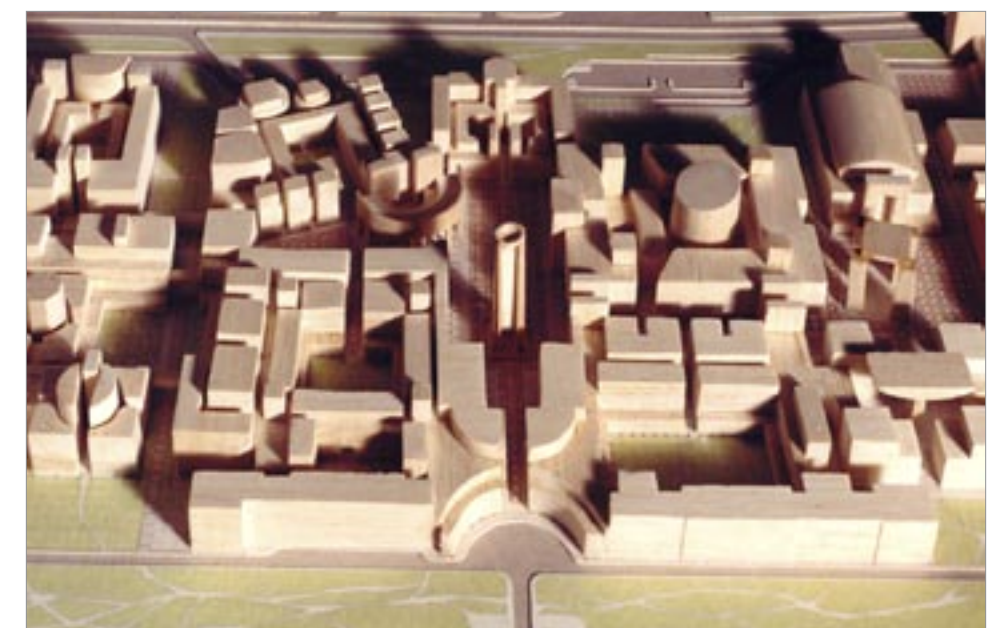
Classroom space has been standardized to allow for some flexibility of use and cross-programming of their use by different faculties. They are set mainly at grade for ease of access and to support the concept of cross-faculty utilization.

Vehicular circulation is restricted to the perimeter of the campus with vehicle access and parking confined to the northern edge. Emergency services can penetrate to the campus center on the pedestrian walkways. An underground service tunnel accommodates utilities throughout the campus and provides access to buildings for deliveries and trash removal.

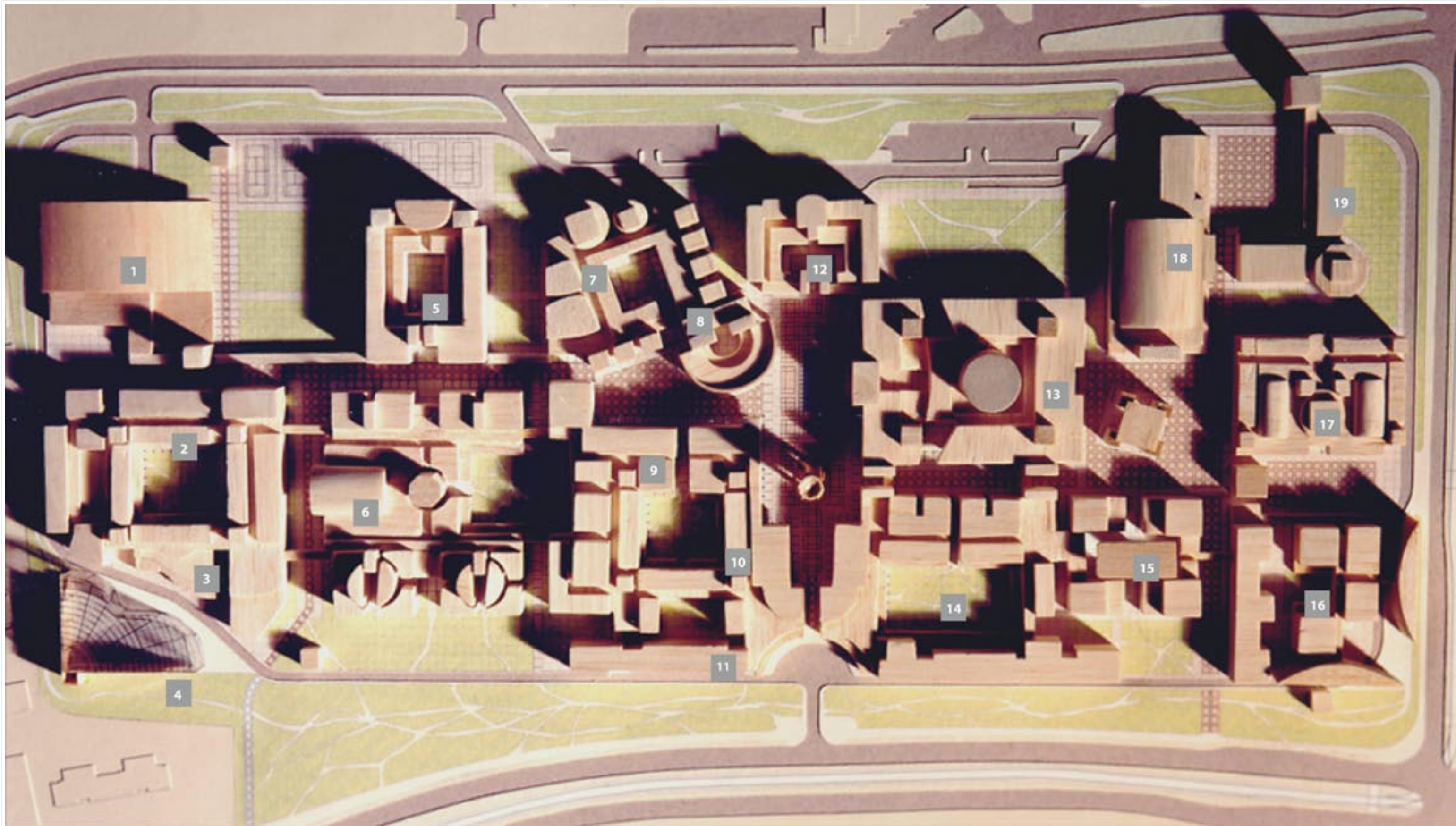
Larger scale public spaces open directly off the pedestrian streets and covered walkways. These plazas are designed as the main thoroughfares and meeting places of the University. Faculty courtyards are smaller in scale, quieter and more private.



Campus model, view from East. A hierarchy of plazas and courtyards along a spine.



Campus model, view from South.



- | | | | | | | | |
|----|------------------------------|----|----------------------------|----|---|----|----------------------------|
| 01 | Athletic Facilities | 07 | Music Academy | 13 | Library | 18 | Social and Cultural Center |
| 02 | Faculty of Agriculture | 08 | Academy of Theatrical Arts | 14 | Faculty of Civil Engineering | 19 | Residential Common |
| 03 | Faculty of Forestry | 09 | Faculty of Law | 15 | Faculty of Transport
And Communication | | |
| 04 | Botanical Garden | 10 | Faculty of Criminology | | | | |
| 05 | Faculty of Political Science | 11 | Institute of History | 16 | Design Center | | |
| 06 | Faculty of Economics | 12 | Rectorate | 17 | Faculty of Architecture | | |



LANDSCAPE

The planning and design of the hard and soft landscape in the university campus is integral with the concept of an urban matrix of streets, arcades and courtyards with the 'special' buffer zones on the edges abutting the streets and urban boulevard.

Soft landscape is concentrated within a hierarchy of open spaces throughout the campus:

- *Buffer Zones* on the northern and southern edges of the campus and the street edges. These are each relatively open fields supporting a heterogeneous planting of deciduous and evergreen trees and shrubs planned in an informal, ornamental style. The ground surface is primarily mown lawn permeated by pedestrian pathways.
- *'Special' Zones*, including the Botanical Garden, the Sports Fields and the Library Garden.

The *Botanical Garden* is enclosed and by definition will accommodate a range of native and exotic species planted for pedagogical and research purposes. The Botanical Garden will be a transparent structure with a strong visual presence extending into the landscape as well as being accessible as part of a recreational walk through the campus.

The *Sports Fields* are defined by function, consisting primarily of hardwearing mown grass, bounded on the south side by an orchard of deciduous trees.

The *Library Garden* is lawn area for passive recreation and relaxation with informal ornamental tree planting to provide shelter and shade.

- *Courtyards* are internal to the faculty or department building, treated with grass lawn, paved pathways and planted surfaces surrounded by paved arcades.

The planting list is based on existing species currently planted on the campus. In addition to formal and aesthetic objectives, planting and trees have been designed to provide shade, wind shelter, acoustic modulation and visual masking. Each of these functions should serve and be appropriate to the season and climate. Design development will focus on issues of sustainability including water consumption, retention and filtration and outdoor air quality.

Hard landscape is concentrated in three areas:

- *Vehicular roadways and parking*: the only regular vehicle circulation on campus is around the perimeter. The design of the road surface itself strives to minimize the visual impact. The materials used for road and parking surfacing are unit pavers.
- *Pedestrian Walkways and Arcades* are the primary circulation routes

within the campus. Unit paving will be in natural stone, capable of sustaining emergency vehicles. The design objective is to make direction and destination clear in the layout of the buildings and the character of the architecture, one result of this being a reduced need for signage.

- *Plazas* are the main public areas in the campus. Paving will be in natural stone and capable of sustaining emergency vehicles.

Throughout the campus there are pools and fountains to provide visual and aural stimulus to the landscape. Within the courtyards the water features are more formal. On the edges, in the buffer zones, the design of water features may be less constrained.



Landscape



Natural stone paved walkways



Library Garden



Fountains in the Courtyards



Phase One - Near Term, 0-5 years



Phase Two - Mid-Term, 5-10 years

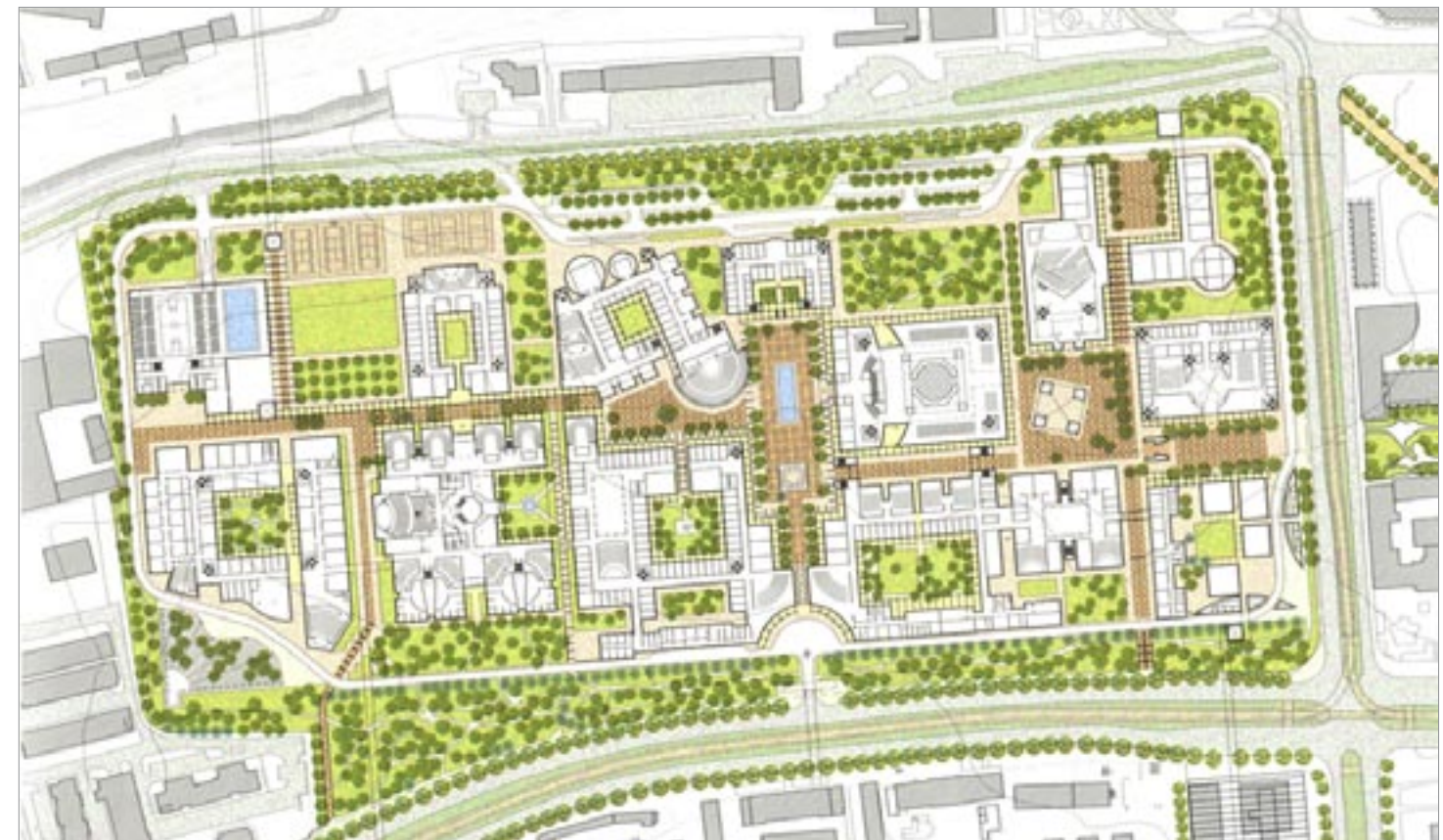
CONSTRUCTION

Construction of the campus will be phased over a number of years.

Phase One – the near-term of five years or less – will prioritize infrastructure and new accommodation for university functions which have either not had their own buildings or whose accommodation was destroyed by war. This consists principally of the Academy of Music; the Academy of Theatrical Arts; the Faculty of Agriculture; and the Faculty of Economics.

Phase Two – the mid-term of five to ten years – accommodates those facilities whose move to the new campus will open up space currently occupied at the Medical School and Hospital. These include: the Faculties of Transport and Communications; Criminology; Civil Engineering; Architecture; and Specialized Laboratories.

Phase Three – the long-term of ten or more years – will accommodate those faculties whose relocation to the Marin Dvor campus will assist consolidation. These include the Faculties of Political Science; Law; History; Forestry; Residential Premises and facilities for Science and Art activities.



Phase Three - Long Term, 10+ years



View from The Philosophers' Walk



View from The University Plaza



View from The Justice Mall

