The future of the AUB campus will be formed by the plans we make today. This difficult and important assignment has required careful consideration of options and alternatives. During the process of creating the plan, three alternative directions were studied. These alternatives differed in the placement of key facilities and contemplated the pedagogical effect this will have on AUB. One alternative proposed as little change as necessary to accommodate the future; a second alternative suggested creating multiple academic and social centers focused upon clusters of compatible disciplines throughout the campus; and the third envisioned a campus with all the central functions gathered from sites throughout campus and placed in a central common conveniently located for all the campus community. The task of considering the alternatives revealed the positive aspects of each. The master plan that has been created for AUB embodies the best of each of the alternatives. By embracing the best of each alternative, the plan is both clear in its intent and sufficiently flexible to accommodate the uncertainties of the future.
Master Plan Concept

The master plan concept can be described as the guiding principles for the proposals in the master plan and is the framework for future decisions not necessarily prescribed in the plan. They are:

- To provide an appropriately sized, state-of-the-art teaching environment by renovating existing buildings and landscape.
- To preserve the function of the Upper Campus as the historic center of the campus.
- To embrace the Medical Center as part of the Upper Campus.
- To ensure the quality of the Middle Campus through active landscape management, amplifying its importance on the campus.
- To transform the Lower Campus by creating multiple well-connected, distinct centers.
- To create strong pedestrian links between the academic, administrative, student quality-of-life, and support facilities.
- To strengthen AUB’s connection, both physically and programmatically, with its neighbors.

The following descriptions of each “system” of the campus illustrate how the plan has been created to give birth to and reinforce the guiding principles.
Building and Land Use

The building and land use organization proposed in the master plan builds upon the existing location of uses and employs new programs to help enforce the master plan concept.

Academic

Key adjustments to the location of academic buildings and the land use pattern of the AUB faculties are proposed:

• Faculty of Arts and Sciences: This faculty will remain split between the Green Oval on the Upper Campus and the Sciences Quad on the Lower Campus. Through building renovations and new space, a balance of space will be achieved between the Faculty of Arts and Sciences faculty offices and faculty offices. The master plan proposes a new building on the site of the East Labs. This building will accommodate the labs displaced by the demolition of the Environmental Laboratories and will accommodate some uses in the Environmental Laboratories and Hydraulics and Sanitary Labs and additional space for the faculty. Temporary facilities will be built behind the Durrafourd Buildings to accommodate these uses in the Environmental Laboratories and Hydraulics. This temporary structure and Durrafourd will act as swing space for the faculty during the redevelopment of Wings B and C.

• Faculty of Engineering & Architecture: This faculty will remain in its current location and be given room to expand in its existing buildings by relocating general classrooms to other buildings, accommodating the specialized needs of class labs, research labs and faculty offices. The master plan proposes a new building on the site of the East Labs. This building will accommodate the labs displaced by the demolition of the Environmental Laboratories and Hydraulics and Sanitary Labs and additional space for the faculty. Temporary facilities will be built behind the Durrafourd Buildings to accommodate some uses in the Environmental Laboratories and Hydraulics. This temporary structure and Durrafourd will act as swing space for the faculty during the redevelopment of Wings B and C.

• Faculty of Health Sciences: The Health Sciences faculty will remain in its current location. Van Dyck Hall is being renovated to meet the office, class lab and research lab needs of the faculty, and is expected to become an integral part of the medical-health sciences precinct. Health Sciences expansion and uses will take priority over other non-health science uses in Van Dyck Hall.
• Faculty of Agricultural & Food Sciences: This group will remain in Agriculture Wing A, and Wing B will be demolished to accommodate additional space in that area of the campus. The functions of the pilot plant will be placed in Replacement Agriculture Wing B after the development of additional classrooms replaces the need for classrooms in this building.

• Faculty of Medicine and School of Nursing: This faculty, along with the faculty of Health Sciences and the Medical Center, will be accommodated in a transformed quadrant that will extend the east end of the Upper Campus into the Medical Center. The School of Nursing will be given a permanent home in the Alumni Club, along with offices, Family Medicine and University Health Services. The Faculty of Medicine includes the hospital and clinics, and together, constitutes the AUB Medical Center. The underground parking structure will be designed to accommodate expansion of the hospital.

Libraries
- Jafet: Jafet is the main library on campus. To meet the identified need for more study space, the plan recommends reorganization and use of space in the lower level to accommodate more study space in the core of the library.
- Lower Campus Library: Stated in a key location within the Lower Campus, the Bethel Building will house the new Lower Campus Library. Through an addition to the Bethel Building, a new, well-located Lower Campus Library can be created. The intent is for this library to become the central academic study space on the Lower Campus.
- Medical/Health Sciences Library: During a major renovation of the Phase III portion of the Medical Center, this library will become the heart of the new Medical/Health Sciences district and be a center for study and academic work within the center. Expansion potential is created in this library by the relocation of offices and non-library functions to other sites within the district.

Quality-of-Life Facilities
- West Hall: The recently renovated West Hall is the center of student activities on the Upper Campus. The building is key to the operation of the campus, housing activity rooms, offices and a theater. Along with Ada Dodge Hall, this building will house the library, with the potential for additional classrooms in the future.
- Ada Dodge Hall: Ada Dodge Hall will be renovated to become the Upper Campus food service location. The campus bookstore could be relocated from Bliss Hall, placing this important campus function in a more appropriate location.

Support Facilities
- Parking: The master plan redirects the pattern of parking on campus from one of small, dispersed parking to consolidated, well-located supplies of parking. The plan recommends incorporating parking under most new facilities and the addition of new parking decks.

Administration
- Faculty Administration: Faculty administration will remain in their buildings in their districts.
- University Administration: This use will remain in College Hall. There is a need for additional student activity and study space in the Durraford Buildings. The Durraford Buildings, located at the edge of the campus, are in an appropriate location to house administrative functions that do not require day-to-day student contact.

Housing
- Faculty and Administration: Housing will remain unchanged, with the exception of the one residence being displaced by the Hostler Center. A temporary use, if necessary, for Durraford East would be administrative residence.
- Student: Currently, student housing on campus is well located at the campus edge. However, much of the housing exists within an environment that needs significant upgrading to compete with other choices available to students. The men’s housing—Kerr and Penrose Halls—is on the southwest corner of campus on Bliss Street. The master plan recommends renovation of Penrose and Penrose West and construction of Kerr. During the reconstruction of Kerr, significant attention should be paid to the open space around the buildings. The women’s residence halls will be the New Women’s Dorm, Bustany, Jewett, Muree, and Mary Dodge Hall. The plan recommends the construction of two new residence halls to the north of these existing halls. This will add to the supply of on-campus housing, complete a residential quad, and significantly upgrade the environment around the existing residence halls. These new facilities could be men’s or women’s residence halls, depending upon the need, demand and policy.
Landscape Structure

The landscape setting of the campus is the most memorable aspect of the AUB environment. The proposed master plan, in which the buildings and landscape reinforce one another, will produce a campus of exceptional quality.

The landscape structure at an institution is the central feature holding together a set of buildings, making it a campus. The landscape, primarily the Middle Campus, is seen as sacred at AUB, and is part of its institutional identity. The master plan builds upon the character and popularity of the Middle Campus. The Middle Campus is the vegetated escarpment dividing the Upper and Lower Campuses. The master plan enhances the Middle Campus and complements it with a series of other spaces: pedestrian promenades, courtyards, the University Overlook, plazas and the public street edge. The combination of these spaces and their locations creates a landscape structure that can become the framework on which the future is built.

Middle Campus

The founders, and later, others, planted much of the vegetation of the Middle Campus, then a rock escarpment. In fact, plants have been added to the Middle Campus landscape throughout AUB’s history. The master plan recommends creating a landscape management plan for this area. The plan suggests replanting vegetation, irrigation and selective pruning throughout the Middle Campus to enhance its function and ensure its future.

University Overlook

The University Overlook is a major outdoor space created from a series of fragmented open spaces between College Hall and Marquand House. The joining of several existing green areas, bordered by walks and roads, at the heart of the campus, creates an upper overlook to the Lower Campus and the sea. This space is one of the jewels attached to the upper promenade, providing spectacular views into the Lower Campus and out to the Mediterranean Sea. A small amphitheater integrated into the University Overlook could become a venue for informal concerts, plays and other activities.
Pedestrian Promenades
The master plan redefines many of the on-campus roadways into a system of pedestrian promenades. This is accomplished by limiting vehicular traffic, upgrading the pavement to a higher-quality material, and adding site amenities such as pedestrian-scaled lighting, benches, banners and trash receptacles.

During the upgrading to the pedestrian promenade system, the university can take the opportunity to add historical markers into the pavement throughout the campus. These markers will honor past achievements of the AUB community and add an educational aspect to the landscape. This system will consist of an upper and lower promenade connected at the east end, as illustrated in Figure 28. The promenades will be joined at each end and throughout the campus by a series of existing stairways.

The upper promenade, located at the top edge of the Middle Campus, will span from the Medical Gate to the West Plaza. It will link the Medical Center quads, University Overlook and the Green Oval with stairway landings, other pedestrian paths and building entrances, forming a chain of significant places on the Upper Campus. The upper promenade will offer spectacular views north toward the sea and south into the Upper Campus.

The lower promenade will span from the Lower Campus Residential Gate on the east to the Faculty Residential Gate on the west. This promenade will have extensions to the Corniche along each side of the Green Field. Located at the base of the Middle Campus landscape, this promenade will link the Residential Greens, the FEA Stairway, the Green Field, the basketball courts and the Sciences Plaza with the Hostler Auditorium, stairway landings and building entrances, forming a chain of significant places on the Lower Campus. The lower promenade will have an intimate character—more like a corridor enriched with interesting places along its length.

The connector through the Middle Campus will join the upper and lower promenades at the east end. The connector will be an alternative to the stairways and the only access for service and emergency vehicles between the Upper and Lower Campuses.
Plazas

The plazas contribute to the hierarchy and enrichment of the landscape structure. Plazas are primarily hard-scape, performing as the forecourt to building entrances and antidoting heavy pedestrian use due to their locations. While many of the plazas are for pedestrians only, several are in locations where vehicular traffic is likely. Plazas proposed in the plan include the Medical Plazas, Banyan Gate Plaza, JFK and College Hall Plaza, Kerr Plaza, Sciences Plaza, FEA Way and Stairway, and the Hostler Plaza, and are illustrated in Figure 29.

All of the plazas contribute to the landscape structure, but some of the more significant are Banyan Plaza, Museum Plaza, West Plaza, FEA Way and Stairway, the School of Business Plaza and Hostler Plaza.

- **Banyan Plaza:** The Banyan Plaza will embrace the intersection of John F. Kennedy Street, Bliss Street and Clemencou Street, and be figuratively, the bridge between the Medical Center and the larger campus. This plaza will connect the upper promenade to the Medical Center quads. Using the same paving in the streets as in the walkways will help “span” the streets for the pedestrian. The safety of this intersection will be improved by traffic lights and by narrowing the vehicular travel lanes. Using similar architectural features to create the replacement for the Banyan Plaza Gate on the larger campus, and the gate at the lower medical quad will reinforce the connection across the streets.

- **Museum Plaza:** Museum Plaza, between Post Hall and the Old Pharmacy Building, will be created to provide an entry plaza to the university’s museum facilities in this location. In the long term, the plan recommends that Post Hall become the Art and Natural History Museums. This plaza will have a gateway from Bliss Street and will not allow access to the larger campus.

- **West Plaza:** West Plaza is proposed to become a vehicular drop-off point for the university. Located between Kerr, Penrose, Fisk and Bliss, this vehicular court will provide a safe and secure location for first-time visitors to park and enter the campus. This site is well located for easy access to the...
Upper Campus through the Oval and the Lower Campus down the West Side Stairway. The plan recommends a modest amount of visitor parking in this location.

- **FEA Way and Stairway:** The existing service drive behind the Faculty of Engineering and Architecture Buildings will be transformed into a linear pedestrian plaza punctuated by a set of grand stairways descending from the lower promenade. The stairway and plaza are intended to be a gathering place for members of the AUB community visiting this area of the campus. This transformation will be accomplished by enhancing the pavement, pedestrian lighting, benches, and vegetation where appropriate. This plaza will provide a direct link between the Lower Campus residence halls, through the campus parking deck, to the FEA Buildings, the service building and the Green Field.

- **Hostler Plaza:** All student centers have a significant amount of lounge space for informal gatherings and coincidental meetings. This plaza between the Hostler Building and the Green Field is intended to be the lounge space for the Lower Campus. To help provide the amenities that attract people, the plan recommends siting a café under the Green Field grandstands. This café can serve events at the Green Field, the Hostler Basketball Courts and the Hostler Theater/Auditorium. The plaza also will provide a link between the Corniche and the lower promenade.

- **The School of Business Quadrangle:** A grand space will be created at the School of Business by enclosing a new space between it, Durrafourd West, Engineering Wing B and the Goshn Building. This plaza will provide a direct link between the Corniche and the lower promenade.

- **The Medical Quadrangles:** The Medical Quadrangles will be series of three quads each having a different character but linked by stairways with similar pavement and amenities, cascading through the Medical Center and creating a landscape structure to a densely populated, busy and stressful environment. A cascading water fountain from the Phase II Plaza will accent the lowest and largest of the quads. This quad, off Banyen Gate Plaza and Clemenceau Street, will organize the diverse architecture describing the space with an oval of palm trees set in an oval lawn panel. The plaza that will open up to Maman Street will act as the hub, collecting several pedestrian paths from a variety of different sources and organizing the group into a hierarchy that will provide clarity and simplicity for pedestrians traveling the paths to different locations within the Medical Center. This quad will provide the primary access to the visitor and patient parking deck. The last of the Medical Quadrangles is in the center of Phase I and Phase III. This quad will be remodeled to include the pavement, lighting and amenity standards developed for this plan.

- **Van Dyck Court:** Van Dyck Court is an existing space that will be renovated to accommodate a direct link between the entrances into the Old Medical and Van Dyck. As part of the Health Sciences Medical Center precinct, these buildings should have entrances facing one another as well as an entrance to the upper promenade.

- **The Green Oval:** This is the oldest and most established open space on campus. Removing pavement from the base of the buildings that define the space will enhance the definition of the oval.

- **The Sciences Courts:** These courts consist of some newly created spaces and existing spaces. Removing the parking adjacent to the Physics and Agriculture Buildings will create a new court that will open directly onto the lower promenade. The small café will remain in a rebuilt facility.

**The Public Street Edge**

For many citizens and visitors to Beirut, the public street edge is the only landscape image available of AUB and is an important element in the landscape structure. The master plan recommends creating new images for the university, commensurate with the quality and thought being planned for areas behind the walls. This will be accomplished by upgrading the design and quality of the Bliss Street edge and the Corniche Edge.

- **The Bliss Street Edge:** The area from the new clinics on the east end to the new Kerr Residence Hall on the west end will be upgraded. This upgrade will include the creation of spaces along the security perimeter that are more transparent and provide views into the campus by removing the solid wall and replacing it with a well-designed, high-quality fence. The desire for visual transparency will be balanced with the degree of privacy and quiet appropriate to a learning environment. The pavement and lighting along the north side of Bliss Street will be upgraded to the AUB (or similar) standard.

- **The Corniche Edge:** The area from the Durrafour Building on the east to Faculty Apartment II residence on the west will be upgraded. Given the change in elevation between the campus and the Corniche, much of this edge will be a retaining wall. However, every attempt should be made to mitigate the negative aspects of the retaining wall. The School of Business, Hostler Center and other facilities along the Corniche should present an "open and inviting" image for AUB. The master plan also suggests large places outside the gates for use by the public.
Campus Circulation System

Portions of the campus landscape structure and campus circulation system exist together, each reinforcing the other’s ability to connect buildings and open spaces, providing a clear system for movement to and through the campus. Elements of the campus circulation system include pedestrian, vehicular, and parking.

Pedestrian Circulation

This system consists of primary and secondary pedestrian promenades, pedestrian bridges or tunnels, and stairways, and is illustrated on Figure 30. The pedestrian system enhances well-established connections and creates several new connections that will diversify and expand the existing system.

Primary Pedestrian Promenades

The functional paradigm for this element of the pedestrian system is the historical path from the Medical Gate to the Main Gate and to the Green Oval. The physical model, the paths’ pavement, lighting and other amenities, do not exist on campus today. All the primary pedestrian promenades will be enhanced to the standards set by this master plan. The primary promenades include the historical path, the upper and lower promenades, and the Middle Campus connector between the upper and lower promenades. Due to their locations on campus, these paths experience the greatest volume of pedestrian traffic. They extend east-to-west to each corner of the campus and are connected in key locations by secondary promenades and stairways. A very important part of the primary pedestrian promenade system is the Middle Campus connector on the east side of campus. This piece of the system is the only access between the Upper and Lower Campuses that is not a stairway. Because this piece is the only ramp, its primary function is to allow services, emergency and shuttle bus access to occur without vehicles having to leave the campus.
Secondary Pedestrian Promenades

The functional model for this element of the pedestrian system is the service alley behind the Bechtel Building (FEA Way). Again, a design model for this element does not exist on campus. The physical design of this element will be less of a standard than the primary path and will more than likely vary on a path-by-path basis, conforming to the constraints of a given situation. The FEA Way, a new secondary promenade, will contribute to the organization of the Lower Campus. This promenade will connect the lower promenade, Green Field and the entrances of all the engineering and architecture buildings. On the west side of the Green Field, another secondary promenade will connect the new Haelter Center to the Faculty Residential Gate and the entrances of the sciences buildings between these two points. At the Medical Center, an important secondary pedestrian promenade will be created that stretches between the courtyards and the Banyan Plaza.

Pedestrian Tunnels

These unique features will play important roles in the circulation of pedestrians. The pedestrian tunnels will provide safe connections between sites divided by busy streets. The two tunnels are for passage between the Lower Campus and AUB Beach, and for passage between the Medical Center and the Upper Campus.
Stairways

As can be identified on the diagram, stairways will contribute significantly to the north/south pedestrian movement on campus. Of course, because of the elevation change, the largest collection of stairways on campus exists in the Middle Campus. The master plan recommends enhancing the design of all these stairways and reopening the large stairway on the west end from Bliss Hall to the pedestrian promenade south of Hariri Faculty Residence Tower. By creating a “landing” of different pavement and design from that of the upper and lower pedestrian promenades, the locations of the Middle Campus stairways will be clearly identified for easy use and will help to create a sense of connection between the Upper and Lower Campuses. Other significant stairways proposed in the plan include the FEA Stairway, connecting the lower promenade to the FEA Way, and the new Corniche Stairway on both sides of the Green Field. The stairways are intentionally located to make north/south circulation through campus easier and more convenient.

Public Street Edge

All the public sidewalks—on both sides of Maamari Street in the Medical Center, the north side of Bliss Street and the south side of the Corniche—will contribute significantly to pedestrian circulation around the campus. These sidewalks will provide access for members of the university community who do not live or park on campus. The master plan recommends working with the City of Beirut to improve the condition and design of these sidewalks. Maamari Street, flanked on both sides by AUB facilities, is heavily traveled by members of the university. The master plan suggests improving this experience by removing the on-street parking and creating wider sidewalks on both sides of the street. The Bliss Street and Corniche edges are heavily traveled by students, faculty and staff who live or park in the neighborhood and walk to the campus. The master plan recommends enhancement of these edges to provide a safer and more pleasant experience for pedestrians.
Vehicular Circulation

The vehicular circulation system consists of three elements: emergency and service access, parking and service access, and shuttle bus access. The master plan has been based upon limiting all vehicular circulation on campus to emergency vehicles, small service vehicles and shuttle buses only.

Service and emergency vehicles will use the primary pedestrian promenades and suitable portions of the secondary pedestrian promenades to access campus facilities. Servicing a campus of this size with supplies and maintenance requires a system. The master plan suggests that this system consist of a central storage and receiving facility located on the edge of campus, with clear access to the city street system. From this point and from the maintenance facility, supplies and maintenance services will be dispatched to campus buildings in small, golf-cart-sized vehicles. Trash collection throughout the campus will be accomplished in the same way.

Figure 31. Proposed Vehicular Circulation
Emergency vehicles will have access to the campus through the vehicular gates. From those points on the primary promenade system, emergency vehicles will have access to all facilities on campus. The pedestrian promenade system is designed to accommodate all emergency vehicles.

Private vehicles of faculty and staff will be allowed on campus only to access the parking supply. All parking has been located at the campus edges to eliminate the need to drive through campus to access a parking space. This physical arrangement can be further managed by allowing faculty and staff vehicles to access the campus only at the gates leading to their parking spaces.

Due to the topographic changes and the dispersed nature of the academic facilities, the master plan recommends continuing the shuttle bus route to run continuously. The shuttle bus will travel on the primary pedestrian promenade, with its route traveling from West Plaza on the Upper Campus to the Faculty Residential Gate on the Lower Campus.

Figure 32. Proposed Shuttle Route
Gateways

As part of both the circulation system and security system for the campus, the gateways have been carefully considered in the master plan. There are four categories of gates: pedestrian-only, vehicle-only, pedestrian-and-vehicle only, and service-only. The locations and categories of gateways have been chosen to minimize pedestrian/vehicular conflicts and assist in providing security for the campus.

There are only three pedestrian- and vehicle-only gates. They are identified as Gates 1-3 on Figure 33. Gate 1, the Banyan Gate, will be predominately a pedestrian-only gate, allowing only limited service vehicles to enter the campus at this location. Gate 2 is the proposed West Plaza Gate. This gate will be predominately a pedestrian-only gate, allowing only pedestrians, service vehicles, and vehicles bound for the visitor parking spaces in West Plaza. Gate 3 will be predominately a vehicle-only gate, allowing access to the faculty residential parking areas, service vehicles, and pedestrians.

There are seven vehicle-only gates, all providing access to the parking supplies on campus and some providing access to service docks for specific facilities. Gate 4, on the Comiche, will provide access to the service and parking supply under the Hostler Center. Gate 5 will provide access to the parking supply under the School of Business and service access to the School of Business and the West diamonds Building. Gates 6 through 10 will provide access only to parking supplies. The security at these gates could be provided by key cards, allowing twenty-four-hour-per-day access without the expense of a guard.

Eight gates—11 through 18—will provide pedestrian access only. The most notable of these gates is the Main Gate. Gate 13, the School of Business Gate, can be closed most of the time and should be open only to provide special access to the School of Business. Gate 18 will provide pedestrian access limited to the AUB museums.

Five gates—19 through 23—will provide access to the service area only and can be opened when necessary. Gate 19 will provide access for delivery vehicles to the central warehouse and receiving facility under the Salient area parking deck. Gate 20 will provide outside vehicle access to the primary pedestrian promenade.
Parking

The parking supply has been sited and sized to work in concert with the proposed vehicular and pedestrian circulation systems. The existing parking supply of 1,115 spaces will be increased to 2,100 in the long term, and will be consolidated into eight locations. The university will continue to accommodate faculty, staff, patient and visitor parking needs and will expand the parking supply by the deficit of spaces and to meet the needs of these populations as they grow. Student parking is not accommodated on campus at present and will not be accommodated in the future.

The parking supply will be centrally controlled and managed as a campus-wide resource. This will allow the highest level of flexibility and efficiency in managing this expensive resource.

A parking lot survey was conducted by the master planning team over a one-week period in March 2001 and current demand was determined by counting the occupied spaces. This current demand was used to extrapolate future need.

The long-term demand for parking, given current policies, is approximately 2,100 spaces, with a distribution of about 50/50 between the campus and the Medical Center. At this time, it is proposed that all small surface parking lots now distributed throughout the campus be removed. These spaces will be accommodated in new structures or surface parking lots located at campus edges. The accommodation of the long-term parking program is illustrated in the following table:

<table>
<thead>
<tr>
<th>Structured Parking</th>
<th>Underground Parking</th>
<th>Surface Parking</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>390</td>
<td>39</td>
<td>50</td>
</tr>
<tr>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>50</td>
<td>250</td>
<td>200</td>
<td>2100</td>
</tr>
</tbody>
</table>

Figure 34. Proposed Parking
Infrastructure

Potable Water
The plan recommends the following actions to ensure the availability of potable water in the future: rehabilitation of the main water reservoir under the tennis courts, installation of a meter system to help monitor and manage the resource, upgrading of the chlorination process, and investment in a reverse osmosis plant and in deep-water pumping.

Fire Fighting
The water system for fire fighting will be expanded and upgraded as necessary to provide an automatic line to campus security forces.

Brackish Water Network
This network will play an important role in supplying the reverse osmosis plant. The reverse osmosis plant provides a long-term solution to landscape irrigation.

Stormwater Drainage Network
The plan recommends performing deferred maintenance, providing better definition and consolidation of discharge location and separation from the sewerage network where this occurs. As this upgrade occurs, a system of collecting and storage of stormwater could be implemented.

Steam Network and Refrigeration
The plan recommends continuing to use the steam network and adding absorption chillers for air-cooling. The distribution network for steam should undergo routine maintenance and upgrading, and absorption chillers should be added to the system to provide a long-term solution to refrigeration.

Power Plant and Network
The long-term plan for the campus' electrical supply is to migrate slowly towards purchasing power from the utility by building up the power distribution network. This solution is engineered to permit growth; is flexible, to switch between power sources; and is reliable, to maintain power. The system can be upgraded, supports transition between power sources, and can accommodate future service level agreements with the authority. The master plan recommends subscribing with the public utility company, developing a substation, purchasing transformers and switchgear, and upgrading the existing distribution system to form continuous loops. Over the long term, these improvements will provide the most flexibility in the future. New buildings, such as the School of Business and Hostler Center, will be designed with back-up operations.

Outdoor Lighting
Through the standards developed for the pedestrian promenades, outdoor lighting will be expanded to provide an appropriate level of lighting throughout the different areas on campus.

Telephone Network
The master plan recommends the immediate upgrade of the two telephone exchanges on campus. This upgrade will allow flexibility for the next ten years.

Data Network
The master plan recommends updating the network throughout the process of building renovation. In addition to buildings, the master plan recommends wireless connections accessible at any of the significant outdoor spaces on campus.

Security Systems
The master plan aims to enhance the security system by placing a series of call boxes throughout the campus. These call boxes will provide an automatic line to campus security forces.

Table One: Parking Current and Future Demand

<table>
<thead>
<tr>
<th>Spaces</th>
<th>Academic Current</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students FTE</td>
<td>5,505</td>
<td>6,500</td>
<td>7,500</td>
<td>8,500</td>
</tr>
<tr>
<td>Faculty FTE</td>
<td>680</td>
<td>802</td>
<td>926</td>
<td>1,049</td>
</tr>
<tr>
<td>Staff Non-Hospital FTE</td>
<td>904</td>
<td>904</td>
<td>904</td>
<td>904</td>
</tr>
<tr>
<td>Staff Hospital from Clinical Volume Projections</td>
<td>1,503</td>
<td>1,532</td>
<td>1,638</td>
<td>1,902</td>
</tr>
<tr>
<td>Total Faculty &amp; Staff FTE</td>
<td>3,087</td>
<td>3,238</td>
<td>3,468</td>
<td>3,855</td>
</tr>
<tr>
<td>Academic Parking*</td>
<td>926</td>
<td>971</td>
<td>1,040</td>
<td>1,197</td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinics: Patients and Visitors Spaces</td>
<td>160</td>
<td>215</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Beds: Patients and Visitors Spaces</td>
<td>300</td>
<td>300</td>
<td>425</td>
<td>425</td>
</tr>
<tr>
<td>Hospital</td>
<td>620</td>
<td>730</td>
<td>925</td>
<td>925</td>
</tr>
<tr>
<td>Total Academic and Hospital Spaces</td>
<td>1,546</td>
<td>1,701</td>
<td>1,965</td>
<td>2,082</td>
</tr>
</tbody>
</table>

*Based on .3 spaces/FTE.

Table Two: Twenty-year Accommodation

<table>
<thead>
<tr>
<th>Campus</th>
<th>Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lots at Faculty Housing</td>
<td>80</td>
</tr>
<tr>
<td>Lot at New Bliss Street Drop-off</td>
<td>30</td>
</tr>
<tr>
<td>Hostler</td>
<td>250</td>
</tr>
<tr>
<td>School of Business</td>
<td>200</td>
</tr>
<tr>
<td>Deck in Salient Area</td>
<td>390</td>
</tr>
<tr>
<td>Sub Total</td>
<td>950</td>
</tr>
<tr>
<td>Medical Center</td>
<td></td>
</tr>
<tr>
<td>Under Phase III</td>
<td>375</td>
</tr>
<tr>
<td>Deck</td>
<td>650</td>
</tr>
<tr>
<td>Under Clinics Phase II</td>
<td>125</td>
</tr>
<tr>
<td>Sub Total</td>
<td>1,150</td>
</tr>
<tr>
<td>Total</td>
<td>2,100</td>
</tr>
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</table>
Urban Design Framework

In the preceding sections of the plan, each campus “system” was described and illustrated. Each system was assembled together as a group to create the campus. After all the systems have been conceived together, a series of principles can be created to support the initial concept of the plan. This, in essence, is the urban design of the campus. This urban design defines external space and creates a variety of individual spaces which, in combination, form a spatial continuum. While spaces may vary in size, proportion, material or texture, each must retain a commonality so that the integrity of the whole is not lost.

- Major Promenades: The primary pedestrian circulation and gathering areas are defined by the top and bottom of the Middle Campus landscape and extend the entire width of the campus.
- Secondary Promenades: These are pedestrian circulation and gathering areas that are defined by buildings and landscape that help structure a precinct or smaller area on campus.
- Enhanced Pedestrian Links: Pedestrian circulation linking important outdoor spaces.
- View Corridors: Views from the Upper Campus that are to be preserved.
- Building Entrances: This identifies the location of building entrances that are key to completing the intended network of outdoor spaces and the circulation system.

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Figure 35. Urban Design Framework
• Build-to-Line: These are the building edges that define the major spaces of the campus.
• Parking and Service Entrances: Entrances to the campus for parking and for service vehicles, located to minimize pedestrian/vehicular conflict.
• Service-only Entrance: Entrances to the campus with vehicular access limited to service vehicles.
• Existing Campus Buildings: Buildings on campus that are to remain.
• Proposed Buildings: Building sites for new buildings.
• New Gateways: They mark key campus gateways and strategic places on campus.
• New University Overlook: A new “heart” for AUB, created from existing open spaces.
• New Plazas: Gathering places, primarily paved, for pedestrians, which can accommodate a large volume of use.
• Focal Point: The historic clock tower on College Hall.
• Significant Vegetation: Vegetation within the project area that helps to create the image of the campus.

Figure 36. Section Through East Side of Campus

Figure 37. Section Through West Side of Campus
Master Plan Implementation

To complete the plan is one thing, but to take the plan and see positive physical change in the environment is the reason for the plan. However, the master plan cannot accomplish this. There are two things important in realizing the plan: The first is the creation of an administrative position in the university, whose charge is to implement the plan; and the second is a set of phases that suggests the priorities for the proposals in the plan.

Phasing

The plan makes several key proposals, many of which will affect the future for AUB. However, not all of these proposals can or should happen at the same time. One of the elements from which the plan gets its flexibility is in the priority that is placed on the proposals. After the university begins to implement the plan, time and the experience gained from building parts of the plan will alter which, how and if the later proposals are implemented.

Phasing is the process of prioritizing proposals in a sequence that makes sense physically and helps the campus reach other academic goals. For the purposes of this plan, the proposals have been divided into three phases. They can also be thought of as short-, medium- and long-term projects.

Figure 38: Proposed Phasing
Administering the Plan

An important aspect of the master plan implementation will be creation of the structure to administer the plan. There are three key components to this structure: the office of planning and design, the Master Plan Steering Committee, and the Campus Planning Committee.

The Facilities Planning and Design Unit

The office of planning and design within the university will administer and implement the recommendations of the master plan. Creating, implementing and updating a facilities master plan is an important function on a campus. The focus and mission of this group are different from those of any other department on campus and should not be thought of as a function of the physical plant department. At many universities, this department reports to the vice president for administration. There may be occasions when this group will report directly to the president. At many smaller institutions, the office of planning and design is very small, and many of its functions are contracted to a campus planning and design consultant. In any case, their responsibilities are:

- To implement, through a comprehensive process, the campus master plan.
- With the vice president for finance, to promulgate the capital improvement budget based upon the campus master plan.
- To convene, with the president, the Master Plan Steering Committee.
- To convene and chair the Campus Planning Committee.
- To administer the process for the selection of planning and design consultants.
- To administer the design and construction process for all capital improvement projects.
- To create and administer, with the provost, the space guidelines.
- To create and administer, with the physical plant director, the design guidelines.

**Phase I**
- Demolition
  - Environmental Laboratories and Hydraulics and Sanitary Labs
  - Alumni Hall
  - Warehouse
  - Health Club/Stadium Setting
  - Residence
  - Dale Home
- Renovations/Additions
  - Nicod Hall
  - Adas Dodge Hall
  - Durraniq East (offices)
  - Gulbenkian Infirmary (academic)
  - Alumni Club (academic)
  - Van Dyck (renovation started)
  - Building 56 (renovation started)
  - Old OPO (renovation started)
  - Hospital (renovation started)
  - Old Infirmary
- New Buildings
  - School of Business
  - Hostler Center
  - Temporary Warehouse
  - Parking at AUBMC
- Site Improvements
  - Green Field/Site around Hostler and School of Business
  - University Overlook/Upper Promenade I
  - Lower Promenade I
  - Middle Campus Enhancement I
  - Service Yard/Warehouse
  - AUB Beach
- Infrastructure
  - Additional Water I (RO Plant)
  - Telephone System Upgrades
  - Energy System Upgrade I
  - Power Distribution Upgrade I
  - Water, Stormwater & Sewage Upgrade I

**Phase II**
- Demolition
  - Kerr Hall (if necessary)
  - House Between Engineering Shops
  - Wing B
- Renovations/Additions
  - Emile Bustani Hall (physics)
  - Bachelet Engineering Building
  - Durraniq West (academic)
  - Fisk Hall
  - Jesuq Hall
  - Medical Gate
  - Engineering Shop West
- New Buildings
  - New Engineering Shop East
  - New Women’s Gate Residences
  - Kerr Hall Replacement (if necessary)
  - New Agriculture Wing B
- Site Improvements
  - Middle Campus Enhancement II
  - Lower/Upper Promenade II
  - Medical Campus Quads
  - West Plaza Enhancement
  - Medical Gate Site Enhancement
- Infrastructure
  - Energy System Upgrade II
  - Power Distribution Upgrade II
  - Water, Stormwater & Sewage Upgrade II
  - Refrigeration Upgrade I

**Phase III**
- Demolition
  - Alumni Tennis Courts
  - House Next to Corporation Yard
- Renovations/Additions
  - Biology Building
  - Agriculture Wing A
  - Architecture Building
  - Jafet Memorial Library
  - Post Hall (as Museum Space)
  - SAAB Medical Library
  - Main Gate
  - Penrose Hall
  - Old Medical Building
  - Old Pharmacy Building
- New Buildings
  - Academic Building Next to Corporation Yard
  - Private Clinic Building
  - Environmental Health and Safety/warehouse and Parking Deck
- Site Improvements
  - Faculty Housing Site Enhancement
  - Bliss Edge Enhancement
  - Middle Campus Enhancement III
  - Lower/Upper Promenades III
- Infrastructure
  - Migrate to Utility Power
  - Water, Stormwater & Sewage Upgrade III
  - Refrigeration Upgrade II

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American University of Beirut Campus Master Plan
The Master Plan Steering Committee

The process is an important aspect of campus planning. A key component of the process is the creation of a forum for dialog and communication about the physical future of the campus within the university community. This committee is essential in creating this communication. It should be comprised of representatives from each of the different constituencies that exist at the university. The committee's responsibilities will be to advise on the creation of the master plan. However, the committee's advice should be solicited throughout the long-term implementation of the master plan. The director of university planning and design should chair the committee, and the meetings should be held regularly to address relevant issues and projects. The Master Plan Steering Committee should:

- Advise on the establishment of general policies for the orderly, efficient, and attractive development of the university's physical campus and facilities, giving particular attention to aesthetic and environmental consideration. This will be accomplished through the creation and updating of the campus master plan document.

- Advise on proposals for major development or building projects and proposals for major revisions in ongoing projects.

- Advise on policies of space allocation and utilization, major modifications or reallocations of existing facilities and the response to development proposals of all affected elements of the university.

The implementation of the master plan is as important as its creation. AUB should create a permanent role within the administration, charged with the function of long-term physical planning and design. This proposal could become one of the most significant in the plan, ensuring a long and successful life for this plan.

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