

EXISTING CITY CENTER

IN RECONSTRUCTING BEIRUT CITY CENTER, SOLIDERE HAS BUILT ON THE INTRINSIC QUALITIES OF THIS EXCEPTIONAL GEOGRAPHIC AND HISTORIC SITE AND GREATLY ENHANCED THROUGH SOUND URBAN PLANNING AND DESIGN, NEW INFRASTRUCTURE AND FINE LANDSCAPED PUBLIC SPACE, MAKING IT A CHOICE LOCATION FOR LIVING AND WORKING, AS WELL AS A CULTURAL, TOURIST, LEISURE AND SHOPPING DESTINATION.



Solidere prepares development sites for investors wishing to develop real estate properties in central Beirut. Its activities in this respect involve town planning, parceling and urban management, site preparation, archeological investigation, and the implementation of infrastructure, landscaping, hardscaping and street furniture. The reconstitution of the public domain and the laying of infrastructure and utility networks, completed in the existing city center, will extend to the new waterfront district. As per its 1994 agreement with the Council for Development and Reconstruction (CDR), Solidere implements these works on behalf of the State in return for an allocation of 29 ha of development land in the waterfront district.

MASTER PLANNING

The initial master plan was amended several times in the light of necessary changes to the waterfront reclamation, more detailed urban studies and sector plans, reflecting Solidere's own city-making experience in Beirut and changing trends in market demand. The latest Master Plan updates regarding the existing city center were issued in Council of Ministers' decrees in 2006.

INFRASTRUCTURE

Beirut city center has a 3.6-km ring road, 8.4 km of primary roads, 16.6 km of secondary, tertiary and pedestrian streets. Expansions to the prewar grid accommodate traffic and facilitate land parceling for real estate development. Three major axes form the ring road system: George Haddad street to the east; the widened Fakhreddine street to the west; Fouad Chehab avenue to the south, with a bridge doubled in capacity and new interchange and underpasses providing fast access to airport, port, east, west and central Beirut. Avenues cut across the city center from north to south. Park avenue links the traditional city center to the hotel and waterfront districts. New local streets were created in Wadi Abou Jamil. The Martyrs' Square axis links Damascus road to three major east-west boulevards: Weygand, Zeitouneh and Port streets, the latter widened and extended towards Trieste street. With its western segment operational, and connecting directly to the citywide corniche system, the city center corniche is to skirt the waterfront district alongside a broad, terraced, pedestrian esplanade.

Among the Master Plan amendments of 2006 are two major road improvements. One is the road linking the north of Martyrs' Square to Trieste street. Michel Macary (France), in coordination with Dar Al-Handasah and Solidere, completed the concept design for the crossing from Byblos street, which includes bridging part of the ancient Tell area in order to preserve archeology. The other is an improvement of the George Haddad - Fouad Chehab junction, creating grade separation at the intersection. The project, including the tunnel design, awaits CDR committing funds for the project and entrusting Solidere with its implementation.

In Bechara Al Mouhandess pedestrian street east of Maarad, overlooking Hadiqat As-Samah, Solidere had earlier completed the part along the restaurants and cafés, where half of the six-meter space is used as terraces, and the continuation of the passageway until Amir Assaf mosque. The retaining wall until the St George Greek-Orthodox and St Elie Greek-Catholic cathedrals was completed by end October 2007.

The city center water supply network consists of 30 km for drinking water and 38 km for irrigation. The water disposal system comprises a sewage pumping station, 28-km sewage piping and 26-km storm water drainage.

Solidere implemented civil works, including culverts, relating to power supply, and installed the 66 and 220 KV power cables, a 220 KV link between the Beirut pine forest station and the city center, and a 240 MW substation transforming high-tension power transmitted by Electricité du Liban into medium voltage; local transformers in turn convert it to low voltage electricity for domestic use. Most areas of the existing city center were equipped with duct banks for its medium voltage cables, with Bachoura and north Saifi still to follow.

Public lighting was installed throughout, with necessary meters, low-voltage cabling, lighting fixtures and feeder pillars. Tunnels were equipped with lighting, stand-by generators, control and safety systems. Civil works were also implemented for telecommunications networks, with duct banks for low current networks, cable TV and telephone services.

Solidere obtained in 1998 a build-and-operate license for broadband distribution of a converged IP network including high speed internet, internet protocol TV (IPTV), video on demand, video conferencing, data center facilities and virtual private networking (VPN) for corporate clients. The Company signed in 2006 an agreement with Orange, a member of the France Télécom group, for the building and operation of a fully IP network, using advanced telecom technology based on a fiber-optic backbone with dual connection to each building in Beirut city center.

Deployment of the Solidere Broadband Network (BBN) was completed by end March 2007, after a slowdown due the 2006 summer war and embargo, with further delay caused by ensuing political events. The pilot project started upon receipt of the bandwidth for testing from the Ministry of Telecommunications. The operation was launched once the required bandwidth was obtained, allowing the provision of services to start everywhere in September 2007, with the exception of the Riad El Solh, UN House and south Martyrs' Square areas, due to the sit-in at the time.

Solidere, under its unified communication network, is now able to provide data (internet) and video (TV), operated and monitored from the network operation center (NOC) that is hosting its data center, call center (IPCC) and other equipment and servers for the different services. Beirut city center is thus being transformed into a 24-hour IT zone capable of attracting multinational companies and other residents who will benefit from the provision of multimedia and broadband communication services.

HARDSCAPING AND STREET FURNITURE

Hardscaping and street furniture were upgraded at Solidere's expense beyond the agreement with the State. Street and sidewalk paving, as well as streetlights, were designed to complement the character of each sector. Sidewalks were upgraded from concrete to granite tiles and kerbs.

Solidere undertook the integrated design of street furniture, signage and public area lighting, and commissioned public art for the city center. Plaques with new postal codes were installed on completed buildings. Development controls were generated in a public domain master plan established with the help of Jean-Michel Wilmotte (France) and Ziad Akl. Street furniture being installed based on the new designs includes street name signage in stainless steel, benches, telephone booths, street kiosks, bus shelters, café seating enclosures and advertising billboards. The signage manual prepared by Solidere received Municipality of Beirut approval. Street name plates were erected in the conservation area and Saifi. Pedestrian way-finding signage, 65 panels in total, was installed in all areas. Beyhum street was equipped with new benches, bollards and waste bins. Renovation of the existing street furniture will gradually be implemented according to the new designs, to be adopted everywhere else. Small advertising billboards for the public domain were delivered to the Municipality, which leases them out for operation. Large advertising billboards operated by Solidere were installed on private property.

Broadband Network

PARKING FACILITIES

Among the underground public parking facilities provided by Solidere, the Beirut Souks car park, with a final capacity of 2,500 spaces, is currently providing 2,000 spaces to Foch-Allenby users, with the four-level Weygand street car park topped by a garden providing another 108 spaces.

The block 93 private car park jointly developed by Solidere and owners of neighboring properties, has become operational in the 320-space section owned by Solidere. Due to serve the north Foch-Allenby area, the car park occupies the space below Harbor Square.

Two car parks under public property in Martyrs' Square and near the Grand Serail, initially tendered out as BOT projects by the Council for Development and Reconstruction (CDR), have not yet been implemented. The winning team of the Martyrs' Square axis international urban design competition integrated an underground parking structure concept design within the landscape scheme for the square, to re-launch the project on a BOT basis. The Council of Ministers had instructed CDR in 2005 to proceed with the design and construction of the Riad El Solh underground car park, also under public property, in coordination with Solidere. However, the Municipality took the resolution not to execute the project.

Pending completion of sufficient space underground, 20 vacant lots assigned for surface parking provide 3,500 car spaces servicing up to 10,000 customers per day. They include a car park in the eastern section of the waterfront district with a free shuttle service to the existing city center. Surface parking moves to new locations to make room for development.

OPERATION AND MAINTENANCE

Solidere operates and maintains the completed infrastructure and reconstituted public domain until their delivery to the State. These services cover: tunnels and underpasses, roads and sidewalks; street furniture, traffic lights and street lighting; utility ducts and manholes, sewage pumping station and network, storm water networks; irrigation station and network, trees and landscaped open spaces.

As per Law 117 of 1991 and the agreement with the State, ratified in decree 5665 of 1994, infrastructure and the public domain are to be delivered upon completion to CDR, representing the State. All the works above ground have been delivered to the public authorities. They include roads, tunnels, sidewalks, street furniture, signage and lighting. Electricity networks were delivered everywhere except for north Saifi, Bachoura and Trablous street. However, Solidere continues to operate the control room in tunnels, and remains in charge of the irrigation network, streets and open spaces. Solidere documents damages occurring in Beirut city center, including those due to car accidents or vandalism acts. The Company sends reports to the Municipality to that effect, with lists of repairs that need to be done and a mention whether the damages result from accidents or from wear and tear.

Since 2006, the Municipality has been subcontracting the operation and maintenance of handed over works, under Solidere's supervision. The storm water network is maintained by the Municipality, with Solidere doing quality control on the work done by the contractors and subcontractors. Solidere is still maintaining the sewage pumping station, and will continue to do so until such time the Beirut Administration (Mohafazat) assigns an operation and maintenance team of its own.

Solidere continually upgrades its site logistics services: cleaning, pest control, safety, security and traffic management. In a city center image improvement program, undertaken in collaboration with participating property owners and users, Solidere is implementing the following services, to supplement those provided by the Municipality: surveillance security; door-to-door waste collection; street and sidewalk washing and street furniture cleaning; pest control; maintenance of open spaces, trees and planters; and street decorations during holidays.

Solidere is also installing a traffic control system that, in addition to phasing traffic lights, monitors drivers violating speed limits. Control panels and cameras have been installed at two intersections so far, with others to follow.

The Company is also installing a CCTV surveillance system to cover all sectors in the BCD. The first phase of the system covering the Foch-Allenby and Saifi sectors became operational in 2006. The Zokak El Blatt, Bachoura, Wadi Abou Jamil, Beirut Souks and Beirut Marina areas were completed in April 2007. The installation of CCTV in the Nejme, Maarad, Riad El Solh and Lazariya areas, initially scheduled for end May 2007, was delayed in view of the political situation. Once completed, the CCTV surveillance and traffic light control systems will be handed over to the concerned public authorities.



ARCHEOLOGY

Extensive archeological excavation and research of sites throughout the city center has yielded evidence on civilizations spanning 5,000 years. Solidere has supported the rescuing and preservation of this heritage, financed the teams working under the supervision of the Directorate General of Antiquities, and prepared plans and a signage system locating all key historic sites on a 3.5 km Heritage Trail.

Research proceeded in 2007 on eight archeological sites in public spaces, development lots, or built lots under restoration. The documentation, digitizing and evaluation of the results provide data for a new synthesis of Beirut's urban history.

New discoveries have confirmed the location of Roman Beirut's major porticoed streets. Excavations in the Wadi Abou Jamil area yielded vestiges of the ancient Hippodrome where chariot races took place, and to the large club buildings used by participants in the races. The club buildings were situated north of the track, while the seats were situated to the south, built on stepped platforms cut out of the Serail hill rock. The archeologists have uncovered two parts of the Hippodrome's central median, or spina. The earlier one is part of the program to make ancient Beirut a Roman colony. The later one, of more monumental nature, may have been sponsored by Emperor Hadrian and built in 130 A.D. Subject to agreement with the Directorate General of Antiquities, these artifacts are to be incorporated within Wadi Abou Jamil Square.

Solidere continues the integration of archeological sites within the city fabric. Elements of the ancient harbor walls are to be incorporated in Khan Antoun Bey Square and in Harbor Square on block 93. The landscaping of Castle Square in block 94 has started with the conservation of ruins containing major elements of the local geological and urban memories. A second phase of this project, the Belvedere Garden, is now in design. The main focus remains Hadiqat As-Samah and the Heritage Trail. A city history museum near the ancient Tell, to be the starting and ending point of the Trail, will bring to life Beirut's 5,000-year heritage and celebrate major Beirut finds.

Articles by archeologists of the fourteen teams that worked in Beirut city center continue to be published in scientific journals, and a number of young Lebanese and foreign archeologists have completed their dissertations attempting to synthesize part of Beirut's history.

LANDSCAPING

With green public space covering 39 ha of land, the city center, representing 10% of municipal Beirut, will contain half of the capital's green areas. Solidere has been vindicated in its quest for quality and unique integration of public domain design accompanied by public art.

Fine public spaces have exerted a significant impact on development land sales. Encouraged by the Mediterranean climate and lifestyle, café society and social promenading within public spaces has also made the city center a most active destination for Beirutis as well as for visitors from the rest of the country, from the entire Arab region and the wider world.

The public domain is designed to comprise 60 parks, gardens, squares, pedestrian areas, quaysides and seafront promenades, the most important of which is the waterside city park; as well as pedestrianized areas and streets lined with trees or incorporating planters or wide medians landscaped with trees, shrubs and colorful plants.

Among completed spaces: Gibran Khalil Gibran garden facing UN House, Roman Baths garden and public space, Fouad Chehab gardens overlooking the city, Riad El Solh Square, Debbas Square and Wadi Abou Jamil Square. Adjoining public and religious buildings are landscaped spaces in Nejme Square, facing the Municipality, cascading under the Grand Serail with Omar Onsi garden at street level, along the CDR stairs, between the Evangelical church and National Music Conservatoire, near St Elie church in Wadi Abou Jamil. Saifi Square and Omar Daouk Square provide other landscaped areas, to which are added private spaces in Saifi, Zokak El Blatt and Mina El Hosn near Planet Discovery. Other works involved upgrading Amir Amin Square in Bachoura by adding a water feature, as per a Vladimir Djurovic Landscape Architecture design; and providing Samir Kassir Square on Weygand street with a sculpture by Louis Derbré (France); the latter garden received a 2007 Aga Khan Award for Architecture.

In Wadi Abou Jamil, the design for block 65 was completed, with a redesign option under way by the Royal Hotel and Resorts. Olivier Vidal (France) was commissioned by Solidere to design the Bab Idriss Square. The square will incorporate sculpture by Xavier Corbero (Spain) to mark the location of Bab Idriss and access to the Roman Hippodrome.

Works in other areas include commissioning two artists for a concept for the sculpture in the Rafic Hariri garden designed by Djurovic. Its construction by the contractor, Target, was interrupted by inaccessibility to the site due to the political situation at the time. The upgrading of Nejme Square and of the CDR open space on the Serail hill, for which concept designs were respectively submitted by Djurovic and by Frédéric Francis, were delayed for similar considerations.

The design of Gebran Tuéni memorial garden along Weygand street, voluntarily offered by Djurovic, needs to be totally revised to make room for a public transport drop-off at that point, as well as access to Le Gray Hotel.

Designed by Gustafson-Porter (US-UK), Hadiqat As-Samah (Garden of Forgiveness) is to be constructed in a 2.3-ha site on which Solidere has relinquished its development rights. The garden, overlooked by several places of worship and with a design reflecting Lebanon's varied landscape and numerous historical layers, will be a place of calm reflection.

The building permit for the garden is about to be issued. Solidere is carrying out all the works that are part of the public domain. The western terrace wall was completed. Continuation of the pedestrian street, including the belvedere to the south of St George cathedral and the passages leading to Amir Assaf mosque, as well as the street between Al Amin mosque and St George cathedral, were completed in June 2007.

Gustafson-Porter also completed the concept design of the garden on municipal land adjoining St Elie Greek-Catholic cathedral. The project is to be presented for Municipality approval before proceeding further with the design.

The winning Greek team included in their presentation to the Martyrs' Square axis competition a concept design for its landscaping. The design will evolve in coordination with Solidere and Beirut Gate, developer of eight lots on the southern section of the axis. The consultant completed the preliminary design of the square together with the concept design of the underlying car park, and is about to proceed with the square's detailed design. To improve the initial design, Solidere approached Xavier Corbero to propose, in coordination with the Greek team, an artistic treatment of the car park ventilation shafts, comprising a tall sculpture south of the square and a number of small sculptures along the Martyrs' Square axis.



fig.2

fig.1 Dar Al-Handasah, Square 25
fig.2 Public space on
General Fouad Chehab avenue



Gustafson-Porter designed the Old Shoreline Walk, a sequence of connected spaces representing the submerged old shoreline. All Saints' Square, Shoreline gardens (blocks 11 and 25), Zeitouneh Square and Santiyeh gardens, in Sectors B, C and E (hotel district, Serail corridor and Souks district), are the main components of the first phase of this project. A later phase, starting with Jean-Paul II Square, will prolong this walk into the Ottoman Wall walk in Sector D (Waterfront District). Progress was achieved on the project detailed design.

The bid for Zeitouneh Square was launched, with the participation of four contractors: Maroun Abi Ghanem, PEG, Target and Sabeco. Tender packages for All Saints' Square, Shoreline gardens and Santiyeh promenade and garden were received by mid February 2008. The preliminary design for the Santiyeh promenade, based on a new concept, was approved by Solidere and by the concerned religious authority, the Mufti. The detailed design is currently under process.

Gustafson-Porter also worked on the concept design for the hotel district corridor landscaping, the culmination of a series of south-to-north open spaces serving as view corridors, including the elevated Mina El Hosn Square. The part of the square falling between the block 17 eastern and western plots is undergoing detailed design by Djurovic.

Machado and Silveti Associates (US) finalized in 2005 the design of Castle Square on block 94. The design integrates a promontory wall at the citadel level, with pedestrian passages offering fine views of the square and of the port first basin. Solidere completed in 2006 the consolidation and restoration of the citadel. The tender, launched with the participation of Target Engineering, AG Contracting, Nassar Trading and Contracting Company, Khoury Contracting Company and PEG, had resulted in PEG winning the construction contract.



fig.1



fig.2



fig.3

fig.1 Castle Square and Castle Belvedere, Machado and Silveti Associates

fig.2 Wadi Abou Jamil Square, Thibaud Urbanisme et Paysage / Rafic El Khoury

fig.3 Fouad Chehab gardens

Preliminary design is proceeding for the adjacent Belvedere Park, on block 95, which overlooks the ancient Tell and includes a garden with historic remains, following approval of its concept design by the Directorate General of Archeology.

The preliminary design for Harbor Square, located on block 93 over part of the ancient harbor, was completed by Gustafson-Porter in July 2007. The detailed design scheduled for completion by mid 2008, includes part of the reconstructed ancient harbor wall, water features, extensive pergola shading and café seating.

Work started on the Heritage Trail pedestrian circuit, with information panels under preparation, together with a tourist map of archeological sites and historic buildings.

Landscaping work planned for the future in the existing city center includes: the next stage of design of Martyrs' Square, design completion implementation of the Machado Silveti Belvedere, landscaping by the Greek team of the northern part of Martyrs' Square.