Urban Transportation

The Transportation Sector
Land transportation

1 - Overview of the land transportation sector
After the end of the Lebanese war, numerous programs and plans followed successively for the reconstruction of Lebanon, among which the urgent rehabilitation program of 1991 adopted by the Government, the “Horizon 2000” program of 1993, the five-year plan for economic development of 1999, and the development program of 2003. Consequently, since 1992 and until today, the road transportation sector specific to people witnessed important works of rehabilitation on the entire Lebanese road network, in addition to opening new roads. Since 1992 and until 2013, projects awarded have reached about US$ 2207.9 million, among which US$ 1245.3 million of executed projects until the end of 2013 and US$ 962.6 million for projects still under execution.

Accordingly, the CDR conducted numerous projects aiming at activating and developing the performance of land transport in all Lebanese regions, among which:
• Coastal expressway project
• Beirut-Syrian border road project
• Penetrator roads for Beirut ring road project
• Urban Transport Development Project (UTDP) for Greater Beirut and Mount Lebanon
• Rehabilitation and upgrading of Beirut roads network
• Rehabilitation project for roads in Beirut suburbs
• Rehabilitation project for network of primary and secondary roads in some regions
• Implementation of new primary and secondary roads in some regions

The Council for Development and Reconstruction implemented part of the above projects and is currently executing other projects and project components. The Council is working on providing technical and financial requirements to execute the remaining contracts to finish these projects.
2 - Main projects achieved (1992 – 2013)
The Council worked on activating the two main axes in Lebanon: the coastal expressway and Beirut-Syrian border road. It has executed several projects and is completing the remaining projects on those two axes in order to guarantee an effective, fast and secure transportation.

Within the two projects of the capital expressway and Beirut-Syrian border road, many contracts have been executed, mainly:

- Completion of study to apply the International Road Agreement in Lebanon.
- Completion of study and preparation of tender documents for the remaining works to complete Sour-Naqoura road.
- Widening and rehabilitating the Abdeh-Homs-Abboudieh highway.
- Execution of the Abdeh-Qoubbet el Choumra highway within the framework of northern coastal road works until the Syrian borders.
- Execution of the Homs-Aridah highway within the framework of northern coastal road works until the Syrian borders.
- Completion of the coastal expressway towards the north Chekka-Tripoli-el Bahsas.
- Rehabilitation of the Tabarja-Chekka highway.
- Rehabilitation of coastal road from Daoura to Tabarja.
- Rehabilitation of of Nahr el Kalb intersection.
- Rehabilitation of coastal highway in Nahr el Kalb.
- The rehabilitation of northern entrance to Beirut from Daoura and Tabarja.
- Execution of land inclination at Adma interchange on the northern coastal highway between Tabarja and Nahr el Kalb.
- The South highway, seafront section of Saida (phase 1).
- The South highway, seafront section of Saida (phase 3).
- The South highway, seafront section of Saida (phase 4: between the municipal stadium and the rest house).
- The South highway, sections of Zahrani, Sour, Cana crossing, Phase 1: Zahrani-al Bablieh.
- The South highway, sections of Zahrani-Sour-Cana crossing, Phase 2: al Bablieh-Abou el Aswad.
- Execution of street lighting and road traffic safety works for Phase 4 of South Highway, Zahrani-Sour-Cana crossing between Abou El Aswad interchange and Burj Rahhal intersection; and completion of unexecuted street lighting and road traffic safety works of Phase 2 of this highway, falling between Bablieh interchange and Abou El Aswad interchange.
- Execution of works of phase 4 of South Highway Zahrani-Sour-Cana crossing between al-Litani Bridge and Burj Rahhal main road.
- Re-construction of Masbah bridge and of the bridge located near the Ministry of Displaced above South-Beirut highway in Damour.
- Execution of phase 5 works on the coastal cornice of Saida, including the execution of a bridge in Sinniq region, linking the cornice to the southern highway.
- Execution of works completing the project aimed at providing road traffic safety features on frontier roads between Lebanon and Syria in Masnaa Region.
- Execution of the project aimed at re-building Sofar bridge and part of the highway destroyed during Israeli attacks of July 2006.
- Rehabilitation and asphalting of the Damascus road, Hazmieh-Sofar section.
- Rehabilitation and asphalting of the Mdeirej-Masnaa road.
- Completion of the widening and overpass Moukaless.
rehabilitation of Rayak-Baalback section (from Douris to Baalback with Baalback entrance from Tell Aammar intersection to Rayak) as part of the rehabilitation project of Chtaura-Rayak-Baalback Syrian border road.

- The rehabilitation of the Camille Chamoun Boulevard between the Chevrolet and Galerie Semaan intersections.
- The rehabilitation and expansion of Taadod-Rayak road, within the project of Chtaura-Riyak-Baalback-Northern Lebanese border project, parts 1 and 2.
- Within the framework of Chtaura-Baalbek- Syrian border road (El Kaa): execution of remaining works of rehabilitation of eastern entrance to Baalbek.

The problem of transportation in city areas is worsening, especially within Greater Beirut and its surroundings, where it mainly depends on the use of private cars, which will necessitate, if no public transportation is developed, the creation of additional spaces for roads and car parks in addition to adopting a developed system to manage traffic.

Therefore, the CDR conceived a project to develop the current transportation network of Greater Beirut and Mount Lebanon.

Urban Development Transportation Project for Greater Beirut and Mount Lebanon:

This project aims at facilitating the traffic flow within the Greater Beirut area and it is composed of three parts:

- Improvement of main traffic axes, which includes the construction of bridges and tunnels at 19 intersections and the execution of related works along main roads.
- Installation of 220 traffic lights and 30 traffic-monitoring cameras, traffic signs, road markings, and creation of a monitoring and management center for traffic circulation, and improving the pedestrian walkways.
- Parking management program with parking meters for 5000 cars.

Among these projects, numerous contracts have been executed, mainly:

- Daoura bridge
- Antelias bridge
- Mathaf intersection
- Bchamoun-Aaramoun
- Hayek bridge
- Organize and launch an awareness campaign
- Training of policemen
- Installation of traffic lights and surveillance cameras (appendix number 1) (civil works and installations)
- Installation of parking meters on roadsides.
Roads & Highways
Under Preparation Projects

Legend
- Interchange/Exchange
- Roads & Highways
• Equipp the traffic police headquarters with computers and other equipment.

Penetrator roads for Beirut ring road:
It is evident that Beirut ring road and its associated penetrator roads aim at reducing traffic congestion at access points to the capital and streamline traffic flow between north and south. Detailed studies of the penetrator road network were divided into 3 sections:
- Northern access to Beirut
- Central access to Beirut
- Southern access to Beirut

Among the main completed projects:

Execution of:
• The lower passage under Mar Mikhail intersection, within the project of urban transportation development
• The Antelias bridge, within the project of urban transportation development
• Lower passage under Tayyoune roundabout, within the project of urban transportation development
• Furnishing the traffic police headquarters with furniture.
• Equip the traffic police headquarters with computers and other equipment.
• The Upper and lower passage to airport road crossings at Chiyah boulevard
• The Tiro road
• The Adlieh connection
• The Haret Hreik-Airport connection
• The Hazmieh-Airport connection (Camille Chamoun Boulevard and Haret Hreik intersection)
• The Cocody-Cola 1 and 2, in addition to Cocody interchange
• The Khaldeh-Cocody road
• The Chatila interchange
• The Chatila-Kafa’at road parallel to Nahr Beirut (PN3)
• The Adlieh-Damascus road (A1) up to as-Sayad interchange

Rehabilitation of roads in Beirut suburbs:
Among the main completed works: Northern suburbs: works are completed on the Bourj Hammoud, Jdeideh and Zalka road sections, the roads parallel to Nahr el Maout and Nahr Antelias, Dbayeh section, Nahr Beirut-Dawra road, the road replacing the railway track inside Bourj Hammoud. Rehabilitation works of Sin el Fil road and Saloumi-Naba’a-Nahr el Maout.

Southern suburbs: works completed until today are: road networks at Chiyah boulevard/adjacent streets axis, Chocifat-Khaldeh Haret Hreik drainage tunnel for storm water, as well as the sections of Mreijeh, Kassis, Ghobeyri, Haret Hreik, Borj el Brajneh, Furn el Chebbak and Ain el Roumaneh. Also, the rehabilitation works of Jamous road and associated services are also complete.

Rehabilitation of primary and secondary roads network: and opening primary and secondary roads in the region:
Among main contracts achieved:
• The works and entrance of Jibrail, Rahbeh, and Birkayel and the inner road of Fneideq village
• The rehabilitation of Beit el Faqs-Karsita-Nemrine square road
• The two interchanges of Hadeth el Joubbe and Hasroun, Diman road (Qadisha roundabout)
• Ehden interchange – Phase 2
• The rehabilitation of Nahr Ibrahim-El Adra road
• Execution of remaining works of Chnaniir-Dlebta project
• The Halba-Birch-Qobbayat road, including two bridges in
Qoubbayat
• The Connection works for roads in Bcharre
• Upgrading and expansion of al-Madfoun-Kfifan road
• Upgrading and expansion of Zgharta-Ras Kifa road
• The Ayto-Ehden road
• The rehabilitation of Ardat-Majdalya road
• Opening and achieving the road of Daalal-Basatin al Assi-Beit Shlalahower Tannourine
• The Ehden interchange
• Ras Kifa-Ayto road
• Kfar Harra-Bire
• Chadra-Mqailbe
• Aandqet-Konieh
• Akroum-Kfartoun
• Ardat-Majdalya
• Executing and asphalting Beit Mery road
• The new road extending between Jounieh-Bkerke-Harissa
• Ghazir-Kfour-Fatqa connection
• Roundabout connection of Jeita-Aintoura
• The Ajaltoun interchange
• The rehabilitation of the road extension between Dbayeh-Antelias with Rabieh-Naccache connection
• The Deek el Mehdi-Naccache-Rabieh intersection

Within the program of developing transport system in Greater Beirut:

• Rehabilitation of Sour-Nakoura road;
• Execution of works on Deir Ammar-al Abdeh road;

It is worth mentioning that in this report we have noted the projects that have been referred to CDP from the Committee of Execution projects and the Committee of Execution of big projects for Beirut, among which:

Within the program of developing the coastal road project:

• Phase 1 of south highway Jiyeh-Zahrani section
• South highway project, seaside cornice of Saida (phase 2)
• South highway project, seaside cornice of Saida (phase 3)
• Deir Zahrani-Nabatiye road and Deir Zahrani-Azze Romine
• South highway section of Rmeileh intersection and Sinniq connection
• Execution of entry and exit to Jadra
• Execution of entry and exit to Qalamoun and Balamand, with pedestrian passages in Qalamoun and Naame
• Lighting installations on South highway Jiyeh-Zahrani-Abou el Awad section
• Lighting installations on South highway Jiyeh-Awali and Sinniq-Zahrani section
• Road circulation signs and protection barriers on South highway Jiyeh-Zahrani section
• Execution of South Highway phase four Zahrani-Tyre section-Kana diversion between Litani bridge and Bourj Rahhal main road.

Within the framework of the Beirut-Masna Road:

• Execution of Arab highway Mdeyrej-Jisr el Namliyeh-Chtaura-Taanayel, Phase 1 (Jisr el Namliyeh (Bwerij)-Chtaura-Taanayel);
• Widening and rehabilitation of the current Damascus road section 3 Aley-Sofar (with appendix number 1);
• Improvement of internal Bhamdoun road as part of the project aimed at widening and rehabilitating the current Damascus road (Hazmieh-Sofar section);
• Expansion and rehabilitation of

3 - Progress of works during 2013, contracts awarded before 2013

Work is progressing on the following projects:

Within the framework of project on the roads that run along the coastline:
• Rehabilitation of Sour-Nakoura road;
Hazmieh-Jamhour road – Phases 1 and 2 (execution of Camille Chamoun boulevard-Sayyad roundabout (1.4 km));
• Baalechmey-Sofar section (6.5 km);
• The execution of the works of part II of the various construction projects at the Masnaa border;
• Providing traffic security requirements on the Lebanese-Syrian border road in Masnaa;
• The execution of complementary works for the project of providing traffic security requirements on the Lebanese-Syrian border road in Masnaa region;
• The execution of Taanayel-Masnna section of the Arab Highway project;
• Widening and rehabilitation of Rayak-Baalback section as part of the project on the rehabilitation of Chtaura-Rayak-Baalback-Syrian border road.

Within the framework of urban transportation development project in Greater Beirut and Mount Lebanon
• Mecharafieh bridge (upper passage works at Chatila Kafaat intersection boulevard Chiyah-Mecharafieh within urban transportation development project);
• Sami el Solh tunnel (Sami el Solh avenue intersection with old Damascus road);
• Underground passage on Bechara el Khoury intersection and Istiklal avenue;
• Execution of Jal el Dib interchange;
• Execution of bridge works and tunnel in Mkales;
• Rehabilitation of Dekwane roundabout and ramifications;
• Training of numerous forces of the Internal Security Forces on road traffic, traffic crisis and solving problems practically and professionally;
• Purchasing of motorbikes for Internal Security Forces (Phases 1 and 2);
• Purchasing of wireless devices for the Internal Security Forces.

Within the Maten Highway:
• Excusion of land slide work on the Maten Highway section Jouret El-Ballout – Baabdat;
• Execution of Roumieh interchange – Beit Merry and Khnabet Brummana.

Within the framework of various roads in the regions:
• The Bteghrine-Zaarour connection;
• The Jouret el Ballout-Deir Mar Chaya connection and Deir Mar Chaya-Aatchaneh connection, Baabdat connection, Deir Mar Chaya-Baabdat connection;
• The works and entrance of Jibrail, Rahbeh, and Birkayel and the inner road of Fneideq village;
• The execution of remaining works in road cutting projects of Mrah el Sreij-Bakhoun- Taran-Hazmieh Bridge;
• The Bcharre interchange (appendix number 1);
• The Bahsas-Kousba intersection (with appendix number 1);
• The rehabilitation of Beit el Faqs-Karsita-Sahet Nemrin road;
• The rehabilitation of Jeita-Oun el Siman road;
• Building Monjez-Aboudieh road (13 km);
• The execution of building Bqayleh -Sannine road, Qimam road project;
• The execution of building Dael-Bejdarfel road within Batroun-Dael road (with appendix number 1);
• The rehabilitation of Saadlyat-Ain el Hor road;
• The rehabilitation of Joun-Zaarouriyeh-Zaytouniyeh road.
• The execution of road works in Hebarieh-Chebaa and Zaghla-Chewaia-Chebaa;
• The execution of Bir El-Haith-Khartaba part one till Sawanah;

Within Sir ed Danniej-Jbab el Homor-Hermel road:
• The Sir ed Danniej-Jbab el Homor road;
• Execution of Jbab el Homor-Hermel road;
• Execution of Sir ed Danniej-Bqarsouna-Qarsita.

4 - Main contracts awarded during 2013

Within the framework of Beirut-Damascus (Masnaa) Road:
• Completion of unexecuted works within the framework of the project on the re-rebuilding of the Sofar bridge and a section of Sofar –Mdeirej Highway, damaged by July 2006 war.

Within the framework of the coastal road:
• Technical inspection of the level of traffic safety related to the project on the expansion of the current coastal highway stretching between Kesserwan and Tabarja;
• Modification of the planning of the North Highway, Kalamoon – Badawi section;

Within the framework of Maten Rapid Highway:
• Execution of sewage water evacuation works in Mar Chaaya to reduce the damage caused to Metn rapid highway in the area of Mar Chaaya-Aatchaneh intersection;
Within the framework of the project on the rehabilitation and expansion of Zouk Mosbeh-Mayrouba-Kfardebian-Tibeh (Baalbeck) Road:

• Reconsideration of the surface areas and expropriation regulations planned on components 2, 3 and 4 of the project related to the planning and development of Zouk Mosbeh-Mayrouba-Kfardebian-Tibeh (Baalbeck) Road – Reconciliation contract;

• Replacement of expansion joints on the two bridges constructed as part of the Ajaltoun interchange located in Zouk Mosbeh above the northern coastal highway (with supervision);

• Preparation of feasibility study, traffic study and environmental impact evaluation of Kesserwan Road, Zouk Mosbeh link road running from Kesserwan interchange towards Jeita Grotto.

Within the framework of rehabilitation and widening of Aamchit-Tannourine Road

• Preparation of the tender document related to the addition of link roads as part of Aamchit-Maifouq road project and supervision of implementation.

Within the framework of Beirut northern entrance:

• Elaboration of preliminary studies and preparation of expropriation documents related to the design of the roads running from Charles Malek Avenue towards Aadlieh;

• Expansion of a section of Beirut-Tripoli highway running from Karantina Bridge towards Charles Helou Station for Travel and Transport;

• Solving the problem of low altitude under the Beirut River bridge on dora-Karantina highway and under the bridge leading to Burj Hammoud on Emile Lahoud highway and Beirut River;

• Reconsideration of the study related to Charles Helou interchange linking Beirut-Tripoli highway section “Port of Beirut-Nahr el Mott”- the design of which is approved by virtue of decree No.9308 of 9/10/1996 with Charles Helou Avenue near the Lebanese Emigrant Monument.

Within the framework of Beirut’s orbital road:

• Elaboration of a study aimed at modifying the design of the highway of the ring road encircling Beirut city, Hadath-Laylake-Tahwitat el Ghadir-Borj el Brajne section.

Within the framework of the Project on the development of urban transportation in Beirut city

• Procurement and installation of a new accounting system for the Traffic, Trucks and Vehicles Management Authority;

• Purchase of cranes for the Internal Security Forces;

• Execution and supervision of the project related to the replacement of expansion joints of the two bridges located above Dora roundabout.

5 - Main projects in progress for 2014-2016

• Tripoli East Highway project (Bahsas-Badaoui)- Completion of South highway;

• Completion of South Highway;

• Mdeirej (Hamana)-Jisr el Namliye (Bwerij) from Beirut-Damascus road (Masnaa);

• Construction of a road between Jamhour -Baalchmay (12.7 km) (Arab highway);

• Construction of Hadath-Dekweneh road (6.2 km) (Ring road for the city of Beirut);

• Ain Alaq-Bteghrine road within Metn rapid Highway project;

• Mar Chayya – Aatchaneh – Ain Alaq road within Metn rapid Highway project;

• The Galerie Semaan intersection;

• Tunnel and bridge near Ministry of Resources;

• The execution of Sir interchange;
• The construction of Beit Ayyoub-Fneydiq road;
• Jounieh – Bkerke – Harissa road;
• The Bqerqasha conversion;
• The Al Arz road;
• The Ghazir-Jdeidet Ghazir road;
• The expansion and rehabilitation of Mayrouba-Nahr el Dahab-Jouret el Termos-Hadchat-Yahchouch road;
• Rehabilitation and expansion of coastal road between Nahr el Kalb and Tabarja;
• Daroun – Harissa road;
• Haret Sakhr – Daroun road;
• Main intersections on Jeita – Faraya road (Jeita-Sheile-Balloune-Daraya-Ajaltoun);
• Rehabilitation of Jbeil – Anaya road;
• Completion of Batroun-Tannourine road;
• Completion of Bir el Hit-Kartaba road;
• Arab Highway, Bedawi-Aaboudiye section.

Major contracts awarded during 2013

<table>
<thead>
<tr>
<th>Project</th>
<th>Contract amount (USD)</th>
<th>Source of funding</th>
<th>Starting</th>
<th>Expected execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the framework of the coastal road</td>
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<tr>
<td>Completion of unfinished works within the framework of re-building of Solar Bridge and a section of Sofar Mdeirej Highway – damaged during the July 2006 War</td>
<td>56,528</td>
<td>The Italian Protocol</td>
<td>21/10/2013</td>
<td>21/12/2013</td>
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<td>Within the framework of the coastal road</td>
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<tr>
<td>Technical inspection of the level of traffic safety of the project aimed at widening the roads that run along the coastline between Kesserwan interchange and Tabarja</td>
<td>26,400</td>
<td>CDR</td>
<td>19/2/2013</td>
<td>04/6/2013</td>
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<tr>
<td>Modification of the design of the North Highway Project, Qalamoun-Bedawi section</td>
<td>166,925</td>
<td>CDR</td>
<td>22/3/2013</td>
<td>22/7/2013</td>
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<tr>
<td>Within the framework of Metn rapid highway</td>
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<tr>
<td>Execution of wastewater discharge works in Mar Chaaya to reduce the damage caused to Metn rapid highway in the area of Mar Chaaya-Aatchaneh interchange</td>
<td>436,814</td>
<td>Arab Fund and CDR</td>
<td>28/5/2013</td>
<td>24/2/2014</td>
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<td>Within the framework of rehabilitation and widening of the Zouk Mosbeh-Mayrouba-Kfardebian-Tibe (Baalbeck) Road</td>
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</tr>
<tr>
<td>Reconsideration of the surface areas and the expropriation regulations planned on components 2, 3 and 4 of the project related to the planning and development of Zouk Mosbeh-Mayrouba-Kfardebian-Tibeh (Baalbeck) Road – Reconciliation contract.</td>
<td>55,000</td>
<td>CDR</td>
<td>1/8/2013</td>
<td>28/4/2014</td>
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## Major contracts awarded during 2013 - Continue

<table>
<thead>
<tr>
<th>Project</th>
<th>Contract amount (USD)</th>
<th>Source of funding</th>
<th>Starting</th>
<th>Expected execution</th>
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<tbody>
<tr>
<td>Replacement of expansion joints on the two bridges constructed as part of the Ajaltoun interchange located in Zouk Mosbeh above the northern coastal highway (with supervision)</td>
<td>354,477</td>
<td>CDR</td>
<td>25/5/2013</td>
<td>10/10/2013</td>
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<tr>
<td>Preparation of a cost benefit analysis and traffic and environmental impact analysis study on Kesrwan road project (the connection of Zouk Mousbeh between the Kesrawan interchange and Jeita Grotto).</td>
<td>220,000</td>
<td>CDR</td>
<td>5/11/2013</td>
<td>5/5/2014</td>
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<td>Preparation of the tender document related to the addition of link roads as part of the project of Aamchit-Maifouq road and supervision of implementation</td>
<td>1,031,800</td>
<td>CDR</td>
<td>3/4/2013</td>
<td>3/9/2013</td>
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<td><strong>Within the framework of Beirut’s northern entrance</strong></td>
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<tr>
<td>Elaboration of preliminary studies and preparation of expropriation documents related to the design of the roads running from Charles Malek Avenue towards Aadlieh</td>
<td>247,500</td>
<td>Municipality of Beirut</td>
<td>24/4/2013</td>
<td>24/10/2013</td>
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<tr>
<td>Expansion of a section of Beirut-Tripoli highway running from Karantina Bridge towards Charles Helou Station for Travel and Transport</td>
<td>8,971,076</td>
<td>Municipality of Beirut</td>
<td>10/7/2013</td>
<td>31/8/2015</td>
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<td>Solving the problem of low altitude under the Beirut River bridge on dora-Karantina highway and under the bridge leading to Burj Hammoud on Emile Lahoud highway and Beirut River</td>
<td>2,634,944</td>
<td>Municipality of Beirut</td>
<td>2/7/2013</td>
<td>29/3/2014</td>
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<td>Reconsideration of the study related to Charles Helou interchange linking Beirut-Tripoli highway section “Port of Beirut-Nahr el Mott” - the design of which is approved by virtue of decree No.9308 of 91996/-10/ with Charles Helou Avenue near the Lebanese Emigrant Monument</td>
<td>259,000</td>
<td>Program Law</td>
<td>13/11/2013</td>
<td>13/1/2014</td>
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<td><strong>Within the framework of Beirut’s northern entrance</strong></td>
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<tr>
<td>Elaboration of a study aimed at modifying the design of the highway of the ring road encircling Beirut city, Hadath-Laylake-Tahwitat el Ghadir-Borj el Brajne section</td>
<td>126,500</td>
<td>CDR</td>
<td>22/1/2013</td>
<td>23/7/2013</td>
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## Major contracts awarded during 2013 - Continue

<table>
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<tr>
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<th>Contract amount (USD)</th>
<th>Source of funding</th>
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<tbody>
<tr>
<td>Within the framework of the Project on the development of urban transportation in Beirut city</td>
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<tr>
<td>Procurement and installation of a new accounting system for the Traffic, Trucks and Vehicles Management Authority</td>
<td>84,000</td>
<td>The World Bank</td>
<td>19/8/2013</td>
<td>19/2/2014</td>
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<td>Purchase of cranes for the Internal Security Forces</td>
<td>1,398,750</td>
<td>The World Bank</td>
<td>2/10/2013</td>
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<td>Execution and supervision of the project related to the replacement of extension joints of the two bridges located above Dora roundabout</td>
<td>377,443</td>
<td>The Program Law</td>
<td>15/1/2013</td>
<td>30/5/2013</td>
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*Batroun - Bajdarfel Road*
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<tr>
<th>Project</th>
<th>Approximate amount (USD)</th>
<th>Source of funding</th>
<th>Expected start</th>
<th>Expected execution date</th>
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<tbody>
<tr>
<td>Eastern ring of Tripoli project (from bohsas toward badawi)</td>
<td>100,000,000</td>
<td>Islamic Bank for Development</td>
<td>September 2014</td>
<td>September 2018</td>
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<td>Completion of South highway (until Tyr entrance)</td>
<td>35,000,000</td>
<td>Proposed to the Saudi Fund for Development</td>
<td>March 2015</td>
<td>March 2017</td>
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<td>Mdeirej (Hamana)-Jisr el Namiye (Bwerij) from Beirut-Damascus road (Masnaa)</td>
<td>45,000,000</td>
<td>Saudi Fund for Development</td>
<td>January 2015</td>
<td>February 2018</td>
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<td>Construction of a road between Jamhour and Baalechmey (12.7 km) (Arab highway)</td>
<td>300,000,000</td>
<td>Proposed to the World Bank</td>
<td>December 2015</td>
<td>December 2018</td>
</tr>
<tr>
<td>Hadath-Dekweneh road (6.2 km) (Ring road for the city of Beirut)</td>
<td>250,000,000</td>
<td>Proposed to the World Bank</td>
<td>December 2015</td>
<td>December 2018</td>
</tr>
<tr>
<td>Galerie Semaan intersection</td>
<td>10,000,000</td>
<td>World Bank</td>
<td>December 2015</td>
<td>December 2017</td>
</tr>
<tr>
<td>Execution of Sir interchange</td>
<td>15,000,000</td>
<td>Islamic Bank for Development</td>
<td>September 2015</td>
<td>September 2017</td>
</tr>
<tr>
<td>Execution of Beit Ayoub-Fnaydiq road</td>
<td>12,000,000</td>
<td>Saudi Fund for Development/ grant from Saudi reconstruction</td>
<td>September 2014</td>
<td>September 2016</td>
</tr>
<tr>
<td>Ain Alaq-Bteghrine road, from Metn rapid highway project</td>
<td>55,000,000</td>
<td>Law program of Public Works Ministry 326/2001</td>
<td>July 2014</td>
<td>July 2017</td>
</tr>
<tr>
<td>Security and slipping works in Biyakout</td>
<td>3,500,000</td>
<td>General reserve provisions</td>
<td>June 2015</td>
<td>June 2016</td>
</tr>
<tr>
<td>Bkerkasha interchange</td>
<td>10,000,000</td>
<td>Islamic Bank for Development</td>
<td>September 2014</td>
<td>September 2016</td>
</tr>
<tr>
<td>Al Arz road</td>
<td>15,000,000</td>
<td>Law program of Public Works Ministry 326/2001</td>
<td>September 2014</td>
<td>September 2016</td>
</tr>
<tr>
<td>Ghazir-Jdeidet Ghazir road</td>
<td>6,000,000</td>
<td>Law program of Public Works Ministry 326/2001</td>
<td>September 2014</td>
<td>March 2016</td>
</tr>
<tr>
<td>Expansion and rehabilitation of Mayrouba-Nahr el Dahab-Jouret el Termos-Hachat-Yahchouch road</td>
<td>20,000,000</td>
<td>Law program of Public Works Ministry 326/2001</td>
<td>August 2014</td>
<td>August 2016</td>
</tr>
</tbody>
</table>
### Major Projects in progress 2014 - 2015 (continue)

<table>
<thead>
<tr>
<th>Project</th>
<th>Approximate amount (USD)</th>
<th>Source of funding</th>
<th>Expected start</th>
<th>Expected execution date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation of Haret Sakhr-Daroun road</td>
<td>6,000,000</td>
<td>Proposed to the Saudi Fund for Development</td>
<td>March 2015</td>
<td>March 2017</td>
</tr>
<tr>
<td>Daroun-Harissa road</td>
<td>7,000,000</td>
<td>Proposed to the Saudi Fund for Development</td>
<td>March 2015</td>
<td>March 2017</td>
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<td>Main intersections on Jeita-Faraya road (Jeita-Sheile-Balloune-Daraya-Ajaltoun)</td>
<td>12,000,000</td>
<td>Proposed to the Saudi Fund for Development</td>
<td>March 2015</td>
<td>March 2017</td>
</tr>
<tr>
<td>Rehabilitation of Jbeil-Aanaya road</td>
<td>12,000,000</td>
<td>Proposed to the Saudi Fund for Development</td>
<td>March 2015</td>
<td>March 2017</td>
</tr>
<tr>
<td>Arab Highway Badawi-Aaboudiyeh section</td>
<td>270,000,000</td>
<td>Local funding Program Law 246</td>
<td>April 2016</td>
<td>December 2019</td>
</tr>
</tbody>
</table>
Maritime Transport
Overview of the maritime sector

The major contracts awarded for the development of Beirut and Tripoli ports, financed through foreign loans, were supervised by the relevant port administration. The total value of contracts reached about US $175 million, and most of their works are completed. The government will focus its efforts during the next phase on developing and extending Tripoli port to become a maritime opening for transit ships towards Iraq.

Main achievements for 1992 - 2013

Rehabilitation and extension of Beirut Port:
This project comprised the dredging and rehabilitation of Basins No. 1, 2 and 3, in addition to the completion of Basin No. 4 to be used as a container terminal, as well as the achievement of related breakwater. The contract was awarded to the conglomerate group Entre Canales/Cubiertas and work has started in the beginning of 1997. Beirut Port Authority received technical assistance covering overall supervision of the design from Marseille Port Authority, while supervision of the works was entrusted to Dar al Handassah (Shaer and Partners). The cost of the project amounted to US$91.1 million, funded in part by a loan from the European Investment Bank (45 million Euro), while Beirut Port Authority covered the remaining amounts from port revenues.

Beirut Port Authority further awarded a contract for the construction of the first phase of Basin No. 5. The 600m long and 15m deep quay will be used as a container terminal. The total cost is estimated at approximately US $50 million, auto-financed by the Beirut Port Authority revenues.

Beirut Port Authority (provisional administration for operating and exploiting Beirut Port) launched a tender in the middle of 2004 for the management and operation of the port container station, after the administration completed the equipping of the station through the purchase and installation of the main equipment, and thus elaborating the necessary operational terms and conditions. In August 2004, the contract was signed with the winning bidder (a joint venture of the British MERSEY (MDHC) and the American (IMA). The company started its actual activities at Beirut Port on 14/12/2004 under the name of Beirut International Port Management and the volume of work is expected to exceed that of 2005 of 500 thousand TEU units.

Rehabilitation and Development of Tripoli port:
In order to ensure navigational safety, dredging works and removal of sediment and accumulated debris in the commercial basin and entrance channel started during autumn 1997. Moreover, the wrecks of five sunken vessels were lifted and the basin was dredged to a depth of 10m at a cost of US$ 2 million. The government commissioned the French consulting firm Sogreah to prepare a master plan for the development of Tripoli Port (financed by the French-Lebanese protocol). The master plan has been completed today, comprising of:

- Increasing the depth of the entrance channel from 10 to 13 meters
- Constructing a 600m long quay extending from the existing port towards Abu Ali river
- Constructing an external breakwater (1000 meters) and completion of the construction of the northern breakwater near Abu Ali River.

As a first step, work started in 2001 on deepening the basin and the entrance channel at a cost of approximately US$ 20 million.

Development of Tripoli Port Project:
In order to implement the master plan to develop Tripoli Port, the Marseille Port Administration completed the feasibility study for the expansion of Tripoli Port and the European investment bank approved a loan of 45 million Euro to finance the expansion works of this port. These works have been divided into two lots:

Lot 1: Comprises the expansion works of the temporary road for the existing main breakwater and extending both the existing main and secondary breakwaters. The works on this lot were awarded in April 2004, with an approximate amount of US$ 23 million of Jan de Nul/Hydromar joint venture. The supervision contract awarded to these works was funded by Tripoli Port revenues.

Lot 2: Comprises the construction works of a new 600m long quay, excavation and deepening of the
port basin to accommodate ships requiring up to 15 meters of depth to pass. Lot 2 works have been carried out by China Harbour Engineering Company, funded by Tripoli port resources, and that after reaching an agreement between the contractor and Tripoli port authorities.

Transformation project of the Commercial Port in Tyre into a Tourist Port:
A feasibility study for converting the commercial port of Tyre into a tourism port is completed.

Tourist Port in Jounieh:
A feasibility study has been achieved in order to assess and evaluate the ecological impact of the construction of a tourist port in Jounieh.

Main projects under preparation for 2013 - 2016
Tourist port in Tyre
Since the feasibility study for converting the commercial port of Tyre into a tourism port is completed, it is expected to award the detailed studies for this project prior to its implementation.

Tourist port in Jounieh
Since the feasibility study in order to assess and evaluate the ecological impact of the construction of a tourist port in Jounieh is achieved, it is expected to award the detailed studies for this project prior to its implementation.

Airports
General Overview of the Sector
The master plan of Beirut International Airport aimed at increasing the annual passenger capacity to 6 million yearly, and that as a first phase. The capacity of the airport is expected to increase gradually to 16 million passengers yearly by 2035.

Main achievements during 1992 - 2013
Phase 1 of the project included the construction of a new passenger terminal and two new runways: one to the east of the existing runway, and the other on land reclaimed from the sea, and that in order to divert flight from the skies of the capital. As a result of these works, the airport is now able to receive about thirty planes simultaneously, stationed either at the embarkation gates or in the aircraft parking yards.

Works started in 1994 and are now completed; and some additional works are currently underway. Works on Phase 1 of the passenger terminal is complete and was put in service in 1998. Phase 2 of the passenger terminal has been completed and increased the passenger capacity to 6 million per year. At the end of January 2000, various facilities, including two additional luggage conveyors were built, and the works were completed on June 30, 2000. The west runway was put in service during 2001.

The works completed in other parts of the airport are:
- Radar building: works completed in September 1996
- Civil Aviation Security Center: works completed in October 1996
- Civil Aviation Maintenance building: works completed in June 1997
- Fire and Rescue Training building: works completed in July 1997
- Fire Station for Land Service: works completed in July 1997
- Automatic Sorting Post Office: works completed in November 1997
- Power Station building: works completed in December 1997
- Infrastructure for passenger terminal and utilities building (electricity, water, main and internal roads) has been put in service in the beginning of 1998.

- Two main water reservoirs and towers are now effectively in service
- Additional buildings and airport guard and security buildings have been handed to Airport Authorities
- Two tunnels in Ouzai, under the west runway were opened to traffic in December 1997
- Ouzai-Khaldeh interchange at Costa Brava was opened to traffic in December 1997. Khaldeh interchange was open to traffic in September 1999 and the link with old Saida road was completed in December 1999
- Embankment protection works for Ouzai road were completed during 2000
- Car parking and aircraft refueling facilities were completed on the basis of a concession (BOT).

Moreover, various contracts for consultancy services or supply of aeronautical equipment have been awarded (funding through French-Lebanese protocol)
- Consultancy services for modernizing Civil Aviation Administration
- Training equipment for the Civil
Aviation Security Center (four contracts)
- Meteorological equipment (contracts for Phases 1 and 2)
- Achievement of a VIP pavilion in March 2002
- VIP lounge (public flights) to be delivered soon
- Landscaping works of the VIP pavilion
- Routine periodic tests of air navigational simulator equipments (maintenance and operations)
- Consultancy services in the arbitration case related to the rehabilitation and development of Beirut International Airport
- Project for improving Maritime Protection and building a quay for the rescue station boats for the new western runway of the airport
- Providing an information system for air navigation with appendixes 1, 2 and 3
- Operation and maintenance service of the new building and auxiliary structures in Rafic Hariri International Airport with appendixes 1 and B, in addition to supervision tasks
- Supervision services related to the rehabilitation of the radar control and surveillance system at Rafic Hariri International Airport
- Geophysical surveys of the new eastern runway area of Beirut International Airport
- Upgrading works of the surrounding fencing of Beirut International Airport.
- Operation and maintenance services of the new building and auxiliary structures in Rafic Hariri International Airport with appendixes D, E, F, G, in addition to supervision tasks.
- Routine periodic tests of air navigational simulator equipments in the airport with appendixes 1/2/3/4 and 5.
- Supervision of operations and maintenance of Rafic Hariri International Airport in Beirut facilities and equipments until 30/6/2010.
- Supervision of remaining external works of civil works execution project of VIP pavilion - public flights and annexes in Rafic Hariri International Airport in Beirut.
- Prepare detailed artistic, economic, design feasibility studies for projects included in the development program of Rafic Hariri International Airport in Beirut.
- Supervision duties related to the rehabilitation of the airport radar control and surveillance systems of Beirut International Airport
- Supervision of operations and maintenance of facilities and airport equipment
- Financial and engineering assessment of the civil works of the VIP building
- Rehabilitation of the asphalt pavement of the aircraft corridor (M) in the section parallel to the general aviation area of Beirut International Airport
- Completion of works for geophysical surveys of eastern runway
- Rehabilitation of Beirut International Airport radar control and surveillance systems (Annex No.1)
- Supervision duties related to the rehabilitation of the airport radar control and surveillance systems of Beirut International Airport
- Supervision of operations and maintenance of facilities and airport equipment
- Operation and maintenance of the new terminal building and associated facilities at Beirut International Airport (Appendix C)
- Preparation of a complete file to award operation and maintenance services for facilities and airport equipment
- Preparation of a tender document for works on the development of the control and monitoring system specific for lighting the runway and public corridors of the airport
- Transfer light supply of western runway 35/17 from the old inverter to the on-going power generator specific to the maritime runway 34/16 in Rafic Hariri International Airport
- Remaining works regarding implementation project of civil works on VIP lounge – public flights and its annexes in Rafic Hariri International Airport
- Rehabilitation and modernization of AMSS in Rafic Hariri International Airport
- Development of the control and monitoring system specific for lighting the runway and public corridors of the airport
- Support works for Ghadir through open-air digging in the airport

Main contracts awarded in 2013
The operation and maintenance of the buildings and facilities of Beirut International Airport – Reconciliation Contract.

Progress of works during
2013 on contracts signed before 2013
The operation and maintenance services of the new building and auxiliary structures of Beirut International Airport (appendix G) are underway, along with the supervision of these services.

Projects that are underway:
Technical support during the period of implementation and supervision of a) the transfer of light supply of the western runway 35/17 from the old inverter to the uninterrupted power generator of the maritime runway 34/16 and of b) the system that commands and monitors the illumination of Beirut International Airport runways and taxiways.

The project on the introduction of additional computerized services at the data exchange center of Beirut International Airport.

The project on the system that commands and monitors the illumination of runways and taxiways.

The transfer of light supply of the old western runway 35/17 from the old inverter to the uninterrupted power generator of the maritime runway 34/16.

Main projects under preparation in the horizon of 2013-2015
Currently the following contracts are under preparation: Implementation and rehabilitation of civil works for the runways and taxiways at Rafic Hariri International Airport

In collaboration with the Ministry of Public Works and transports, the CDR will start to reconsider the master plan of Rafic Hariri International Airport, according to the latest developments of past years.