

TEAM INTERNATIONAL

ENGINEERING & MANAGEMENT CONSULTANTS



TEAM 48

48 YEARS OF EXCELLENCE



BRIEF DESCRIPTION OF TEAM INTERNATIONAL



TEAM International, is an engineering and management consulting firm that provides advanced professional consultancy and support services. Since it was established in 1975 in Beirut, Lebanon it has expanded its activities into more than 40 countries, and has gained international as well as a regional recognition as a major provider of consulting services.

Since the last century, TEAM International has focused its strategy on supporting governments, institutions and companies in their endeavors to face-up to the challenges of change and development. Through clear vision, steady improvement, employee empowerment, and dedication to customer satisfaction, TEAM International continues to act as an effective vehicle for the transfer and application of the latest world advances in management, engineering, information technology and human-resource developments, delivering highest quality services to its clients. Looking ahead, TEAM International is poised to be a truly global 21st century knowledge organization

Scope of services includes a wide spectrum of engineering and management consulting activities comprising feasibility studies, planning, design, assistance during implementation and construction supervision, project management, EIA, institutional development and organizational studies, human resources development and ITC consultancy.

The firm is distinguished in providing services that require multidisciplinary expertise and advanced modeling and analytical capabilities

OUR SLOGAN

engineering excellence, managing with precision

MISSION & VISION



OUR MISSION

Establish a track record of success as a world-class provider of engineering, management and information technology services.



OUR VISION

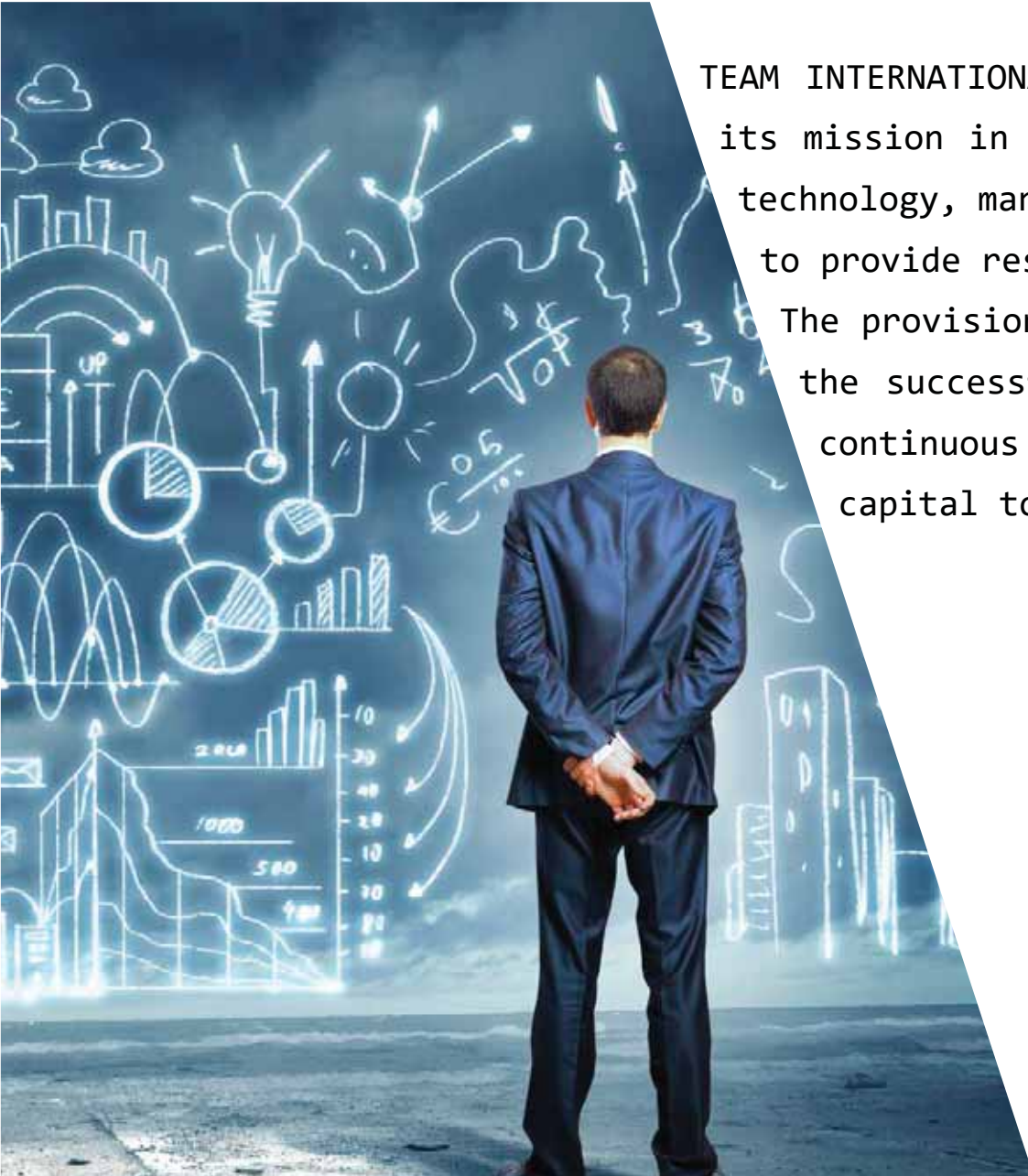
To provide high quality services by identifying, designing and implementing high-value solutions in engineering, management and information technology that are optimal, cost effective and practical to implement.




COMPANY STRATEGY

TEAM INTERNATIONAL's corporate ethos strongly characterizes its mission in pursuing a strategy that includes: Combining technology, management knowledge, and engineering expertise to provide results with long-term benefits.

The provision of effective development programs to ensure the successful implementation of project solutions. The continuous professional development of the firm's human capital to ensure high caliber services.



HUMAN CAPITAL



TEAM INTERNATIONAL's corporate ethos strongly characterizes its mission in pursuing a strategy that includes: Combining technology, management knowledge, and engineering expertise to provide results with long-term benefits.

The provision of effective development programs to ensure the successful implementation of project solutions. The continuous professional development of the firm's human capital to ensure high caliber services.

COMMITMENT

TEAM INTERNATIONAL's foremost commitment is to support governments, institutions, and companies to respond effectively to the challenges of change and development. Our project dynamics are not set by the technical challenges alone; we reach further to harness all the necessary resources in order to capture solutions with our clients that create a sustainable platform for continuous development and growth.



LEADERSHIP TEAM



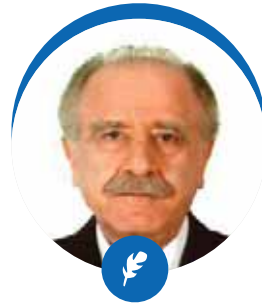
DR. TAMMAM NAKKASH

Managing Partner & Principal, Engineering Consulting

Over 38 years of consulting engineering experience - 44 as a Founding Partner and Principal in TEAM INTERNATIONAL. Specialized expertise: Multi-modal Transport Systems, Transportation Planning and Urban Engineering Highway and Toll Facilities Engineering, Management of Engineering Systems, Traffic Engineering, National Transport Policies, Economic Feasibility of Transport Projects, Private Sector Participation in Urban Services, National Housing Policies, Construction and Public Works Sectors, Manpower Development, Operations Research and Mathematical Modeling. Experience in the field of engineering covers a wide spectrum: Policy setting, formulating strategies, project identification, program development, prefeasibility and economic feasibility studies, preliminary design, final design and preparation of bidding documents, prequalification of contractors, analysis of bids, construction management and supervision, operation, maintenance, and post-construction evaluation. In addition to his specialized expertise in transport systems, Dr. Nakkash is a development expert-at-large, with strong experience in socio-economic issues, environmental aspects, and international procurement practices.

Education:

Ph.D. Civil Engineering, Purdue University - Lafayette Indiana, U.S.A, 1969.
 M.S. Transportation Engineering, University of South Carolina, Columbia, S.C., 1966.
 B.E. Civil Engineering (with distinction), American University of Beirut, 1964.
 Fellow ASCE



DR. YUSEF SALAM

Managing Partner & Principal, Management Consulting

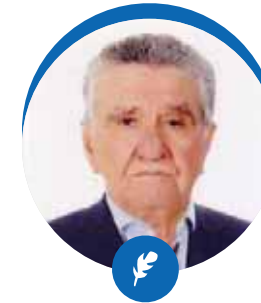
Over 35 years of experience in engineering and management consulting - 44 years as a Founder and Director in TEAM INTERNATIONAL.

Directed and participated in numerous projects and consulting assignments for public and private organizations, covering strategic planning and management, institutional capacity building, policy management, resource evaluation and development, sectoral studies, manpower studies, quality management systems, performance management systems, master plans, feasibility studies, transportation planning and engineering projects.

Extensive experience in strategy and policy setting, development management, program and project planning and management, organizational development, needs assessment, impact assessment, restructuring of service delivery by government, performance measurement and management, public and private partnerships, statistical applications, socio-economic forecasting, technical studies, transport systems, traffic system management, urban and rural development, local government, institutional strengthening and capacity building and manpower planning, development and management.

Education:

Ph.D. Civil Engineering, University of California, Berkeley, 1971.
 M.S. Civil Engineering, University of California, Berkeley, 1967.
 B.E. Civil Engineering (With Penrose Award), American University of Beirut, 1965.
 Fellow ASCE



DR. MOHAMMAD MIKDASHI

Managing Partner & Principal, ICT Consulting

Over 35 years of experience in Management Consulting - 44 years as Founder and Director in TEAM INTERNATIONAL.

Directed, managed and planned a wide array of projects and consultancy assignments at the regional and international levels in multiple sectors. Involved in diagnostic, institutional evaluation studies, strategic planning, feasibility studies, manpower assessments, training programs and quality management systems.

Extensive experience in planning & control systems, reengineering & restructuring, e-government, organizational development, human resources development, quantitative methods & systems modeling, financial analysis & forecasting, and evaluation studies.

Involved in establishing and directing companies and business ventures, in particular in the areas of Information Technology.

Education:

Ph.D. Mathematics, University of Birmingham, Birmingham, England, 1970.
 MS. Mathematics, Ph.D. research Student, University of Michigan. Ann Arbor, Michigan, USA, 1966.
 BS. Electrical Engineering (with distinction), University of Alabama, USA, 1963.



OUR
SERVICES

OUR SERVICES

TEAM INTERNATIONAL Engineering and Management Consulting, provides a wide range of professional consulting services to both public and private clients. Our consultants possess a wealth of engineering and management knowledge. Our in-house capabilities range from conceptual planning to project closeout and everything in between. We deliver value-added services in the related fields of:

01



Engineering Consulting Services

02



Management and Institutional
Development

03



HR Development & Training

Information Technology

04



ENGINEERING CONSULTING SERVICES



- Master planning and project programming
- Economic, environmental and technical feasibility studies.
- Conceptual design and preliminary engineering.
- Detailed design, estimating, preparation of contract documents and bid evaluation.
- Urban planning and urban design
- Architectural services and housing studies.
- Traffic studies and transportation systems ITS.
- Environmental impact assessment.
- Social impact assessment.

MANAGEMENT AND INSTITUTIONAL DEVELOPMENT



Strategy formulation and planning

Organization development and design

Financial planning and control systems

Management systems and procedures

Integrated management information systems

Quality management systems

Support to Public Administration Reform initiatives

Performance measurement systems and indicators

Feasibility and investment analysis

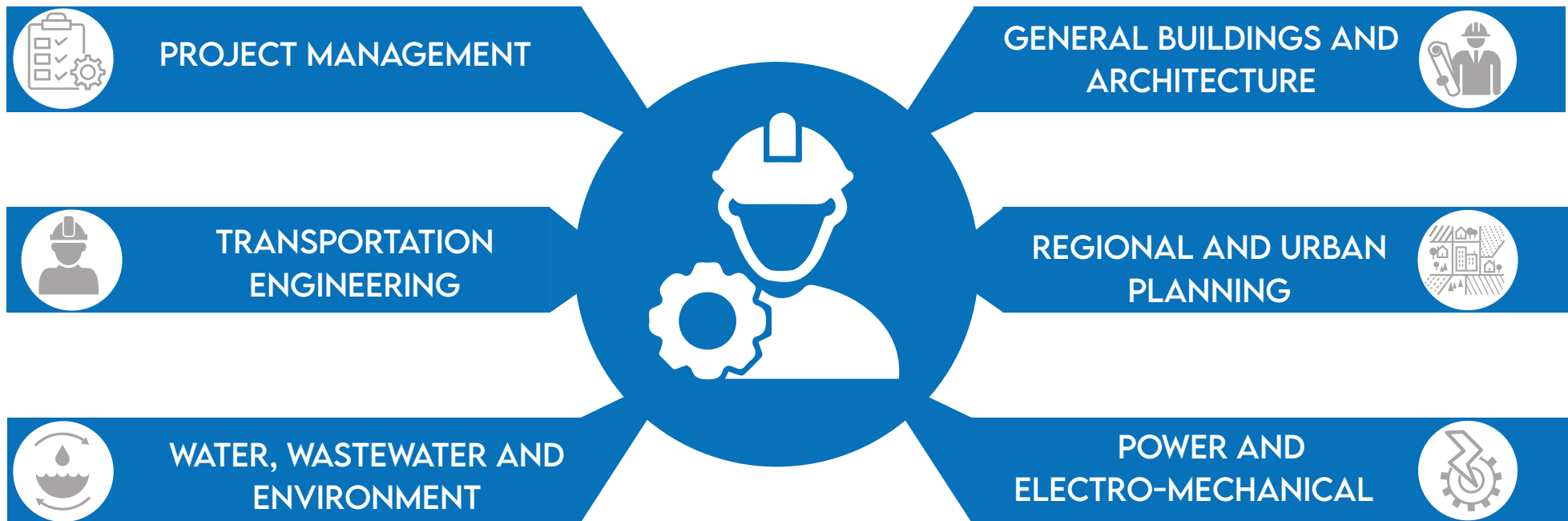
Socio-economic studies and surveys

Institutional capability building

Local government and municipal management services

MAJOR AREAS OF ENGINEERING ACTIVITIES


In addition to the expertise acquired through its past years of existence in the major disciplines of engineering, TEAM International possesses the facilities and resources for handling projects in the following engineering fields:




MAJOR AREAS OF ENGINEERING ACTIVITIES




- ✓ Needs assessment / market studies.
- ✓ Feasibility studies
- ✓ Project planning and budgeting
- ✓ Project organization and staffing
- ✓ Impact studies (Environmental, Traffic, Social, etc.)
- ✓ Contract management
- ✓ Progress monitoring and control
- ✓ Cost control
- ✓ Schedule control
- ✓ Quality control
- ✓ Earned value reporting
- ✓ Management of procurement services
- ✓ Project reporting
- ✓ Project completion and evaluation



- ✓ Water resources, dams and flood control
- ✓ Water supply and distribution
- ✓ Water desalination plants, well systems, water reservoirs and pumping stations.
- ✓ Storm water drainage
- ✓ Wastewater collection, treatment and disposal.
- ✓ Environmental Impact Assessment.
- ✓ Institutional, management and training support to authorities




- ✓ Land use studies.
- ✓ Urban development and city planning.
- ✓ Urban structure plans: residential, public services, industry, utilities, markets, tourism, transport and communication.
- ✓ Zoning and subdivision plans.
- ✓ Site Planning.



- ✓ Roads, streets and intersections
- ✓ Urban expressways and toll facilities
- ✓ Bridges, tunnels and interchanges
- ✓ Traffic signalization, highway signing and lighting
- ✓ Public transport terminals and parking facilities
- ✓ Railroads, airports and harbors
- ✓ Traffic engineering and transport planning



- ✓ Office and governmental administration buildings.
- ✓ Commercial and residential housing complexes.
- ✓ Technical and vocational training centers.
- ✓ Hotels, resorts and recreational facilities.
- ✓ Hospitals and health care facilities.
- ✓ Municipal buildings, public transport terminals and parking.
- ✓ Schools, universities, and general educational facilities.
- ✓ Rehabilitation and maintenance.



- ✓ Electrical power generation.
- ✓ Electrical power transmission and distribution.
- ✓ Technical training centers and equipment.
- ✓ Technical manpower training plans and programs.

INDUSTRIES



**HIGHWAYS AND
TRANSPORT**



**URBAN
PLANING**



HEALTHCARE



INDUSTRIAL



**SOCIAL ECONOMIC
DEVELOPMENT**



**CAPACITY
DEVELOPMENT**



E-GOVERNMENT



IT / ICT

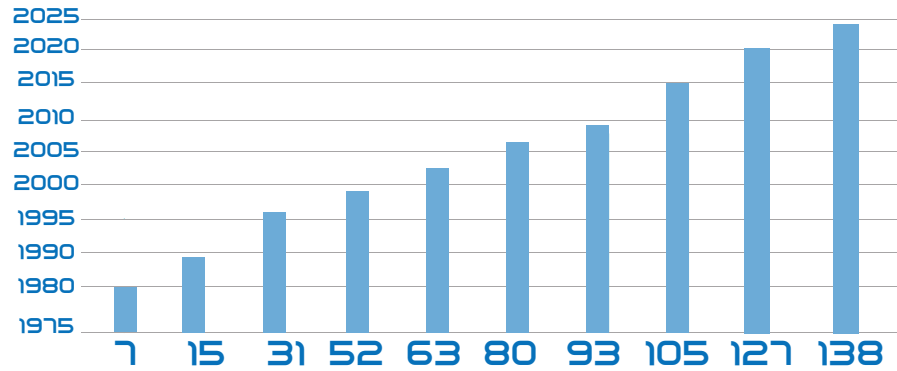


SECURITY



EDUCATION

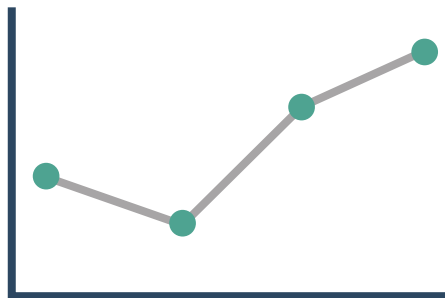
SHORT STATS



MORE THAN 138 PROJECTS COMPLETED



POSITIVE FEEDBACK FROM OUR CLIENTS



FASTEST GROWING



MORE THAN 17 COUNTRIES COVERED



Certificate of Registration

The Management System of:

**TEAM International
Engineering & Management Consultants**

Madam Curie Street, Snoubra, Ras Beirut, Mroueh Building, Fifth Floor, Beirut,
Lebanon

Operates a

Quality Management System

Which complies with the requirements of

ISO 9001:2015

This certificate is applicable for:

The planning, design, and supervision of engineering systems.

EA Code: 34

Certificate of registration No: LB-10046-QMS

Initial Certification Date: 04 September 2020

Certificate Issue Date: 04 September 2020

Certificate Expiry Date: 07 September 2023

SIGNATURE

Yevgeniya Milkheyeva
Operations Manager



Registered by:

Sustainable Management Group SMG, 1800 Bank Street, Ottawa Ontario, K1V 0W3 Canada, and subject to the SMG Terms and Conditions for Certification.
This certificate remains the property of SMG and must be returned to SMG upon its request.

To verify that this certificate is current, please refer to SMG online certification register at: <https://smg-cw.com/inquiries/about-your-certificate/>

The International Council of Management Consulting Institutes

hereby grants

Team International Engineering and Management Consultants

The CMC-Firm Status

confirming that it met all the requirements needed
to continue as a



CERTIFIED MANAGEMENT CONSULTANT
FIRM

Robert Bodenstein, CMC®
Chair, ICMCI

A handwritten signature in blue ink, appearing to read "Robert Bodenstein".

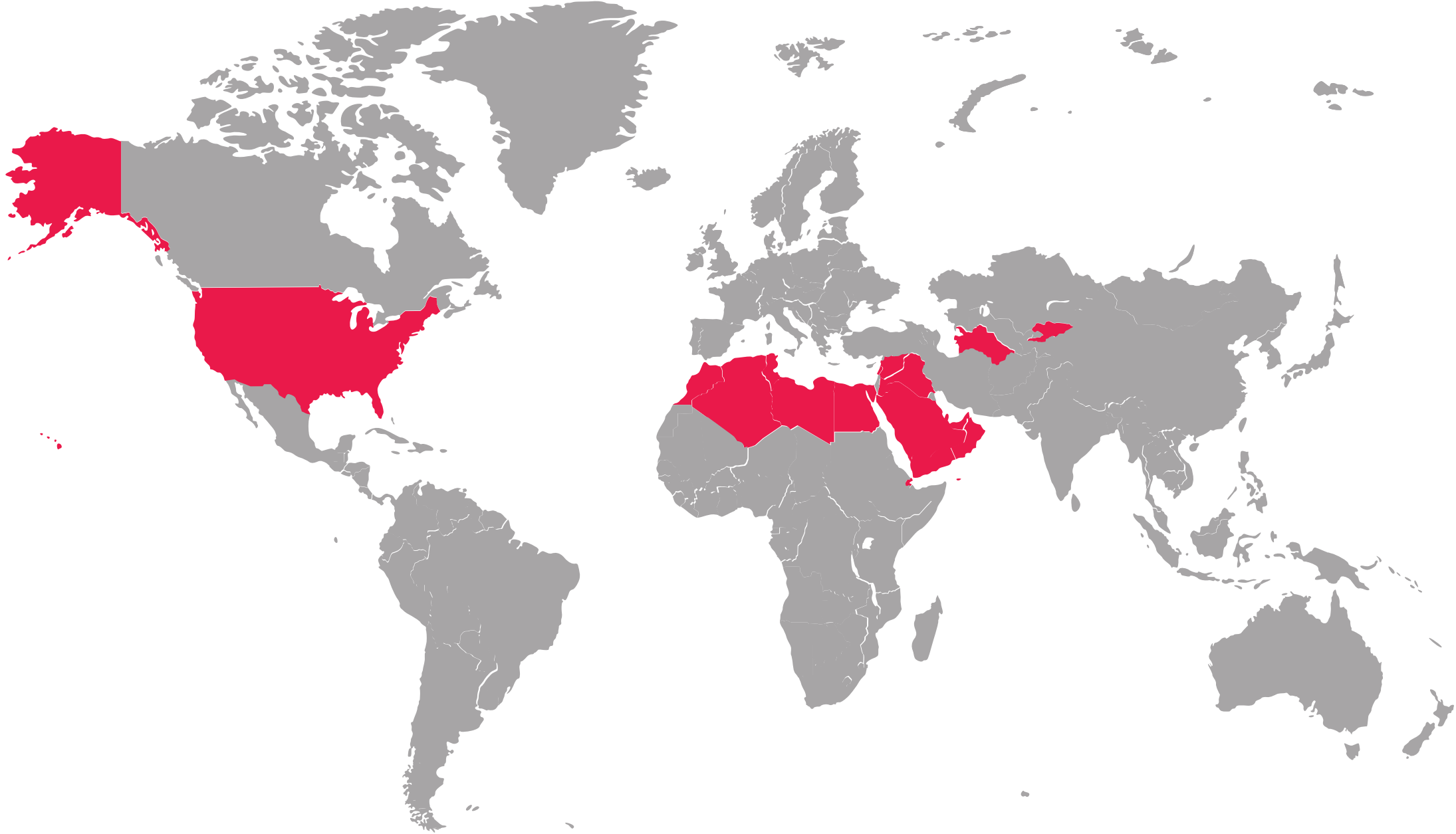
Valid until August 2025



CMC - GLOBAL



CLIENTS COUNTRIES



PARTIAL LIST OF CLIENTS

- ✓ Council for Development and Reconstruction (CDR), [Beirut, Lebanon](#)
- ✓ Ministry of Construction and Housing (MoCH), [Iraq](#)
- ✓ Ministry of Culture and Youth, [Kurdistan Region, Iraq](#)
- ✓ Ministry of Municipalities and Tourism, [Kurdistan Region, Iraq](#)
- ✓ Electricity Corporation, [Saudi Arabia](#)
- ✓ Ministry of Public Works and Transport, [Beirut, Lebanon](#)
- ✓ Conseil Executif des Grands Projets (CEGP), [Beirut, Lebanon](#)
- ✓ Conseil Executif des Grands Projets de la Ville de Beyrouth (CEGPVB), [Beirut, Lebanon](#)
- ✓ International Bank for Reconstruction and Development, Wash., D.C.
- ✓ Islamic Development Bank, [Jeddah, Saudi Arabia](#)
- ✓ Arab Fund for Economic and Social Development, [Kuwait](#)
- ✓ Saudi Fund for Economic Development, [Riyadh, Saudi Arabia](#)
- ✓ Kuwait Fund for Arab Economic Development, [Kuwait](#)
- ✓ Higher Council for Urbanism, [Beirut, Lebanon](#)
- ✓ National Council for South Lebanon, [Lebanon](#)
- ✓ Public Transport and Railways Authority, [Beirut, Lebanon](#)
- ✓ General Directorate of Urban Planning, [Beirut, Lebanon](#)
- ✓ Economic and Social Commission for Western Asia (ESCWA), [Beirut, Lebanon](#)
- ✓ Ministry of Public Works and Highways, [Yemen](#)
- ✓ Ministry of State, Capital Secretariat, [Sana'a, Yemen](#)
- ✓ Ministry of International and Public Cooperation (MIPC), [Yemen](#)
- ✓ Port Cities Development program (PCDP), [Yemen](#)
- ✓ General Investment Authority (GIA), [Yemen](#)
- ✓ Aden Free Zone (AFZ), [Yemen](#)
- ✓ General Authority for Land, Survey and Urban Planning, [Yemen](#)
- ✓ Local Economic Development Department (LEDD), [Yemen](#)
- ✓ Al-Riyadh Development Authority (ADA), [Riyadh, Saudi Arabia](#)
- ✓ Arabian American Oil Company (ARAMCO), [Dhahran, Saudi Arabia](#)
- ✓ Municipality of Riyadh, [Saudi Arabia](#)
- ✓ Municipality of Muscat, Sultanate of [Oman](#)
- ✓ Ministry of Transport, [Morocco](#)
- ✓ Ministry of Transport and Communication, [Kyrgyz Republic](#)
- ✓ Ministry of Public Works, [Morocco](#)
- ✓ Ministry of Public Works, [Jordan](#)
- ✓ Ministry of Public Works and Transport, [Beirut, Lebanon](#)
- ✓ Ministry of Public Works and Housing, [Saudi Arabia](#)
- ✓ Ministry of Posts and Telecom, [Beirut, Lebanon](#)
- ✓ Ministry of Planning, [Saudi Arabia](#)
- ✓ Ministry of Municipal and Rural Affairs, [Saudi Arabia](#)
- ✓ Ministry of Municipal Affairs and Agriculture, [Doha, Qatar](#)
- ✓ Ministry of Public Works, [Manama, Kingdom of Bahrain](#)
- ✓ Ministry of Industry, [Algeria](#)
- ✓ Ministry of Industry and Electricity, [Saudi Arabia](#)
- ✓ Ministry of Education and Youth Affairs, [Muscat, Sultanate of Oman](#)
- ✓ Ministry of Communications, [Saudi Arabia](#)
- ✓ Ministry of Communications, [Morocco](#)
- ✓ Minister of State for Administrative Reform, [Lebanon](#)
- ✓ Port of Beirut, [Lebanon](#)
- ✓ Saudi Arabian Public Transportation Co., [Riyadh, Saudi Arabia](#)
- ✓ Saudi Government Railroad Organization, [Dammam, Saudi Arabia](#)
- ✓ Saudi Consolidated Electric Company, Eastern Province, [Saudi Arabia](#)
- ✓ Saudi Consolidated Electric Company, Southern Province, [Saudi Arabia](#)
- ✓ Saudi Consolidated Electric Company; Central region, [Saudi Arabia](#)
- ✓ Saline Water Conversion Corporation, [Riyadh, Saudi Arabia](#)
- ✓ Riyadh Electricity Company and Suburbs, [Riyadh, Saudi Arabia](#)
- ✓
- ✓ Water and Electricity Department, [Abu Dhabi](#)
- ✓ The Kuwait Planning Board, [Kuwait](#)
- ✓ General Directorate of Civil Defense, Ministry of Interior, [Saudi Arabia](#)
- ✓ General Directorate of Military Works, Ministry of Defense and Aviation, [Saudi Arabia](#)
- ✓ Industrial Development Authority of Lebanon (IDAL), [Beirut, Lebanon](#)
- ✓ Kuwait Airways Corporation, [Kuwait](#)
- ✓ Kuwait Foundation for Advancement of Science, (KFAS), [Kuwait](#)
- ✓ Kuwait Institute for Scientific Research (KISR), [Safat, Kuwait](#)
- ✓ Kuwait Investment Co., [Safat, Kuwait](#)
- ✓ Kuwait National Petroleum Company, [Kuwait](#)
- ✓ Kuwait Prefabricated Building Company, [Kuwait](#)
- ✓ Public Warehousing Co., [Safat, Kuwait](#)
- ✓ Royal Oman Police, Sultanate of [Oman](#)
- ✓ Saudi Arabian Refrigerated Transport Co., [Riyadh, Saudi Arabia](#)
- ✓ SAUDIA, Saudi Arabian Airlines, [Jeddah, Saudi Arabia](#)
- ✓ Shuaiba Industrial Area Authority, [Kuwait](#)
- ✓ Societe Internationale de Telecommunications Aeronautiques (SITA), [Beirut, Lebanon](#)
- ✓ Syrian Company for Oil Transport, [Syria](#)

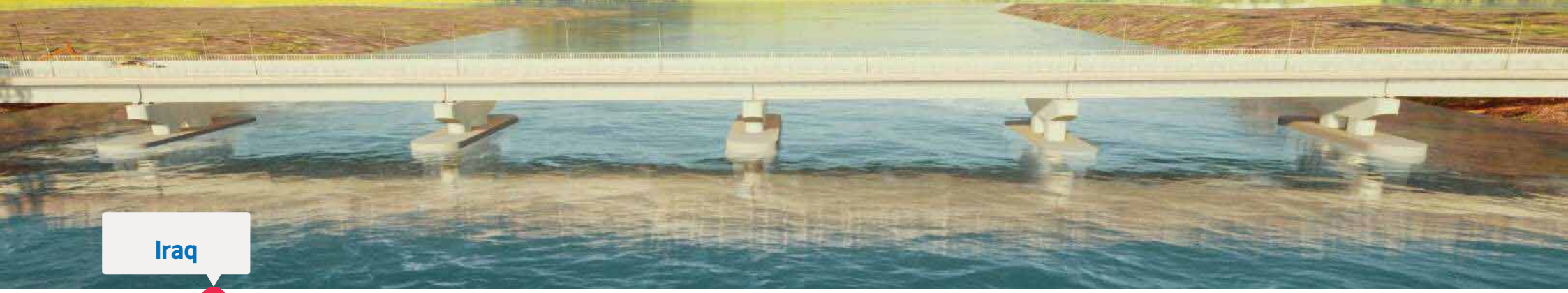
PARTIAL LIST OF CLIENTS

- ✓ Syrian Company for Storage and Distribution (SADCOB), Syria
- ✓ The General Secretariat of Gulf Cooperation Council, Riyadh, Saudi Arabia
- ✓ USAID, Cairo, Egypt
- ✓ UNDP, Beirut, Lebanon
- ✓ UNICEF, Beirut, Lebanon
- ✓ De leuw, International Inc., Chicago, U.S.A.
- ✓ Falcon Cement Co., Cairo, Egypt
General Company for Textiles, Algeria
- ✓ Hariri Foundation, Beirut, Lebanon
- ✓ Islamic Awkaf Directorate, Beirut, Lebanon
- ✓ Lebanese Food Industries Association, Lebanon
- ✓ Manpower Council, Riyadh, Saudi Arabia
- ✓ National Center for Consultancy and Management Development, Iraq
- ✓ National Cleaning Company, Safat, Kuwait
- ✓ National Institute for Productivity and Industrial Development, INPED, Algeria
- ✓ National Petroleum Corporation, Libya
- ✓ OGER, Liban, S.A.L., Beirut, Lebanon
PETROMIN, Saudi Arabia
- ✓ Royal Oman Police, Sultanate of Oman
- ✓ Saudi Basic Industries Corporation (SABIC), Saudi Arabia
- ✓ Social Welfare Institutions, Beirut, Lebanon
- ✓ Southern Province Cement Co., (S.P.C.C.), Abha, Saudi Arabia
- ✓ The Arab League, Cairo, Egypt
- ✓ The Mawarid Group, Riyadh, Saudi Arabia
- ✓ World Health Organization, Alexandria, Egypt
- ✓ Bable Governorate, Iraq
- ✓ Ministry Of Construction and Housing, Kurdistan, Iraq
- ✓ Ministry Of Construction and Housing General Directorate Of Roads and Bridges, Iraq
- ✓ Ministry Of Transport, Saudi Arabia
- ✓ Agència Catalana de Cooperació al Desenvolupament, Barcelona, Spain
- ✓ United Nations Development Programme, UNDP
- ✓ United Nations Children's Fund, UNICEF
- ✓ Ministry Of Construction And Housing And General Municipalities, Iraq
- ✓ Public Transport Authority, Saudi Arabia
- ✓ Ministry of Transport (MOT), Saudi Arabia
- ✓ Ministry of Municipalities and Client Rural Affairs (MOMRA), Saudi Arabia
- ✓ Ministry Of Cultural and Youth, Kurdistan, Iraq
- ✓ Rural Access Program-Central Management Office Ministry of of Public works and Roads, Yeman
- ✓ Muscat Municipality, Oman
- ✓ Societe Nationale des Autoroutes du Maroc (ADM), Morocco



DESCRIPTION OF SIMILAR
ASSIGNMENTS

TRANSPORTATION ENGINEERING



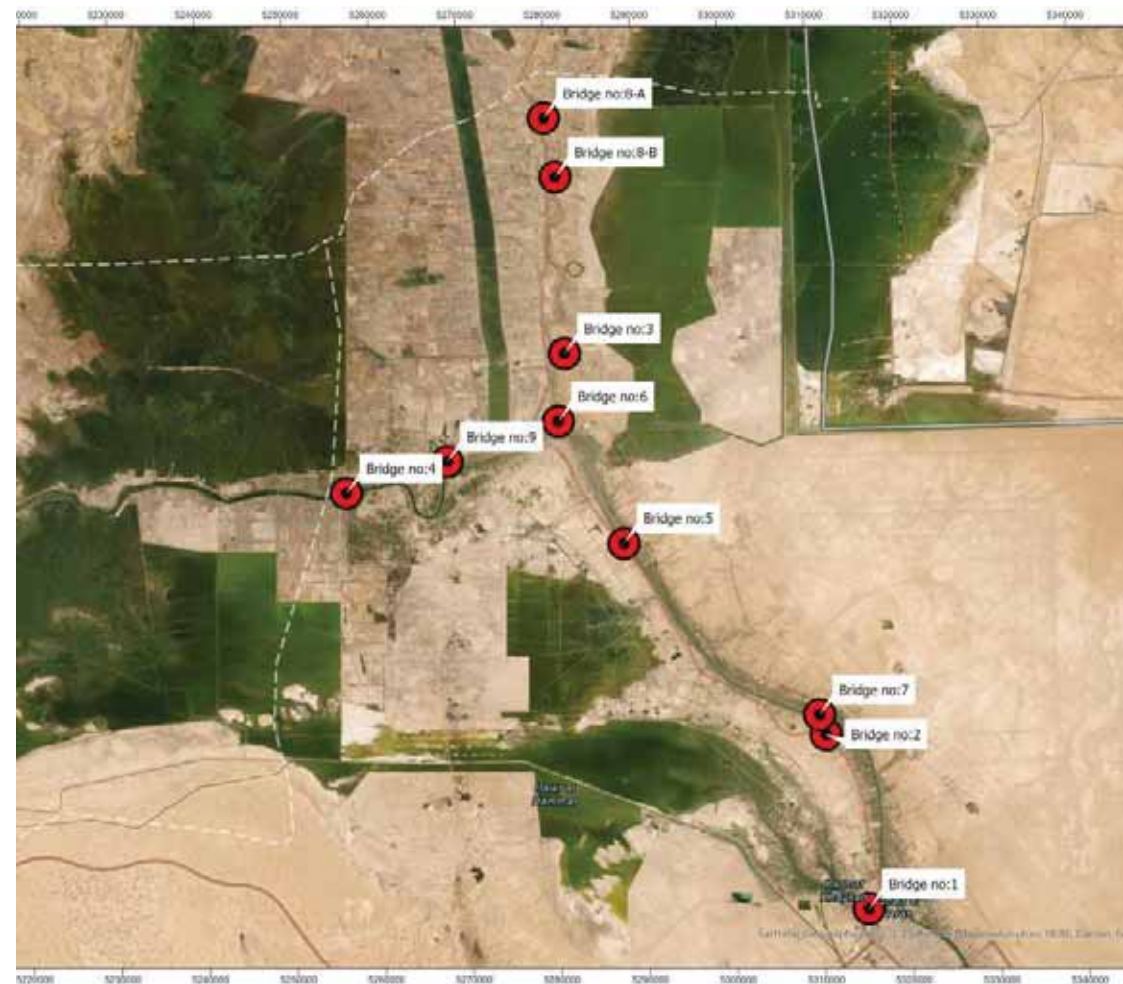
Iraq

6213 >>

Audit on the preparation of consultancy studies for the design of 9 bridges and causway

Client	Basra Governorate	Associated Firm	None
Brief Description		Date of Completion	Ongoing

The province of Basra is interspersed with river routes and waterways that require daily traffic to cross through bridges and crossings that have become dilapidated over time or can no longer accommodate excessive traffic, in addition to the need to establish new crossings that meet the population and economic growth requirements of the region. Also, the existence of road intersections that require the establishment of overpasses to provide traffic flow with the increasing number of vehicles occupying the roads. The project includes consultancy services to review studies, designs, and necessary documentation for the implementation of nine bridges and viaduct.



SAFETY FIRST

Lebanon

6214

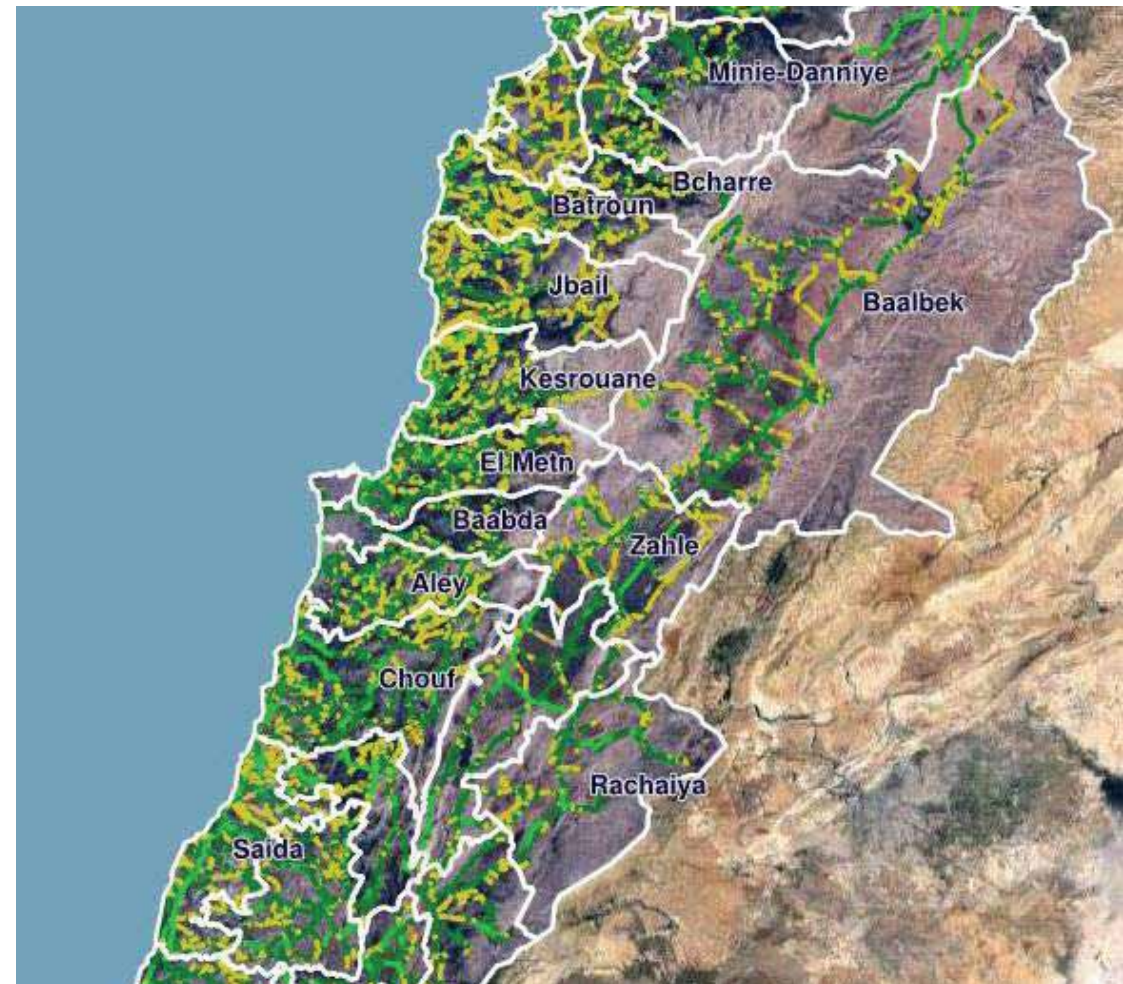
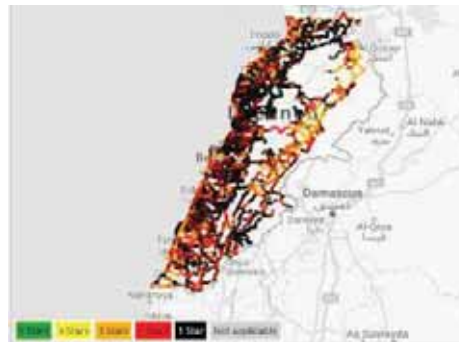
Technical Assistance for a Road Safety Program

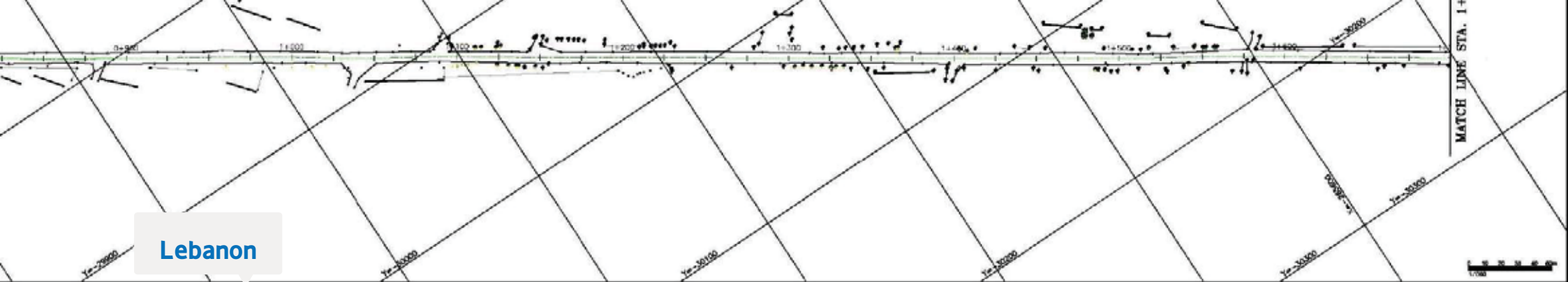
Client	Council for Development and Reconstruction (CDR)	Associated Firm	FRED ENGINEERING
Brief Description	Date of Completion: Ongoing		

The Roads and Employment Project (REP) financed by the World Bank, includes a technical assistance for road safety which is the subject of these Terms of Reference.

The Objective of this TA is to put Lebanon on a clear path of reducing its number of road traffic fatalities and serious injuries. The areas of focus of this TAs are:

- i) the development of national norms and standards for road safety;
- ii) the development of a National Road Safety Master Plan and related Safe System Projects, and
- iii) building capacity in crash data management and road infrastructure safety management





Lebanon

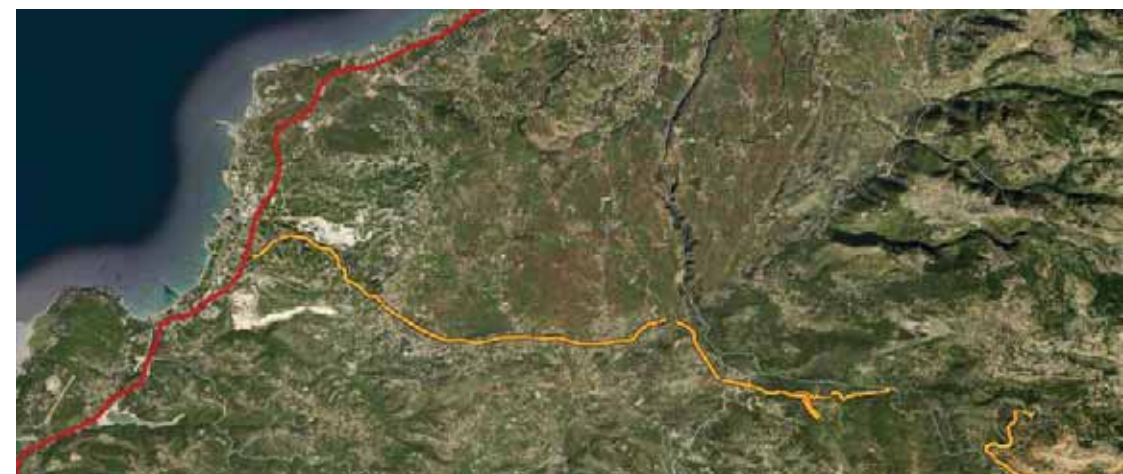
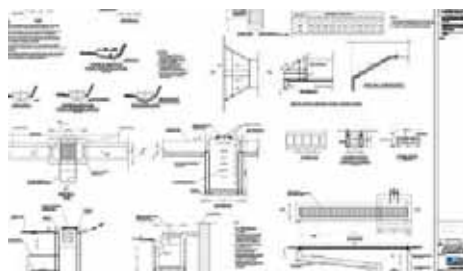
6210 6209

Consultancy Services Preparation of Detailed Design, Standard Bidding Documents and E&S Safeguard Document for Road Routine Maintenance and Rehabilitation of Remaining Roads Lot 6 & 5

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	Ongoing

The objective of this Consultancy service is to (1) execute routine activities and (2) implement rehabilitation works on selected roads that are under REP. The objective of the consultancy is to design the following:

- Execute Routine Maintenance activities for a period of two years, for each Caza in Lot 5- Tripoli, Koura, Batroun and Bcharre Cazas, for Primary roads as priority and for Secondary roads where funds are available.
- Rehabilitation works of below Roads:
 - Road No.4: "Bechmizzine - Fiaa - Deddeh - Dahr El Ain - Ras Masqa El Shmaliyeh" Section 2 (around 7km) in Lot 5- Koura caza;
 - Roads No. 4 & 1a: "Anfeh - Fiaa - Botram" (around 5km) to arrive to Bechmezzine & Bterram, in Lot 5-Koura caza;
 - Road No.5: "Bustan Al Assi - Kfar Halda - Beit Chlala - Tannourine Al Tahta"-Section2 (around 9km) in lot 5-Batroun Caza.





Lebanon

6203

Construction Supervision Services for the Rehabilitation of Selected Road Links in Lebanon, Lot: 6 Hermel and Baalbeck

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	Ongoing

This project covered 8 road links in the Casas of Baalbek and Hermel with a total length of 84.19 km. Works related to this project are financed by the World Bank and consist of road and bridges rehabilitation. The Consultant shall develop a Project Management Plan to be adopted and implemented during the execution of sub-projects under the contract, which will be composed of 3 main phases: Preconstruction or tendering stage, construction stage and defects liability stage

- Assist in the review of tenders for construction works.
- Review of the detailed construction designs and drawings and provide comments and recommendations for design changes and improvements and ensuring optimization of labor content, if required.
- Ensure that all documentation for land expropriation have been processed, if any.
- Prepare initial site-handing over certificate in accordance with contract provisions.
- Review and approve the Contractor's and his sub-contractors', if any, Work Program including equipment, work force including management and support staff necessary to execute the project.





Iraq

6206

Design review and Construction Supervision of Rehabilitation of 30Km of Al Sherqat Intersection- Ramadhanyat Road (Two Way) in Salah AL-Din Governorate (30KM)

Client	Ministry of Construction and Housing-Roads and Bridges Directorate (RBD)	Associated Firm	None
Brief Description		Date of Completion	2022

The Project Development Objective is to improve road transport connectivity and safety along Route 1. The work to be executed consists of the rehabilitation of Route 1 at Salah Addin Governorate in Iraq. The typical cross-section for this road has 4-lanes divided with a wide median. Flexible pavement is used for the maintenance and rehabilitation of the existing road. It consists of two asphalt layers, one is an asphalt concrete binder course and shall be laid as per the site requirements and the other is an Asphalt concrete surface course layer that will cover the entire length of the road. Comprises the rehabilitation of the existing road, but not limited to:

- repair and improvement of traffic safety measures
- Stabilizing the outer and inner shoulders along the entire project length.
- repair of pavement distresses
- Construction of rigid pavement instead of weighing station as included in the proposed variation order No.1.





Lebanon

Construction Supervision and Assistance During Tender for the Pan Arab Highway Mdairej–Chtaura–Taanayel Section – Lot A

Client	Council for Development and Reconstruction (CDR)	Associated Firm	SoudConsult
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Brief Description	Partial handed over
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- Earthworks and pavement construction
- Reinforced and prestressed concrete bridges
- Large Viaducts launching prestressed concrete girders.
- Cut and cover underpasses construction
- Large earth retaining construction
- Soil stability and large piling construction
- Foundation soil treatment and large landslides mitigation measures.
- Storm water drainage systems with box culverts and hydraulic structures
- Signing, road marking and safety system.
- Relocation of dry and wet utilities
- Reinstating of roads interfered by the Highway.
- Traffic management during construction
- Lighting, landscaping irrigation and other highway and safety equipment.
- The estimated cost of construction of this section is around 170 Million \$.





Kyrgyzstan

« 6162 »

Consulting Services for Design and Bidding Documents Review, tendering Procurement Assistance and Construction Supervision of BishKeK–Nayrn–Torugart Road Km272–365KM (154 KM)

Client	Ministry of Transport and Client Roads	Associated Firm	SaudConsult and KTI
Brief Description		Date of Completion	2022

New construction of single and double layer asphalt concrete pavement; base course from crushed stone and gravelly sub-base; Earthwork; Widening of subgrade and construction of a new subgrade on the sections with re-routing; Re-routing of the alignment on small stretches where improvements in horizontal alignment were possible.
Demolition and construction of new pipes; widening of pipes and their repair.
Improvement of soil stability and treatment of land slide that may include subject to designs performed during construction, reinforced concrete piles.
Bridge rehabilitation, include widening and strengthening.
Construction of roadside drainage, construction of the irrigation canals and chutes Installing road signs, road marking, kilometer posts and barriers, snow fences; Construction of sidewalks in the settlement, New construction of bus stops and enclosed bus stops.



Design of Engineering Solutions and Supervision of Works in the Sector of Road Safety in the UoM of Menieh

Client	Agencia Catalana de Cooperació al Desenvolupament	Associated Firm	None
Brief Description		Date of Completion	2022

- Review the preliminary selection of black spots improvement measures and recommend changes if needed.
- Prepare detailed designs for countermeasures in compliance with the relevant national and international legal and safety standards
- Assist ACCD and Mennieh UoM in any pilot project additional work.
- Obtain the necessary permits for implementation of the designs.
- Assist in procurement through preparation of a bill of quantities, technical specifications and recommendation of selection criteria.
- Supervise the execution of works in all technical and administrative matters, including on-site management of the contracted construction company, approvals, verifications and final drawings





Technical Assistance– Information and Communication Systems

Client	Ministry of Construction and Housing General Directorate of Roads and Bridges – Kurdistan	Associated Firm	Quest
Brief Description		Date of Completion	2022

- Examination in detail and familiarization with current status of ICT development within the KRG and overall KRG road system.
- Assessing the current level of fiber optics system development and defining arrangements for its utilization through agreement with the Ministry of Communications, including the link to support the proposed ICT solutions for road asset management;
- Development of recommendations for implementation of ICT systems in the road management activities by setting the road map for implementing communication and surveillance systems for traffic safety monitoring, traffic volume monitoring, weight-in-motion (WIM) monitoring, axle-load enforcement, travel speed monitoring, license plate recognition (to detect illegal plates), Variable Message signs (VMS), SOS system, traffic control center, weather conditions monitoring, CRRS, free Wi-Fi access at parking and rest areas, etc., including definition of enabling conditions.



ICT REPORT

Information and Communications Technology (ICT) Plan Report





Iraq
Kurdistan

Preparation of Road Maintenance Technical Manual / Specifications

Client	Ministry of Construction and Client Housing – Kurdistan	Associated Firm	None
Brief Description		Date of Completion	2022

The process of the development of a Technical Manual/Specifications for Road Maintenance aims to achieve the following five important objectives:

- Improved quality of road maintenance and operation.
- Appropriate solutions regarding maintenance in the local context.
- Reducing resources (Time, Human Resources and Cost) consumed in road maintenance
- Minimizing adverse impacts to environment
- Full compatibility and harmonization with contemporary and best practice in the road sector.





Iraq

6186

Transport Corridors Project / Construction Supervision & Related Services for Rehabilitation of Expressway No. I – R7 & R8 (255 KM)

Client	Ministry Of Construction And Housing And General Municipalities	Associated Firm	None
Brief Description		Date of Completion	2021

Objectives of these consulting services are to Provide necessary technical assistance to the Roads and Bridges Directorate PMT in the:

1. Bidding process.
2. Pre bid conference, evaluation of bids and contract award and signing and, Land over approved detailed design drawings and instructions to the contractor.
3. supervise work contracts to ensure that the executed works comply with the approved design internationally acceptable technical specifications environmental and social safeguards and sound engineering practice.
4. Prepare final construction reports and compile full set of as-built drawings of all completed works.





lebanon

Detailed Engineering Design for Rehabilitation of Selected Road Links in Lebanon Lot 5 & Lot 6 (164 KM)

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2020

The project aims at carrying out a program of activities to rehabilitate, upgrade and maintain primary, secondary and tertiary roads, including road safety and sport improvements. The project includes full pavement analysis design operation to determine the preferred rehabilitation option. Do A conceptual design, cost estimate and prepare the required bidding documents for the works. The actual services consist of carrying out a detailed engineering drawings and the tender documents. Updating the different specifications of the project components.

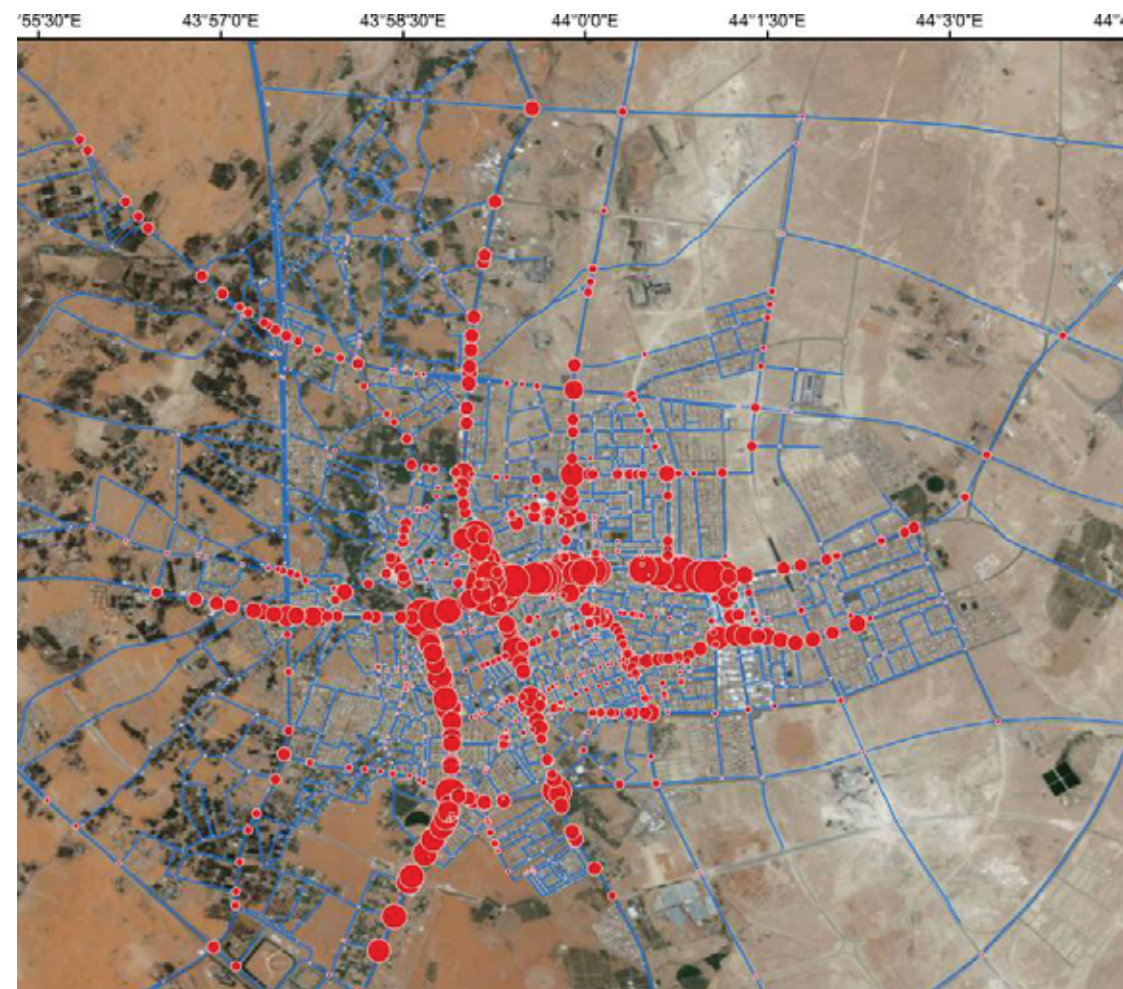




Establishing and Developing a System for Preparing Master Transport Plans for the cities of the Kingdom of Saudi Arabia

Client	Ministry of Municipalities and Client Rural Affairs (MOMRA)	Associated Firm	SaudConsult
Brief Description		Date of Completion	2018

Establishing a framework for integrating transport planning within the process of urban master planning.
 Identification of the interaction of land use planning and the demand for travel.
 Propose a methodology for transport planning based on the 4-step model For each of the test urban areas review past relevant studies and identify additional required data.
 Data collection in each of the cities: traffic counts, Roadside OD, travel speed, intersection counts.
 Network inventory and description Data analysis Calibrating a travel model using PTV VISUM Building the transport model, running alternative scenarios.
 Evaluate various scenarios Propose transport plans for a 15 years horizon Meeting with client and results presentations Preparation of documentary reports Establishment of computerized data bases for future updating.





Lebanon

6188

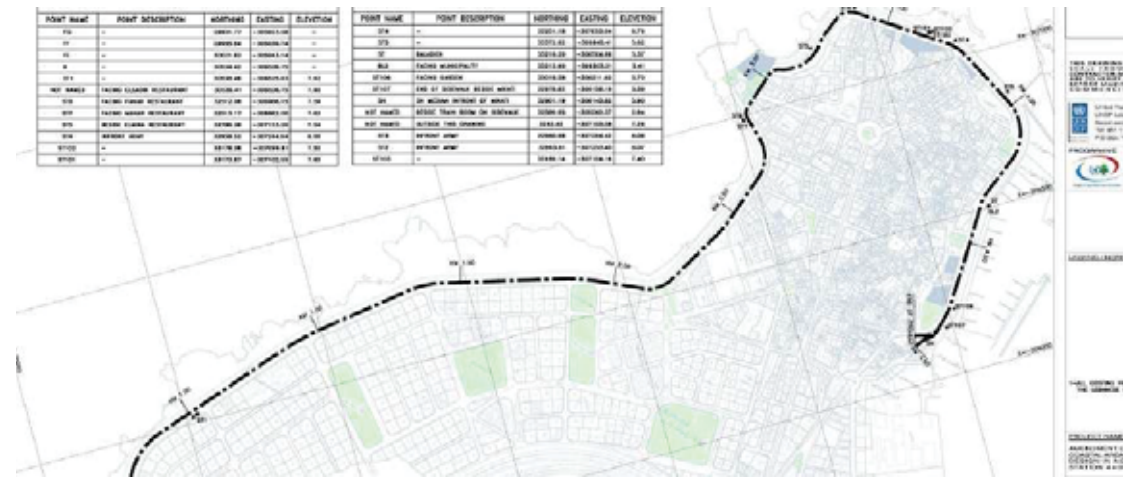
Provision of Professional Services for the Assessment and Design of the rehabilitation activities needed for El Mina Coastal area and Cornish Facade

Client	United Nations Development Client Program (UNDP)	Associated Firm	None
Brief Description	2017		

- Data collection and assessment of the current conditions of the Cornish in terms of cross sections, traffic, economic activities, topographic survey etc.
- Coming up with a new and improved concept design for the 5km stretch of the Cornish which ensures that it is an attractive area for people from all over the city, the region and the country visit. The design included a reorganization of the ROW to give more space to people by reducing vehicular lanes, providing a bus lane, and enhancing pedestrian facilities and crossings
- Tender documents, including call for tenders, final design, Specifications, General and Special Conditions of Contract, BOQ, Fair Price Estimate, and a Primavera construction schedule.

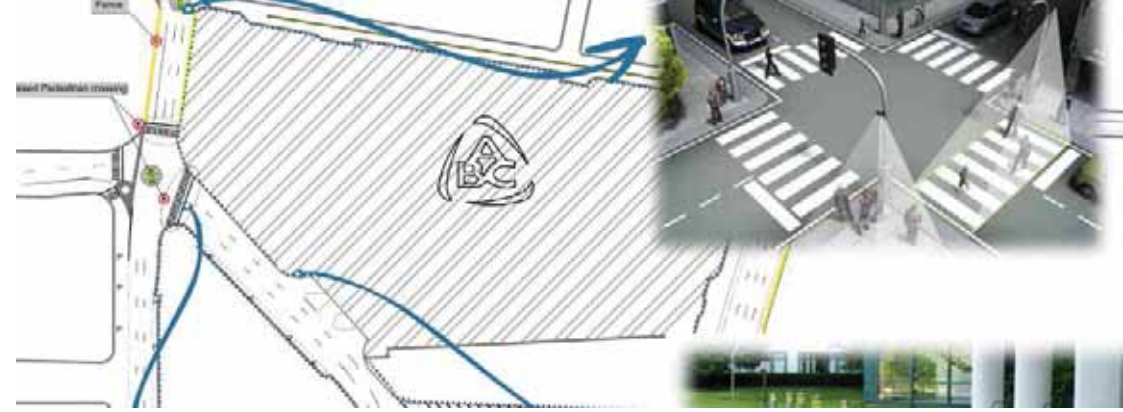


POINT NAME	POINT DESCRIPTION	ADDRESS	CASTING	ELEVATION
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ST2	END	00000.00	00000.00	0.00
ST3	START	00000.00	00000.00	0.00
ST4	END	00000.00	00000.00	0.00
ST5	START	00000.00	00000.00	0.00
ST6	END	00000.00	00000.00	0.00
ST7	START	00000.00	00000.00	0.00
ST8	END	00000.00	00000.00	0.00
ST9	START	00000.00	00000.00	0.00
ST10	END	00000.00	00000.00	0.00
ST11	START	00000.00	00000.00	0.00
ST12	END	00000.00	00000.00	0.00
ST13	START	00000.00	00000.00	0.00
ST14	END	00000.00	00000.00	0.00
ST15	START	00000.00	00000.00	0.00
ST16	END	00000.00	00000.00	0.00
ST17	START	00000.00	00000.00	0.00
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ST19	START	00000.00	00000.00	0.00
ST20	END	00000.00	00000.00	0.00





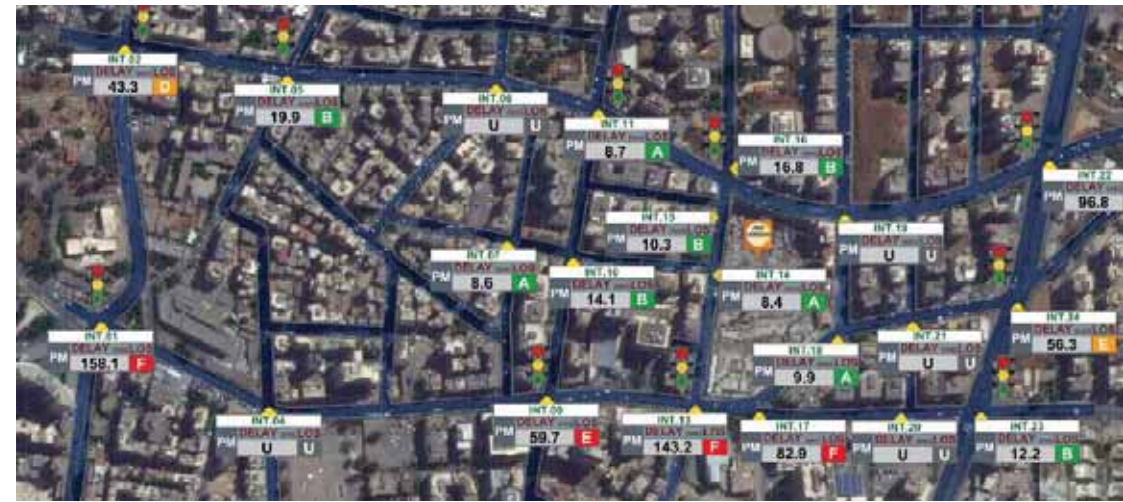
lebanon



Advisory Services to ABC Verdun Mall

Client	ABC	Associated Firm	None
Brief Description		Date of Completion	2017

The study covers the required traffic management improvements in the ABC Mall Vicinity and investigate on potential enhancement on the efficiency of the existing roadway system in order to improve traffic flow circulation and minimize the influence of the Mall on the traffic congestion within Verdun Area.





Saudi Arabia



Advisory Services to PTA (Public Transport Authority) in preparing scope of work for several studies

Client	Public Transport Authority	Associated Firm	None
Brief Description	<p>Preparation of position papers and scope of work for several studies and proposing long-lists of international consultants who are eligible to invite.</p> <p>The following documents were prepared.</p> <ol style="list-style-type: none"> Challenges to public transport in Saudi Arabia Providing Transport for working women Public Transport Security Competition in Multi-Modal Passenger Transport 		
Date of Completion	2016		

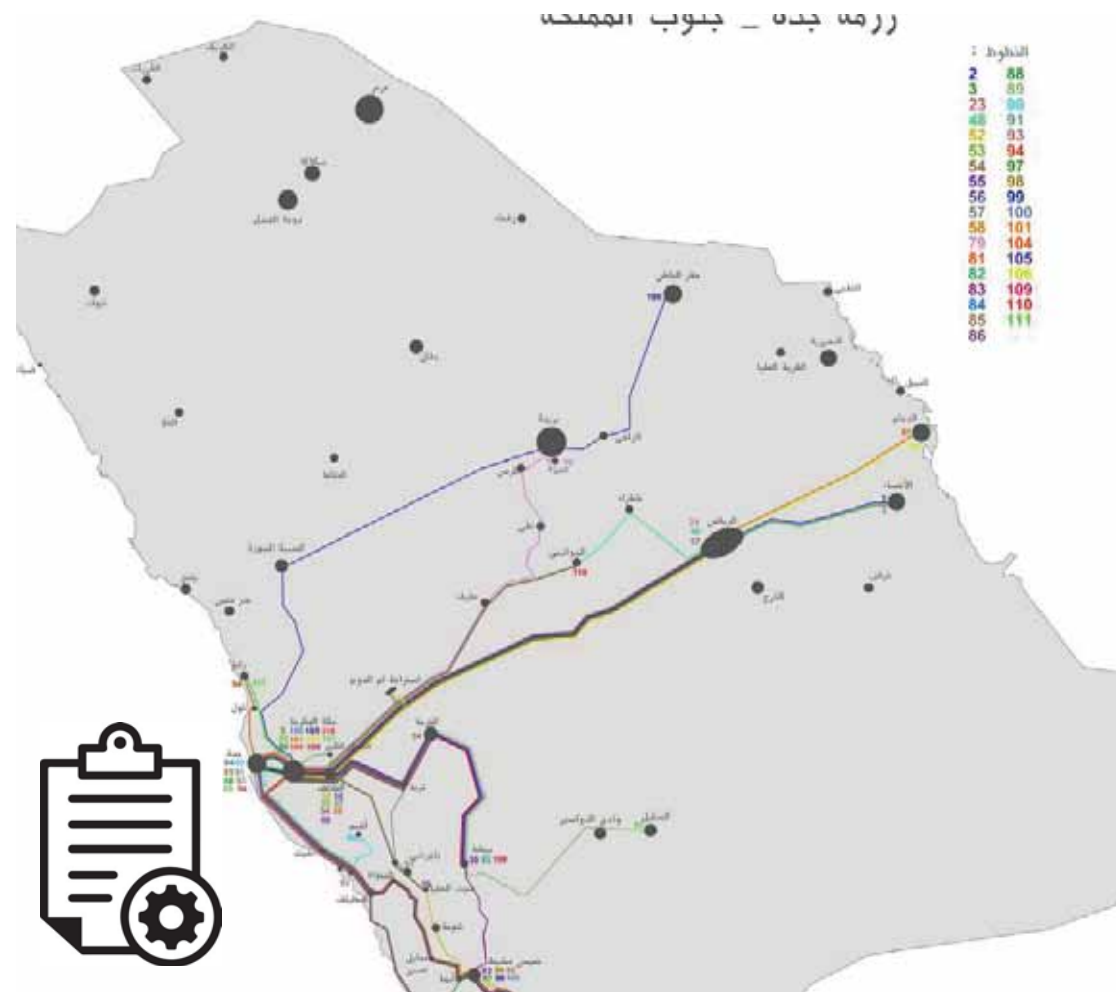
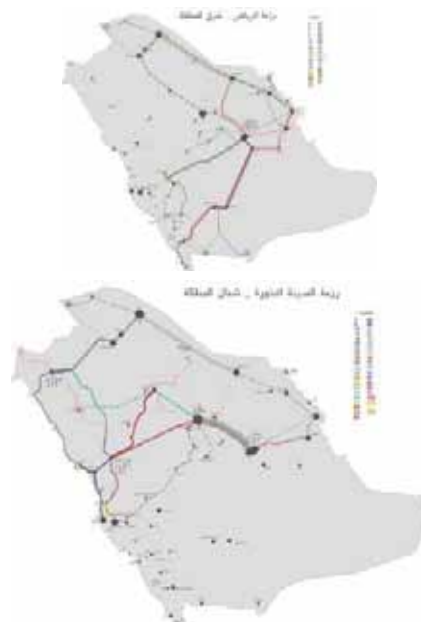


Technical Assistance During Procurement of Tendered Intercity Bus Services covering the entire Kingdom of Saudi Arabia

Client	Ministry of Transport (MOT)	Associated Firm	LRTC (Germany) Saudconsult (Saudi Arabia)
Brief Description	2014		

Provide Technical Assistance for MOT during the transition from the sole operator of bus public transport between cities to three operators.

- Updating basic information (ridership and Lines)
- Preparation of Prequalification Documents
- Analysis of Prequalification Applications
- Preparation of Tender Documents and Special Conditions of Contract
- Preparation of TOR for the down-stream Technical Assistance.





lebanon

6110 >>

The Cultural Heritage and Urban Development (CHUD) Project Supervision of Construction Contracts for Urban Development & Conservation, and Engineering Study for Traffic and Road Improvement in the Old City of Tripoli.

Client	Council for Development and Reconstruction (CDR)	Associated Firm	Bitar Consulting (only for the supervision services)
Brief Description		Date of Completion	2014

The Cultural Heritage and Urban Development (CHUD) Project is an initiative undertaken by the Government of Lebanon and with the support of the World Bank, Agence Francaise de Developpement, Government of Italy and Government of France, with the purpose of protecting, rehabilitating, and revitalizing selected Lebanese archaeological and core historical sites. The project aims at improving the quality of urban life of the local residents in and around the old city of Tripoli. As a result of this project, a better access to the medina will be provided while freeing it of vehicular traffic; public spaces of great value will regain their pedestrian qualities; a popular market serving the historic city will be provided with better facilities. The main components of the project are:

1. Moving the vegetable market to a platform covering River Abou Ali Channel.
2. Passing the traffic to Zghorta through an underpass and Bridge improvement.
3. Access to spaces, traffic circulation, parking improvements and landscaping.
4. Water supply, sanitation and utility connections in





lebanon



6161 >>

Supervision service for implementation & Operation of Traffic Management Program & On-street parking management Program

Client	Council for Development and Reconstruction (CDR)	Associated Firm	IBI group (Canada)
Brief Description		Date of Completion	2013

1. Supervision of construction of road works
 2. Operation of the Traffic Management Center
 3. Supervision of implementation of On-Street Parking Management
 4. Operation services and traffic engineering technical assistance.
- TMC Supervision
 - Traffic Engineering Technical Assistance
 - Supervision of road works construction and contract management
 - Supervision of installation of Park Meters





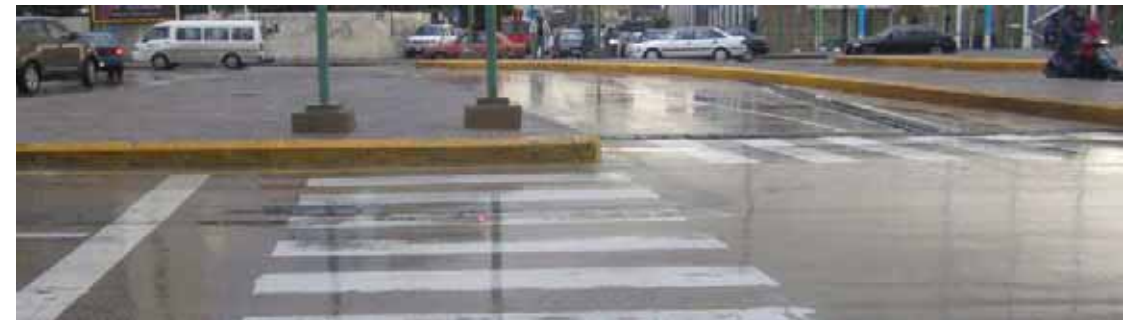
Lebanon

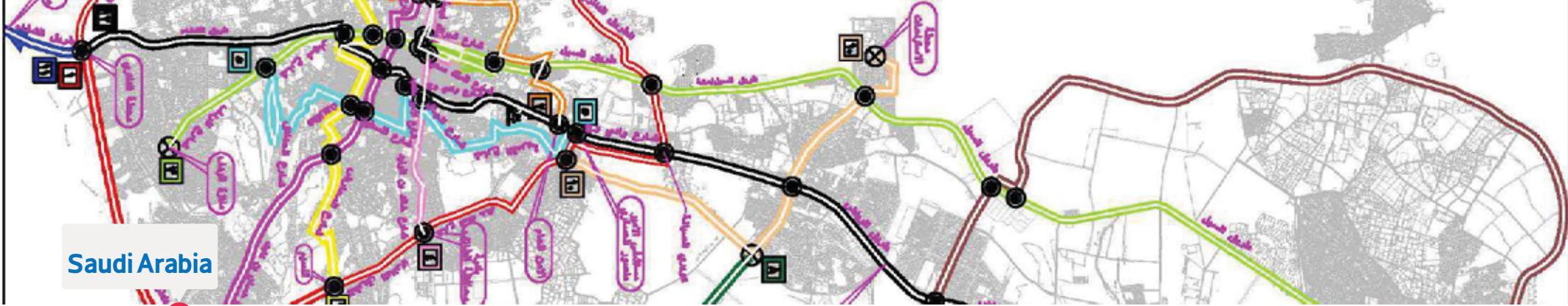
Urban Transport Development Project – Traffic Management

Client	Ministry of Municipalities and Tourism	Associated Firm	IBI Group
Brief Description		Date of Completion	2013

The objective of the Urban Transport Development Project (UTDP) is to improve the operational and economic efficiency of Beirut's urban transport system, and facilitate the traffic flow within the Greater Beirut area. The UTDP consists of the following components:

- Traffic management program, installation of 199 traffic lights and 55 traffic monitoring cameras, traffic signs, road markings, and improving the pedestrian walkways. The creation of a monitoring and management center for traffic circulation and connect it to 120 traffic lights via DSL technology, and installing a 45Km network of fiber-optics to connect the traffic lights and the traffic monitoring cameras to the center. Installing red light enforcement cameras on 10 intersections;
- On-street parking management program, with parking meters for 7,500 parkings.
- Technical assistance for transport planning, public transport regulation, air quality management and transport feasibility studies;
- Project management;
- Improvement of main traffic junctions





Saudi Arabia

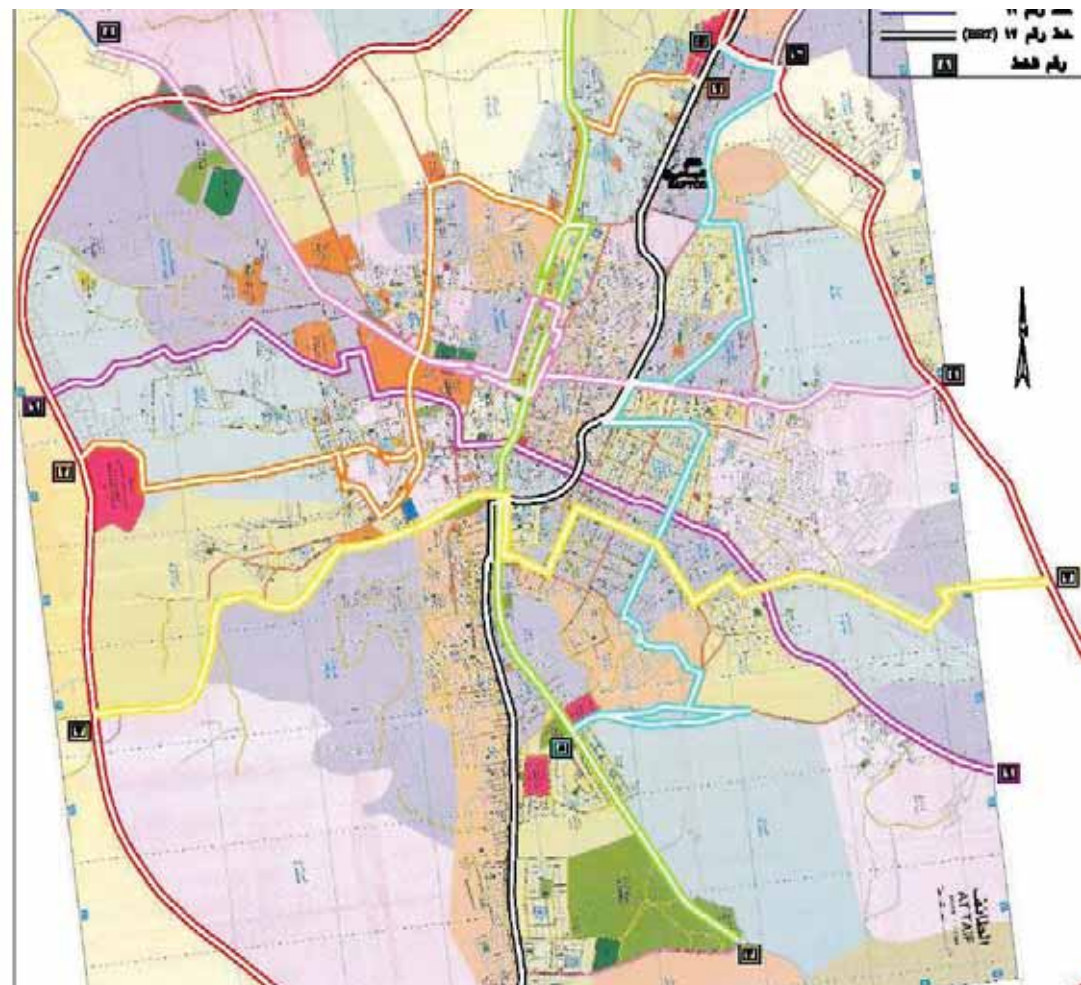
6168

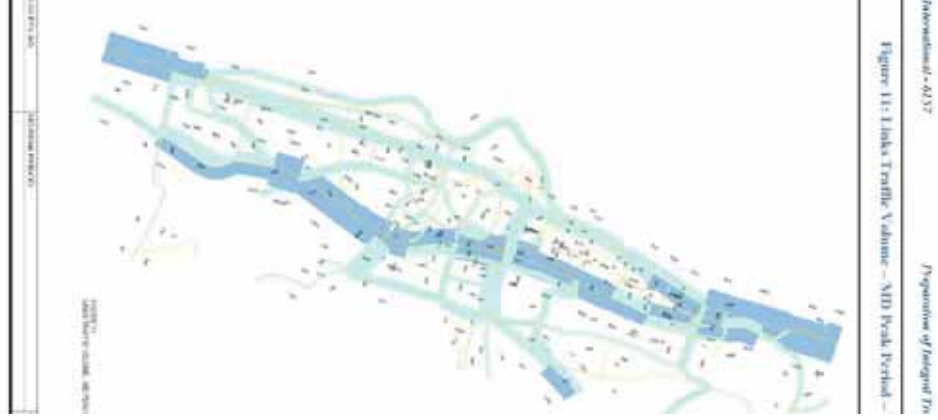
Preparation of Scope of Work For the Feasibility Study and preliminary Engineering Design of the Public Transport system in the City of Taif.

Client	Ministry of Municipalities and Client Rural Affairs (MOMRA)	Associated Firm	SaudConsult
Brief Description		Date of Completion	2012

The planned public transport system for the city of Taif includes a bus network composed of buses running in mixed traffic, busses on exclusive bus lanes, and a BRT line. The assignment includes preparing the TOR for a feasibility study and preliminary design of the system

- Definition of system's components
- Setting the objectives and deliverables of the feasibility study
- Setting the level of detail required from the preliminary design.
- Preparation of tender documents for the down-stream phases of the project



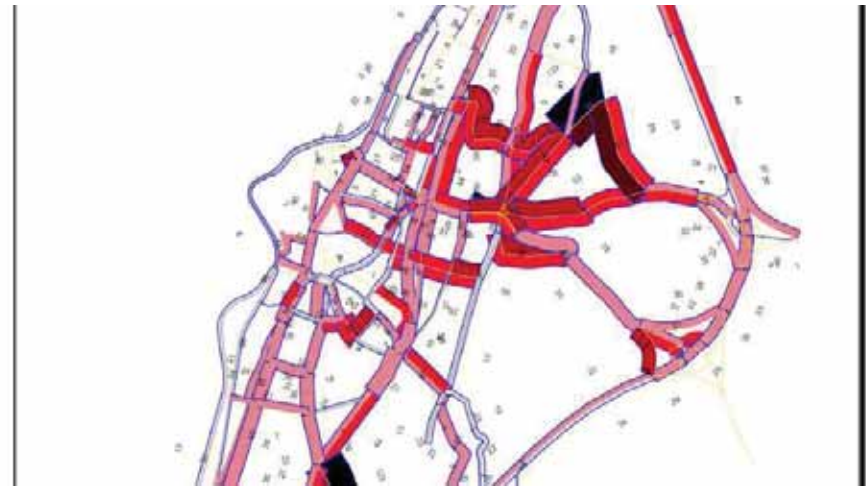


Preparation of an Integral Traffic Plan for Saida City

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2012

The objective of the study is to define a traffic and circulation plan for the city of Saida, the administrative center for the South Mohafaza. The aim is to propose measures and projects to improve the circulation and the accessibility in the city.

The scope of services include diagnosing the current conditions, performing the traffic and travel surveys, building a traffic model, forecasting demand for the year 2020 horizon, with an intermediate horizon of 2015. Based on that propose a Traffic Master Plan after subjecting the viable options to testing according to criteria of accessibility, mobility, level-of-service, internal and external circulation, and environmental sustainability.





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Supervision and Assistance During Tender for the Construction of Grade Separations at Six Locations in the City of Beirut.

Client	Council for Development and Reconstruction (CDR)
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Associated Firm	Saudconsult
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Brief Description

Date of Completion	2011
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The project is part of the corridor improvement program intended to increase traffic capacity along seven main highly congested corridors entering the city of Beirut. The project concerns the construction of six new grade separations at junctions in the Greater Beirut Area: The grade separations consist of underpasses with single and double cells cut and cover tunnels. The clear width of each cell is 8.40 m with a roadway width of 7.50 m carrying 2 lanes of traffic. All the works occur in an urban setting along highly congested corridors where special attention is given to detouring of traffic and reducing negative impacts on abutting properties. Environmental monitoring as far as required by the Health and Safety high standard regulations is strictly observed. As well, protection of cultural heritage and archaeological remains, together with social responsibility are also integrated into the project implementation. The estimated cost of construction works of this project is around 33 Million \$.





Construction Supervision and Assistance during Tender for the Construction of Grade Separations at Two Locations in Beirut: Museum Intersection and Sami Solh Avenue and Damascus Road Intersection

Client	Council for Development and Reconstruction (CDR)	Associated Firm	Saudconsult
Brief Description	2011		

- The grade separations consist of underpasses with double cells cut and cover tunnels, carrying 2-lane traffic roadways of 7.40 m width. The clear width of each cell is 8.40 m.
- The works occur in an urban setting along highly congested corridors where special attention is given to detouring of traffic and reducing negative impacts on abutting properties. Environmental monitoring as far as required by the Health and Safety high standard regulations is strictly observed. As well, protection of cultural heritage and archaeological remains, together with social responsibility are also integrated into the project implementation. The works include:
 - Earthworks and pavement construction ,
 - Reinforced concrete underpasses & Retaining walls
 - Storm water drainage network ,
 - Signing, road marking and safety barriers
 - Relocation of existing dry and wet utilities ,
 - Reinstatement of roads interfered by the works.
 - Traffic management during construction ,
 - Lighting, telephone network, landscaping...





Kyrgyzstan

Taraz – Talas – Suusamyr Road Consulting Services for Construction Supervision Preparation of Tender Documents and Tendering.

Client	Ministry of Transport and Communications	Associated Firm	Saudconsult
Brief Description		Date of Completion	2011

Preparation of Pre-qualification Documents of Contractors, Tender Documents and Tendering, including: Assistance in Tendering and Procurement, Issuing Tender Documents to Pre-qualified Bidders, Assistance in Orientation and Guidance of Prequalified and Invited Bidders, Clarification of Bidding Documents, Bid Evaluation, Advisory Assistance to MOTC. Design and Mobilization Review, including: Review and Approval of Contractor’s Designs and Working Drawings and Specifications, Review and Approval of Contractor’s Plans, include: Contractor’s Work Plan & Critical Path Analysis, Review Contractor’s Schedules, Contractor’s Program - Resources and Documentation, Review Traffic Management Measures. Supervision of Construction: Pre-Construction Activities, including: Review Topographic Survey of Project Site, Review Materials Sources, Review Contractual Responsibilities, Conduct Pre-Construction Meeting, Contractor’s Bonds, Guarantees and Insurances, Contractor’s Possession of the Site. Orders



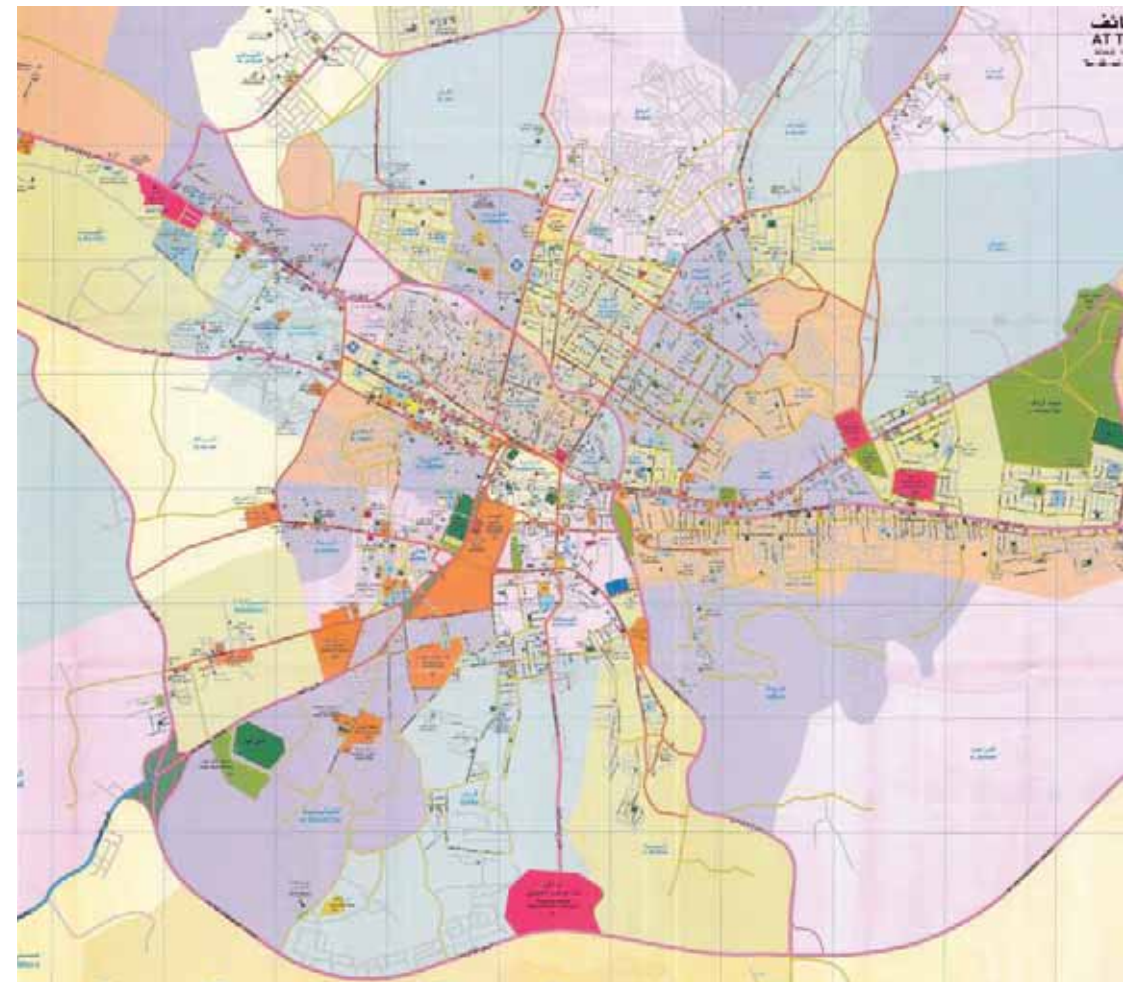


Saudi Arabia

Development of Services of Public Transport Systems within City of Taif

Client	Ministry of Transport Deputy Minister for Transport	Associated Firm	None
Brief Description		Date of Completion	2010

- Taif is a medium size city in the Western region of the Kingdom of Saudi Arabia, in the vicinity of the wholly City of Makkah. Taif used to be the Summer Capital of the Kingdom, since it enjoys a pleasant weather being in a mountainous region. It is a popular Summer resort, and houses large military bases. It is served by an airport which is under development in preparation for receiving international flights, and probably play a role in serving Hajj and Umra passengers.
- Taif has a university and several technical schools. In addition to reliance on internal tourism, the city has an active commercial activity, light industries, and the surrounding areas grow fruits and legumes.
- Taif with a population of around 800,000 currently has no organized public transport services of any sizeable magnitude.





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6129 >>

Construction Supervision and Assistance during Tender for the Construction of Grade Separations at Two Locations in Greater Beirut: Tayounneh Roundabout And Mar MeKhael Intersection.

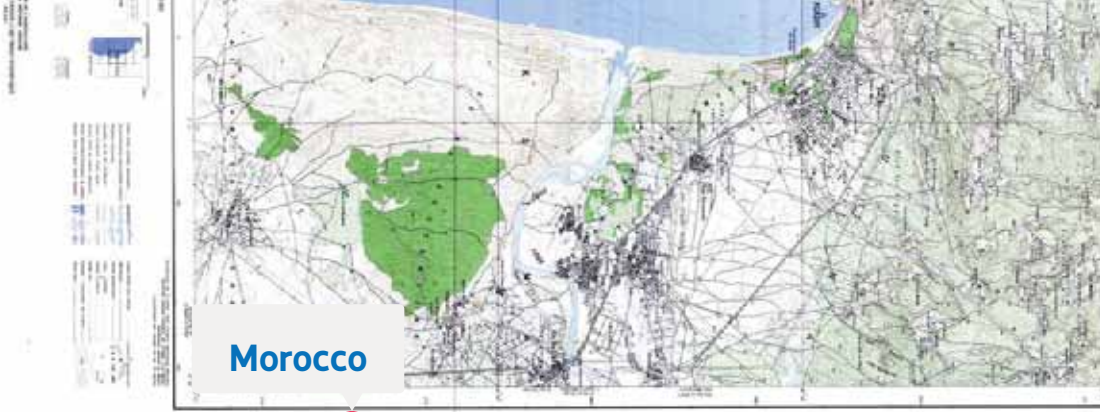
Client	Council for Development and Reconstruction (CDR)	Associated Firm	Saudconsult
Brief Description	Date of Completion 2010		

The grade separations consist of underpasses with single and double cells cut and cover tunnels. The clear width of each cell is 8.40 m with a roadway width of 7.50 m carrying 2 lanes of traffic.

The works occur in an urban setting along highly congested corridors where special attention is given to detouring of traffic and reducing negative impacts on abutting properties. Environmental monitoring as far as required by the Health and Safety high standard regulations is strictly observed. As well, protection of cultural heritage and archaeological remains, together with social responsibility are also integrated into the project implementation. The works include:

- Earthworks and pavement construction
- Reinforced concrete underpasses & Retaining walls
- Storm water drainage network
- Signing, road marking and safety barriers
- Relocation of existing dry and wet utilities
- Reinstatement of roads interfered by the works.
- Traffic management during construction
- Lighting, telephone network, landscaping...



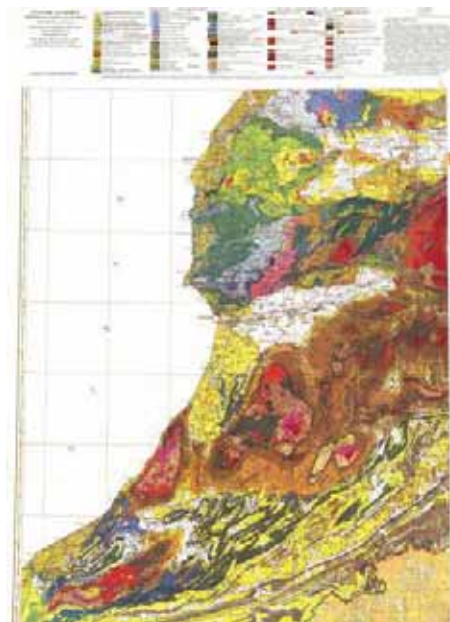


6124 >>

Design and Preparation of Tender Documents of the Section AmsKroud –Agadir of the MarraKesh–Agadir Motorway

Client	Societe Nationale des Autoroutes du Maroc (ADM)	Associated Firm	TEAM Maroc
Brief Description	Date of Completion: 2009		

This is a 17 km section of the National Motorway Toll System of Morocco. Complete design and preparation of tender documents.

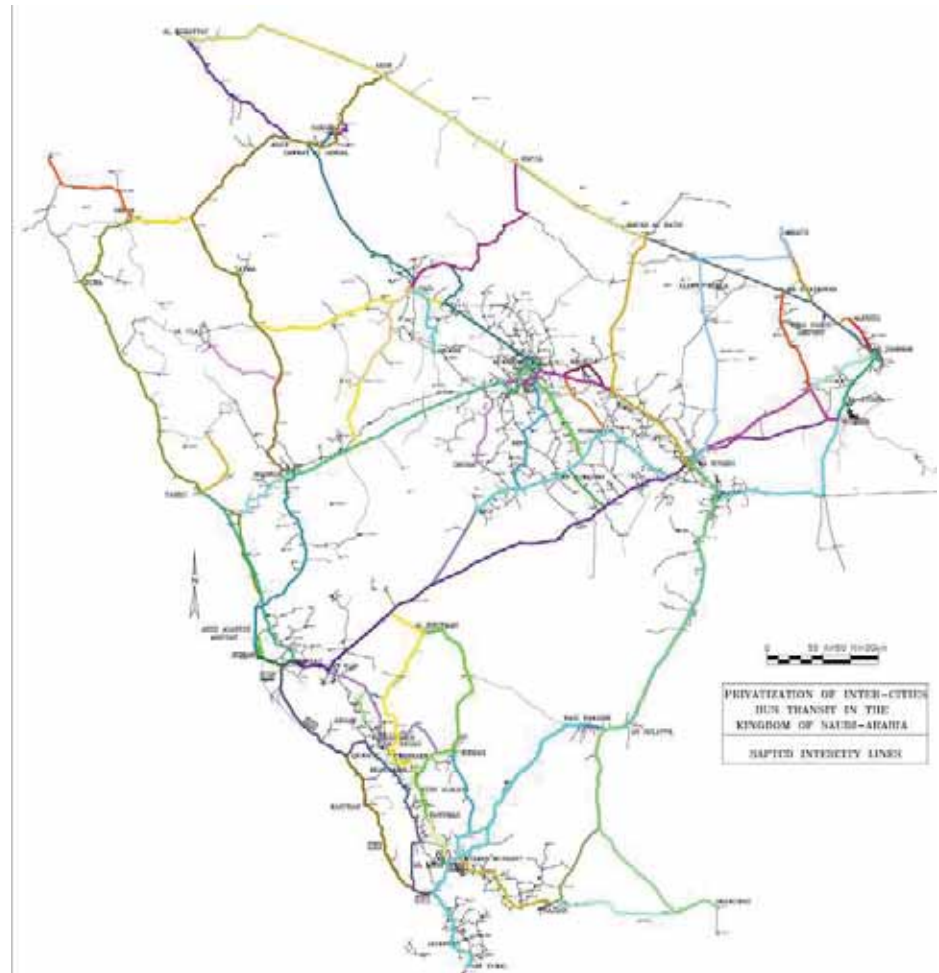
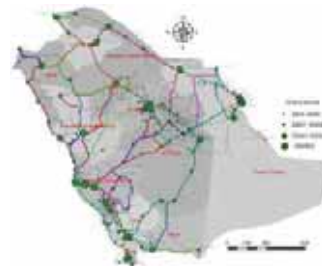


Introducing Competition in Intercity Bus Transport

Client	Ministry of Transport (MOT)	Associated Firm	LRTC (Germany) Saudconsult (Saudi Arabia)
Brief Description	2009		

MOT wishes to Formulate a procedure for contracting intercity bus transport services and supervise them, through a competitive bidding mechanism among qualified private sector service providers, upon the expiration of SAPT-CO's franchise.

- 1-Estimate current and future demand of intercity bus services
- 2-Assess profitability of services
- 3-Evaluate best contract type (Gross, Net, Hybrid).
- 4-Design the procurement cycle of transport operators
- 5-Conditions of Concession Contracts.
- 6-Regulation of Services
- 7-Selection criteria of service providers
- 8-Service Integration
- 9-Continuity of Services During the transition period.





Detailed Design and Tender Documents preparation for the Section between PK 72+000 and PK 92+000 of Fez–Taza Highway.

Client	Societe Nationale des Autoroutes du Maroc (ADM)	Associated Firm	CAED
Brief Description		Date of Completion	2008

The Fez - Taza Highway project is part of the National Motorway Toll System of Morocco. The Section of this project starts with an interchange at the historical city of Fez, extends 20 km in the mountainous region, passing through critical soil conditions and crossing rivers and deep oueds, and ends at a roundabout at the PK 92+000 of the projected main highway which will lead to Ouejda city near the border of Morocco with Algeria. The number of lanes in each direction of this dual carriageway is 3 traffic lanes plus shoulder.

The design sections include:

- One interchange and one roundabout.
- One rest area and one toll plaza.
- 7 reinforced and prestressed concrete overpasses bridges.
- 7 reinforced concrete underpasses bridges.
- 5 prestressed concrete viaducts crossing critical oueds and rivers with total individual lengths reaching 150 m., to be built in a bad soil condition.
- 80 hydraulic structures

The scope of services provided involves a complete detailed design including:
The geometric design of the main highway with

the interfering and service roads, hydraulic and geotechnical studies, structure, drainage, utilities, lighting, signing, road marking and safety, in addition to an environmental impact study.
The services involve also the preparation of the implementation tender documents.



Lebanon

Engineering Design & Construction Supervision Services for the Re-construction of Zahrani Bridge – Coastal Road Zahrani Interchange: Kinnareet Overpass, Ghazieh Overpass, Rmeileh Overpass, Wardaniyeh Overpass

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2007

A number of bridges on the Lebanese territory were a target during the Israeli hostilities of July-August 2006. The resulting damages were classified into the following. This project involves six of those bridges along the South Motorway .

The Scope of work has been determined according to the structural and laboratory reports on each of the damaged bridges. A solution was formulated for each and re-construction was supervised accordingly.

The Consultant (TEAM International) has transmitted to the Contractor the as-builts provided by the CDR for each of the bridges below. The scope of work was determined as follows:

- 1)Rmeileh / Wardaniyeh PS-4
- 2)Rmeileh Village PS-5
- 3)Ghazihey Village PS-14
- 4)Ghaziieh /Kinnareet PS-15
- 5)Zahrani Interchange
- 6)Zahrani Multiple-Box-Culvert





Yemen

6123 >>

Consultancy Services for Preparation of Comprehensive Traffic Management Study for Sana'a City

Client	Sanaa Municipality	Associated Firm	None
Brief Description		Date of Completion	2007

Study of Existing Traffic & Travel characteristics

- Collect available data, reports, maps and development plans
- Conduct primary surveys
- Delineation of Traffic zones
- Conduct road network inventory
- Conduct Work Place Surveys

Projection of Transport Demand

- Calibrate trip distribution
- Carry out traffic assignment over road network system
- Develop alternate urban & transport development strategies for city development
- Project transport demand in the road network system for a 20 year horizon period

Identification of Transport Problems

Preparation of Transport Network Improvement

- Recommendation for an optimal transport network Upgrading
- Short Term Improvement measures
- 1. Prepare improvement plans for priority junctions
- 2. Consider Alternative low cost traffic improvement
- Medium & Long Term Improvement Plans
- Propose Future Modes of Public Transport, including a Bus Rapid Transit (BRT) on its own Row





Lebanon

Planning, Design and Supervision of Road Rehabilitation and Maintenance in Beqaa Gharbi and Rachaya

Client	Ministry of Public Works Directorate of Roads	Associated Firm	CAED
Brief Description		Date of Completion	2007

- The services involved detailed inventory of the network to identify the condition of each link with the type of corrective treatment needed on it. Cost estimates of urgent repair work were calculated on a Km-by-Km basis for each link. Criteria were set to prioritize the work subject to budget constraints.
- Some sections required widening and/or major reconstruction. These sections were surveyed and designed.
- Field supervision covered all works performed by contractors. Works included earthwork, drainage structures, retaining walls, pavement construction, and asphalt overlays. Projects supervised covered simultaneous work spread over a wide area benefiting from the dry weather during the interval from May to September of each year





Yeman

Support and Technical Assitance to Local Consultants

Client	Rural Access Program–Central Management Office Ministry of Public Works and Roads	Associated Firm	None
Brief Description	<ul style="list-style-type: none"> • The World Bank has given Republic of Yemen a loan which will be used to improve rural accessibility in areas severely affected by isolation. This includes design, construction, and supervision of construction of six local and village access roads. • Support and technical assistance to local consultants including: <ul style="list-style-type: none"> • Assessment of current practices and performance of local consultants and contractors. • Conducting On-Job Training & Workshops for local consultants in order to improve their performance in the design and supervision of local access roads, taking into consideration the newly introduced technical, environmental and social aspects. • Preparing of the Design Manual for Rural Access Roads. Preparing of the Construction Supervision Manual for Rural Access Roads. 		



Morocco

Detailed Design and Tender Documents preparation for the Sections RN8-Chichawa and Amskroud-Agadir of MarraKesh- Agadir Highway.

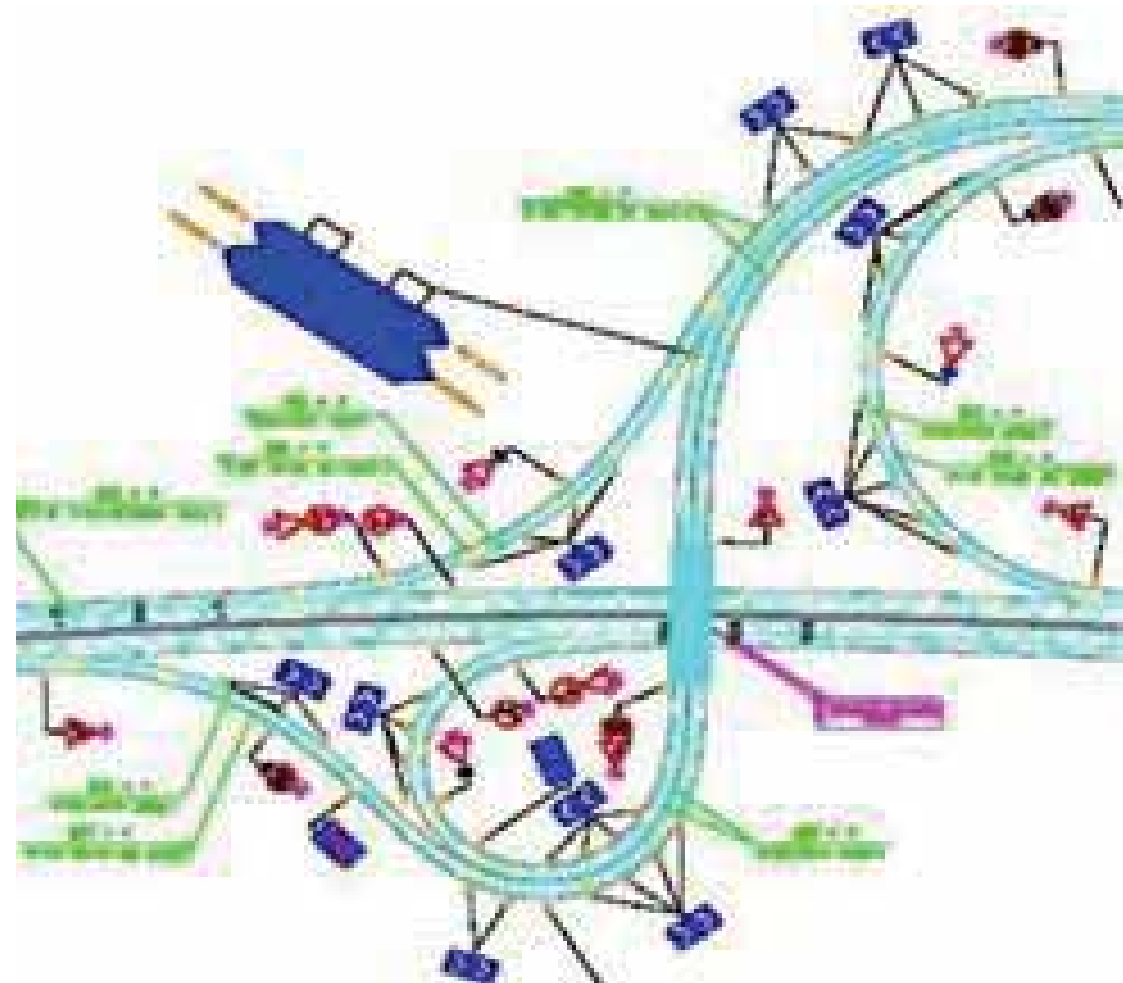
Client	Societe Nationale des Autoroutes du Maroc (ADM)	Associated Firm	
Brief Description		Date of Completion	2006

The Marrakesh-Agadir Highway project is part of the National Motorway Toll System of Morocco. The first Section of this highway with the existing national road RN8 at Sidi Zuwain, extends 33 km in the plain area of Chichawa, crossing the existing large rivers in the region and ends at an interchange in Chichawa. The second Section starts with an interchange at Amskroud, extends 17 km in the mountainous region, crossing Oued Tazenja, and ends at an interchange in Agadir. The number of lanes in each direction of this dual carriageway is 3 traffic lanes plus shoulder.

The design sections include:

- 3 interchanges and one roundabout.
- 3 toll and rest areas with 2 toll plazas.
- 22 reinforced and prestressed concrete overpasses bridges.
- 3 reinforced concrete underpasses bridges.
- 3 prestressed concrete viaducts crossing the Oueds of Tazenja, Boulkhrass and Khatarra.
- 63 hydraulic structures.

The scope of services provided involves a complete detailed design for all the components of the 50 km highway sections and includes: The geometric design of the main highway with the interfering and service roads, hydraulic and geotechnical studies, structure, drainage, utilities, lighting, signing, road marking and safety, in addition to an environmental impact study. The services involve also the preparation of the implementation tender documents.





Saudi Arabia

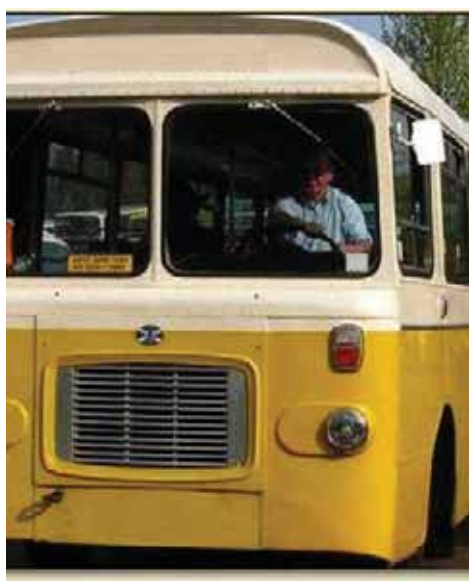


Study of School Transport in Riyadh

Client	Ministry of Transport	Associated Firm	Saudconsult
Brief Description		Date of Completion	2005

Six hundred thousand students attend public schools in Riyadh. School Transport to female students was supplied by the Government, and to a lesser degree to male students. Big reliance on private transport by student parents is creating heavy congestion in the areas surrounding schools. Some contract transport has started to be provided. A sustainable safe system needs to be implemented. The services provided by this study included:

1. Survey of existing school transport practices.
2. Survey of users to understand the demand characterization.
3. Survey of the transport companies to understand the supply side.
4. Mathematical modelling of demand and supply functions.
5. Recommend a sustainable school transport system, both for male and female students.
6. Identify the specifications of contract school transport.





Lebanon



Supervision of the Rehabilitation & Widening of Aintoura–Jeita Road & Ghazir–Jdeidet Ghazir Road

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description	<p>Date of Completion: 2005</p>		

Ghazir is located in the Keserwan district, 27 kilometers north of Beirut, at an altitude of about 500 meters above sea level. As for Jdeidet Ghazir, it is located to the east of the town of Ghazir, at an altitude between 550 and 600 meters above sea level. The width of the current Ghazir–Jdeidet Ghazir road ranges between 5 and 7 meters, and its vertical curves range between 3% and 9%. The project of expanding and rehabilitating the Ghazir–Jdeidet Ghazir Road requires widening the road in accordance with Decree 64/15533 issued on 2/19/64, which specified a 14-meter wide road limit. The length of the project is about 2.8 km, including a new 700-meter road link that was modified to protect the ancient Ghazir Mill, which was affected by the old decree and is estimated to be about two hundred years old.

The road works include:

- Improved current road section and side slopes
- Improvement of the horizontal trajectory and the vertical curve of the road
- Rehabilitation and construction of side walls

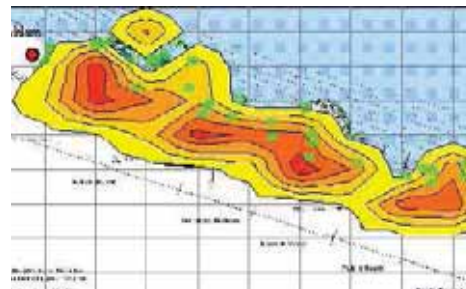
- Asphaltting the road and building side-walks
- Provide a rainwater drainage system
- Rehabilitation of drinking water pipes
- Providing road signs and placing traffic lights and guiding signs
- Provide means of protection for traffic
- Providing lighting on the road
- The project cost is estimated at about \$2,922,000, excluding value-added tax



Traffic Studies and Environmental Impact Assessment of Seeb Sea Front Development

Client	Muscat Municipality	Associated Firm	A consortium led by CONSER includes: AS&P - Germany
Brief Description		Date of Completion	2003

A beach front development along the Seeb beach in Muscat, 6 km long with an average 500 m width. It will include residential, commercial, and leisure facilities including hotels, marinas, souks, golf course, beaches, etc. All traffic planning in-site and of-site, based on a Traffic Impact Study. Output included recommendations regarding street widths, intersection control, parking control, ITS applications; and the configuration of interchanges along the boundary highway. EIA included a full assessment of impacts during construction and operation on the marine and land environments. Output included a detailed Environmental Management Plan (EMP).





Lebanon



Technical Assistance and Construction Supervision of Asphalt Overlay and Ancillary Works, Hazmieh – Saoufar Highway

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2002

The works include rehabilitation of 28 km of highway including:

- pavement milling of 495,000 sqm
- bituminous wearing course, 6 cm, 30,000 cu.m
- concrete edge barrier, 7 km
- pavement marking 20,000 sq.m
- traffic signs 100
- raised pavement markers (cat eyes) 5,000
- spot improvement of some overpasses and underpasses including elongation of Aaraya underpass
- a 6m high retaining wall with tie-back anchors, in an area of soil instability.



Morocco

Preliminary and Final Design of Casablanca – Settat – MarraKesh

Motorway

Client	Direction des Routes et de la Circulation Routiere	Associated Firm	Transroute
Brief Description		Date of Completion	2002

The alignment definition was completed for the entire length of Casablanca - Marrakesh 188Km.

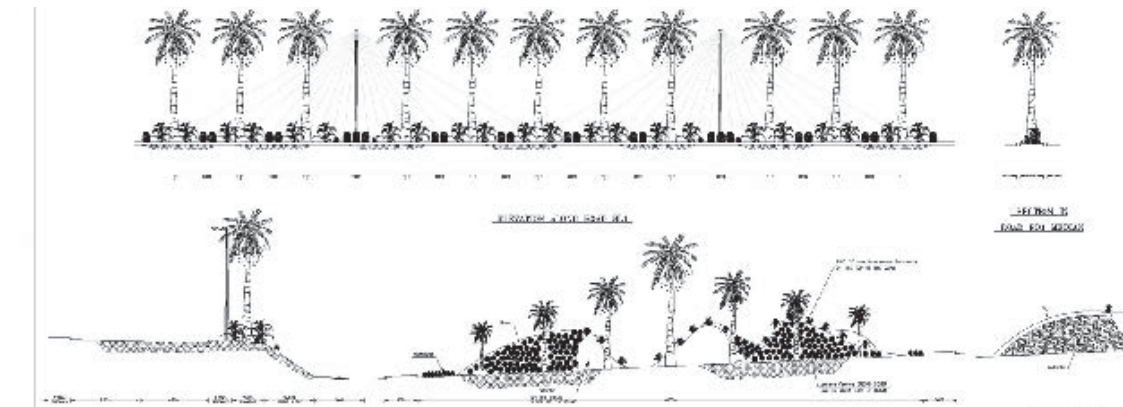
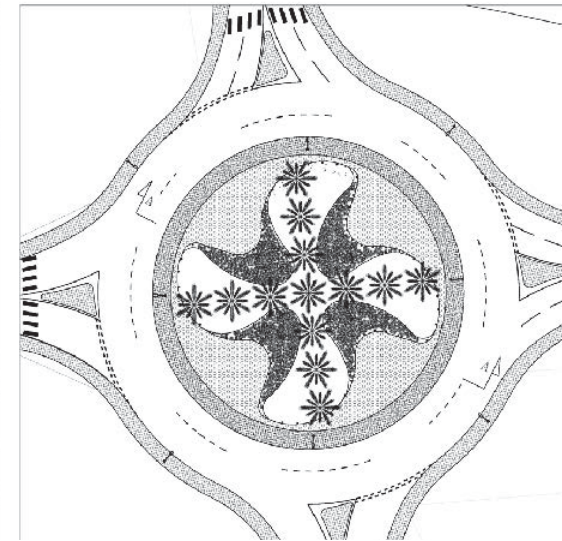
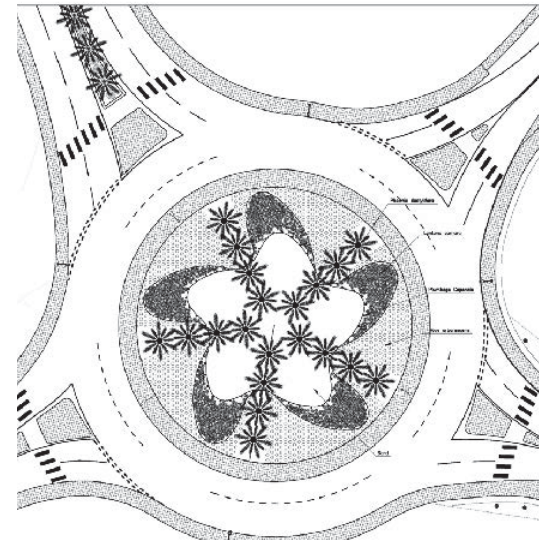
Preliminary design for Casablanca - Settat section was completed in 1994 - detailed design of this section is in progress.



Traffic Congestion in Al-Khuwair & Al-Ghubbrah Areas

Client	Muscat Municipality Directorate General of Technical Affairs	Associated Firm	Conser & Partners Engineering Services L.L.C.
Brief Description	2001		

- The purpose of this study is to alleviate the traffic congestion in Al-Khuwair and Al-Ghubbrah areas in Muscat. The study area is bounded by Shati El-Qurm and Madinat Al-Sultan Qaboos areas to the east, by Gulf of Oman to the north, by the Seeb area to the west, and by the Bawsher area to the south.
- The congestion problem experienced at several junctions in the study area is due to vehicular movements whose trajectory was dictated by some missing links in the roadway network. The missing links are forcing drivers to take circuitous routes in order to avoid the peak hour congestion on some of the main junctions, thus spilling over traffic and causing congestion also on road sections that were designed to serve access rather than through traffic.



Traffic and Parking Study of HAIL Central Business District

Client	Ministry of Municipal and Rural Affairs, Urban Planning Directorate	Associated Firm	Dar Al-Taawon
Brief Description	Date of Completion: 2001		

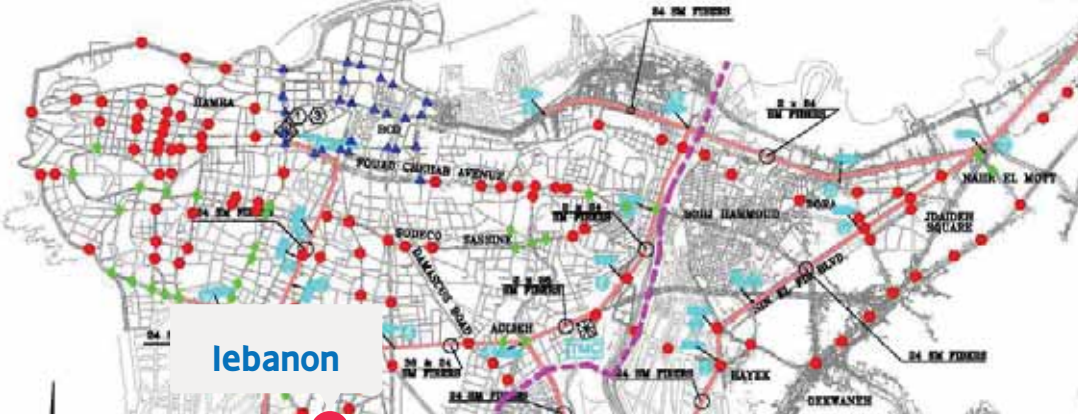
The alignment definition was completed for the entire length of C The center of Hail City, a provincial capital in northern Saudi Arabia, is 682 m x 585 m, bordered by street arterials. It includes several souqs, administrative buildings, courthouses, schools, and residences. This super-block includes also undeveloped land that is currently being used as surface parking.

A detailed land use survey was conducted, followed by extensive traffic and parking surveys. Based on the current and projected land uses, the circulation and parking requirements were determined.

Recommendations and designs included additional street links, intersection improvement, signalization of some junctions, on-street parking regulation, signing and marking.

asablanca - Marrakesh 188Km.
 Preliminary design for Casablanca - Settat section was completed in 1994 - detailed design of this section is in progress.





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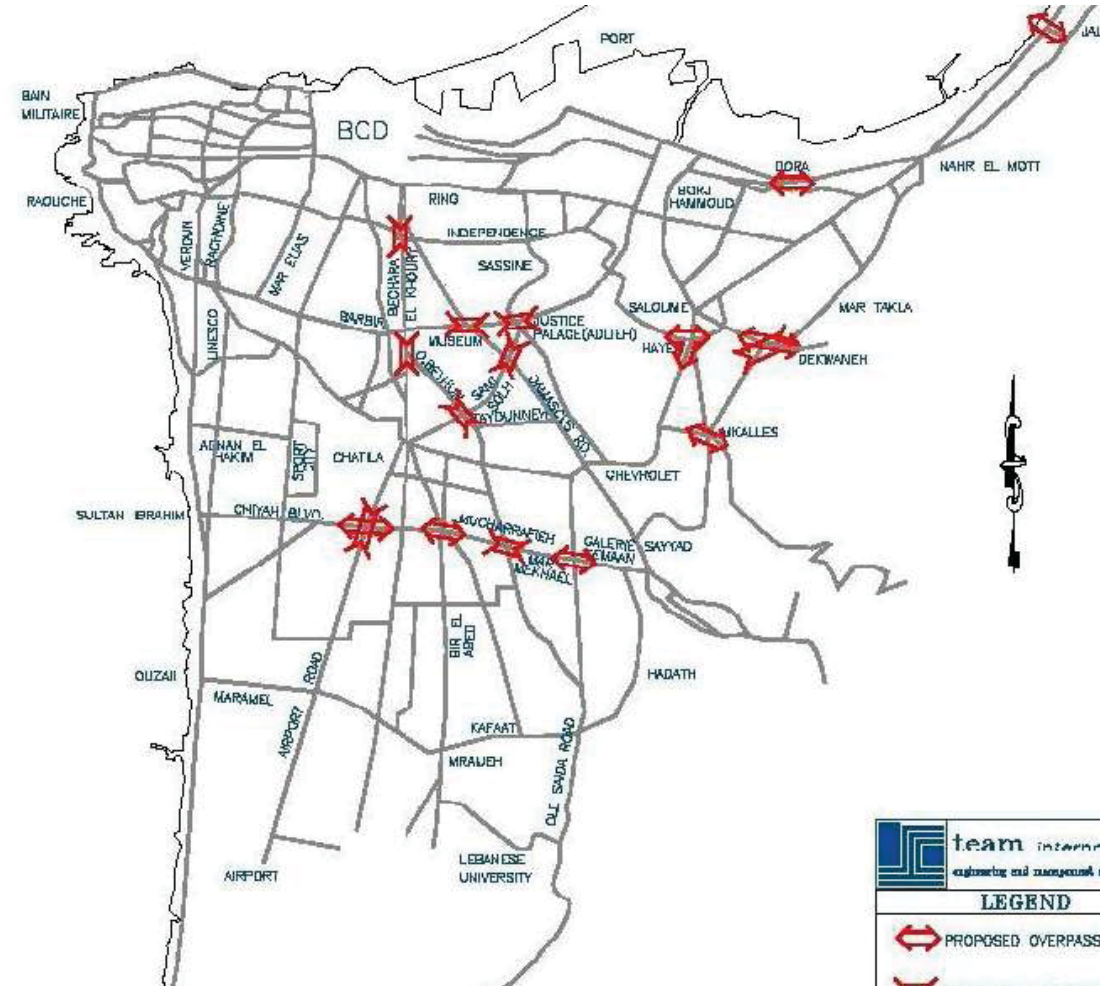


Beirut Urban Transport Project Preparatory Study

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2001

The Beirut Urban Transport Preparatory Study (BUTP) aims to complement the short-term recommendations of the "Immediate Action Plan" (IAP) in accordance with the recommendations of the "Greater Beirut Transportation Plan" (GBATP), which was completed in 1995 for the Council of Reconstruction and Development (CDR) by Team International/IAURIF. The immediate Action Plan aims to control the traffic congestion and restoring tolerable traffic conditions. The Beirut Urban Transport Project is only an expansion of the immediate Action Plan. Two scenarios for a long-term plan have been studied and evaluated (Horizon 2015). The first involves development of the road network, while the second provides for the integration of a network of rapid transit within densely populated areas. The Greater Beirut Urban Transport Project provides the basic urban transport system required to address Beirut's various complex transport issues and support selected elements of the Greater Beirut transport plan. Several key issues were addressed to improve the operational and economic performance of the urban transport system in Greater Beirut, including:

- Traffic Management
- Network Performance
- Parking Control.



team international
 engineering and management
LEGEND
 PROPOSED OVERPASS



Lebanon

Technical Assistance and Construction Supervision of the Ashrafieh – Nahr – Sin El Fil Link

Client	Executive Council for Great Projects in City of Beirut	Associated Firm	SaudConsult
Brief Description		Date of Completion	2000

- This important link of two major east-west thoroughfares joined together across the Beirut River was conceived 25 years ago, but its implementation was delayed until 1994. Major redesign was done during construction.
- The project includes a series of underpasses and bridges inlaid in a dense urban fabric over a difficult topography and bad soil conditions.
- Work involved extensive utility relocation which included 1000 mm and 600 mm water mains, a network of waste water and storm water drainage, potable water, power and telephone networks.



Technical Assistance, Construction Supervision, & Control of the South Motorway Jiyeh-Zahrani Section – Phase I

Client	Conseil Executif des Grands Projets (CEGP)	Associated Firm	None
Brief Description		Date of Completion	2000

- Two large viaducts, one at Jadra and another
- Eighteen grade separations, and several hydraulic structures.
- Several interchanges.
- Highlights of the project included:
 - Jadra Bridge: A 200 meter bridge, 15.6 m wide for each roadway bridge is constituted of a central span: 65 m long, 22 m high arch, with two 26 m spans on one side of the central arch and three 26 m spans on the other. The super structure is composed of precast postensioned beams of 13 m over the central arch, and 26 m at both ends. The super - structure is carried on by huge piers reaching 30 m high.
 - Zahrani Bridge: A 70 m long bridge, 14 m wide for each roadway, with 4 spans of 15 and 19 m. the super - structure is constituted of precast beams resting on piers supported by 120 cm diameter reinforced concrete piles reaching a depth of 30 m.
- Eleven overpasses.
- Seven underpasses.
- Ten multiple box culverts of various sizes.
- Concrete works totaling about 92 thousand
- Earthworks totaling 2.2 million m³.
- Asphaltic concrete pavement works for all roadways.
- Drainage and utilities.





lebanon

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Greater Beirut Transportation Plan

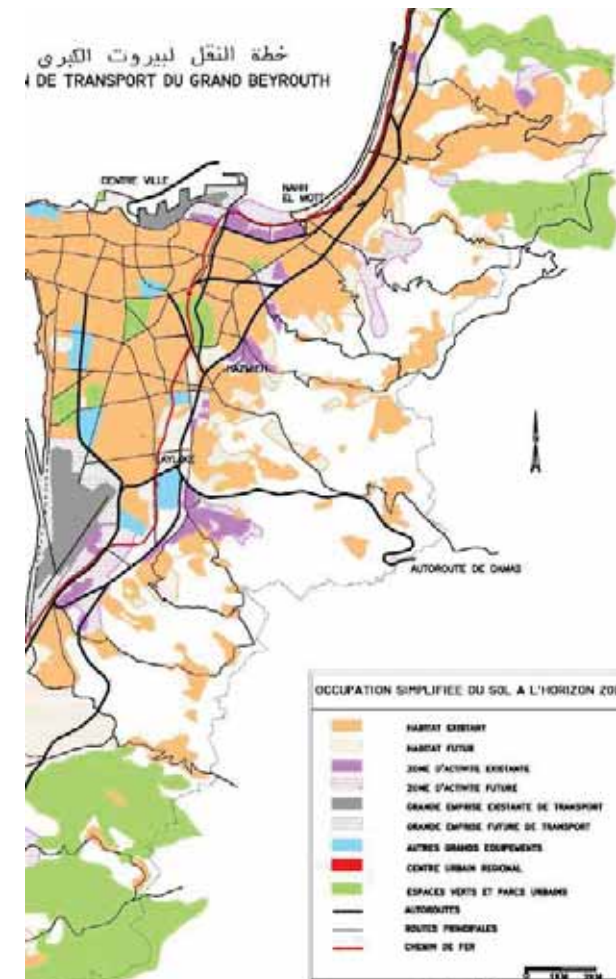
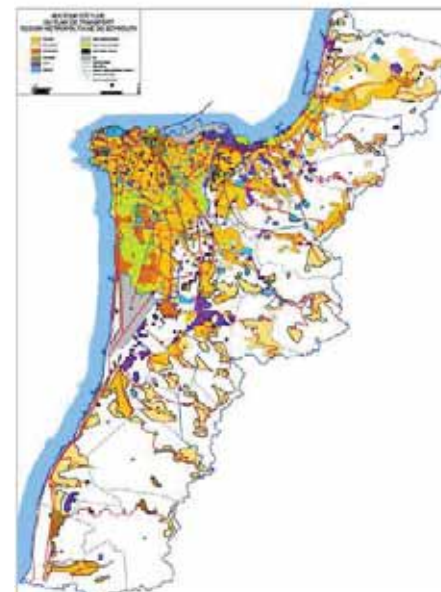
Client	Council for Development and Reconstruction (CDR)
Brief Description	

Associated Firm	IAURIF-SOFRETU
Date of Completion	1996

The objective of this study was to establish a sound framework for developing and managing transport within the Greater Beirut Area, including the rationalization of the use of existing urban transport capacities and identifying new capacity and systems to meet the requirements of future demand.

The components of the study included a long term mass transit network consists of:

- A regional commuter service line that will use the railway line (28 Km)
- 2 metro lines ensuring the basic backbone of mass transit servicing the interior of the dense Beirut Urban agglomeration.
- BRT lines and complementary Bust Network with multimodal exchange stations.



Morocco

Design of Highway Bridges

Client	Direction des Routes et de la Circulation Routiere Ministere	Associated Firm	Transroute
Brief Description		Date of Completion	1994

- In addition to the tens of bridges included in the Kenitra
- Larache Section of the Rabat Tanger Motorway,
- about twenty highway structures were designed in various regions in Morocco.
- 3 bridges on the Kenitra By-pass including a major bridge over River Loukkos, consisting of 5 spans, 38 m each, post-tensioned girders, over 60 m deep pile foundation;
- five bridges and Irish-Crossings in the Azilal Region;
- four bridges, 3 to 5 spans each, 28 m to 41 m spans, in post-tensioned girders on pile foundations, for roads realignment necessitated by the construction of the Wahda Dam in Taounate Region.
- six bridges over rivers and railroads in the Fes Region; and
- a bridge over River Bou-Regreg Rabat Bypass, 4 spans 38 m each in post tensioned variable section box-girders, over pile foundations.



Study and Design of the Operation and Maintenance Systems for the Rabat-Tanger Toll Freeway

Client	Direction des Routes et de la Circulation Routiere	Associated Firm	None
Brief Description		Date of Completion	1992

This project is concerned with the design of all systems and ancillary facilities associated with the O & M of Rabat - Tanger toll freeway. The scope of work included the definition of system type (open or closed system), the positioning of toll gates and plazas, the number of toll lanes to equip, the manner of toll collection, organization of the O & M function, the number and qualifications of needed personnel, the number and location of administrative buildings and surveillance facilities, the emergency telephone system and the rest and service areas.

The overall configuration of the system consisted of two toll plazas and nine controlled interchanges comprising 50 toll lanes and some 20 rest and service areas.

The design work included producing all the tender documents for the system, comprising drawings, specifications and bills of quantities for all the components: toll plazas, toll gates, canopies, collection facilities, electronic control, computer hardware, detection and classification systems, area flood lighting, utilities tunnels, water supply and drainage, maintenance facilities, administration buildings, equipment garages, toll surveillance centers, rest areas, and service areas



Morocco

Design and Preparation of Tender Documents for the Construction of the Kenitra–Larache Section of Rabat–Tanger Autoroute.

Client	Direction des Routes et de la Circulation Routiere Ministere Travaux Publics	Associated Firm	None
Brief Description		Date of Completion	1992

The scope of responsibilities included all the work required to prepare tender documents and construction drawings. Technical tasks included reconnaissance, alignment selection, preliminary and final geometric design, drainage, configuration and geometric design of interchanges, structural design of grade separations and river crossings, signing, marking and all ancillary facilities, and related economic studies.

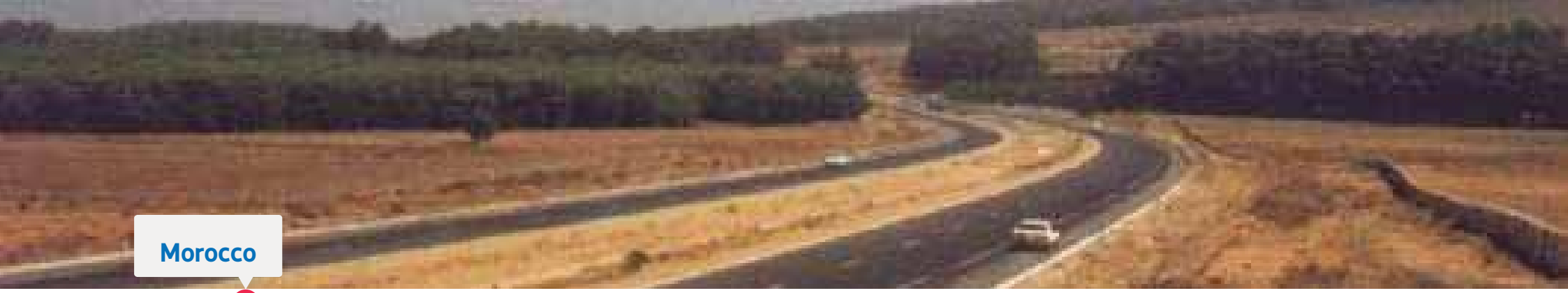
The study also included the planning of the toll collection system and its component identification.

The Kenitra-Larache section of the Rabat-Tanger Autoroute is 110 Km long. It includes 3 highway interchanges. There are 12 major bridges, five of which are major river crossings including 2 major bridges on the river LOUKKOS, three interchange bridges, 3 overpasses, and one underpass.

In addition, there are some 79 pedestrian and vehicle underpasses on minor roads, and several tens of multiple box culverts.

The set of tender documents include plans and computer generated drawings, technical specifications, and bills of quantities.





Morocco



Design and Supervision of Highways and Bridges in Morocco.

Client	National Association of Freeways of Morocco (ADM) Directorate of Roads and Road Circulation	Associated Firm	None
Brief Description		Date of Completion	1989

The scope of responsibilities included all the work required to prepare tender documents and construction drawings. Technical tasks included reconnaissance, alignment selection, preliminary and final geometric design, drainage, configuration and geometric design of interchanges, structural design of grade separations and river crossings, signing, marking and all ancillary facilities, and related economic studies. The study also included the planning of the toll collection system and its component identification





Lebanon

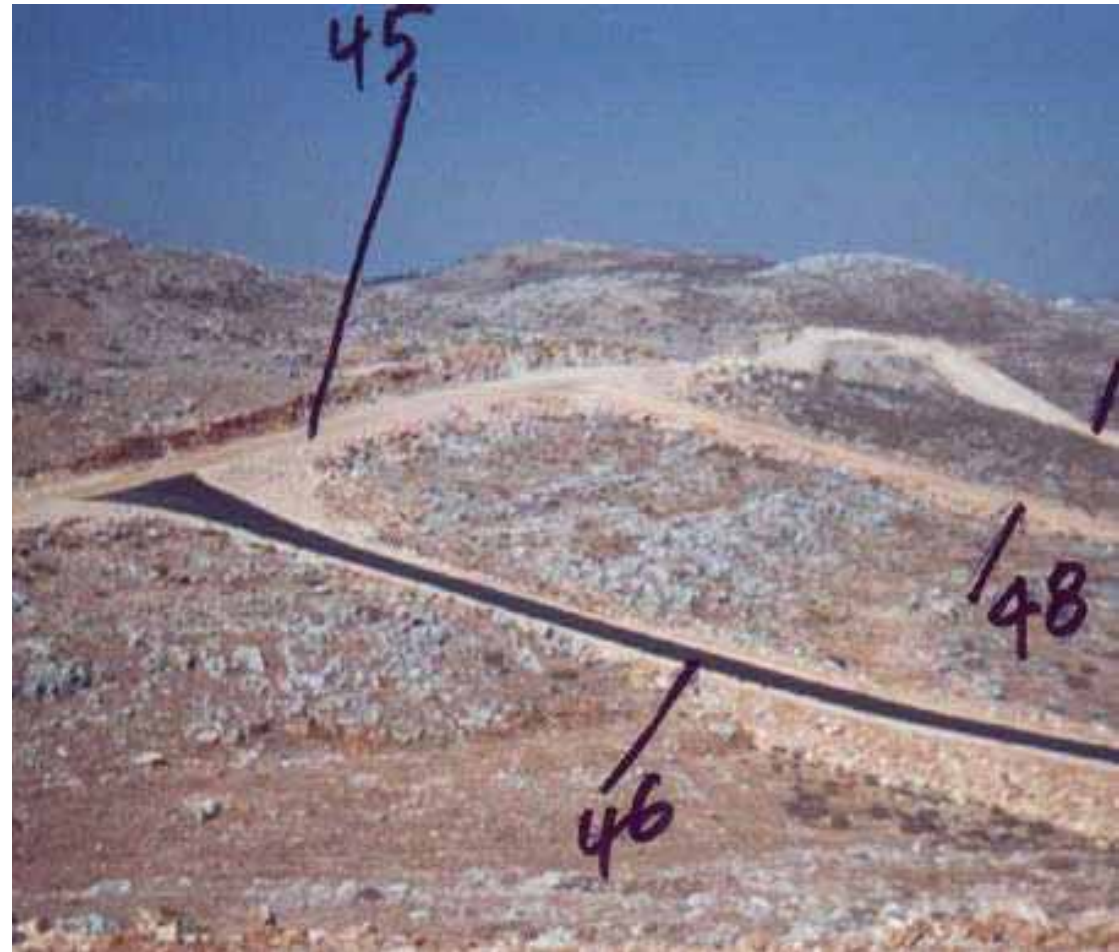


Design Of Roads and Drainage Infrastructure, Toul Development

Client	Toul Real Estate Co	Associated Firm	None
Brief Description		Date of Completion	1989

Toul is a 3 square kilometers planned development near Nabatiyeh, Lebanon. TEAM was awarded the design of the entire roads (30-Km), drainage system and wastewater network. Construction supervision was also carried out.

Services included: Design of roads, storm and wastewater drainage, electrical network, specification and construction tender documents, quality and quantity control, and construction supervision.



Lebanon

Construction of the External Security Wall and the Internal Road to Ensure Protection and Security for Beirut International Airport (L=251cm)

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	1987

Preparation of Pre-qualification Documents of Contractors, Tender Documents and Tendering, including: Assistance in Tendering and Procurement, Issuing Tender Documents to Pre-qualified Bidders, Assistance in Orientation and Guidance of Prequalified and Invited Bidders, Clarification of Bidding Documents, Bid Evaluation, Advisory Assistance to MOTC. Design and Mobilization Review, including: Review and Approval of Contractor's Designs and Working Drawings and Specifications, Review and Approval of Contractor's Plans, include: Contractor's Work Plan & Critical Path, Analysis, Review Contractor's Schedules, Contractor's Program - Resources and Documentation. Supervision of Construction: Pre-Construction, Activities, including: Review Topographic Survey of Project Site, Review Materials Sources, Review Contractual Responsibilities, Conduct

Pre-Construction Meeting, Contractor's Bonds, Guarantees and Insurances, Contractor's Possession of the Site

GENERAL BUILDINGS AND ARCHITECTURE



Iraq

Provision of Architectural and Civil Engineering Design Services for Anah Municipality Building

Client	United Nations Development Client Programme (UNDP)	Associated Firm	None
Brief Description		Date of Completion	2018

Building consists of two floors, Ground Floor, First Floor, and top. The area of ground floor about 592 m², the total building area ~ 1500 m², including 10 departments distributed among the all floors, with the all necessary of services and facilities as required by UNDP: Ground Floor: contains main entrance, security, guard's room, offices, lounge, toilets, kitchen, stores, 8 departments. First Floor: contains 4 departments, deputy director room, manager director, guest room, - conference room, offices, secretary, stores and toilets, and conference hall for 50 persons.



Disabled Building Duhouk and Department Of Execution

Client	Ministry Of Construction & Housing	Associated Firm	None
Brief Description		Date of Completion	2014

- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation



Iraq
Kurdistan

6178

Department of Real Estate Registration Building – Kfoury

Client	Ministry Of Construction & Housing	Associated Firm	None
Brief Description		Date of Completion	2014

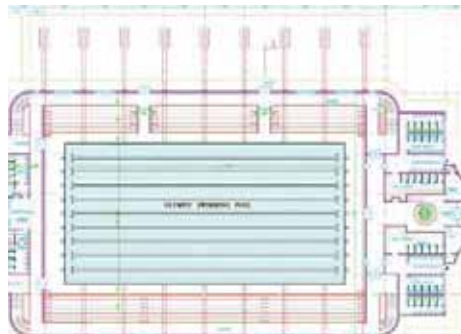
- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation



Olympic Hall (1000 Seats)

Client	Ministry Of Cultural and Youth	Associated Firm	None
Brief Description		Date of Completion	2012

- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation



Olympic Hall (700 Seats)

Client	Ministry Of Cultural and Youth	Associated Firm	None
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Brief Description	Date of Completion	2012
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- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation



Arbil Municipality Building

Client	Arbil Municipality
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Associated Firm	None
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Brief Description

Date of Completion	2012
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- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation





Iraq
Kurdistan

6164

Design of Cultural Compound, Heritage Museum and Multipurpose Hall

Client	Ministry Of Cultural and Youth	Associated Firm	None
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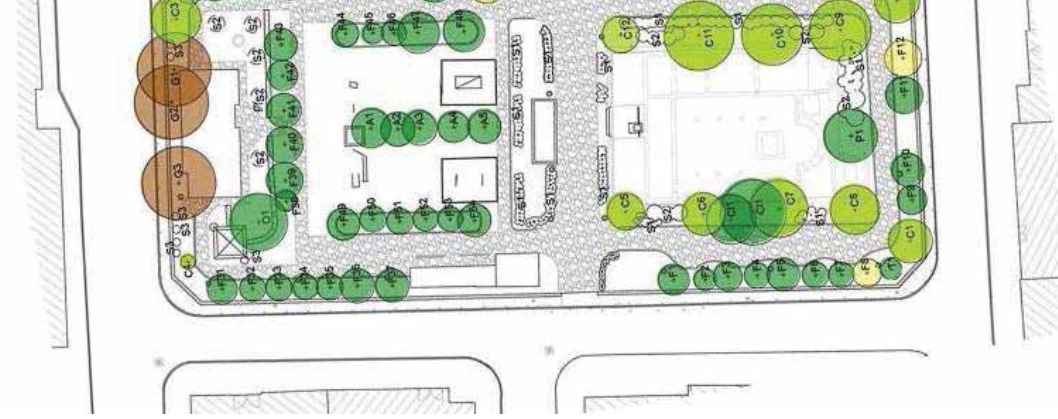
Brief Description	Date of Completion	2012
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- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation





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Detailed Design and Preparation Of Tender Documents for Construction of underground (Achrafieh) Parking underneath Jesuite Public Garden

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2010

- Preliminary Design
- Final Design
- Execution Drawings
- Specifications
- Bill of Quantities
- Tender Documents
- Fair Price Estimate
- Assistance During Implementation





Lebanon

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Supervision of Saida and Zahle Governmental Hospitals

Client	Council for Development and Reconstruction (CDR)	Associated Firm	AI-Hejailan A/E Consultants
Brief Description	Date of Completion: 2004		

This project involved supervision of 154 bed hospital in Zahle and 131 bed hospital in Saida. The scope of work covered comprehensive contract administration and supervision services, including

- Establishing systems and monitoring quality control, progress control and quantities installed.
- Ensuring that the contractor is working in conformity with contract requirements in terms of legal aspects, materials, specifications, construction methods and workmanship
- Establishing a programme of weekly/monthly progress review meetings while keeping CDR informed accordingly.
- Review of design.
- Evaluation of cost and time implications of variations.
- Review payment applications by the contractor and certify for payment.
- Review construction schedules updated by the contractor.
- Keeping records of tests, inspection approvals.
- Initiate and supervise the commissioning of plant and engineering services, and ensure that operating manuals, as-built drawings, etc. are made available to CDR, and issue completion and final certificates





Lebanon



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Design and Preparation of Tender Documents for the Head Quarters of the Traffic Management Organization (TMO) in Lebanon

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description		Date of Completion	2002

The building will be the HQ of the Traffic Management Organization and is primarily conceived to include the Traffic Management Center (TMC), part of the Beirut Urban Transport Project. The building is composed of 3 basements, a ground floor, plus 3 upper floors, with a total area of about 10,000 sqm. The building contains offices for the various TMO departments: The Administration, On-Street Parking Control, and Traffic Management. It also has space for the Internal Security Forces Regiment detached for this function. In addition to offices and auxiliary areas, the building includes an auditorium and exhibition area for conducting traffic safety and awareness training. One of the floors is dedicated to the Traffic Engineering Department and the TMC. The latter is a hall in which surveillance and control over the entire Greater Beirut area traffic is conducted. Specialized traffic management personnel sit side-by-side with police and emergency personnel watching traffic along 4-major corridors equipped with more than 50 field video cameras. Information from the field with over 200 signalized intersections is brought in to the TMC for optimization of traffic signal timing. The room is equipped with specialized computer workstations, video walls, and video monitors. The TMC includes also a viewing gallery for the public, and special areas for media to report on traffic conditions.



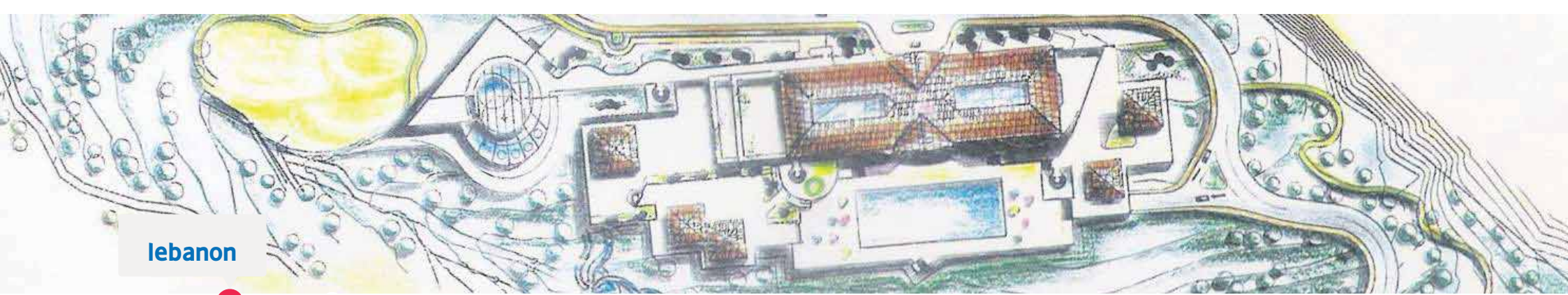
Supervision of Beirut Governmental University Hospital

Client	Council for Development and Reconstruction (CDR)	Associated Firm	AI-Hejailan A/E Consultants
Brief Description	2002		

This project involved design review and supervision services of a 530 bed university hospital. The scope of work covered comprehensive contract administration and supervision services, including:

- Establishing systems and monitoring quality control, progress control and quantities installed.
- Ensuring that the contractor is working in conformity with contract requirements in terms of legal aspects, materials, specifications, construction methods and workmanship
- Establishing a programme of weekly/monthly progress review meetings while keeping CDR informed accordingly.
- Review of design.
- Evaluation of cost and time implications of variations.
- Review payment applications by the contractor and certify for payment.
- Review construction schedules updated by the contractor.
- Keeping records of tests, inspection approvals.
- Initiate and supervise the commissioning of plant and engineering services, and ensure that operating manuals, as-built drawings, etc. are made available to CDR, and issue completion and final certificates



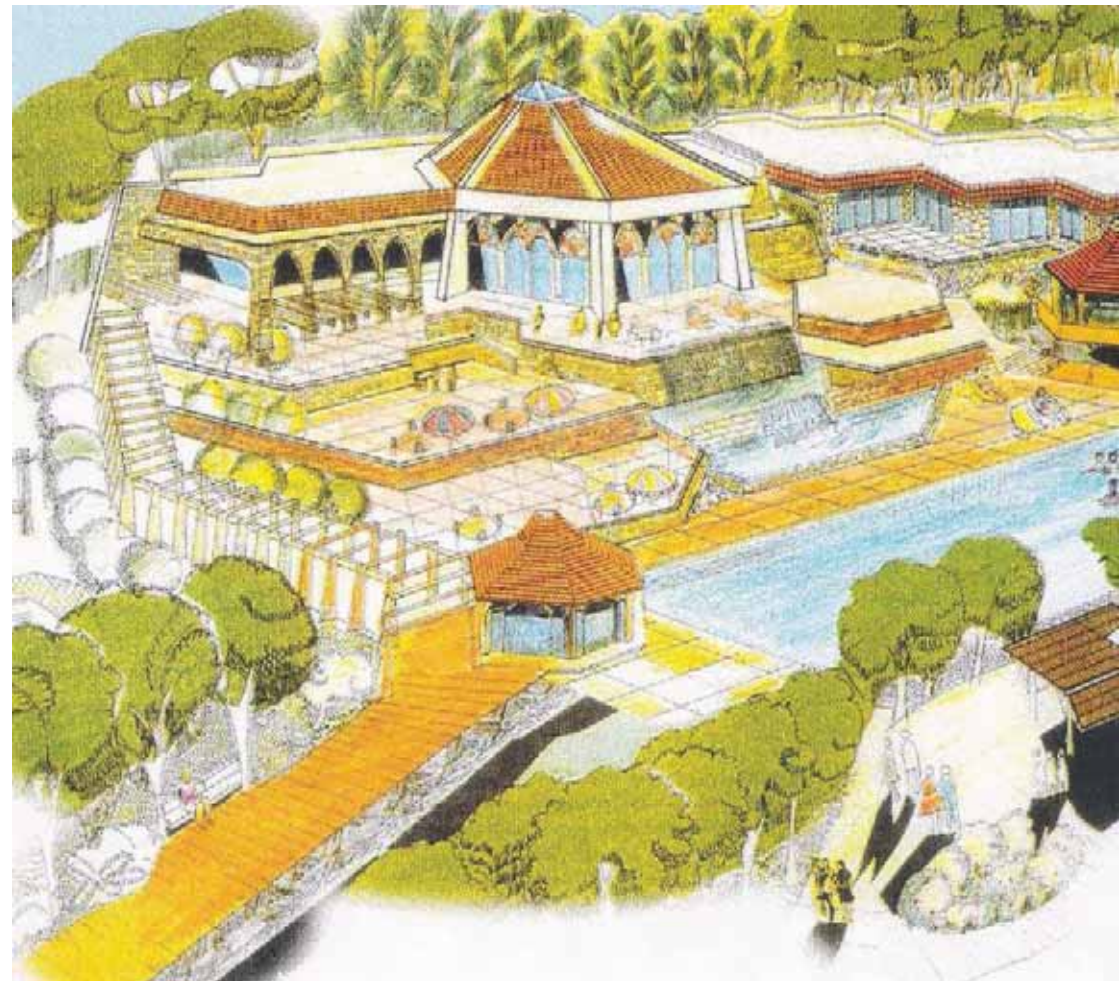


lebanon

Design and Supervision of Touristic Complex in Jeita

Client	Tannuri Group	Associated Firm	None
Brief Description		Date of Completion	1999

- This project comprises a large hotel and sports club covering an area of 140,000 sq.m. Work involves conceptual design, establishing the permit documents, preliminary and final engineering design, tender documents and supervision of construction.
- Cost of construction around 20 million US\$.





lebanon



Design and Supervision of Three Buildings in Beirut Central District

Client	Solidere	Associated Firm	None
Brief Description		Date of Completion	1996

The three buildings are multi-story historical edifices located in the Beirut Central District area, at the Southern part of Al-Maarad for the first building and at the North of Place l'Etoile overlooking Al-Omari Mosque for the two other buildings. The two buildings on lot 1154 & 200 are dated in 1930's. They present a combination of colonial and Neo- Islamic features and motifs, continuing the formal architectural characteristics found along Al-Maarad street. The building on lot 1155 dated in the 1950's, presents an architectural language and characteristics found in buildings known to represent the "Modern Period". The scope of the project was the renovation of these buildings that were severely damaged during the civil war, and involved the following works:

- Demolishing the internal slabs and all the structural internal framing system.
- Preserving the facades of the buildings.
- Replacing all existing slabs, columns and footings by new structural framing system.
- Adding extra floors and new basements. The scope of work included soil investigation, existing structure assessment, architectural complete design with ex-

ecution drawings, structural design of the new framing system including the additional floors and basements, guidelines for the bracing and demolition processes to be taken by the Contractor during construction, specifications and Tender documents and construction work supervision.



Design and Supervision of Conference Center

Client	Nissa Group – Ashgabat	Associated Firm	None
Brief Description		Date of Completion	1995

This project consisted of a conference building and an administration building 6000 m2 each. Work included conceptual and preliminary designs, execution drawings, tender documents and supervision of construction.



Design and Supervision of Tarik al Jadida Secondary School for Boys

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
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Brief Description	Date of Completion	1993
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The scope of work included the redesign, tender documents and supervision of construction of Tarik Al Jadida Secondary School. The A/E services comprised the redesign including all execution drawings, technical specifications, bills of quantities, and all tender documents.

The redesign involved 13000 m² of floor area with all utilities and electro-mechanical systems...

The project covered the following facilities:

- Gymnasium and related facilities, parking area for 30 cars
- Various rooms for music, art and sports activities.
- Administration offices, meeting rooms, libraries, and teachers rooms
- Classrooms, labs and workshops
- Sports facilities



Djibouti

Design of a Vocational Training Center for the Electricity Sector

Client	Nissa Group – Ashgabat	Associated Firm	None
Brief Description		Date of Completion	1988

The project covered the following:

- A preliminary design of the training center including the Architectural Designs, specifications and construction cost estimates.
- Preparation of construction permit request documents with detail of the estimated costs.
- Preparation of bid documents including the bid forms, project details and the general and specific conditions and technical specifications.
- Assistance in the execution phase :
- Bid opening, studying of the proposals and recommending the best suited.
- Preparation of contract documents.
- Assisting EDD throughout the construction period by supervising the construction, monitoring progress and checking the adherence to the design and the preset specifications.



Typical Designs of Civil Defense Administration Buildings of Various Categories As Well As Emergency Administration Buildings and Warehouses, Design of the Civil Defense Administration Building in the City of Taif.

Client	General Directorate of Civil Defense – Riyadh, K.S.A.	Associated Firm	None
Brief Description		Date of Completion	1986

These projects covered the following:

- Review of the organization structures of the various Civil Defense Administrations and Fire Stations in the Kingdom.
- Review of the functional charts and setting the maximum and minimum number of officers and employees in each building.
- Determination of the required surface area for each category based on the numbers in the category and the required equipment for the operation.
- Discussion with present employees to reach an optimal design fulfilling the basic requirement of the users as to the functionality, comfort and ease of maintenance.
- Development of alternative preliminary designs for the various categories of buildings.
- Discussion of the alternatives and choice of the best suited ones.
- Development of the chosen alternative into preliminary designs.
- Development of detailed architectural designs.
- Development of detailed Structural designs.
- Development of detailed Mechanical designs.
- Development of detailed electrical designs.
- Preparation of detailed Bills of Quantities.
- Preparation of Technical Specifications and Bid Documents.



Design of Training Center – Abha

Client	Nissa Group – Ashgabat	Associated Firm	None
Brief Description		Date of Completion	1981

- The scope of work included all planning studies to determine the training requirements of Electricity South in order to fulfill the objective of Saudization. Based on training needs, the space requirements were established.
- The A/E services comprised the preliminary and final designs, including all execution drawings, technical specifications, bills of quantities, conditions of contract, and all tender documents.
- The design involved more than 15,000 m² of floor area distributed in the following structures:
 - Residential buildings (student dormitories and guests)
 - Administration building
 - Auditorium (300 seats)
 - Mosque (200 persons)
 - Basic training and laboratory building
 - Power generation training shops
 - Power transmission distribution training shops
 - Restaurant - laundry - indoor sports facilities
 - Including all utilities, roads, water treatment, sewage treatment, garbage incinerator, and all electro-mechanical systems.



REGIONAL AND URBAN PLANNING

Lebanon

6187

Supervision Services for the Complementary Works for the Rehabilitation of Abu Ali River Banks in Tripoli Old City, related to the Cultural Heritage and Urban Development Project (CHUD)

Client	Council for Development and Reconstruction (CDR)	Associated Firm	None
Brief Description	Date of Completion: 2019		

The project is located along Abu Ali River Corridor between Bab El Tabbaneh and Maoulawiya Bridge. Works included mainly: Pavement, Kiosks Cover In Fiberglass Domes and Steel Tables, Bortassi Garden, Fountains, Sub Base and Base Courses, Bituminous Construction, Road Furnishing.





Iraq

Planning and Design of the Artisanal District of Al Hilla City

Client	Babel Governorate
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Associated Firm	None
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Brief Description

Date of Completion	2018
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The project involves an artisanal district consisting of 1200 shops, designed with complete infrastructure and utilities, including urban infrastructure, covering: water supply network, waste water network, electricity distribution network, solid waste requirements. Provided: The scope of work covers:

- Topographic survey.
- Soil investigation.
- Site master plan covering shops of various sizes and related administration and service buildings, taking into consideration environmental aspects.
- Architectural and Structural Design.
- Design of water distribution and waste-water networks, solid waste facilities- firefighting system and electrical distribution.
- Preparation of tender documents, bills of quantities, cost estimation.



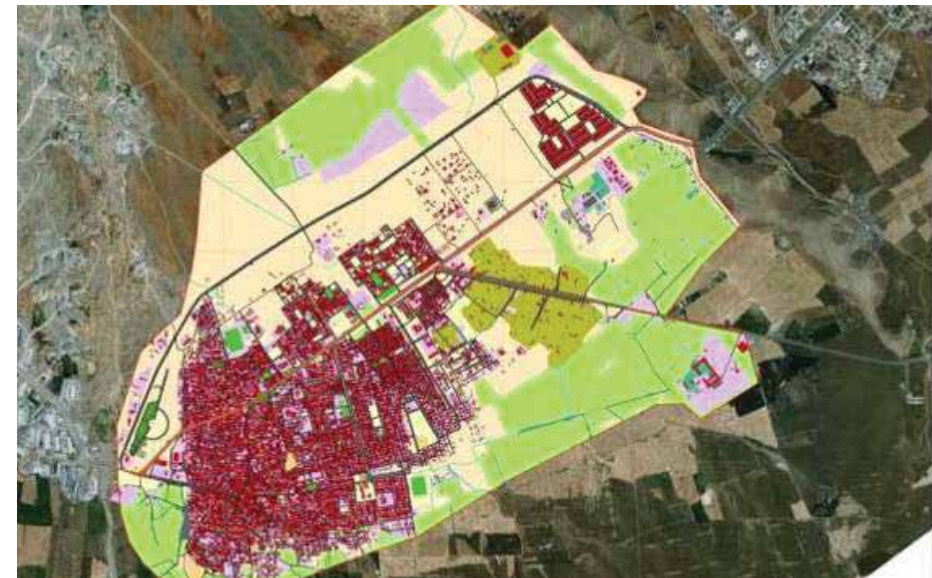
Iraq Kurdistan

Master Plan for the three cities: Ranya/Hajiyawa/ShwarQurne

Client	Ministry of Municipalities and Tourism	Associated Firm	None
Brief Description	2017		

T-Ensure sustainable urban development of cities for 25 years to come, taking into account aspects of social, economic, environmental and cultural development.

- Propose the framework of land use and transportation system for the future development of urban and determine the requirements for the provision of public facilities (social infrastructure) and services (technical infrastructure) for the current cities and the region covered by the development.
- Determine the current areas that require immediate business planning public facilities and services.
- Preparation of implementation strategies of the major plans including the identification and description of the prioritization of major projects for the horizon of the next 25 years. In addition to urban systems, classification of land use and building codes to detailed plans System (ADS plans) and recommendations for institutional development.



CitwarQurne GIS Basemap

City Center	Building
Urban	Greenery
Suburban	Open Space
Water	Water
...	...

Map Scale 1:7,500





Lebanon

« 6127 »

The Cultural Heritage and Urban Development (CHUD) Project –Supervision of Construction Contracts for Urban Development & Conservation, and Engineering Study for Traffic and Road Improvement in the Old City of Tripoli.

Client Council for Development and Reconstruction (CDR)

Associated Firm Bitar Consultants

Brief Description

Date of Completion 2016

The Cultural Heritage and Urban Development(CHUD) Project is an initiative undertaken by the Government of Lebanon and with the support of the World Bank, Agence Francaise de Developpement, Government of Italy and Government of France, with the purpose of protecting, rehabilitating, and revitalizing selected Lebanese archaeological and core historical sites.

The project aims at improving the quality of urban life of the local residents in and around the old city of Tripoli. As a result of this project, a better access to the medina will be provided while freeing it of vehicular traffic; public spaces of great value will regain their pedestrian qualities; a popular market serving the historic city will be provided with better facilities.





Lebanon



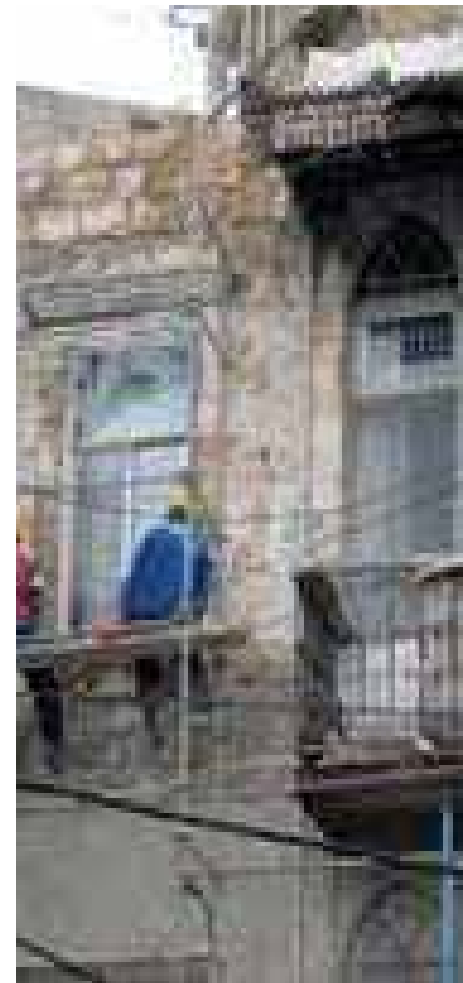
The Cultural Heritage and Urban Development (CHUD) Project –Su-pervision of Construction Contracts for Urban Development & Conservation, and Engineering Study for Traffic and Road Improvement in the Old City of Tripoli.

Client	Council for Development and Reconstruction (CDR)	Associated Firm	Bitar Consultants
Brief Description		Date of Completion	2016

The Cultural Heritage and Urban Development (CHUD) Project is an initiative undertaken by the Government of Lebanon and with the support of the World Bank, Agence Francaise de Developpement, Government of Italy and Government of France, with the purpose of protecting, rehabilitating, and revitalizing selected Lebanese archaeological and core historical sites. Tripoli, the second city of Lebanon, has a large historical city center that hosts very significant architectural monuments of the Crusader and Mameluk periods. The project aims at improving the quality of urban life of the local residents in and around the old city of Tripoli and offering, to the inhabitants, opportunities of local economic development. As a result of this project, public spaces of great value will regain their pedestrian qualities; the attractiveness of the souq to residents and visitors will be highlighted; a popular market serving the historic city will be provided with better facilities; some key monuments will be restored; the historical building stock will be maintained. Some of the project components are:

1. River-side circulation, parking improve-

- ments and landscaping.
2. Resettlement housing and commercial spaces.
 3. Rehabilitation of public spaces and streets frontage.
 4. Support to housing rehabilitation.
 5. Scope of construction supervision services provided involves:
 - Quality, Quantity and Time Control of the construction works which occur in an urban setting in a historic city .
 - Health, safety and Environmental Monitoring.
 - Protection of cultural heritage and archaeological remains.
 - Optimize the construction activities to the minimal detriment of those of the inhabitants by: reducing negative impacts on abutting properties, detouring of traffic, maintaining access to shops, minimizing the nuisances associated with the construction activities...
 - Coordination with other related projects under construction in the same areas.
 - Liaise with all stakeholders: funding institutions, DGU, DGA, the Municipality of Tripoli, various citizen groups & NGOs.





Studies and Designs of Dry Ports (Logistic Platforms) In Hizyaz South of Sana'a and to the West of Sana'a – Al Hodeidah Road

Client	Capital Secretariate – Sanaa	Associated Firm	CATRAM (France) & HS & Associates (Yemen)
Brief Description	<ul style="list-style-type: none"> Analysis of requirements Conceptualization and master planning of facilities. Land surveying of site Layout plans Detailed design and preparation of Tender Documents of infrastructure (roads and yards, water supply, surface drainage, sewerage, power supply, low-current systems. Specific concern was to allow safe entry and exit of heavy trucks and delivery vehicles to and from the facilities, and ensuring traffic safety for external and internal vehicular and pedestrian traffic. 		
Date of Completion	2010		



WATER, WASTEWATER AND DAMS

Technical Assistance To ONEP For Follow-Up Of Potable Water Projects In 20 Centers

Client	Office National de l'Eau Potable Direction Equipement – Rabat	Associated Firm	HIDRO PROJECTO – Portugal
Brief Description		Date of Completion	2000

- Follow-up and control of potable water projects in 20 cities of Morocco financed by an OECF-Japan loan.
- Potable water projects cover water canalization, rehabilitation and reinforcement of the existing networks in the concerned 20 towns (Kelaâ Sraghna, Essaouira, Ben Ahmed, Ben Slimane, Oued Zem, Berrechid, Khemisset, Ouezzane, Sidi Slimane, Tiflet, Tanger, Had Kourt, Kenitra, Taourirt, Azrou, Erfoud, Errachidia, Khenifra, Midelt et Ifrane).

Regional Socio-Economic Reconstruction And Development Programme For South Lebanon And West BeKaa

Client	High Relief Committee – Lebanon, and UNDP	Associated Firm	IAURIF, CRI, ECODIT University of YORK
Brief Description		Date of Completion	1999

A comprehensive study was carried out to set the requirements for reconstruction and development of the occupied territories in South Lebanon and Bekaa Gharbi. A plan was developed guided by the directives of sustainable development, active involvement of the private sector and mobilizing local resources, improving the standard of living and protecting the environment and natural wealth.

Based on extensive surveys and studies, complementary axes of intervention were identified, including:

- Infrastructure development: especially roads, water and sewerage networks, transportation, telecommunication and electrical networks, schools and public buildings.
- Environmental rehabilitation of specific sites, essentially for the economic and social development.
- Economic development oriented towards job creation and production in services and industry, and towards a modernization of agriculture; with the priority of starting businesses and mobilization of private investments.

The few actions listed below illustrate the content of the program:

- The setting-up of a financial resource center supporting the creation of enterprises, managing loans, and promoting investments in the South.
- Pilot projects in the agricultural domain and food industry.
- The reconstitution of local offices of the Ministry of Agriculture, supported by ex-

perts and operating over the medium and long-term.

- The rehabilitation of water networks and sanitation, the rehabilitation of road networks and traffic lights, and pilot projects for solid waste management.
- The launching of ambitious irrigation projects for South Lebanon with the water of
- Lake Qaraon (Conveyor 800).
- Changing tobacco cultivation over a duration of 10 years, permitting substantial decline in the State budget and a better income for the farmers.

Master Plan For Kenitra Wastewater System

Client	Regie Autonome Intercommunale de Distribution d'Eau et d'Electricite de Kenitra – Kenitra	Associated Firm	SAFEGE – France
Brief Description		Date of Completion	1998

The study updates and completes the study of Kenitra city wastewater system master plan; preparation of the pre-feasibility studies and preparation of the institutional study and cost recovery

Master Plan For Tetouan and The Coastal Zone Potable Water

Client	Regie Autonome Intercommunale de Distribution d'Eau et d'Electricite de la Wilaya de	Associated Firm	SAFEGE – France
Brief Description		Date of Completion	1998

The study consists in elaborating the potable water distribution master plan for Tetouan city and the Mediterranean coastal zone. The stages of this study are:

- Diagnosis and evaluation of the existing potable water distribution network
- Preparation of the distribution master plan
- Preparation of a detailed pre-feasibility study for the first bracket of works to be executed
- Assessment of losses and improvement of the network ; and detection of the leakage
- Preparation of a preventive maintenance program

Master Plan For Khouribga Wastewater Drainage

Client	Office National de l'Eau Potable Direction des Etudes et de l'Assainissement – Rabat	Associated Firm	SAFEGE – France
Brief Description		Date of Completion	1998

Preparation of the master plan for Khouribga wastewater drainage to meet the city needs of Horizon 2010 study and determine priority work to be executed to meet the needs of the next 5 years along with long-term goals.

The stages of this study are:

- Diagnosis, research and analysis of existing data and studies; updating networks sketches and specify emergency needs
- Identification, analysis and comparison of alternatives for drainage, treatment and reutilization.
- Study of storage parameters and definition of the construction stages.
- Institutional and cost recovery studies.

Design Of The Drainage Of Rivers Bashroun And Aaraara In Ghazieh – South Lebanon

Client	Conseil Executif des Grands Projets (CEGP)	Associated Firm	None
Brief Description		Date of Completion	1998

The necessity to improve the drainage of Bachroun and Aaraara Rivers became apparent during construction of the South Motorway in that region.

The 100-year flood flow of Bachroun is 110 m³/sec and that of Aaraara is 40 m³/sec. Concrete channels were designed with the necessary energy dissipating and velocity control features, to cater for this flow and carry it across the motorway and the existing Beirut - Saida Road, to the sea.

The project involves draining rivers Bashroun and Aaraara adjacent to the South Motorway in Ghaziyeh. The study area extends from the point where each river meets the sea and upstream 1500 m in case of Bashroun and 1200 m in case of Aaraara.

Scope of work includes topographical works, supervision of the soil testing, hydrologic and hydraulic studies.

Various alternative solutions were compared in search of the optimal solution technically and economically. Drainage channels and culverts were designed including energy dissipaters and other details. The drainage channels were designed to take access - roads on both sides with a total length of about 3 km. Tender documents and expropriation files were also prepared.

Master Plan For Great Berkane Potable Water And Wastewater System

Client	Office National de l'Eau Potable Direction des Etudes et de l'Assainissement – Rabat	Associated Firm	None
Brief Description		Date of Completion	1997

- The study includes 2 sections:
- Master plan for distribution of potable water in Berkane city
- Master plan for Berkane city wastewater
- Section 1: The study consisted in verifying the functioning and the status of the potable water network and proposing corrective measures to improve it. A study to extend the distribution network was achieved to meet the needs of Horizon 2010 study.
- Section 2: The study consisted in defining technical, operational and financial arrangements to provide the best solution to problems of collecting, carrying, treating and disposal or recycling domestic water in Berkane city at low cost.
- A diagnosis report of the functioning and existing wastewater network status has been achieved, and corrective measures have been suggested to improve it.
- wastewater network extensions have been studied to meet the needs of Horizon 2010 study

Potable Water Studies For The Chief-Towns Of Taounate Rural Municipalities

Client	Office National de l'Eau Potable Direction Planification et Developpement – Rabat	Associated Firm	None
Brief Description		Date of Completion	1997

- Field diagnostic and analysis of the present status of potable water systems in 10 chief-town centers in rural municipalities. Surveys resulted in issuing a schedule of needs-resources and an analysis of the present potable water systems. A suggestion of immediate urgent measures has been proposed to improve present conditions

Execution Studies To Supply Great Berkane With Potable Water

Client	Office National de l'Eau Potable – Rabat	Associated Firm	None
Brief Description		Date of Completion	1997

Preparation of execution studies (Final Design & Tender Documents) for the first bracket of works initiated by the potable water distribution master plan in Great Berkane. These studies include:

- Extension and rehabilitation of the distribution network in Great Berkane
- Two half-buried reservoirs: 2000 m³ and 4000 m³ capacities
- Additional works and adjustments of existing works

Master Plan For Great Berkane Potable Water And Wastewater System

Client	Office National de l'Eau Potable Direction des Etudes et de l'Assainissement – Rabat	Associated Firm	None
Brief Description		Date of Completion	1997

- The study includes 2 sections:
- Master plan for distribution of potable water in Berkane city
- Master plan for Berkane city wastewater
- Section 1: The study consisted in verifying the functioning and the status of the potable water network and proposing corrective measures to improve it. A study to extend the distribution network was achieved to meet the needs of Horizon 2010 study.
- Section 2: The study consisted in defining technical, operational and financial arrangements to provide the best solution to problems of collecting, carrying, treating and disposal or recycling domestic water in Berkane city at low cost.
- A diagnosis report of the functioning and existing wastewater network status has been achieved, and corrective measures have been suggested to improve it.
- wastewater network extensions have been studied to meet the needs of Horizon 2010 study



Execution Studies of the Wastewater Priority Works in Berkane City (APD-DCE)

Client	Office National de l'Eau Potable Direction des Etudes et de l'Assainissement – Rabat	Associated Firm	None
Brief Description		Date of Completion	1996

The project covers detailed design and construction tender documents of the wastewater priority works in Berkane city. These works have been initiated by the master plan and include 3 sections:

- Network: rehabilitation of the existing pipes disfunctioning and network rehabilitation
- Interception and discharge: collection of domestic water, construction of a pumping station and interception ducting to convey domestic water to the treatment plant.
- Purification: construction of a wastewater treatment plant via a natural lagooning



Preliminary Studies For Wastewater In Bnidrar, Neima, Ain Erragada, AKlim And Zayat

Client	Office National de l'Eau Potable Direction des Etudes et de l'Assainissement – Rabat	Associated Firm	None
Brief Description		Date of Completion	1996

- Diagnosis about the wastewater network in each of the five concerned areas, proposing urgent actions to remedy the existing situation, and preventive measures to avoid its aggravation ; and proposing short-term suggestions/arrangements.

Technical Assistance And Construction Supervision Of The Ashrafieh – Nahr Sin El Fil Link

Client	Executive Council For Great Projects In City of Beirut (CEG-PVB)	Associated Firm	SaudConsult
Brief Description		Date of Completion	1994

The project which included a major road construction inlaid in a dense urban fabric over a difficult topography and bad soil conditions, involved extensive utility relocation: 1000 mm and 600 mm water mains, a network of water and waste water drainage, potable water, telephone and power supply.

Potable water and wastewater drainage works:

Job included complete redesign and construction supervision of:

- 1000mm D.C.I potable water main supply pipe,
- 600mm and 250mm D.C.I. water supply pipes,
- 4 and 3 inches water mains,
- storm and wastewater conduit pipes and channels of various sizes with appropriate appurtenances and house-connections.

Institutional Support Contracttem

Client	General Organization of Sanitary Drainage of Greater Cairo (GOSD)	Associated Firm	None
Brief Description		Date of Completion	1992

Team is conducting this project as a subcontractor to a US firm CH2M-Hill. The purpose of the project is to institutionally reform the organizational, technical training & administrative systems of the sewerage authority. This project is the implementation of autonomous status & economic viability of the GOSD. The project includes the development of the following:

- MIS system
- Decision support system
- Cadre of trainers
- Managerial skills training
- Computerized financial system
- Inventory control system
- Library system
- Operations & maintenance training program
- Technical training
- Safety management.

Greater Cairo Sanitary Drainage Project

Client	General Organization of Sanitary Drainage of Greater Cairo (GOSD)	Associated Firm	CH2M-Hill
Brief Description		Date of Completion	1991

This five -year project covered design and supervision of the sanitary drainage trunk network for Greater Cairo with an estimated construction cost of more than \$200 million. This project included also an institutional development component covering the strengthening of managerial, organizational, technical training & administrative systems of the sewerage authority.

Supervision Of Two Water Projects For UNICEF

Client	UNICEF-Beirut	Associated Firm	None
Brief Description		Date of Completion	1991

Work involved supervision and contract administration of two water projects for the villages of Toura and Maarakeh, Sour Water Authority. The projects consisted of equipping wells, construction of pump house and laying of pipes as follows:

- Water well depths 235m and 350m, diameter 12"
- Equipping wells by electric submersible pumps 100 HP and 150 HP with Total Manometric Head of 310m.
- Rehabilitation/construction of pump houses
- Laying of new pipelines using 5" and 6" galvanized steel pipe.

Luci Water Supply Project

Client	UNICEF
Brief Description	

The project objective is to provide potable water for Rachaya region in Lebanon by pumping water up through boosters to Sultan Yacoub Hill and from their convey by gravity to Rachaya.

The scope of work: is upgrading a water supply project implemented in 1950 (funded by US point 4), build a new pumping station. Above a 100m deep well, construct a reservoir 1000 cubic meter capacity, install a network ductile iron pipes 300Km long. Our role was to supervise procurement and installation of all system components, test and certify the system. Fees: \$ 20.000

Associated Firm	None
Date of Completion	1990

Field Survey Related To Tihama Domestic Water Project

Client	Seureca/ Consultants To The Ministry Of Agriculture And Water
Brief Description	

The survey covered areas of Jizan, Asir, Al-Baha and Makkah totalling more than 70,000 Kms and consisted in gathering demographic, infrastructural and socioeconomic data necessary to the planning and design of the domestic water projects for these areas.

The field survey covered more than 700 villages distributed over the various geographic and topographic zones, water sheds and population settlements

Associated Firm	None
Date of Completion	1990

ENVIRONMENTAL IMPACT ASSESSMENT

Workshops and Awareness Conferences about Environmental Impact Assessment

Client	Mediterranean Environmental Technical Assistance Program ,managed by the World Bank
Brief Description	

Four workshops were designed and administered to:

1. Employees of the Ministry of Environment, CDR, and line ministries
2. Environmental NGO's
3. Industries and consulting firms
4. Staff of World Bank funded projects engaged in environmental monitoring

Thirty awareness conferences were designed and administered all over Lebanon, beneficiaries include:

1. Municipalities and local authorities (18)
2. Engineers and contractors
3. Industrialists
4. Business community
5. Lawyers
6. Insurance companies
7. Media (papers, broadcasting, TV)
8. Bankers
9. Universities (3)
10. Donors
11. Decision-makers.

This training and public awareness campaign is done in preparation for requiring an EIA for each new project.

Depending on the audience, the presentations include various levels of detail covering:

- status of environment in Lebanon
- what is an EIA?
- benefits of an EIA
- procedures involved: screening, scoping, technical studies, public participation, reporting, monitoring, etc.
- proposed steps in conducting an EIA
- cost of conducting an EIA
- skills required to conduct an EIA
- risk aversion.

Associated Firm	None
Date of Completion	2001



Environmental Impact Assessment for the Zebdol-Saghbine Road Rehabilitation Project

Client	Ministry of Public Works and Transport, Directorate of Roads, Project Implementation Unit
Brief Description	

An environmental assessment (EA) was conducted by TEAM International for the proposed PRI 055C Zebdol-Saghbine Road Rehabilitation Project. The proposed project which is about 27 km length involving the rehabilitation of the already existing road is part of the National Roads Project (NRP). A Program Implementation Unit (PIU) was introduced within the Ministry of Public works (MPW) to implement the project. The NRP is partly financed through a loan agreement between the World Bank and the MPW. The implementation of the project is coordinated by the Program Implementation Unit at the Ministry of Public Works. It is not expected that the project will directly involve other ministries or government agencies.

The objectives of the EA include providing a sound basis for decision-making about the design of the project components that takes environmental considerations into account, ensuring that the project is implemented with awareness of environmental factors, and that potential environmental impacts are recognized and addressed.

The scope of work of the EA included the definition of current policies, legal and administrative framework related to transport and road rehabilitation in Lebanon; the definition of existing environmental conditions; the identification and analysis of potential environmental impacts and mitigation measures, and the development of an environmental management plan (i.e. monitoring) during the construction phase.

Associated Firm	None
Date of Completion	2001

The EA was conducted in accordance to the provisions of World Bank Operational Directive 4.01, "Environmental Assessment" which classifies the present project under Category "B" mandating the preparation of a limited EA or Environmental Management Plan (EMP) since "anticipated negative impacts are mainly short term and can be aptly mitigated". The main objective of the EA is to ensure that potential environmental impacts are recognized and addressed.

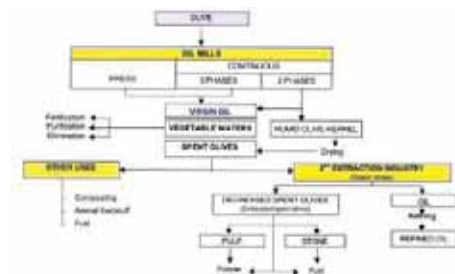


Study to Develop an Environmental Compliance and Phasing Program for the Paper Industry (Paper and Cardboard) and the Food Industry (Olive Pressing)

Client	Ministry of Environment
Associated Firm	None
Date of Completion	2001

- Brief Description**
- Paper Industry (Paper and Cardboard)
1. Conduct a field survey of the paper industry (paper and cardboard).
 2. Presentation of geographical distribution of sector facilities on a map.
 3. Selection of two licensed facilities representative of the paper industry (paper and cardboard).
 4. Environmental auditing of these two facilities (following environmental auditing). national procedures for
 5. Environmental Impact Assessment of the subject sector.
 6. Presentation of a decree plan defining specifications and standards for the subject sector.
 7. Propose pollution preventive measures, clean production methodologies, and treatment methods to ensure that the two selected facilities conform with specifications and standards within a specific time frame.
 8. Propose a number of economic incentives to facilitate the application of the developed plans.
 9. Preparation of a memorandum of understanding between the Ministry of Environment and representatives of the subject sector to ensure environmental compliance within the proposed time frame.
 10. Development of an environmental monitoring plan for the Ministry of Environment to support the implementation of the memorandum tasks.

- Brief Description**
- Food Industry (Olive Pressing)
1. Preparation of a report of the necessary data and information on the olive oil production sector in Lebanon (number of olive trees, quantities used in olive oil production, number of olive mills, geographical distribution, geographical characteristics).
 2. Mapping the available information and data to available technologies for the purpose of selecting best techniques that can be used at the national level.
 3. Review of technologies that could be economically feasible to adopt in Lebanon and defining the two most suitable ones.
 4. Ensuring the performance of the selected technologies and conducting a preliminary economic feasibility study to choose one of the two technologies and defining its preliminary cost.
- Source: Pollution Prevention in Olive Oil Production. Regional Activity Center for Cleaner Production. Mediterranean Action Plan.



Environmental Assessment of Beirut Urban Transport Project

Client	Council for Development and Reconstruction (CDR)
Associated Firm	None
Date of Completion	2000

Brief Description

The proposed Beirut Urban Transport Project (BUTP) would provide the fundamental urban transport apparatus needed to address the extremely diverse and complex transport issues the city faces, and support selected immediate actions of the GBATP. There are several key issues which must be immediately addressed to improve the operational and economic efficiency of the GBA urban transport system including: traffic management network capacity and parking provision and controls.

The Consultant has prepared an Environmental Assessment for the proposed project consistent with the requirements for a Category "A" project under the procedures of the World Bank. The objectives of the EA include providing a sound basis for decision-making about the design of the project components that takes environmental considerations into account, ensuring that the project is implemented with full awareness of environmental factors, informing the public when and how the project implementation may affect their environment, and facilitating the public participation in the decision-making process.

The scope of work of the EA included the definition of current policies, legal and administrative framework related to the transport sector in Lebanon; the definition of existing environmental conditions in the GBA; the identification and analysis of potential environmental impacts and mitigation measures; the definition and analysis of potential alternatives; the development of environmental monitoring and management plans; and the solicitation of public participation regarding the

entire project.

Since there are currently no approved Environmental Assessment procedures in Lebanon, the study has been conducted in accordance with the provisions of World Bank Operational Directive 4.01, "Environmental Assessment". The components were reviewed and screened as follows: (a) Traffic Management Improvement Program; (b) parking Improvement Program; and (c) Corridor Improvement Program. While the proposed construction of underground parking facilities has been dropped from the proposed project, following field based engineering and environmental evaluations, it has been decided to continue the preparation of a full Environmental Assessment which allows the project design process to fully benefit from a more detailed evaluation of environment issues and an active public consultation process."

While public consultation is not a common practice in Lebanon, it is mandated under the EA procedures of the World Bank, and this study has provided an opportunity to successfully demonstrate the use of this approach in the preparation of infrastructure improvement projects. In addition, the EA procedures of the World Bank include the assessment of potential impacts to cultural heritage as an integral element of the EA process and the preparation of the study has included consultations with the Lebanese Department of Antiquities.

National Administrative Rehabilitation Program (NARP)

Client	Ministry in charge of Administrative Reform	Associated Firm	None
Brief Description		Date of Completion	1996

This project represents an update and completion of the “Public Administration Rehabilitation Program - Immediate Technical Cooperation Activities” sponsored by UNDP.

The scope of work for each of the 44 ministries or public agencies (including the Ministry of Environment) has covered an audit of the existing situation including organization and staffing, an assessment of the objectives and strategy, ascertaining priorities, evaluation of the immediate needs in terms of personnel, premises, equipment, computers, training programs and plans and technical assist.

Environmental Assessment of Tripoli – Syrian Motorway

Client	Conseil Executif des Grands Projets (CEGP)	Associated Firm	None
Brief Description		Date of Completion	1995

The motorway subject of this EIA is a controlled access six-lane divided facility, with full control of access and with service roads on both sides. Total length from Tripoli to Syrian border is 56km. It includes 9 interchanges.

The EIA analyzed the impacts of the motorway during both construction and operating phases. The scope of work included quantification of land areas to be expropriated, building to be demolished, families and businesses to be displaced, trees to be cut, earth to be moved (cut and fill), noise and emissions of construction machinery, waste of asphalt plants, etc. A comparison of conditions with and without the motorway regarding vehicular emissions, noise, and traffic accidents was made. Mitigation measures were identified and included:

- Promotion of good practice in quarry operations,
- Dust control,
- Noise control,
- Safety of job site,
- Pollution control of asphalt concrete plants,
- Trees replanting,
- Landscaping and erosion control; and
- Anti air pollution measures.



TEAM INTERNATIONAL HEAD OFFICE



BEIRUT, LEBANON

Mrouweh Center, Madam Curie Street.



Ras Beirut, Beirut

P.O.Box 145303, Mazraa,

Beirut 1105-2030, Lebanon



For Management Consulting

+961 1 814020

+961 1 814021



+961 1 353459



For Engineering Consulting

+961 1 804094

+961 1 804095



+961 1 804034



engineering@team-international.com

teambeirut@team-international.com

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