

A METHODOLOGY FOR INFRASTRUCTURE PRIORITISATION IN IRAQ

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A Future of Development and Economic Growth for Iraq

- 1. Iraq has recently seen significant security improvements, and the 7 March 2010 general election was held in relative calm. A series of economic and administrative reforms have brought improvements to the business environment, and investor interest in the country is growing.¹
- 2. In recent years, Iraqi economic policy has focused on opening markets and fostering a business-friendly environment to attract foreign direct investment and facilitate trade. The country is on a steady path of legal and regulatory reforms that is cause for optimism. It has reformed laws and regulations governing the formation and registration of companies, foreign investment, import, export and customs valuation, intellectual property, and banking.
- 3. In addition to the domestic progress, Iraq has resumed its relationships with most countries of the MENA region, and has been increasingly involved with the international community through enhanced international consultations and accession engagements with key international organisations. In 2004, Iraq initiated the World Trade Organisation accession process.²

Creating an Attractive Investment Climate: The Investment Law and the National Investment Commission

- 4. In 2006, a new Investment Law $(13/2006)^3$ was adopted to foster a stable and predictable investment climate, attract and build technical and scientific expertise, develop human resources, create job opportunities, and remove red tape. It covers all sectors of the economy with the exception of banking and insurance, and oil and gas extraction and production. Once all implementing regulations are in force, the provisions of the Investment Law should enable an open investment regime for foreign investors. Article 2 of the first amendment to the law (approved on 13 October 2009)⁴ has given foreign investors the right to own land in the context of housing projects and has clarified leasing rights. The government now offers 50-year leases for projects in other sectors and secured privileges for public-private partnerships (PPP). If projects are at least 50 % Iraqi owned, a 15-year exemption from taxes is granted; if the 50% threshold is not reached, a 10 year tax exemption applies.⁵
- 5. According to article 4 of Investment Law 13/2006, a dedicated investment agency was created in July-August 2007⁶: the National Investment Commission (NIC). This authority is responsible for advocacy and drafting of the country's national investment policy and guidelines, and for monitoring their implementation.⁷ In addition, Provincial Investment Commissions (PICs) were established in every province in 2008. Both the NIC and the PICs provide "one-stop shop" services to new foreign and domestic investors, including signing contracts and facilitating registration.

¹ Mirza: Iraq – From war zone to boom town. In: MEED, 8 April 2010.

² http://www.wto.org/english/theWTO_e/acc_e/a1_iraq_e.htm (20 April 2010).

The Investment Law 13/2006 is available at: http://www.investpromo.gov.iq/index.php?id=16 (20 April 2010).

⁴ http://www.investpromo.gov.iq/index.php?id=91 (20 April 2010).

⁵ Law No. 13 (2006), Art. 15.

⁶Diwan Order No. 134, 7 November 2007.

⁷Law No. 13 (2006), Art. 1(b) and Art. 4.

The NIC and the MENA-OECD Investment Programme: An enhanced co-operation

- 6. The MENA-OECD Investment Programme (MENA-OECD) Iraq project began its co-operation with the NIC immediately after its creation in 2007 at the request of the Government of Iraq (GoI). At the annual review conference on the International Compact with Iraq (ICI) in Stockholm in May 2008, Iraqi government representatives acknowledged the importance of reforms supported by MENA-OECD and stated their interest in fostering further co-operation with the programme.
- 7. In recent years, the MENA-OECD Investment Programme has organised, in the framework of its co-operation with the NIC, a series of training workshops bringing together representatives from Iraq, MENA countries, and OECD member countries to identify key obstacles to the revitalisation of the Iraqi economy. NIC staff members have been trained in internationally recognised best practices for investment promotion, and policy advice has been provided, with the following key objectives:
 - Strengthen the institutional capacity of the NIC and its one-stop shop;
 - Enable the Iraqi Investment Law to take effect by working with the GoI on the development of implementing regulations;
 - Assist implementation of the national investment promotion strategy;
 - Build capacity on international investment agreement negotiation and implementation;
 - Raise awareness of international investor exposure to transparency standards, including the OECD Anti-Bribery Convention.
- 8. Although recent investment climate developments suggest an optimistic outlook, Iraq's government still faces challenges in managing economic recovery and implementing governance reforms. While security improvements and increased oil revenues have enabled substantial economic reconstruction in recent years, there are still many concerns regarding the country's future, particularly in the field of infrastructure.

Rebuilding Iraqi Infrastructure: MENA-OECD Support for the Working Group on Infrastructure Finance

9. To support the GoI in its efforts to move forward with infrastructure development, MENA-OECD has been tasked as co-leader and organizer of the GoI Working Group on Infrastructure Finance, formed in November 2009. The working group includes high-level GoI representatives from the Cabinet, the Office of the Deputy Prime Minister for Infrastructure, 13 Iraqi ministries and agencies as well as experts from OPIC, the World Bank, MIGA, UNDP, UNIDO, the Islamic Development Bank, and other national lending and guarantee agencies. Its mission is to make recommendations on priority infrastructure projects and appropriate financing mechanisms, and to assist GoI ministries in preparing loan applications and PPP proposals.

The Government of Iraq's Focus on Rebuilding Infrastructure

10. Despite significant advances in many areas of infrastructure in Iraq, much still remains to be undertaken. It is important for the GoI to increase its ability to deliver basic services given that the Iraqi population is on a considerable growth trajectory, there are increased expectations of a higher standard of living, and there is a need to accommodate economic growth. Responding to these needs will demand considerable strengthening of infrastructure.

11. The GoI is currently elaborating plans to rebuild the country's infrastructure, including major projects in agriculture, transportation, telecommunications, and energy and housing, with a total budget of USD 150 billion by 2025. In addition to budgetary funds, Iraq intends to involve foreign investors, including via public-private partnerships. The NIC and its OSS, and the Working Group on Infrastructure Finance, will have a key role to play in facilitating procedures for foreign investors and providing attractive project conditions.

Selected Projects

- 12. *Oil.* Iraq's oil reserves are the second largest in the world and its proven gas reserves are the tenth largest. The oil and gas sector provides the bulk of income for the GoI, and it is largely these revenues that will be used to rebuild the country. To drive its reconstruction efforts, Baghdad plans to increase crude oil production, which was an average of 2.285 million barrels a day (b/d) in 2008, by 4.5 million b/d by 2014. To achieve this ambitious objective, the Ministry of Oil plans (for example) the construction of new pipelines as well as of storage systems for crude oil to be exported. 10
- 13. *Electricity*. The Ministry of Electricity is seeking to boost production and to find alternatives to existing power plants run on imported diesel fuel that costs approximately USD 1.2 billion per year. ¹¹ The Ministry plans to construct new gas-powered electricity generation stations, but lacks funding, ¹² and existing facilities require renovation. USD 4.5 billion would be needed in total to realize the Ministry's projects. ¹³
- 14. *Transport*. The Ministry of Transport is focusing on 24 projects¹⁴, including new airports, railways and sea ports. The USD 4 billion Grand Fao Port is one of the most ambitious projects, aiming at the construction of one of the ten biggest ports worldwide on the coast of the Persian Gulf, connecting East Asia with the Gulf and Europe.¹⁵ A railway project connecting Karbala, Najaf, Al-Samawa and Al-Musayab with the Iraqi Railway Network is also part of the Ministry of Transport infrastructure plan. The current railway system does not cover the main axes, and people and merchandise are therefore primarily transported by road.¹⁶ USD 3.6 billion would be needed to implement the extension project.¹⁷
- 15. Agriculture. Iraq has over 500,000 hectares of arable, unfarmed land with adequate water. ¹⁸ The Ministry of Agriculture plans to implement 48 projects for USD 18 billion, including date production facilities and market complexes for goods delivery and dispatch. With a growing population that will probably reach 40 million by 2025, agriculture is a priority sector for the GoI in terms of food security. ¹⁹
- 16. *Housing*. The housing sector is another priority: Iraq needs 2 million extra units in urban areas, and existing housing capacity in rural areas needs to be renovated and maintained. ²⁰ 75 housing projects

⁸ Roberts/Mirza: Baghdad plans \$150bn reconstruction. In: MEED, 1-8 April 2010.

⁹ Draft National Development Plan 2010-2014, pp. 78-82.

¹⁰ Ebenda./Project fiche sent to MENA-OECD by the Ministry of Oil.

¹¹ Mirza: Iraq – From war zone to boom town. In: MEED, 8 April 2010.

¹² Draft National Development Plan 2010-2014, pp. 82-85.

¹³ Roberts/Mirza: Baghdad plans \$150bn reconstruction. In: MEED, 1-8 April 2010.

¹⁴ Ebenda.

¹⁵ Project fiche sent to MENA-OECD by the Ministry of Transportation.

¹⁶ Draft National Development Plan 2010-2014, pp. 97-101.

¹⁷ Ebenda.

¹⁸ NIC: Sector and Province. December 2009.

 $⁽http://www.investpromo.gov.iq/tl_files/6291/xhtml/RepositorNIC\%20Investment\%20Opportunities\%20). \\ (20 April 2010).$

¹⁹ Draft National Development Plan 2010-2014, p. 66.

²⁰ Ebenda, pp. 147-150.

have been identified across Iraq, and the Ministry of Housing and Construction also plans to extend and maintain the existing road system. The construction of Highway No. 2 (Baghdad-Kirkuk-Salah al-Din-Mosul-Turkish border) is only one of several relevant projects.²¹

17. *Municipalities*. The Ministry of Municipalities plans to construct sewage systems across Iraq in response to contaminated water and inadequate sewage disposal, while other projects include complexes for waste recycling in Mossul, Basrah and Nassiriyah as well as the construction of slaughterhouses.

Prioritizing infrastructure projects in Iraq

18. At the first meeting of the Working Group on Infrastructure Finance in Iraq, held in Amman, Jordan, on 17-18 February 2010, members called on the OECD Secretariat to prioritize a selection of future infrastructure projects identified by participating ministries. The priority order of the suggested projects was to be determined on the basis of a list of criteria reflecting the benefits of each project to Iraq and the projected return on investment (RoI) for companies involved in public-private partnerships. The seven criteria retained for analysis were: development strategy; priority sector; basic services; social and environmental impact; trade facilitation; technology transfer; and projected return on investment. Each of these criteria is detailed in the following paragraphs.

Evaluation Criteria and Scoring

- 19. Development strategy. This criterion reflects the presence or absence of a given project in the Iraqi development strategy, as embodied in the draft Iraq National Development Plan 2010-2014. Although this criterion is scored out of 10, as are the other criteria, it is an all-or-nothing grade: a project scores 10/10 if it is mentioned in the National Development Plan and 0/10 if it is not.
- 20. Priority sector. This criterion reflects the extent to which a project corresponds to a sector that is of immediate importance to Iraqi reconstruction, growth and jobs. For example, highways, ports and oil-related infrastructure projects (corresponding to the transport and oil sectors) are considered high priority because of the export revenue they can generate and their role in facilitating the transit of goods from producer to market to end consumer. The flow-on effects in terms of employment, growth, and purchasing power for further reconstruction should be considerable, so projects in such sectors are rated highly. In contrast, a waste recycling project (corresponding to the waste management/environmental services sector), although laudable in terms of sustainable development, would not be expected to have the same impact, and therefore receives a lower score. Road, rail and maritime modes of transport receive a higher rating than air transport because of their predominant role in container traffic and lower cost structures.
- 21. Basic services. This criterion concerns the role of the project in the provision of basic services such as water, electricity, sewage collection and treatment, hygiene, and housing. The score reflects the extent to which a given project is perceived by the evaluator to contribute to such services. Slaughterhouses receive a score of 7 for their contribution to hygiene in meat production, while date processing receives a score of zero because it is not directly related to basic needs.
- 22. Social and environmental impact. This criterion measures the contribution of a project to positive social effects (such as community building) or positive environmental impacts (such as reduced pollution or more sustainable forms of consumption). One obvious positive social impact, job creation, is not included in this criterion because it is measured as part of the priority sector criterion. For the purposes of this exercise, five points out of 10 were allocated to social impact and five to environmental impact. Only one of the projects, housing in Falluja, obtained any points for the social impact sub-score, but other

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²¹ Ebenda, pp. 88-93.

projects would have done so – for example, the construction and operation of a series of community centers providing citizens' advice, recreational activities, and meeting space for associations and groups. A high environmental impact score was more common, and was attributed to clean energy projects, waste treatment and recycling, and rail transport (assuming electrification).

- 23. *Trade facilitation.* This criterion measures the contribution of each project to various forms of trade facilitation, including improved transport of goods, better adherence to standards, and the reinforcement of Iraqi product visibility in overseas markets (national branding). Oil and port infrastructure draws high grades due to the extreme importance of hydrocarbons in Iraqi foreign trade, while sewerage and housing projects score poorly.
- 24. Technology transfer. This criterion concerns the role of each project in encouraging technology transfer and the acquisition of international know-how by Iraq. Projects generating the transfer of relatively complex or innovative technology, such as port infrastructure and renewable energy, are scored more highly, while projects that bring relatively straightforward or well-established technology, such as electricity generation facilities and highways, receive modest scores. For a classification of major product categories by technological complexity, please see OECD (2009), OECD Sciences, technology and industry scoreboard 2009, p. 32.
- 25. Return on investment. This criterion reflects the rates of return on investment of the different projects. The return on investment is generally calculated as an annualized rate of return on the total investment (including all ongoing fees and maintenance costs) over the entire life of the project and should be based on thoroughly researched cash-flow forecasts. For the purposes of assigning a score out of 10, scores might be allocated to intervals of rates of return, for example: 1-3% = 1, 4-6% = 2, 7-9% = 3, 10-12% = 4, 13-15% = 5... and 28% + = 10. The scores for this criterion have not been calculated since the necessary detailed cash-flow projections for the various projects are not available.

Calculating the Weighted Average

26. The overall ranking of projects is calculated not on the basis of a simple average of the criteria scores but on the basis of a weighted average reflecting the fact that certain criteria are regarded as being of greater importance than others. Each criterion is assigned a weight of 1, 2 or 3, with 3 being the heaviest weight. For the purposes of this demonstration, weights have been assigned as follows:

Criteria	Weight
Priority sector	3
Basic services	3
Return on investment	3
Development strategy	2
Social and environmental impact	2
Trade facilitation	1
Technology transfer	1

27. The heaviest weight is accorded to the priority sector and basic services criteria because of the urgency of reconstruction and sustained growth and because of the importance of basic services for social stability and economic activity. The return on investment is also considered a key factor given its importance in attracting firms to PPP opportunities and obtaining the guaranties that such private operators would require. The development strategy and social and environmental impact criteria carry a weight of 2, again reflecting the importance of basic development issues in Iraq of 2010, while the trade facilitation and technology transfer criteria – although important – are assigned a weight of 1 in recognition of their less direct relationship with the immediate infrastructure and reconstruction needs of the country.

Interpretation of the Results

- 28. The calculation of the weighted average scores results in a ranked list of priority infrastructure projects based on the criteria outlined above. Since the criteria reflect the benefits to Iraq of the various projects, as well as the return on investment for private sector operators, and not necessarily the priorities of international financial institutions, the highest ranked projects will not in every case be good candidates for development bank loans or for guaranties required by firms entering into PPP arrangements.
- 29. The six projects selected for detailed case studies at this meeting (shaded in gray in the following table), which are relatively well-matched to international financing options, are not all among the top six projects in terms of the priority ranking. The Falluja housing project, the renewable energy project, and the railways project outrank several of the case study projects, but may not closely match the screening profile of international financial institutions in terms of sectoral focus and expertise, or volume of required investment.

Limitations of the Process and Implementation Options

- 30. The scoring table is to a certain extent influenced by subjective judgments on the part of the evaluator. This subjectivity may play a particularly critical role when as is the case here the weighted averages are separated only by very small values, such that a slight alteration of the score for one criterion may cause the related project to gain or lose several places in the overall ranking.
- 31. Several options exist to minimize subjective bias in this type of exercise, and one of them is the collection of a maximum of hard data. Scoring should be based on reliable and recent data, such as econometric simulations of project impact on growth, the numbers of people to benefit from basic services projects, quantified pollution reductions, estimates of technological complexity, and interviews with sectoral experts. Carefully researched cash-flow projections will also be necessary to allow the calculation and scoring of rates of return on investment. Remaining subjectivity could be further managed by forming a large pool of evaluators: for example, the various Iraqi ministries could each perform the evaluation based on the same data set, and the results could be averaged, thereby ensuring greater balance within the inevitable element of subjectivity inherent in all such processes.

RESULTS OF AN INDICATIVE COMPARATIVE ANALYSIS OF IRAQI INFRASTRUCTURE PROJECTS

Project	Criteria Scores (X/10)							
	Dev. strategy ²²	Priority sector ²³	Basic services ²⁴	S/env impact ²⁵	Trade facilit'n ²⁶	Tech. transfer ²⁷	Return on inv.	Weight.
WEIGHT (X/3)	2	3	3	2	1	1		Ave.
Sewerage	10	10	10	5	0	7		8.0
Gas electricity stations	10	10	10	5	0	7		8.0
Housing Falluja	10	10	10	5	0	0		7.5
Renewable energy	10	7	8	5	0	7		6.8
Railways	10	7	6	5	4	7		6.6
Marketing complexes	10	8	8	2	6	0		6.5
Highway B'dad-Turkey	10	10	6	0	6	3		6.4
Grand Fao Port	10	10	3	0	10	7		6.3
Oil pipelines	10	10	3	0	10	3		6
Oil storage tanks	10	10	3	0	10	0		5.7
Slaughterhouses	0	5	7	2	6	0		3.8
Plane purchases	10	5	0	0	4	3		3.5
Date processing	10	4	0	0	6	0		3.1
Waste recycling	0	3	3	5	0	3		2.5

²² Extent to which the project is mentioned in the National Development Plan.
²³ Extent to which the sector is of immediate importance to Iraqi reconstruction, growth and jobs.
²⁴ Role of the project in the provision of basic services (water, electricity, sewerage, housing, etc).
²⁵ Presence of positive social and environmental impacts (community building, reduced pollution, etc).
²⁶ Contribution of the project to trade facilitation (improved transport of goods, better adherence to standards, etc).
²⁷ Role of the project in encouraging complex technology transfer.

ANNEX: SELECTED INFRASTRUCTURE PROJECTS

Ministry of Electricity

Construction of Gas-Powered Electricity Generation Stations

Introduction	Iraq still lacks 7.000 MW-h in production capacity. Given developments in the electricity system and the Ministry of Electricity's incapability of covering needs, contracting for equipment and gas powered electricity generating stations for the production of 10.000 MW-h is required.
Project	Construction of new gas-powered electricity generation stations with a capacity of 10.000 MW-h within 3 years
Problems	Current financial allocations
Type of financing	External source of financing (grant or loan) or IPP

EPC²⁸ Projects (civil and engineering work for GE²⁹ units) – First phase

Description of EPC

- Complete engineering of power plant including detailed drawings
- Procurement of plant BOP equipment
- Power plant construction civil and electromechanical
- Providing equipment necessary for plant construction
- Turnkey project management

Mega deal (GE units): 56 units x 125MW = 7000 MW

Project name	Position	Capacity	Estimated costs
	Qudus/Baghdad	125x4	220
EPC	Khayrat/Karbala	125x10	540
	Kassak/Ninewa	125x6	325
	Kut/Waset	125x6	325
	1410		

²⁸ Engineering, Procurement, Construction²⁹ General Electric

EPC Projects (civil and engineering work for Siemens units)

Project name	Position	Capacity
EPC	Kirkuk/Kirkuk	265x1
EPC	Baiji/Salah al-Din	160x6

Project plans of future control centers for the period 2010-2015

Project name	Estimated costs (in million \$)
Construction of control centers for provision in the rest of the governorates of the Northern region (Kirkuk)	7
Construction of control centers for provision in the rest of the governorates of the Southern region (Thi-Qar)	8
Construction of control centers for provision in the rest of the governorates of the Central Euphrates region (Najaf, Karbala)	7+7
Construction of control centers for provision in the rest of the governorates of the Central region (Anbar)	9
TOTAL COSTS (added by OECD)	38

Investment projects for power production stations

With the issuance of Investment Law 13/2006, the Ministry of Electricity presented plans for the adoption of the investment policy in the electricity sector by:

- Organisation of a world conference for investment in cooperation with international organisations; international investment companies and organisations attended the conference;
- The Ministry contracted an international consulting company to advise on investment and the contracting of investors;
- The Ministry presented its investment plan for the construction of power production stations and provided preliminary information on the stations.

The Ministry coordinated with the National Investment Commission on presenting the Ministry's investment plan to the investment commissions in the governorates.

Ministry of Agriculture

Construction of Market Complexes for Goods Delivery and Dispatch

Project	Construction of markets/marketing complexes in each governorate	
Project description	 Reception of local and imported agricultural merchandise (vegetables/fruits, animals, fish) Cleaning, classifying and packing of this merchandise Frozen, refrigerated and normal storage Wholesale offices, some of them with refrigerated and frozen storage Parking (roofed) Services to participants (including the provision of marketing data, etc.) 	
Cost estimation per complex		

Ministry of Municipalities

Two sewerage system projects in Ramadi and Kirkuk in two phases

Project capacity	Sewerage system project in Ramadi in two phases; 192 500 m³/per day until 2030 Sewerage system project in Kirkuk in two phases; 415 251 m³/per day until 2028
Project description	The project includes planning and implementation of heavy sewerage and rain systems, pumping stations and stations for the treatment of heavy waters
Number of served inhabitants	a) Ramadi: 449 790 people until 2030 b) Kirkuk: 1 219 527 people until 2028
Project objectives Construction of a complete sewerage system (networks/systems and pum stations to protect the environment from pollution; using treated water for agriculture in addition to the implementation of rain water systems	
Project benefits	Creating jobs for 98 people (technical and administrative staff)
Estimated costs per project	a) Ramadi project: (systems, pumping stations, treatment station): 432.500.000 \$ b) Kirkuk project: costs for the construction of a sanitation project (rain and heavy waters, with pumping and treatment stations): 850.000.000 \$

Ministry of Oil

Pipelines to increase oil export capacity in southern Iraq

- feasibility study (economic and technical) in December 2007
- several contracts were signed at the end of 2008 and during the first quarter of 2009
 - o 1) contract for demining and deactivation of unexploded bombs with the company "MUSC" in the first quarter of 2009; 65% realised
 - o 2) contract for examining the sea and its soil for putting the pipelines with the Indian company COMACO at the end of 2008; fully completed
 - o 3) contract for engineering/technical consulting and designing with the company Foster Wheeler at the beginning of 2009; 63% completed

Implementation phases for the project:

<u>First phase</u>: designing the expansion/lengthening of two sealines with a bore of 48 inchs and a length of 70km with two export terminal units (Single Point Mooring)

<u>Second phase</u>: Complete the central metering & manifold platform and connect it to the single point mooring (length of 3km)

<u>Third phase</u>: Include a third export pipeline with a bore of 48 inchs and a length of 70km to the single point mooring; this phase is financed by a Japanese loan of 330 millon \$.

Project objectives:

- 1) Realisation of alternatives to the current export ports and the existing export pipelines
- 2) Increase the future export capacity of Southern export ports and a stable export capacity of 4,5 million barrel/day after the completion of the three project implementation phases

Financial needs:

The financial costs for the first and the second phase of the project (without the Japanese loan) are about 1400 million \$.

Ministry of Transportation

Al-Fao Grand Port

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Project objective	Construction of one of the 10 biggest ports worldwide on the coast of the Persian
	Gulf to be one of the 12 best ports in terms of geographical location (by benefitting
	from Iraq's excellent location that connects East Asia with the Gulf and Europe.
	The port will be able to accomodate the biggest container vessels worldwide (Post
	Panamax 10-12000 TEU) and will be able to deal with 5-6000 big vessels annually.

Infrastructure for the project

Container berth	Bulk berth	Space for container	Bulk area	Silos	Paved
3900 m	2000 m	$1.200.000 \text{ m}^2$	400.000 m^2	150.000 m^3	600.000 m^2

Capacity		Cranes	Grain pneumatic	Grain pneumatic	Conveyor belts
Containers	Bulk	Cranes	unloaders	towers	Conveyor bens
36-40 million t	22-25 million t	22	6	4	3

Estimated costs for the infrastructure for the project: 3,75 billion \$

Doubled railway from Basra to Fao (100 km)		
Upgrade the single road between the new port and the Umm Qasr port to a doubled railway	Estimated costs: 319 million dollar	
Maintenance the doubled road between the Umm Qasr port and the highway to Baghdad	ory manion dona	
Total	4,06 billion dollar	

Ministry of Housing and Construction

High Way Road Project

Republic of Iraq

Ministry of Construction and Housing

Technical Summary

High Way Road Project No. (2)

Firstly: work scope

Building High Way Road no. (2)passing through the following provinces (Baghdad – karkuk – Salahalddin – Mosul – to Turkish border . the road length 508 km consisting of seven major section in addition to the bridges on the river and tributary on the major road in all the areas which pass through.

Secondly: the project aim

The project aims to connect central of Iraq (Baghdad) with the north area reaching to the Turkish border. This road consider complementary to the High Way Road no. (1) that accomplished recently which connect between Basarh—Baghdad—Al Anbar—to the Jordanian border.

When accomplishing the High Way Road Project No. (2), a network will be formed connecting south of Iraq with the central, north and west.

Thirdly: the project site

The project is located in Baghdad, karkuk, Salahalddin and Mosul provinces.

Fourth: the project components

The total length Of high way road no. (2) Is 508 km consisting of (7) parts as follow:

Baghdad – Samara	94 km length
Samara – Jabal Hamreen	70 km length
Jabal Hamreen – karkuk	63 km lengths
Karkuk – Dibaja	77km length
Dibaja – Mosul	97km length
Mosul – Bastaka Olay	64 km length

Bastaka Olay - The Turkish border. 43 km length

intersection of the major road.

The project consists also of building all the bridges on the river and tributary on the