MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 117

<table>
<tr><td colspan="2">Assignment Name:

TA No.7008-PAK – Development of National Trade Corridor Highway Business Plan -</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Islamabad</td><td>Number of person-months of the entire project:

55 days</td></tr>
<tr><td colspan="2">Name of Client:
Asian Development Bank - Serena Business Complex, Khayaban-e-Suhrawardy, G-5, Islamabad / Halcrow Pakistan (Pvt) Ltd. – 3rd Floor, Nawa-e-Waqt House, Mauve Area, Sector G-7/1, Zero Point, Islamabad, Pakistan</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

01</td><td>No. of Persons-Months:

55 days</td></tr>
<tr><td>Start Date (Month/Year):
01 September 2009</td><td>Completion Date (Month/Year):

28 February, 2010</td><td>Approx. Value of Services:

US$ 30,057/- (Pak Rs.1,789,480/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Aized Hasan Mir, Infrastructure & Institutional Development Specialist (Consultant)</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

Appraisal and project preparation for a logistics hub at Sundar Industrial Estate to be developed under Public Private Partnerships.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

Appraisal and project preparation for a logistics hub at Sundar Industrial Estate to be developed under Public Private Partnerships. Responsible for developing organization and transaction structures for PPP, developed and advised on policy framework and risk assessment. Provided advice to the Planning Commission and ADB on PPP bottlenecks and use of hybrid models</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 116 **Page 1 of 1**

<table>
<tr><td colspan="2">Assignment Name:
Developing Performance Indicators for the National Transport Corridor Improvement Program (NTCIP) – PO No.7716234 and PO No.7721880.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Islamabad</td><td>Number of person-months of the entire project:
53 days</td></tr>
<tr><td colspan="2">Name of Client:
The World Bank Islamabad – 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan</td><td>Total value of full project (in million US$):
N.A</td></tr>
<tr><td colspan="2">No. of Staff:
01</td><td>No. of Persons-Months:
53 (days)</td></tr>
<tr><td>Start Date (Month/Year):
21 July 2008</td><td>Completion Date (Month/Year):

31 October, 2008</td><td>Approx. Value of Services:

US$ 20,507/- (Pak Rs.1,229,000/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Aized Hasan Mir, Infrastructure & Institutional Development Specialist</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The development objectives of the National Trade Corridor Improvement Program (NTCIP) are to reduce the cost of trade and transport logistics and bring services quality to international standards in order to reduce the cost of doing business in Pakistan and ultimately enhance export competitiveness and the country's industrialization. The GOP achieved this objective through a comprehensive multi-sector reform and investment program aimed at streamlining procedures, improving services and upgrading physical infrastructure. The scope of the program included railways, the road transport industry, ports and shipping, trade facilitation, highways and air transport.

The World Bank prepared National Trade Corridor Development Policy Project, the first of a series of three Development Policy Projects designed to support implementation of NTCIP based on a policy matrix endorsed by the Government.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
There are twelve types of activities that have been undertaken under this agreement, which were in two phases. These have been done in close coordination with the World Bank consulting team.
Phase-I Collection of Existing Performance Data Collection
a. Collecting data from existing sources
b. Reviewing the existing data and suggesting means of supplementing data to cover all data types
c. Managing support consultants in data collection
d. Preparing data for reports
e. Preparing comments on existing data quality
f. Attending meetings as needed
Phase-II Primary Data Collection
a. Preparing interview procedures and forms and protocols for data collection
b. Performing interviews and surveys
c. Carrying out quality control checks on the interview and data collection results
d. Writing up the summary of results of interviews and data collection
e. Helping to identify data verification issues
f. Attending meetings as needed

Led a local team of consultants for designing monitoring framework and indicators, collecting last 5 years data and compiling base line indicators on all trade corridor improvement project sectors – Air Transport, Ports & Shipping, Railways, Road Transport, and Customs. The indicators were used to develop an M&E computer model for monitoring effectiveness of the NTCIP</td></tr>
<tr><td colspan="3">Fields of Specialization:
Transportation Sector</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.115

Assignment Name: Construction Supervision for Rehabilitation / upgradation of Jalalpur Pir Wala - Uch Section of Multan TMP Road		**Country:** Pakistan
Location within Country: Punjab		**Number of person-months of the entire project:** 828
Name of Client: National Highway Authority, Ministry of Communications, Government of Pakistan, Islamabad, # 28 Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US $ 42.00 million
No. of Staff: 46		**No. of Persons-Months:** 828
Start Date (Month/Year): 17 Nov 2009	**Completion Date (Month/Year):** Dec 2014	**Approx. Value of Services (in million US$):** US$ 482,000/- (Rs.38,602,754/-)
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Mr. Muhammad Shoukat Resident Engineer, Mr. Najeeb Ullah Assistant Resident Engineers, Mr. Amjad Riaz Toor Material Engineer and Mr. Afzaal Ahmad Quantity Surveyor and others. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.

Brief Narrative Description of Project:

The project was aimed at the widening and improvement of Jalalpur Pirwala – Uch Section of Multan – Trinda Muhammad Panah Road Project (46 Kms). The project consists of three package ie. Package-I from Km 0+000 to Km 7+500, Package-II from Km 7+500 to Km 14+800 and Package-III from Km 20+000 to Km 46+810. The work comprises of improvement, widening and strengthening of the existing 7.3 m carriageway.

Description of Actual Services Provided:

- Design Review and Technical Audit of the Project
- Construction Management
- Staking out, verification of PRM and permanent benchmarks.
- Project Management as per FIDIC
- Environmental monitoring and evaluation
- Construction of bridges
- Supervision of Piling Operation
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Construction Management
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Checking and verifying IPCs and overall contract administration.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Type of Services provided:
Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Design Review and Construction Supervision for Dualization and Rehabilitation of Larkana - Moenjodaro Road.	**Country:** Pakistan
Location within Country: Sindh	**Number of person-months of the entire project:** 348
Name of Client: National Highway Authority, Ministry of Communications, Government of Pakistan, Islamabad, # 28 Mauve Area, G-9/1, Islamabad	**Total value of full project (in million US$):** US $ 31.00 million
No. of Staff: 29	**No. of Persons-Months:** 348
Start Date (Month/Year): 18 May 2009 / **Completion Date (Month/Year):** 31 Dec 2014	**Approx. Value of Services (in million US$):** US $ 298,000/- (Rs.23,860,592/-)
Name of Associated Firm(s), If Any: None	**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Mr. Ejaz Ali Bokhari Resident Engineer, Mr. Tufail Ahmad Abro & Mr. Azam Ali ARE (H), Mr. Daud Khan & Mr. Muhammad Yousaf Baloch ARE (Str), Mr. Khadim Hussain Material Engineer and Mr. Mumtaz Ahmad Quantity Surveyor and othes.

Brief Narrative Description of Project:

The project was aimed at the widening and improvement of existing road from Larkana to Moenjodero covering a total length of 28 kms. The project road starts from Larakana and ends at Meonjodero and Airport. The project has been designed to be a dual carriageway. It has been divided into two sections i.e., Package I from km 0+000 to km 14+000 and Package II from km 14+000 to km 27+950. NHA was also proposed two teams for these two sections for the completion of the road in shortest time schedule. The existing road width varies from 6.1 to 6.5 m wide. The existing traffic requires that the subject road was dualized which was attract more tourism in the area and more easy access to the Airport from the city. The project involves dualization of the existing road.

Description of Actual Services Provided:

- Design Review and Technical Audit of the Project
- Construction Management
- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Construction Management
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.

- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Checking and verifying IPCs and overall contract administration.
- Project Management according to FIDIC document.

Type of Services provided:
Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction and Project Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Detailed Design and Construction Supervision for Rehabilitation of Kamber – Shahdadkot Road – 29 Km.</td><td>Country:
Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Sindh</td><td>Number of person-months of the entire project:
183</td></tr>
<tr><td colspan="2">Name of Client:

National Highway Authority, Ministry of Communications, Government of Pakistan, Islamabad, # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US$ 11.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

42</td><td>No. of Persons-Months:

183</td></tr>
<tr><td>Start Date (Month/Year):

January 2009</td><td>Completion Date (Month/Year):

Dec 2014</td><td>Approx. Value of Services (in million US$):

US $ 139,000/- (Rs.11,120,625/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff included Mr. Rana Muhammad Arshad Teadm Leaer/Highway Engineers, Mr. Akhtar Mahmood Mir Geomatric Expert, Mr. Ahmad Luqman Sarwar Pavement Expert, Ms. Iram Amir Bridge/Structure Expert, Mr. Muhammad Arshad Janjua Quantity Surveyor, Mr. Mukhtar H. Mirani RE, Mr. Ghulam Qadir Junejo ARE, Mr. Muhammad Azam Warraich QS, Mr. Khadim Hussain Material Engineer, Mr. Faiz Alam Basra Structure Engineer and others.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
National Highway Authority intended to rehabilitate the Kamber – Shahdadkot Road as a single two lane carriageway as per NHA’s standard.

The surrounding area along the road alignment was all cultivated land. The paved width of existing road was approximately 6.0 m with earthen shoulders varying from 1.5m to 2.0m. There were bridges, culverts and level railway crossing on this alignment. We carried out the detailed engineer design for the project as per the latest engineering standards and carried out the construction supervision of the project.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
• Soil investigations, study of borrow sources and their analyses, traffic counts and surveys, design of major intersections and traffic flow analyses, axle loads study and related analyses, Origin Destination Surveys.
• Hydrological studies, Structural design of bridges and cross drainage structures.
• Existing pavement evaluation using Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis
• Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
• Pavement Design
• Geometric Design
• Structural Design of Bridges
• Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
• Determination of VOCs and preparation of economic feasibility report.
• Preparation of PC-I, Feasibility Study using HDM-4
• Preparation of Tender Documents
• Environmental Studies
• Construction Supervision</td></tr>
</table>

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Engineering etc., Environmental Studies, Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Material Testing.

Fields of Specialization:

Construction Industry Development Sector:

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Detailed Design for Construction Supervision of Grade Separation Facility at the Intersection of 9th Avenue with the I.J. Principal Road Islamabad and Stadium Road including approach roads.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Islamabad</td><td>Number of person-months of the entire project:
202</td></tr>
<tr><td colspan="2">Name of Client:

Capital Development Authority (CDA), Headquarters, Khayaban-e-Suhrwardy, G-7/4, Islamabad.</td><td>Total value of full project (in million US$):

US $ 17.50 million (estimated)</td></tr>
<tr><td colspan="2">No. of Staff:

29</td><td>No. of Persons-Months:

202</td></tr>
<tr><td>Start Date (Month/Year):
March 2009</td><td>Completion Date (Month/Year):

Dec 2009</td><td>Approx. Value of Services (in million US$):

US$ 236,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Mr. Ahmad Luqman Sarwr Pavement Engineer, Mr. Akhtar Mahmood Mir, Highway Engineer, Ms. Iram Noreen Structural Engineer, Mr. Muhammad Arshad Janjua Quantity Surveyor, Mr. Siddique Akbar Material Engineer and others.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Capital Development Authority (CDA) intended to undertake the design of overhead bridge / grade separation facility at the Intersection of 9th Avenue with the I.J. Principal Road Islamabad and Stadium Road.

During last decade a substantial increase in traffic volume, especially multi axle vehicles, was observed with a rapid development of capital and opining of motorway. The intersection of 9th Avenue with I.J. Principal road was constructed a few years ago. It was widely used for traffic movement between Rawalpindi and Islamabad. The I.J. Principal road was a main road dividing the twin cities of Islamabad and Rawalpindi. It was about 15 Km long starting from Faizabad interchange on Islamabad Highway and ending at its connection with the G.T road. Hundreds of thousands of people travel daily using a huge number of vehicles. Similarly the 9th Avenue was serving as a main entrance to the capital city from Rawalpindi and IJP. These two main roads were constructed on grade and traffic movement was being controlled through signals. However due to the numbers of vehicles increasing day by day, this signal was often found choked causing a lot of inconvenience to users. It was also causes a great loss to the nation in terms of time and unnecessary fuel consumption every day.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks are being carried out during the course of the project:
• Soil and Sub Soil Investigations
• Alignment Studies
• Topographic Surveys
• Land Surveys
• Material Testing and Borrow Sources
• Geometric Design
• Design of Urban Areas
• Traffic counts and surveys, and traffic flow analyses,
• Hydrological studies, Structural design of bridges and cross drainage structures.
• Condition Surveys</td></tr>
</table>

- Capacity Analysis
- Traffic Signals Study
- Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
- Pavement Design including Rigid and Composite Pavements
- Socio Economic and Environmental Studies
- Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
- Determination of VOCs and preparation of economic feasibility report.
- Structural Design of Bridges / Underpasses
- Preparation of PC-I
- Construction Management
- Construction Supervision

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Technical Advisory Services for Remodeling of Sher Khan Shaheed Stadium (SKSS), Peshawar</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Peshawar, Pakistan</td><td>Number of person-months of the entire project:
108</td></tr>
<tr><td colspan="2">Name of Client:
11 Corps Signal Headquarters Peshawar Cantt.</td><td>Total value of full project (in million US$):

US $ 250.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
1</td><td>No. of Persons-Months:
36</td></tr>
<tr><td>Start Date (Month/Year):
January 2013</td><td>Completion Date (Month/Year):
Jun 2017</td><td>Approx. Value of Services (in US$):

US $ 250,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

Nil</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Aized H. Mir, Technical Advisor</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The objective of the assignment was to design the framework for the development of project with different components like Stadium, Expo Centre, Hyper Store / Retail Store, Hotels, Service Apartments etc. in which the land was provided by the Client and the development of these different components were conducted by the selected developers / investors through a transparent mechanism from the local and foreign countries utilizing the JV, BOT, Lease Hold Rights, Contractual Models, etc. as appropriate. The entire spectrum of consortium services that were required to enter into MOU / legally binding contracts with developers / investors was included consortium advise on transaction structures based on master plan, infrastructure plan, feasibility studies, risk analysis, due legal diligence, documentation and selection of developers which shall be conducted by the respective Advisors to the consortium. In short to render a legal, financial, technical and planning perspective to establish the like of Fortress Stadium consisting of numerous components of Project through the selected developers / investors. The scope of the Advisory Consortium services was to develop / finalize into deliverables through mutual discussions with the Client in the context indicated herein but was end with the signing of the legally binding contracts of different components of project.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Providing all technical advisory services for the project including guiding multi-disciplinary teams in master planning, infrastructure design, business modeling, risk analysis and assessment of various components, and in negotiations for a US$250 million project.</td></tr>
<tr><td colspan="3">Fields of Specialization:
• Technical advisory services
• PPP, negotiations
• Master Planning and product designing
• Site Zoning
• Procurement
• Feasibility Studies</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 110

Assignment Name: Detailed Design and Construction Supervision of Arja Tain – Dhalkot (29 Kms) Road Project.		**Country:** Pakistan
Location within Country: Azad Jammu & Kashmir		**Number of person-months of the entire project:** 174
Name of Client: Kashmir Highways Authority, Government of Azad Jammu & Kashmir, Muzaffarabad.		**Total value of full project (in million US$):** US $ 20.00 million
No. of Staff: 32		**No. of Persons-Months:** 174
Start Date (Month/Year): June 2007	**Completion Date (Month/Year):** Dec 2010	**Approx. Value of Services (in million US$):** US $ 0.23 million
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Col Pervaiz Hafeez Team Leader, Mr. Akhtar Mir Geometric Design Engineer, Mr. Javed Hussain & Ms. Iram Noreen Structural Engineers, Mr. Aized H. Mir Contract Specialist/Project Advisor, Mr. Ahmad Luqman Sarwar Pavement Engineer, Mr. M. Arshad Janjua Quantity Surveyor, Mr. Khadim Hussain Material Engineer, Mr. Muhammad Saeed Brdige Engineer, Mr. Khalid Imran Environmental Specialist, Mr. Mohsin Shahzad Staff Engr (H), Mr. Rafiuddin Staff Engr. (Str), Kashif and others detailed design and /RE Assistant Resident Engineers, Material Engineers and Quantity Surveyors for the construction supervision. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.

Brief Narrative Description of Project:

The AJK Highway Authority intends to undertake detailed design for up-gradation, widening and construction of Arja-Tain Dbalkot Road (29km) in AJK for improving the present condition of the road so as to transform It to an all-weather 2- lane highway, conforming to international standards.

Kashmir Highway Authority engaged consultants to provide the engineering services for technically sound and economically viable designs, and preparation of tender documents/ drawings and estimates

Description of Actual Services Provided:

The following supervision tasks were carried out during the course of the project:

- Alignment Studies
- Topographic Surveys
- Land Surveys
- Material Testing and Borrow Sources
- Geometric Design
- Urban Area Design
- Traffic counts and surveys, and traffic flow analyses,
- Hydrological studies, Structural design of bridges and cross drainage structures.
- Condition Surveys, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis
- Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
- Pavement Design

- Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
- Socio economic and environmental studies
- Determination of VOCs and preparation of economic feasibility report.
- Toll study and analysis
- Preparation of PC-I

Construction Supervision

- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Preparation of drawings for the offices of the Contractor
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:

Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Detailed Design and Construction Supervision of Kohala Dhirkot (27 Kms) Road Project.		**Country:** Pakistan
Location within Country: Azad Jammu & Kashmir		**Number of person-months of the entire project:** 204
Name of Client: Kashmir Highways Authority, Government of Azad Jammu & Kashmir, Muzaffarabad.		**Total value of full project (in million US$):** US $ 20.00 million
No. of Staff: 33		**No. of Persons-Months:** 204
Start Date (Month/Year): April 2007	**Completion Date (Month/Year):** Dec 2010	**Approx. Value of Services (in million US$):** US $ 291,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Highway Engineers, Structural Engineers, Pavement Engineer, Quantity Surveyor, Material Engineer, Surveyors and Laboratory Technicians for detailed design and Resident Engineers, Assistant Resident Engineers, Material Engineers and Quantity Surveyors for the construction supervision. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.

Brief Narrative Description of Project:

The AJK Highway Authority intended to undertake detailed design for upgradation, widening and construction of Kohala – Dhirkot (27 kms) in AJK for improving the present condition of the road so as to transform it to an all-weather 2-lane highway, conforming to international standards:

AJK Highway Authority engaged consultants to provide the engineering services for technically sound and economically viable designs, and preparation of tender documents / drawings and estimates.

Description of Actual Services Provided:

The following supervision tasks were carried out during the course of the project:

- Alignment Studies
- Topographic Surveys
- Land Surveys
- Material Testing and Borrow Sources
- Geometric Design
- Urban Area Design
- Traffic counts and surveys, and traffic flow analyses,
- Hydrological studies, Structural design of bridges and cross drainage structures.
- Condition Surveys, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis
- Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
- Pavement Design
- Socio Economic and Environmental Studies

- Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
- Determination of VOCs and preparation of economic feasibility report.
- Toll study and analysis
- Preparation of PC-I

Construction Supervision

- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Preparation of drawings for the offices of the Contractor
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:

Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.108

Assignment Name: Consultancy Services for Planning, Designing and Construction Supervision of Talli Tangi Storage Dam, Sibbi		**Country:** Pakistan
Location within Country: Province of Balochistan		**Number of person-months of the entire project:** 100
Name of Client: National Logistic Cell, HQ, Sowan Camp Rawalpindi / Irrigation and Power Department, Government of Balochistan.		**Total value of full project (in million US$):** N.A
No. of Staff: 18		**No. of Persons-Months:** 85
Start Date (Month/Year): March 2007	**Completion Date (Month/Year):** Mar 2015	**Approx. Value of Services (in million US$):** US $ 500,000/-
Name of Associated Firm(s), If Any: M/s Infra-D Consultants Islamabad		**No. of Months of Professional Staff Provided by Associated Firm(s):** 15

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Brief Narrative Description of Project:

Talli Tangi storage dam, located in Sibbi for availability of water at the proposed dam site through comprehensive reservior on Chakar River 16 miles North East of Sibbi Town. Details are as under:-

Catchment Area	573 sq. miles
Design Flood Discharge	67,000 cusec
Type of Dam	Concrete Gravity
Length of Dam	200 feet
Height of Dam	175 feet
Storage Capacity	93,000 Acres Feet
Area of Benefit	37,000 Acres

Description of Actual Services Provided:

Details of services provided are as follows:-

- Detailed Topographic Survey and Geo-technical Investigations
- Layout optimization
- Hydrological and hydraulic studies
- Identification of command area and design of conveyance system
- Socio-Economic and environmental studies
- Feasibility level design and cost estimates
- Detailed design of the project

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Earthquake Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Procurement Services, Supervision/ Inspection of Construction, Project Management/Administration (on behalf of owner), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Agriculture & Rural Development Sector:
Rural Development Planning, Physical Infrastructure, Flood/River Control Works.

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Highway Planning & Programming, Rural Feeder Roads (Farm to Market) (Highway Planning & Programming), New Highways/Improvements & Reconstruction, Rural Feeder Roads (Farm to Market) (New Highways, New Structures/Reconstruction), Bridges (Road Transportation Facilities), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.107

<table>
<tr><td colspan="2">Assignment Name:
Supervision Services for the Construction of Gawadar Ratodero Motorway Project (M-8) Section IV – Khuzddar Shahdadkot Package-V, Wangu Hill Reach to Quba Saeed Khan (56 Kms).</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:

458</td></tr>
<tr><td colspan="2">Name of Client:
National Highways Authority, Government of Pakistan - # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):
US $ 17.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
16</td><td>No. of Persons-Months:
458</td></tr>
<tr><td>Start Date (Month/ Year):
June, 2006</td><td>Completion Date (Month/Year):

Dec 2017</td><td>Approx. Value of Services (in million US$):
US $ 398,000/- (Rs.23,874,750/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Resident Engineer, Assistant Resident Engineers, Material Engineers and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
This road section is part of the Gwadar - Ratoderao Motorway (M-8) with total length of 891.75 km and was divided into five sections for ease in construction and design. This section was part of Khuzdar – Shahdadkot Section IV of the project. There was only a katcha track present and a new two lane earthen track will be constructed with improved horizontal and vertical geometry. The general living standard of the inhabitants of the road influence area is below the mark on account of poor infrastructure provisions. Improvement of the road was improved the living standards of the people in the area. In this Contract, ACC was the nominated Engineers Representative for the Project, and the interpretation and implementation of the COCs is the responsibility of the Engineer Representative on behalf of the Client.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Staking out, verification of PRM and permanent benchmarks.
• Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
• Assist the client in land acquisition proceedings.
• Preparation of drawings for the offices of the Contractor
• Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
• Insitu testing of densities and compaction using AASHTO standards
• Preparation of Concrete Mix Designs and testing of Concrete.
• Preparation of Job Mix Formulae for Asphalt.
• Review and adjustments to geometric design and design of structures as per site requirements.
• Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
• Assisting the contractor in improving his logistics and methodology. Construction Management Support.
• Checking and verifying IPCs and overall contract administration.
• Project Management as per FIDIC</td></tr>
</table>

Type of Services provided:
Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.106

<table>
<tr><td colspan="2">Assignment Name:
Construction Supervision / Design Review of Kalat-Quetta-Chaman Section of N-25 including Design/ Supervision of Cross Border Facility at Chaman</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:

1317</td></tr>
<tr><td colspan="2">Name of Client:

National Highways Authority, Government of Pakistan - # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US $ 50.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

17</td><td>No. of Persons-Months:

400</td></tr>
<tr><td>Start Date (Month/Year):

January, 2006</td><td>Completion Date (Month/Year):

Dec 2009</td><td>Approx. Value of Services (in million US$):

US $ 2,125,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:
M/s SMEC International Pty. Ltd. Australia (Lead)
M/s Pacific Consultant International Japan
M/s Associated Consulting Engineers (ACE) Lahore
M/s National Engineering Consultant
M/s SEBCON (Pvt) Ltd, Islamabad</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
917</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Resident Engineer, Assistant Resident Engineers, Material Engineers, Bridge Engineer and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project involved rehabilitation and upgradation of the National Highway N-25, from Kalat to Chamman via Quetta 240 kms. The road was become after its upgradation to a 7.3 m wide asphaltic carriageway witrh treated shoulders. The project envisaged widening and up-gradation of existing road and improvement of road geometry.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Staking out, verification of PRM and permanent benchmarks.
• Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
• Traffic Safety study
• Assist the client in land acquisition proceedings.
• Preparation of drawings for the offices of the Contractor
• Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
• Insitu testing of densities and compaction using AASHTO standards
• Preparation of Concrete Mix Designs and testing of Concrete.
• Preparation of Job Mix Formulae for Asphalt.
• Review and adjustments to geometric design and design of structures as per site requirements.
• Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
• Assisting the contractor in improving his logistics and methodology. Construction Management Support.
• Checking and verifying IPCs and overall contract administration.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.105

<table>
<tr><td colspan="2">Assignment Name:
Design and Construction Supervision (Rural Access Roads Package-B) for ADB Assisted NWFP Roads Development Sector and Sub-Regional Connectivity Project, Loan No.2013-PAK.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of NWFP</td><td>Number of person-months of the entire project:

2348</td></tr>
<tr><td colspan="2">Name of Client:

Works & Services Department, Government of NWFP, House No.46-A, Street No.19, Shami Road Peshawar</td><td>Total value of full project (in million US$):

US$ 150.00 Million</td></tr>
<tr><td colspan="2">No. of Staff:
39</td><td>No. of Persons-Months:

1748</td></tr>
<tr><td>Start Date (Month/Year):

January, 2005</td><td>Completion Date (Month/Year):

June 2011</td><td>Approx. Value of Services (in million US$):

US $ 2,200,000/- (Rs.173,602,293/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:
M/s Engg. Consultants International (ECIL) Karachi
M/s Engineering Associates (EA) Karachi
M/s Associated Consulting Engineers (ACE) Lahore
M/s Associates in Development (AID) Peshawar</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):

600</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Team Leader, Contract Specialist, Structural Specialist, Environmental Specialist, Social/Resettlement Specialist Resident Engineers, Senior Highway Engineers, Highway Design Engineers, Material Engineers, Social/Resettlement Specialist, Transport Economist, Environmental Specialist, Senior Structural Engineer/Bridge Engineers, Structural/Bridge Design Engineers, Drainage Engineers, Geodetic Engineers, Contract Specialist, Traffic Engineer, Quantity Surveyors etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project involved design review, update of already done designs, detailed engineering design and feasibility study of the rural access roads in the province. The roads were located in the northern part of NWFP. The activities included the feasibility study, environmental studies, resettlement studies, soil studies, traffic studies and analysis detailed engineering design and construction supervision of the roads.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks were carried out during the course of the project:
• Review the design of roads mentioned which have already been designed by the ADB TA Consultant. Consultant will suggest changes in the design if found necessary viz a viz site conditions. Such changes shall of course be approved by the Employer.
• Carry out social analysis including assessment of gender and indigenous people and prepare appropriate action plan, as required, in accordance with ADB's relevant policies and guidelines.
• Investigate land acquisition and resettlement impacts, carry out resettlement planning and prepare Resettlement Plan with ADB's Policy on Involuntary Resettlement, Hand book on Resettlement. A Guide to Good Practice.
• Carryout environment impact assessment (EIA) and/or initial environment examination (IEE) and summary IEE and/or EIA for selected roads in accordance with ADB guidelines and other requirements.
• Detail Survey and Design of selected roads as per requirements of the Client.</td></tr>
</table>

- Propose suitable contract packaging for selected roads.
- Prepare complete civil works prequalification (including evaluation guidelines) and bidding documents following ADB's Guidelines on Procurement and Sample Bidding Documents for Civil Works.
- Estimate maintenance cost (routine and periodic maintenance separately) on existing and improved roads for the purpose of economic evaluation.
- Construction Supervision, Construction Management
-

List of Roads

LCB No.	Name of Road	Length (km)
LCB 3	Sarqala - Martung Road (Section I) – Bunair	13.50
LCB 4	Sarqala - Martung Road (Section II) – Bunair	10.149
LCB 5	Patriak – Kalkot – Thall Badgoi Road (Section I)	10.0
LCB 6	Patriak – Kalkot – Thall Badgoi (Section II)	9.565
LCB 17	Batai – Kalial – Bargokhand Road Section I)	8.4
LCB 18	Batai – Kalial – Bargokhand Road Section II	9.836
LCB 19	Gullu Bandi To Mong	5.012
LCB 21	Koza – Bandi – Seegram Road (Swat)	6.211
LCB 22	Kalam Matiltan Sec - I (Swat)	5.500
LCB 23	Kalam Matiltan Sec - II (Swat)	4.733
LCB 24	Ghazi – Jharikas road Section-1 (Haripur)	6.0
LCB 25	Ghazi – Jharikas road Section-II (Haripur)	4.0
LCB 27	Rahat Kot Sakhra Sec – I (Swat)	4.900
LCB 28	Rahat Kot Sakhra Sec – II (Swat)	4.610
LCB 33	Alifay to Latifay Road (Malakand)	4.398
LCB 45	Mayar to Qandari Road	3.273
LCB 50	Damtal to Ijara Road (Lower Dir)	4.6
LCB-59	Enzergai to Agra Road	3.045
LCB-60	Maira Amja Ali Road	5.5

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management/Administration (on behalf of owner), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.104

<table>
<tr><td colspan="2">Assignment Name:
Supervision Services for the Construction of Gawadar Ratodero Motorway Project (M-8) Section IV – Khuzddar Shahdadkot, Package III Khori - Wangu Hill Section (Km 35+000 to Km 84+500).</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:
375</td></tr>
<tr><td colspan="2">Name of Client:
National Highways Authority, Government of Pakistan - # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US $ 20.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
14</td><td>No. of Persons-Months:
375</td></tr>
<tr><td>Start Date (Month/Year):

Oct, 2004</td><td>Completion Date (Month/Year):

31 Dec 2020</td><td>Approx. Value of Services (in million US$):

US$ 46,000/- (Rs.13,909,000/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Resident Engineer, Assistant Resident Engineers, Material Engineers and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
This road section was part of the Gwadar - Ratoderao Motorway (M-8) with total length of 891.75 km and was divided into five sections for ease in construction and design. This section was part of Khuzdar – Shahdadkot Section IV of the project. There was only a katcha track present and a new two lane asphaltic road will be constructed with improved horizontal and vertical geometry. The general living standard of the inhabitant of the road influence area was below the mark on account of poor infrastructure provisions. Improvement of the road was improved the living standard of the people in the area. In this Contract, ACC was the nominated Engineers Representative for the Project, and the interpretation and implementation of the COCs is the responsibility of the Engineer Representative on behalf of the Client.

The COCs and bidding documents are based on FIDIC sample documents. The works were awarded to M/s AM Group (Pvt.) Ltd. Pakistan.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Staking out, verification of PRM and permanent benchmarks.
• Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
• Assist the client in land acquisition proceedings.
• Preparation of drawings for the offices of the Contractor
• Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
• Insitu testing of densities and compaction using AASHTO standards
• Preparation of Concrete Mix Designs and testing of Concrete.
• Preparation of Job Mix Formulae for Asphalt.
• Review and adjustments to geometric design and design of structures as per site requirements.
• Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
• Assisting the contractor in improving his logistics and methodology. Construction Management Support.
• Checking and verifying IPCs and overall contract administration.</td></tr>
</table>

Type of Services provided:
Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.103

Assignment Name: Supervision Services for the Construction of Gawadar Ratodero Motorway Project (M-8) Section IV – Khuzddar Shahdadkot Package-IV, Wangu Hill Reach (Km 84+500 to Km 117+500).		**Country:** Pakistan
Location within Country: Province of Balochistan		**Number of person-months of the entire project:** 294
Name of Client: National Highways Authority, Government of Pakistan - # 28 Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US $ 10.00 million
No. of Staff: 17		**No. of Persons-Months:** 204
Start Date (Month/Year): March, 2004	**Completion Date (Month/Year):** March 2018	**Approx. Value of Services (in million US$):** US $ 164,000/- (Rs.9,624,407/-)
Name of Associated Firm(s), If Any: Osmani & Company (Pvt) Ltd.		**No. of Months of Professional Staff Provided by Associated Firm(s):** 90

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Resident Engineer, Assistant Resident Engineers, Material Engineers and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.

Brief Narrative Description of Project:

This road section was part of the Gwadar - Ratoderao Motorway (M-8) with total length of 891.75 km and was divided into five sections for ease in construction and design. This section was part of Khuzdar – Shahdadkot Section IV of the project. There was only a katcha track present and a new two lane earthen track will be constructed with improved horizontal and vertical geometry. The general living standard of the inhabitants of the road influence area is below the mark on account of poor infrastructure provisions. Improvement of the road was improved the living standard of the people in the area. In this Contract, ACC was the nominated Engineers Representative for the Project, and the interpretation and implementation of the COCs is the responsibility of the Engineer Representative on behalf of the Client.

Description of Actual Services Provided:

The following supervision tasks were carried out during the course of the project:

- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Preparation of drawings for the offices of the Contractor
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.

Type of Services provided:
Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.102

<table>
<tr><td colspan="2">Assignment Name:

Traffic Study of Multan Northern Bypass</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Punjab Province</td><td>Number of person-months of the entire project:

14</td></tr>
<tr><td colspan="2">Name of Client:

Infrastructure Project Development Facility (IPDF), Ministry of Finance, Government of Pakistan - # 2, Street 59, Sector F-7/4, Islamabad</td><td>Total value of full project (in million US$):

N. A</td></tr>
<tr><td colspan="2">No. of Staff:

07</td><td>No. of Persons-Months:

14</td></tr>
<tr><td>Start Date (Month/Year):
27 Jan 2012</td><td>Completion Date (Month/Year):
15 March 2012</td><td>Approx. Value of Services:

US$ 200,000/- (Pak Rs.1,790,875/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:
Nil</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff included Mr. Ahmad Luqman Sarwar Team Leader, Malik Saqib Mahmood Traffic Engineering Specialist, Transport Planner/Advisor, Mr. Zafar Sohail Kahoot Traffic Survey Coordinator, and enumerators etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
National Highway Authority (NHA) initiated the project of Multan Northern Bypass Road – Linking N-5 and Multan Mianwali Road (MMR) via Muhammad Wala Bridge to facilitate increasing traffic volume and bypassing city traffic to help relieve city road network from congestion and pressure of extraneous traffic. The project comprise of two sections. The approximate length of Section I (Qadirpur Ran to Muhammad Wala bridge) is 23 km including 2 bridges, width is 7.3m with 3m shoulder on each side, connecting Shuja abad Canal Road with N-5 through Qadirpur Bypass, whereas Section II (Muhammad Wala Bridge to Multan Mianwali Road) is approximately 13 km long, width is 7.3m with 3m shoulders on both sides. Right of way for both of sections is 21.34m.

The objective of the traffic study to carry out the analysis of the existing traffic volume and to forecast the expected traffic attracted, to the proposed section of Bypass between Qadirpur Ran to Muhammad Wala Bridge and Muhammad Wala Bridge to Multan Mianwali Road (MMR) for approximately thirty (30) years in future. The study will assist IPDF in the development of a feasibility report and Financial Structure / Model for the said sections of road for Public Private Partnership (PPP).</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks are being carried out during the course of the project:
• Review of existing traffic study
• Traffic counts on crossing roads, turning volumetric counts on key junctions, journey time survey, delay studies on key links, manual classified counts, traffic assessment and traffic modeling
• OD Surveys and analysis
• Generated and diverted traffic
• Willingness to Pay Surveys
• Tolling analysis</td></tr>
<tr><td colspan="3">Type of Services provided:
Design – Engineering etc., Traffic engineering and analysis</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.101

<table>
<tr><td colspan="2">Assignment Name:

Design and Construction Supervision (Provincial Highways & Rural Access Roads) for ADB Assisted Balochistan Roads Development Sector Project, TA No. 2019-PAK</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:

860</td></tr>
<tr><td colspan="2">Name of Client:

Communication & Works Department, Government of Balochistan, Quetta</td><td>Total value of full project (in million US$):

US $</td></tr>
<tr><td colspan="2">No. of Staff:

44</td><td>No. of Persons-Months:

799</td></tr>
<tr><td>Start Date (Month/Year):

June, 2005</td><td>Completion Date (Month/Year):

Sept 2010</td><td>Approx. Value of Services (in million US$):

US $ 6,165,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:
M/s SMEC International (Pvt) Ltd. Australia (Lead)
M/s Dainichi Consultants Inc., Japan
M/s Louise Berger Group (LBG), USA
M/s NESPAK (Pvt) Ltd.
M/s SEBCON (Pvt) Ltd.</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
61</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes:-
<u>International:</u> Team Leader, Contract Specialist, Structural Specialist, Environmental Specialist, Social/Resettlement Specialist
<u>Local:</u> Deputy Team Leader, Senior Resident Engineers, Resident Engineers, Senior Highway Engineers, Highway Design Engineers, Material Engineers, Social/Resettlement Specialist, Transport Economist, Environmental Specialist, Senior Structural Engineer/Bridge Engineers, Structural/Bridge Design Engineers, Drainage Engineers, Geodetic Engineers, Contract Specialist, Traffic Engineer, Quantity Surveyors etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The Government of Balochistan was applied for a loan from Asian Development Bank (ADB) towards the cost of the Balochistan Road Sector Development Project involving improvement of about 462 kilometers (Km) provincial highways and about 583 km of rural roads. Balochistan Road Development Sector Project involved screening and prioritization of more than 3000 km rural and provincial roads based on the economic analysis of the project on HDM-4. Economic analysis and feasibility studies of 500 km of National Highways including Kalat-Quetta-Chamman Section and Gwadar Turbat Section of M-8, 1200 km of rural and provincial roads and 250 km national highways are selected based upon the economic returns. Socio economic and poverty studies of all the project roads including national, provincial and rural roads. Resettlement and Environmental analysis of 6 core roads covering 400 km of rural & and provincial roads and 250 km of national highways. Detailed design of 400 kms of core rural and provincial roads which included the detailed topographic surveys, geo-tech and materials testing, traffic analysis, axle load surveys, OD surveys, geometric and pavement design, hydrological studies and structures design, rate analysis and engineers estimate and contract documentation. Work also involves preparation of contract packages and detailed TORs for the construction supervision of Consultants. Detailed implementation plans and financial layout of the loan.</td></tr>
</table>

Work also involve preparation of pre-qualification documents for Contractors.

List of Roads

S.No	Projects Name	District	Road Length
1	Zhob-Mir Ali Khel- Khajuri Kach Road	Zhob	91.000
2	Sanjavi-Dukki	Ziarat / Loralai	34.114
3	Dera Allahyar - Hairdin Road, Section –I	Jaffarabad	20.000
4	Dera Allahyar - Hairdin Road, Section –II	Jaffarabad	20.200
5	Khurkhera - Kanraj Road	Lasbela	24.776
6	Kach-Shahrag-Harni Road	Ziarat / Sibbi	93.400
7	Gulistan-Sagi Bazar -Kandel Road	Killa Abdullah	11.016
8	Baraka Shahza To Badini, Section – I	Killa Saifullah	21.000
9	Baraka Shahza To Badini, Section – II	Killa Saifullah	21.494
10	Baraka Shahza To Badini, Section – III	Killa Saifullah	Bridges
11	Dera Allah Yar To Usta Muhammad, Section - I	Jaffarabad	20.000
12	Dera Allah Yar To Usta Muhammad, Section – II	Jaffarabad	21.489
13	Duraji - Lohi Road, Section-I	Lasbela / Khuzdar	15.000
14	Duraji - Lohi Road, Section-II	Lasbela / Khuzdar	15.000
15	Faiz Abad Jamali To Head Bagh	Jaffarabad	29.661
16	Gandawa - Kotra- Pir Chatta	Jhal Magsi	27.369
17	Hairdin To Malguzar, Section I	Jaffarabad	25.000
18	Hairdin To Malguzar, Section II	Jaffarabad	18.166
19	Lehri - Sangsila Road	Sibbi	56.851
20	Qamar Din To Surkuch Road	Zhob	15.572
21	Shoran To Landi Road, Section - I	Bolan	20.000
22	Shoran To Landi Road, Section – II	Bolan	18.594
23	Usta Muhammad To Mir Wah, Section I	Jaffarabad	13.348
24	Usta Muhammad To Mir Wah, Section II	Jaffarabad	14.471

Description of Actual Services Provided:

The following tasks were carried out during the course of the project:

- Review the design of roads mentioned which have already been designed by the ADB TA Consultant. Consultant will suggest changes in the design if found necessary viz a viz site conditions. Such changes shall of course be approved by the Employer.
- Carry out social analysis including assessment of gender and indigenous people and prepare appropriate action plan, as required, in accordance with ADB's relevant policies and guidelines.
- Investigate land acquisition and resettlement impacts, carry out resettlement planning and prepare Resettlement Plan with ADB's Policy on Involuntary Resettlement, Hand book on Resettlement. A Guide to Good Practice.
- Carry out poverty impact assessment for selected roads in accordance with ADB's Handbook on Poverty and Social Analysis. Prepare a distribution ratios for selected roads.
- Carryout environment impact assessment (EIA) and/or initial environment examination (IEE) and summary IEE and/or EIA for selected roads in accordance with ADB guidelines and other requirements. **Review the existing types of Forests and Propose the right types of Trees along the roads.**
- Detail Survey and Design of selected roads as per requirements of the Client.
- Propose suitable contract packaging for selected roads.
- Prepare complete civil works prequalification (including evaluation guidelines) and bidding documents following ADB's Guidelines on Procurement and Sample Bidding Documents for Civil Works.
- Estimate maintenance cost (routine and periodic maintenance separately) on existing and improved roads for the purpose of economic evaluation.

Type of Services provided:
Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management/Administration (on behalf of owner), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.100

<table>
<tr><td colspan="2">Assignment Name:
Project Appraisal Mission - Design for Southern Punjab Poverty Alleviation Project – Pakistan - Pakistan Contract No.61240-0005 and No. 61240-0005 PO No.0000014505</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Punjab</td><td>Number of person-months of the entire project:

01</td></tr>
<tr><td colspan="2">Name of Client:

International Fund for Agricultural Development (IFAD) - Via Paolo di Dono, 44 00142 Rome, Italy</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

01</td><td>No. of Persons-Months:

01 month</td></tr>
<tr><td>Start Date (Month/Year):
21 Mar 2010</td><td>Completion Date (Month/Year):

07 May 2010</td><td>Approx. Value of Services (in million US$):
US $ 13,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Aized Hasan Mir, Rural Development Specialist</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The GoPb proposed a land reallocation scheme of “Small Houses-cum-Garden Plots for Eradication of Poverty in Punjab (Pilot Project) Phase-I” which was evaluated by an IFAD Project Formulation mission. In discussion with the key government stakeholders and the beneficiaries it was decided that the concept for the project originally proposed by the Government was not feasible for various technical and social reasons. However, it was agreed that the selected districts of Southern Punjab were a priority for the Government and should be the focus for the future IFAD investment. The formulation mission modified the original concept in close coordination with government officials, donor agencies active in the area, key NGOs and the intended beneficiaries. The current mission was tasked to carry out a detailed project design and develop the implementation mechanisms for the project in four selected districts of Southern Punjab. The project scope included infrastructure, agriculture support, livestock interventions, veterinary and para-vet training, livelihoods skills training etc with a focus on gender.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Specific tasks assigned included field visits, projects assessment, community and other stakeholders consultation and to:
a) Finalize the design of the project’s rural infrastructure activities, including budget, number of beneficiaries, cost per beneficiary, estimated benefits, implementation arrangements, etc.

b) Provide inputs to the Project Implementation Manual (PIM) on the various aspects of the rural infrastructure component, with necessary details including the criteria for each type of infrastructure scheme properly outlined.

c) Ensure that each of the proposed activities is properly costed and in collaboration with the Financial Management Specialist ensure its inclusion in the budget.

d) Assist the Financial Management Specialist in the preparation of the benefit cost assessment.

e) Prepare the PIM for other components of the project with the assistance of team members

f) Refine the Working Paper on Rural Infrastructure and modify it as required keeping in view any changes to the project design.</td></tr>
</table>

g) Identify appropriate monitoring and evaluation mechanisms together with the Team Leader.

Prepared the following:

- *Working paper for **Environmental and Social Compliance Note***
- *Working paper for **Community Infrastructure Development***
- *Working paper on **Targeting and Gender,** designed the Poverty Targeting Mechanisms and prepared estimates of project coverage, and an assessment of the use of the Poverty Score Card, statistical analysis*
- ***Project costing** and review of analysis*
- *Response to QE panel comments*
- Developed for the **Project Implementation Manual** sections on:

Productive Infrastructure

- Purpose, Objectives, Outcome and Output
- Component Description and Mechanisms
- Eligibility and Type of Support
- Terms of reference for related project management unit staff
- Communication, Contracting and Reporting

Targeting and Gender

- Purpose, Objectives, Outcome and Output
- Component Description and Mechanisms - targeting
- Eligibility and Type of Support
- Terms of reference for related project management unit staff
- Communication, Contracting and Reporting

Programme Management

- Purpose, Objective, Outcome and Output
- Component Description and Mechanisms
- Terms of reference for project management unit staff

Programme Monitoring and Evaluation

- Key Objectives
- Key Monitoring and Evaluation Activities
- Key indicators
- Log frame

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 99

Assignment Name: Study for Road Management System of Provincial and Local Road Network in Pakistan		**Country:** Pakistan
Location within Country: Punjab, Sindh		**Number of person-months of the entire project:** 10
Name of Client: JICA, Islamabad		**Total value of full project (in million US$):** N.A
No. of Staff: 3		**No. of Persons-Months:** 6 month
Start Date (Month/Year): 01 Oct 2009	**Completion Date (Month/Year):** 15 March 2010	**Approx. Value of Services (in million US$):** US $ 42,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** 4
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Institutional Expert, Road Maintenance Engineer, Financing Expert		
Brief Narrative Description of Project: The project involves to review the existing road management system of provincial and local road networks in Pakistan and to recommend Improvements in planning and operations, Institutional reforms in construction and maintenance operations, Sustainable financial mechanism and Define issues, suggest Road Management plan and prepare TOR for JICA technical assistance project.		
Description of Actual Services Provided: The study highlights current status of provincial and rural roads network of Pakistan and its administrative divisions, climate, rainfall, area, population and economy. The services involve stakeholders meetings with detailed of discussions, assessment of stakeholders concerns and finally recommendations on the basis of consultation. The study deals with the analysis of road sector with reference to road maintenance, discussing past studies, asset management. available road infrastructure, policies, plans and programs, contracting out road maintenance, technology used in maintenance operation, staffing of stakeholders, existing maintenance procedure alongwith recommendations. The study involves the assessment of existing institutions with provincial and district governments' alongwith recommendations to improve their performance. The services involved detailed urban transport financing assessment specifically including the explanation of existing financial system and the assessment of recent budgets, inter government tax sharing between federal and provincial share of budget. Furthermore, financial allocations for districts are also studied in detail. The allocation to different sectors in PSDP reviewed and analyzed. The project involves the study for the strategy of road maintenance operations alongwith recommendations.		

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 93-98

Assignment Name: Technical, Financial and Economic Feasibility Studies for Seven (7) Agro Industry Projects in Sudan		**Country:** Sudan
Location within Country: El Suki, Abgar, Jazira Injaid, Um Jawaseer, West Umdarman, Shandi , El Rahad		**Number of person-months of the entire project:** 19
Name of Client: Federal Ministry of Agriculture and Forests Republic of the Sudan		**Total value of full project (in million US$):** To be estimated
No. of Staff: 21		**No. of Persons-Months:** 14
Start Date (Month/Year): 16th Feb 2010	**Completion Date (Month/Year):** April, 2010	**Approx. Value of Services (in US$):** US$ 280,000/-
Name of Associated Firm(s), If Any: M/s Ernst & Young		**No. of Months of Professional Staff Provided by Associated Firm(s):** 5

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Dr. Rashed ul Qayum Team Leader/Agronomist/Soil Sciences; Mr. Aized Hasan Mir Project Coordinator; Dr. Muhammad Ashraf Agronomist Rice; Dr. Syed Abbas Ghazanafar Agricultural Mechanization; Mr. Abdul Razzaq Saleemi Socio-economic surveys, Baselines, Agronomist; Dr. Muhammad Afzal Chaudhry Forestry and Range Sciences Specialist / Range Nutrition; Dr. Waqar Ahmad Horticulturist/Agronomist; Mr. Muhammad Abid Irrigation & Water Management Specialist; Dr. Muhammad Fatah Ullah Khan Livestock/Animal Production Expert; Mr. Muhammad Asif Khan Agriculture & Rural Development Economist; Dr. Abdul Hameed Khan Soil Expert; Mr. Aziz ur Rehman, Resettlement & Environment Specialist.

Brief Narrative Description of Project:

The main objective of this consultancy was to prepare a series of background papers that would contain information on all aspects of agricultural, forests and livestock production, specific by areas and integrated as a comprehensive document. These documents, supported by the area and commodity specific materials would be used for preparing technical, economic and financial feasibility studies. The studies were carried out in the following areas: El Suki, Abgar, Jazira Injaid, Um Jawaseer, West Umdarman and Shendi. Recommended agro-industries were:

1. Integrated Sugar Plant on an area of 25,000 feddans at El Suki
2. Integrated Sugar Plant on an area of 25,000 feddans at Abgar
3. Integrated Rice farming (with soya bean) and processing plant on an area of 25,000 feddan at Jazira Injaid (White Nile rice plantation)
4. Mixed farming on an area of 100,000 feddans at Um Jawaseer
5. Mixed farming on an area of 25,000 feddans at West Umdarman
6. Dairy and Livestock production and processing at West Umdarman
7. Horticulture farming and processing project with on an area of 10,000 feddan at Shandi

- Study of economic background of Sudan
- Study of Agriculture Environment of Sudan
- *Analyses of Agricultural sector performance*
- Analyses of crop production system
- The Agricultural Environment of the Project Region
- Socio-Economic Studies
- Topographic Survey
- Soil Studies
- Irrigation, Drainage and Civil Works

Description of Actual Services Provided:

- Crop Production (Agronomy and Horticulture)
- Agricultural Mechanization
- Crop Water Requirements
- Crop Protection
- Forestry and Agro-Forestry
- Animal Production
- Marketing
- Project Management Organization and Set-Up
- Assessment of Economic and Financial Viability of the Projects
- Environmental Impact Of The Project

Fields of Specialization:

Agriculture Development Sector
Agriculture Planning Sector
Forests
Agronomy
Horticulture
Field Surveys including Topography
Irrigation and Canal Sector
Environmental Sector
Resettlement Sector
Socio and poverty Sector

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.92 **Page 1 of 1**

<table>
<tr><td colspan="2">Assignment Name:
Topographic Survey for In-House Design of Remaining 85 Kms Road Section of Multan – Shujabad-Jalalpur Pirwala Uch Sharif – TMP Section of National Highway N-115.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Punjab</td><td>Number of person-months of the entire project:</td></tr>
<tr><td colspan="2">Name of Client:

National Highway Authority, Ministry of Communications, Government of Pakistan, Islamabad, # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US $ 50.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
3</td><td>No. of Persons-Months:
6</td></tr>
<tr><td>Start Date (Month/Year):

26 Jan 2010</td><td>Completion Date (Month/Year):

Apr 2010</td><td>Approx. Value of Services (in million US$):

US $ 32,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Mr. Akhtar Mahmood Mir Technical Manager, Kashif Khurshid Design Engineer Mr. Muhammad Sarfaraz Ahmad Chief Surveyor and Mr. Zaheer Abbas, Mr. Ehsan Haider, Mr. Tasawar Hussain Surveyors.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

The project aims at the completed topographic survey for detailed engineering design of widening and improvement of Multan – Trinda Muhammad Panah Road Project. NHA has planned to construct this road as per International Standards. The project is being designed by NHA in house.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

Carrying out the detailed Topographic Surveys of proposed new highways existing highway and bridges for National Highway Authority. Collection of all features, buildings, utilities structures, side roads on either side within 35 meters of the centre line of the proposed highway. Establishment of permanent control stations and horizontal control through EDM traversing. Establishment of vertical control through BM leveling. Detailed inventory of each structure and cross sections at 50m interval. Counting of trees. Plotting of survey data on AutoCad for use in RoadCalc and Moss Programs.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Project Formulation for Southern Punjab Poverty Alleviation Project – Pakistan Contract No. 61240-0003 PO No.0000013193</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Punjab</td><td>Number of person-months of the entire project:

6</td></tr>
<tr><td colspan="2">Name of Client:

International Fund for Agricultural Development (IFAD) - Via Paolo di Dono, 44 00142 Rome, Italy</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

01</td><td>No. of Persons-Months:

01</td></tr>
<tr><td>Start Date (Month/Year):

05 Nov 2009</td><td>Completion Date (Month/Year):

31 Dec 2009</td><td>Approx. Value of Services (in million US$):

US $ 13,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None (IE)</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Aized Hasan Mir, Infrastructure Specialist (Individual Experience)</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
IFAD had requested by the Government of Pakistan to assist in the up-scaling of a new project for poverty alleviation in Southern Punjab. A project concept note was provided to IFAD by the Government of Punjab for a land reallocation scheme for kitchen cum garden plots for poor households in Southern Punjab. An IFAD mission was fielded to assess the feasibility of the proposed concept from the technical, legal and social perspectives. The IFAD mission met with key officials in the Government of Punjab, Department of Agriculture, Board of Revenue and the Task Force constituted for the proposed project. The mission undertook field visits to the proposed project sites to meet with the intended beneficiaries and discuss the project ideas with them. The IFAD mission objectives were to determine the suitability of the proposed Land Reallocation scheme of the Government. In case the idea was deemed feasible the IFAD Team was develop a full project formulation report based on IFAD guidelines. In case the idea was not feasible for any reason the Team in discussion with the Government of Punjab was to discuss other potential ideas for agriculture development proposed by the Punjab Agriculture Department.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Assessment of the proposed ‘Small House cum Garden Pilot Project’ which was first proposed by the Government of Punjab (GoPb) as a possible investment for IFAD. However, after field visits to the Government selected sites and a detailed assessment of the potential for development and their suitability for housing poor households it was decided that this pilot scheme of the government did not represent a sound investment for IFAD. As such, it was decided to focus on the same four districts selected by the Government, retain the poverty score card methodology but develop an integrated project with components and activities with the potential to enhance rural livelihoods and alleviate poverty for a much larger section of the poor in the selected districts.

Specific tasks assigned included:
1. Assess if the Land Reallocation Scheme of the Government of Punjab presents a technically and socially sound investment opportunity for IFAD for poverty alleviation and gender targeting and any alternative project in case the land reallocation scheme is not a viable option. In order to conduct this assessment:

a) Undertook visits to the selected project sites such as Rajanpur, Bahawalpur and Muzzafargarh to assess the technical suitability of the sites.</td></tr>
</table>

b) Carried out discussions with the intended beneficiaries to review some of the selected sites and assess the needs of basic infrastructure in terms of roads, irrigation and drainage, sewerage, water supply and sanitation facilities.

c) Reviewed some of the selected sites and assessed their suitability from the perspective of beneficiaries and the availability of irrigation water, distance to markets, distance to schools, health facilities and other services important for the beneficiaries who will be relocated on these sites.

d) Assessed the benefit cost analysis of providing these services and assessed if the benefits justify the costs in terms of the number of households served and the unit costs incurred. Also assessed the maintenance arrangements for sustaining these services in the proposed locations.

e) Assessed the potential of the sites to be developed as a one site one product centre in collaboration with the enterprise development and agriculture development specialists.

f) Assessed the alternative project ideas and ensure that it includes poor rural households, women and other vulnerable households.

g) Conducted field visits to the proposed project area and in discussions with the proposed beneficiaries assessed their livelihood strategies to ensure that infrastructure development activities which will enhance their productivities, incomes and employment are identified and included in the proposed project design.

h) Identified the implementation arrangements for each of the proposed set of activities and in collaboration with the Team Leader ensured adequate implementation arrangements are made for their execution.

i) Carried out costing of each proposed activity and in collaboration with the Financial Management Specialist ensured its inclusion in the budget.

j) Provided information to the Financial Management Specialist for preparation of the benefit cost assessment.

k) Developed the Monitoring and Evaluation Framework including the Logframe for the project.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.90 **Page 1 of 3**

<table>
<tr><td colspan="2">Assignment Name:

Institutional Development and Management Consultancy – Balochistan Road Development Sector Project Loan No.2019 Pak ADB</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Balochistan, Pakistan</td><td>Number of person-months of the entire project:

240</td></tr>
<tr><td colspan="2">Name of Client:

Communication & Works Department, Government of Balochistan, Quetta</td><td>Total value of full project (in million US$):

US $ 150.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

8</td><td>No. of persons-months:
60</td></tr>
<tr><td>Start Date (Month/Year):

14 June 2005</td><td>Completion Date (Month/Year):

30 June 2009</td><td>Approx. Value of Services (in million US$):

US $ 1,700,000/-</td></tr>
<tr><td colspan="2">Name of Lead Firm (s), If Any:
M/s SMEC International Pty. Ltd. Australia
M/s Dainichi Consultants Inc. Japan
M/s Louis Berger Group (LBG)
National Engineering Services of Pakistan (NESPAK)
M/s SEBCON (Pvt) Ltd.</td><td>No. of Months of Professional Staff Provided by Associated Firm (s):
180</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Team Leader, HDM Specialist, Environment Specialist, Social/Poverty Specialist, Privatization Specialist, Road Safety Specialist, Contract Specialist, Road Safety Specialist, Transport Economist, Computer Trainer, Social Gender Dev. Specialist, Computer Programmer and other office support staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The primary objectives of the services provided by the Institutional Development Management Consultants (IDMC) were:
➢ To assist CWD in strengthening capacity for project implementation, road asset management, road maintenance, environmental and social aspects of road development and
➢ To assist CWD in Project Implementation support through planning, monitoring, coordination, budget and financial control, project performance monitoring system and ensuring that the environment and resettlement plans are satisfactorily carried out.
CWD officers worked in association with the IDMC and construction supervision Consultants (the Engineers) with regard to the management, administration, construction supervision, including checking of physical works of the project roads as well as compliance with environmental and resettlement requirements. This was facilitated the transfer of management, administration techniques, environmental, social and resettlement, and technical knowledge .between CWO, the IDMC and the supervision consultants. EA staff participation is limited only as counter part staff, or for on the job training, etc. and not as team member of the Consultants.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Institutional Development
The objectives and summary of scope of the consulting services for the institutional development component are to assist the Balochistan Provincial Government and CWD to:-

i) Build and strengthen capacity building of the road maintenance unit (RMU) in road maintenance.</td></tr>
</table>

ii) Support RMU to develop modern maintenance concept and prepare maintenance procedures and manuals for typical road maintenance;
iii) Assist RMU to prepare complete contract documentation, including specifications for contracting out of periodic and routing road maintenance;
iv) Assist RMU to prepare complete contract documentation including specifications for introduction of (a) network management and (b) performance - based road maintenance on a pilot basis;
v) Asses road maintenance funding sources and user charges and develop a sustainable system and prepare complete with legislation and/or regulation and administrative arrangement, for secure and stable funding of road maintenance including establishment of a road maintenance fund;
vi) Further develop and extend the existing road asset management system to districts with provision of additional functions and applications to support the District Government activities;
vii) Introduce Highway Design and maintenance model - (HDM-4) at CWD and provide training of staff;
viii) Assist CWO to prepare and implement an action plan for improved axle load control of heavy vehicles, covering preventive and corrective measures;
ix) Asses the causes and prepare an action plan for improved enforcement of road safety and traffic regulations;
x) Prepare and introduce a road safety design audit system including provision of training;
xi) Assist the CWO in preparing its programme and activities and its policy and strategy papers for enhancement of awareness; and strengthening education and drivers training and the knowledge of road safety matters among road users, road sector institutions and other stakeholder;
xii) Strengthen capacity of CWO in environmental and social assessment and provide training of staff;
xiii) Carry out poverty monitoring of the project roads;
xiv) Conduct an assessment of the present CWD organization to ensure that the staffing (numbers and skills) matches the functions and prepare recommendations for reforms along-with detailed implementation schedule with milestones to be achieved during the project;
xv) Review opportunities and identify areas for further evolvement of the private sector in operations, maintenance, and rehabilitation and provision of road infrastructure and other areas; and
xvi) Implement other related activities as may be agreed with Development Bank, supporting the project objectives.

Project Management Assistance - Scope of Services

i) Assisting CWD in Management, Coordination, and Reporting
ii) Progress monitoring and updating overall project planning as reported by supervision Consultants to CWD.
iii) Supervising implementation of poverty monitoring program, health information, education campaign, and compliance with Labor Laws for construction workers.

Project Planning: Reviewing at the onset of the project the detailed implementation schedule (partly or completely in the form of a critical path network) showing all major activities and critical links between activities for the implementation of the entire project. Thereafter periodically reviewing progress monitored and reported by the supervision consultant in relation to the project schedule.

Environmental and Social Matters: The IDMC assisted CWD and relevant agencies in monitoring, coordinating and supervising the measures necessary to mitigate the project effects on the environment, as outlined in the project's Initial Environmental Examinations and the conditions, if any imposed by the Provincial and Central Environmental Authority as part of its approval of the project. The assistance will include preparation of environmental guidelines in coordination with CWD in road safety.

The IDMC assisted CWD in preparing Initial Social Assessments (ISAs) and Resettlement Plans for non-core RAR subprojects and assist staff with monitoring and supervising the implementation of the resettlement implementation plans. The ISAs will also include any indigenous people and other social issues that may arise with respect to the proposed road improvements.

Assist CWD, and relevant agencies such as Ministry of Labor and Health in monitoring, coordinating supervising the implementation of health awareness campaign and compliance of Labor Laws for construction workers. The assistance will include preparation of manual and materials for health awareness campaign and compliance with Labor Laws.

Training Programmes.

The IDMC will formulate and / or assist in formulation and implementation of training programmes for CWD management and project staff, in project and contract management, pavement design, geometric design and bridge design, environmental impact management, resettlement, poverty and social development matters, and other relevant activities.

Type of Services provided:

Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Technical Studies, Design – Architectural/ Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Quantity Surveying/Cost Estimating, Structural Engineering, Technical Assistance and Advisory Services, Institutional Strengthening/Restructuring, Management Advisory Services, Organizational Development Studies, Training and Transfer of Technology.

Fields of Specialization:

Construction Industry Development Sector:
Institution Building, Tech./Equipment/Materials & Training, Development of Appropriate Construction Tech., - Labor-Based Construction & Maintenance Methods, Low Cost Construction Techniques, Use of Domestic Materials, Traffic Safety and Audits .
Monitoring, Strategic Development Planning, Design/Engineering & Implementation, Construction Methods and Materials, Buildings Standards & Regulations, Community Participation, Self-Help Programs.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Sindh Road Sector Development Programme – ADB Loan No.1892 PAK (SF) and OPEC 899-P		**Country:** Pakistan
Location within Country: Province of Sindh		**Number of person-months of the entire project:** 2914
Name of Client: Works & Services Department, Government of Sindh		**Total value of full project (in million US$):** US $ 100.00 million
No. of Staff: 35		**No. of Persons-Months:** 971
Start Date (Month/Year): December, 2004	**Completion Date (Month/Year):** June 2009	**Approx. Value of Services (in million US$):** US $ 1,500,000/-
Name of Associated Firm(s), If Any: KAMSAX, ECIL, REC, OCL, ABM		**No. of Months of Professional Staff Provided by Associated Firm(s):** 1943

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

During design the senior staff comprised of a Technical Manager, highly experienced Highway, Bridge, Materials and Pavement, Design Engineers, measurement engineer, surveyors and other technical staff with extensive experience in detailed engineering design of roads and bridges. The design work is completed and supervision services are now being provided during construction.

The supervision staff comprises of a Chief Resident Engineer, Resident Engineers, Material Engineers, Site Engineers, Laboratory Technicians, Surveyors and Quantity Surveyors.

Brief Narrative Description of Project:

The project was funded by Asian Development Bank includes the improvement of about 164 kms of provincial highways and 1200 of rural access roads and Institutional Strengthening of CWD. ACC is responsible for detailed engineering and construction supervision of over 300 kms of rural access roads in different districts of Sindh. The project roads includes core roads for which design review is to be carried out and identification of new rural access roads where detailed engineering design had been carried out.

Description of Actual Services Provided:

The design work entailed topographic survey, soil investigations and surveys, route alignment studies, traffic studies, pavement design, retaining walls, hydrological studies, and design of cross drainage structures including 9 major bridges, river training works, guide banks, protection works and preparation of all tender documents, BOQ, Engineers Estimates, Specifications and Drawings.

After design stage was completed, services for pre-qualification of contractors, NIT, pre-bid meetings, bid evaluations and recommendations for awards were provided.

For the supervision stage, staff including Project Coordinator, Resident Engineers, Material Engineers, Site Inspectors/Engineers, Laboratory Technicians, Surveyors and Quantity Surveyors have been deputed to ensure construction as per specifications and provide project management support to the client.

Project Benefit Monitoring and Evaluation was carried out.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

List of Roads

S.No	Projects Name	District	Length of Projects
1	Contract No. 40201	Dadu	7.819
2	Contract No. 40202	Dadu	6.231
3	Contract No. 40501	Jacobabad	5.171
4	Contract No. 40502	Jacobabad	8.090
5	Contract No. 40503	Jacobabad	6.116
6	Contract No. 40702	Khairpur	16.254
7	Contract No. 40703	Khairpur	15.655
8	Contract No. 40705	Khairpur	8.629
9	Contract No. 40801	Larkana	7.760
10	Contract No. 40802	Larkana	8.361
11	Contract No. 40803	Larkana	18.730
12	Contract No. 40804	Larkana	10.408
13	Contract No. 40805	Larkana	6.683
14	Contract No. 41106	Nausheroferoze	6.474
15	Contract No. 41503 (Package - I)	Tharparker	9.000
16	Contract No. 41503 (Package – II)	Tharparker	7.888
17	Contract No. 83304 (Package – I)	Shikarpur	9.000
18	Contract No. 83304 (Package – II)	Shikarpur	8.490
19	Contract No. 83302	Shikarpur	5.213
20	Contract No. 83202	Shikarpur	12.518
21	Contract No. 83103	Jacobabad	10.767
22	Contract No. 83109	Jacobabad	9.551
23	Contract No. 83110	Jacobabad	5.711
24	Contract No. 83203	Larkana	9.139
25	Contract No. 83204	Larkana	12.571
26	Contract No. 83207	Larkana	11.290
27	Contract No. 83208 (Package - I)	Larkana	11.000
28	Contract No. 83208 (Package - II)	Larkana	11.519
29	Contract No. 83309	Shikarpur	7.709

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management/Administration (on behalf of owner), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.88

<table>
<tr><td colspan="2">Assignment Name:

Multi-Sector Rehabilitation and Improvement Project in Azad Jammu and Kashmir (MSRIP) – ADB Loan No.2153-PAK (SF)</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Azad Jammu & Kashmir</td><td>Number of person-months of the entire project:

687</td></tr>
<tr><td colspan="2">Name of Client:
Additional Chief Secretary, Planning & Development Department (PDD), Govt. of State of Jammu & Kashmir, Block 11, Kashmir Plan Civil Secretariat Azad Jammu & Kashmir Muzaffarabad.</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

11</td><td>No. of Persons-Months:

113</td></tr>
<tr><td>Start Date (Month/Year):

March 2006</td><td>Completion Date (Month/Year):

February 2009</td><td>Approx. Value of Services (in US$):

US $ 483,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:
M/s ECIL, M/s Anjum Asim Shahid Rehman & M/s Barqaab Consulting Services (Pvt) Ltd.</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
574</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

The senior staff includes two highway/design engineers, two bridge engineers, structure engineer, contract engineer, geotechnical engineer, resident engineer, project quantity surveyor and quantity surveyor etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Multi-Sector Rehabilitation and Improvement Project in Azad Jammu and Kashmir (MSRIP) was funded by Asian Development Bank covering three components i.e. roads and bridges, water supply system and power sector.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks were carried out during the course of the project:
• Condition surveys & Traffic Surveys
• Topographic Surveys
• Conceptual Planning of Intersection
• Materials Testing
• Structures Design for Bridges and Flyovers
• Geometric Design, Pavement Design, Costs Estimates, Bill of Quantities
• Tender Documents
• Transportation Study
• Economic Analysis
• Preparation of PC-I
• Environmental Study and Forestation
• Tree Plantation for Stoppage of Land Slides
• Resettlement Surveys and Study
• Highway Safety Studies
• Rate Analysis
• Engineer’s Estimate
• Contract Packaging
• Construction Drawings</td></tr>
</table>

Type of Services provided:

Design – Engineering etc., Soil Mechanics and Foundation Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Drawings, Structural Engineering, Material Testing, Traffic Engineering, Economic Analysis, Resettlement, Environmental, Community Infrastructure, Procurement

Fields of Specialization:

Construction Industry Development Sector:
Detailed Implementation Plans

Environmental Sector

Transportation Sector:

Urban Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Traffic Surveys and Analysis, Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.87

<table>
<tr><td colspan="2">Assignment Name:

Study on the Rural Road Construction Project Punjab.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Punjab</td><td>Number of person-months of the entire project:

7.2</td></tr>
<tr><td colspan="2">Name of Client:

Japan International Cooperation Agency (JICA)</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

11</td><td>No. of Persons-Months:

7.2</td></tr>
<tr><td>Start Date (Month/Year):

December 2008</td><td>Completion Date (Month/Year):

January 2009</td><td>Approx. Value of Services (in million US$):

US $ 48,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Team Leader, Rural Road Specialist, Transport Economist, Resettlement Specialists, Rural Road Engineer, Enumerators, Quantity Surveyor, Cad Operator and office support staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The transport sector was an important sector of the economy contributing to about 10% of the GDP and over 17% of the Gross Capital Formation. The sector consumes 35% of the total energy annually and is recipient of 20% to 25% of the annual federal public sector development program.

The Government of Japan (GOJ) provided an ODA loan for Rural Roads Construction Project in 1993 for four provinces. After completion of the Project, its phase-II that planned to be provided in each province has started and GOJ approved the first Project for Sindh province in this year. Now to find out necessity and priority a basic survey in Punjab province is scheduled.

The purpose of the study to confirm necessary cost such as construction cost and total project cost, EIRR and operation and affect indicator of the project through observing current condition of every candidate roads (6 provincial and 24 district and 4 bridges) including Resettlement and Environmental Analysis. Prioritization of roads based upon economic analysis, social and environmental assessment.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Alignment Studies
• Land Surveys
• Condition Surveys
• Resettlement Surveys and Analysis
• Environmental Surveys and Analysis
• Costs estimation
• Social Surveys and Assessment
• Traffic counts and analysis. Economic Analysis
• Poverty Analysis
• Economic Analysis using HDM-4
• Prioritization of Roads</td></tr>
</table>

Project Data Sheet No.87

Type of Services provided:

Design – Engineering etc., Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents, Structural Engineering, Traffic Engineering, Economic Analysis, Resettlement, Socio and Poverty, Environmental, Community Infrastructure, Procurement

Fields of Specialization:

Construction Industry Development Sector:
Detailed Implementation Plans

Environmental Sector
Resettlement Sector
Socio and poverty Sector

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.86

<table>
<tr><td colspan="2">Assignment Name:
Detailed Design for Rehabilitation of Existing North and South Carriageway and Design of 3rd & 4th Rigid Lanes of Kashmir Highway from Peshawar More to G.T. Road (Both Sides)</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Islamabad</td><td>Number of person-months of the entire project:

16.25</td></tr>
<tr><td colspan="2">Name of Client:

Capital Development Authority (CDA), Islamabad.
Khayaban-e-Suhrwardy, G-7/4, Islamabad</td><td>Total value of full project (in million US$):

US $ 70.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

18</td><td>No. of Persons-Months:

16.25</td></tr>
<tr><td>Start Date (Month/Year):

November 2007</td><td>Completion Date (Month/Year):

Nov-2008</td><td>Approx. Value of Services (in million US$):

US $ 44,000/- (Rs.2,637,000/-)</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Team Leader/Highway Engineers, Project Manager/Contract Specialist, Transport Economist, Two Structural Engineers, Pavement Engineer, Two Quantity Surveyors, Two Staff Engineer, Surveyors and Cad Operators.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Capital Development Authority (CDA) intended to undertake the rehabilitation of Kashmir Highway and additional of two rigid lanes with each carriageway. Kashmir Highway was constructed in 1964 and serves vehicular as well as freight traffic and occasionally it is also used for VVIP movement.

During last decade a substantial increase in traffic volume, especially multi axle vehicles, has been observed with a rapid development of capital and opining of motorway. The Authority has already dualized the Kashmir Highway, however according to ultimate cross section of Kashmir Highway, two lanes (rigid) with each carriageway are to be added to make it four lands divided carriageway. The inter provincial heavy traffic including trucks coming from Margalla and Lawrencepur usually carry load more than the specified load limits. The survey has indicated that most of the heavy traffic carry as much as 20 to 25 tones per axle against the permissible load limit of 8 tones per axle and there are apporx. As many as 8000 to 10000 heavy vehicles passing from Kashmir Highway in 24 hours. The Consultant services required for depth study for providing sustainable and cost efficient engineering solution for catering the heavy traffic on Kashmir Highway including extension of existing bridges, culverts and ultimate extension of 4 lanes (two lanes of flexible and two lanes of rigid pavement on either side).</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Alignment Studies
• Topographic Surveys
• Geometric Design
• Rigid and Semi Rigid Pavement Design
• Composite Pavement
• Urban Area Design
• Traffic counts and surveys, and traffic flow analyses,</td></tr>
</table>

- Hydrological studies, Structural design of bridges and cross drainage structures.
- Condition Surveys, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis
- Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
- Pavement Design (Rigid Pavement as well as Flexible Pavement)
- Geometric Design of the Interchange
- Structural Design of Bridges
- Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
- Determination of VOCs and preparation of economic feasibility report.
- Toll study and analysis
- Preparation of PC-I

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.85

<table>
<tr><td colspan="2">Assignment Name:
JBIC Ex-Post Monitoring Survey 2007 in Pakistan</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

NWFP and Islamabad/Rawalpindi</td><td>Number of person-months of the entire project:

1.5</td></tr>
<tr><td colspan="2">Name of Client:

M/s IC Net Limited Japan/JBIC</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

2</td><td>No. of Persons-Months:

1.5</td></tr>
<tr><td>Start Date (Month/Year):

1 July 2008</td><td>Completion Date (Month/Year):

31 August 2008</td><td>Approx. Value of Services (in US$):

US $ 14,835/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Water Expert, Project Coordinator Field Survey Staff alongwith Office Support Staff</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Ex-Post Survey for Metropolitan Water Supply Project (Khanpur I) was done.

The Ex-post monitoring survey, part of post-evaluation and monitoring activities of the Japan Bank for International Cooperation (JBIC), covers all the JBIC-financed Yen loan projects in their second year after completion. Main objectives of the post-evaluation are:-

To review the implementation of the project, assess the effectiveness/impact resulting from the project, and draw valuable lessons to be reflected in future JBIC projects to enhance the quality of JBIC's assistance.

To review the current situation, operation, maintenance and management of the completed projects and make recommendations to the Borrower/Executing Agency to ensure proper operation in the future.

The survey method consists of i) interview survey with executing agencies, operation and maintenance agencies and relevant organizations ii) visit to project facilities and iii) interviews with direct beneficiaries. The questions are to address three areas of concerns (effectiveness, impact and sustainability).</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following activities were done during the study:-

Preparation of the Questionnaire/Pre-survey in Pakistan/Arrangement for field survey by the Japanese Consultant. Advanced Survey by local consultants. Field survey by the Japanese/local consultants team to various department like WASA, CDA etc. Compile the information collected and prepare the evaluation Report/Project Post and Ex-post Comparison Chart. Provide logistic services for the Japanese consultant including arrangement for accommodation, transportation, communication etc.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
ADB Assisted Bahawalpur Rural Development Project – RSC-C80508 (PAK)</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Bahawalpur, Punjab</td><td>Number of person-months of the entire project:
Not Applicable</td></tr>
<tr><td colspan="2">Name of Client:
Asian Development Bank - # 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines</td><td>Total value of full project (in million US$):
N.A.</td></tr>
<tr><td colspan="2">No. of Staff:

1</td><td>No. of Persons-Months:

0.75</td></tr>
<tr><td>Start Date (Month/Year):

9 Jul 2008</td><td>Completion Date (Month/Year):

30 Jul 2008</td><td>Approx. Value of Services (in US$):

US $ 4440/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Rural Roads Engineer</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Bahawalpur Rural Development Project (BRDP) was designed to increase rural income and employment and improve the quality of life in a relatively less developed division in Pakistan. Components included rural roads, water course improvements, small scale infrastructure, rural electrification and institutional strengthening.

The Project aimed to increase the rural incomes, quality of life and employment through improvements in infrastructure services to permit value-added production and economic and market activities and institutional strengthening through organizational and skills training for beneficiaries in village communities. The project was designed to reduce the poverty in the Bahawalpur Division, which is considered one of the least developed areas in Punjab. The Project objectives supported the Government's strategic objectives of economic and social development, increased private sector participation, improvements in agriculture production, more efficient use of increasingly scarce irrigation water and development of rural areas</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Following services has been performed:
➢ Assist the Project Completion Review Mission
➢ Review selected background documents prior to the start of the field work including RRP, Phase-I Evaluation Report, Project Reports, BME Reports, Cost Tables and relevant PPTA reports etc.
➢ Assist the associate project analyst in reviewing road related procurement documents
➢ Assist the associate project analyst in assessing whether road related procurement was effective and efficient
➢ Review adequacy of the design including technical specifications and scope of the rural roads component and assess its relevance to the project impact, especially the inclusion of the main/provincial road. Work with the international economist on the costs and benefits of the main/provincial road.
➢ Review the cost comparisons of project roads as prepared in the Phase I evaluation and assess whether the design and construction of the roads was cost-efficient.
➢ Review the budget situation and physical capacity of district governments and community organizations (COs) to undertake operations and maintenance of the roads.
➢ Provide relevant inputs to the aide memoaire and project completion report
➢ Prepare a rural roads evaluation report</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.83

<table>
<tr><td colspan="2">Assignment Name:
Feasibility Study and Detailed Engineering Design of Sibbi – Kohlu – Rakhni Road (162 kms)</td><td>Country:
Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Balochistan</td><td>Number of person-months of the entire project:
72</td></tr>
<tr><td colspan="2">Name of Client:

Communication & Works Department, Government of Balochistan / National Logistic Cell (NLC) HQ, Sowan Camp, Rawalpindi</td><td>Total value of full project (in million US$):

US $ 50.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

18</td><td>No. of persons-months:
36</td></tr>
<tr><td>Start Date (Month/Year):

Jan 2007</td><td>Completion Date (Month/Year):

Aug 2008</td><td>Approx. Value of Services (in million US$):

US$ 600,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

M/s Infra-D Consultants, Islamabad</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):

36</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Team Leader, one Geometric Expert, one Pavement Engineer, one Structural Specialist, one Contract Specialist, one Drainage Engineer, one Highway Engineer, one Material Engineer, Two Surveyors were employed to carry out detailed survey, design, technical feasibility and tender documents preparation including pavement evaluation. One transport economist provided inputs in economic feasibility report preparation. The team was supported by surveyors, draftsman, laboratory technicians, estimators, enumerators and other support staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
C&W Department, Government of Balochistan intended to construct Sibbi-Kohlu-Rakhni road to provide fast and efficient route for trade related traffic between various parts of Balochistan province. The designated route is Sibbi-Talli Tangi-Sharif Tangi – LoeKumb – Mawaind – Fazalchell – Kohlu. For the purpose C&W Deptt. Govt. of Balochistan has tasked to prepare alignment studies/design of the work. Detail is as under:-

Total length 162 kms
Carriageway Width 6.7 m (21 ft)
Shoulders 0.77 m (2.5 ft)
Carriageway design TST

Four to five wide crossing places in a Km in mountainous region
Road from Kohlu to Fazil Chel already constructed widened and improved to above specifications</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The work entailed detailed topographic survey, study on alternate alignments, fixing of permanent reference monuments and establishing permanent benchmarks, soil and sub soil investigations, study of borrow sources and their analyses, Quarry material sources and analysis, traffic counts and surveys, traffic forecasts, design of major intersections and traffic flow analyses, Design of Urban Areas, Axle loads study and related analyses, Origin Destination Surveys, Hydrological studies, Design of Storm Water Drainage, Existing pavement evaluation Capacity Analysis, Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities, Pavement Design, Rigid Pavement Design for urban areas, Structural Design, Design of Foundations, sub-structures, super structures, River Training Works, Preparation of Construction Drawings, Socio Economic and Environmental Studies.</td></tr>
</table>

Bill of Quantities, Preparation of Mass Haul Diagram, Preparation of Specifications, Tender Documents, General and Special Terms and Conditions of Contract, Engineering Cost Estimates, Study of Regional Connectivity

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Sector Studies, Regional Development Plans, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Earthquake Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Technical Assistance and Advisory Services, Material Testing.

Fields of Specialization:

Agriculture & Rural Development Sector:
Floor/River Control Works

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, International Transportation Tech., Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, New Structures/Reconstruction, Highways Safety, Road Transport Economics.

Urban Development Sector:
Land Readjustment, Traffic Management, Urban Transport Planning

Water Supply and Sanitation Sector:
Storm Drainage.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Detailed Design and Supervision Services for the Construction of Sibbi – Dhaddar Section of National Highway N-65.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:

210</td></tr>
<tr><td colspan="2">Name of Client:

National Highways Authority, Government of Pakistan - # 28, Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US $ 6.50 million</td></tr>
<tr><td colspan="2">No. of Staff:

17</td><td>No. of Persons-Months:

210</td></tr>
<tr><td>Start Date (Month/Year):

November, 2004</td><td>Completion Date (Month/Year):

June 2008</td><td>Approx. Value of Services (in million US$):

US $ 115,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Highway Engineers, Structural Engineers, Pavement Engineer, Quantity Surveyor, Material Engineer, Surveyors and Laboratory Technicians for detailed design and Resident Engineers, Assistant Resident Engineers, Material Engineers and Quantity Surveyors for the construction supervision. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
This road from Sukkur to Quetta, designated as N-65 by NHA, was an important section of the national highway network connecting the N-5, N-55 and N-25. Apart from being the only significant highway joining Balochistan and Sindh Provinces, also feeded central part of Balochistan. The total length of existing highway between Sukkur and Quetta was about 385 Kms. The general living standard of the inhabitant of the road influence area is below the mark on account of poor infrastructure provisions. There is hardly any noteworthy industry except the recently constructed Uch Power Station. This section includes construction of additional carriageway between Sibbi and Dhadar with total length of 25 kms. ACC carried out the detailed design and is also responsible for the construction supervision of the Project. In this Contract, ACC was the nominated Engineers Representative for the Project, and the interpretation and implementation of the COCs was the responsibility of the Engineers Representative on behalf of the Client.

The COCs and bidding documents are based on FIDIC sample documents. The works were awarded to M/s Frontier Works Organization Pakistan.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Alignment Studies
• Topographic Surveys
• Land Surveys
• Material Testing and Borrow Sources
• Geometric Design
• Urban Area Design</td></tr>
</table>

- Traffic counts and surveys, and traffic flow analyses,
- Hydrological studies, Structural design of bridges and cross drainage structures.
- Condition Surveys, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis
- Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
- Pavement Design
- Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
- Determination of VOCs and preparation of economic feasibility report.
- Toll study and analysis
- Preparation of PC-I

Construction Supervision

- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Preparation of drawings for the offices of the Contractor
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.81

<table>
<tr><td colspan="2">Assignment Name:
Pakistan Infrastructure Implementation Capacity Assessment Study - Contract No.7675918</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

All over Pakistan</td><td>Number of person-months of the entire project:

2.5</td></tr>
<tr><td colspan="2">Name of Client:
The World Bank Islamabad 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:

1</td><td>No. of Persons-Months:

2.5</td></tr>
<tr><td>Start Date (Month/Year):
Jan 2008</td><td>Completion Date (Month/Year):

June 2008</td><td>Approx. Value of Services (in million US$):

US $ 30,200/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Co Team Leader / Consultant (Individual Capacity)</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
In anticipation of a significant increase in economic activity within the country and enhanced international trade volumes, the GoP through its various public sector organizations has embarked on an ambitious program to upgrade infrastructure within he country.

Pakistan has embarked on a massive infrastructure development program to be implemented over the next 10 years. The infrastructure development covers highways, railways, air, power and water & irrigation sectors. An assessment, pegs this additional planned investment at US $ 12 billion over his period. It is widely recognized within he GOP and the private sector, that there is a serious domestic capacity constraint construction industry, due to its limited capacity, appears to have failed in meeting this unprecedented demand within the country. The Client’s apparent limited capacity to successfully execute such projects is further compounding the situation.

The Bank has taken the lead in advocating the strategic importance and an urgent need to carry out a study, assess and identify the implementation capacity constraints and regulatory bottlenecks in Pakistan and formulate and implement policies and provide for an enabling environment, which attracts skilled and experienced engineers, consultants and contractors to Pakistan, and foster growth of a local capacity as well.

The study involves the review of the construction industry in Pakistan, its structure and performance. It emphasized to identify the constraints faced by the potential bidders and contractors and the implementing government agencies. It recommended actions which could be adopted by all stakeholders to enhance the industry’s capacity and efficiency. Study also evaluated the public implementation processes and business environment both in Pakistan and in a few selected countries including Indonesia. The study identified the constraints being faced by the road construction industry and provided recommendations to overcome these in order to meet the demand due to increase in the Public Sector Development Program by Government of Pakistan and capacity of the industry stakeholders to implement the planned large infrastructure projects in the country over the MTDF.</td></tr>
</table>

Description of Actual Services Provided:

The following services were provided:

- Review and approve the detailed work plan and methodology to be prepared
- Review and agree a draft table of contents of report
- Review the questionnaires and data collection modalities – subjective and quantitative
- Review the data to be collected from regional countries – regulatory policies, economic and investment climate, major contractors and consultants
- Coordination with selected key players, GOP, Government of Sindh, Punjab, Balochistan and Frontier, Karachi Port Trust, Pakistan Railways, WAPDA, Irrigation Departments, National Highway Authority, Major local and foreign Contractors and large local and foreign A&E firms
- Coordination with regional and international key payers
- Assist in obtaining specific data (time, cost, quality, perceptions of contractors and consultants, perceptions of client) on past contracts and develop case studies
- Liaise daily with the consulting firm and prepare weekly progress reports on the study
- Review Draft Report
- Review and disseminate Final Report after approval

Type of Services provided:

Planning Studies, Market Studies, Economic Studies, Financial Studies, Technical Assistance and Advisory Services, Institutional Strengthening/Restructuring, Management Advisory Services, Organizational Development Studies.

Fields of Specialization:

Construction Industry Development Sector:

Monitoring and Evaluation, Strategic Development Planning.

Industry Sector:

General

Transportation Sector:

General

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:

Technical and Concession Management Services, including Project Engineer and O&M Manager for Lahore-Sheikhupura-Faisalabad Dual Carriageway 115 km (BOT)</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Punjab</td><td>Number of person-months of the entire project:

3500</td></tr>
<tr><td colspan="2">Name of Client:
M/s LAFCO (Pvt.) Ltd. # 509, Kashmir Road, R.A. Bazar, Rawalpindi (Road Building Operating Company consisting of M/s FWO, , M/s Habib Rafique, M/s Khalid Rauf and M/s Sachal).</td><td>Total value of full project (in million US$):

US $ 66.67 million</td></tr>
<tr><td colspan="2">No. of Staff:

80</td><td>No. of Persons-Months:

3000</td></tr>
<tr><td>Start Date (Month/Year):

June 2002</td><td>Completion Date (Month/Year):

June 2008</td><td>Approx. Value of Services (in million US$):

US $ 4,050,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

M/s MMP (Pvt.) Ltd.</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
1500</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Project Engineer, Planning and Contract Engineers for coordination with Client and LAFCO. Detailed engineering design teams consist of Ten Highway Engineers, Five Structures Engineers, Four Materials Engineers, Two Traffic Engineers, Transportation Engineers, Quantity Surveyors. The Project also includes the complete supervision of the BOT project and the staff includes 2 Resident Engineers, 4 Assistant Resident Engineers, 4 Material Engineers and 4 Quantity Surveyors. All staff will be deployed to provide contract administration and quality control and assurance on behalf of the client. The scope of work also includes Operation and Maintenance Management led by O&M Manager, Dy. Manager Program Development, Dy. Manager Maintenance, Controller Planning, Controller Operations, Controller Technical, Controller Maintenance Management, Financial Specialist, Concession Specialist, Traffic safety Engineer, Quantity Surveyor to control the operations and maintenance phase of the BOT project.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The Project of Lahore-Sheikhupura-Faisalabad Dual Carriageway was a Build-Operate-Transfer (BOT) Project. The road length was 115.5 km. Lahore, Sheikhupura and Faisalabad have over 25% population of the province of Punjab and thus have immense potential. The existing road from Sheikhupura to Faisalabad was a single carriageway (90 kms) and was improved to dual carriageway. The scope of work consisted of Feasibility studies, Detailed Engineering Design, Traffic and Tolling Analysis and Strategy, Contract Administration, Construction Supervision and Management, Operations and Maintenance Management, Concession Management. Based upon the traffic data and road intersecting to the project road toll plazas were constructed at the following locations:-
<u>Section I</u> Toll Location 1 At approximately 1+800 km just after Saggian Bridge intersection
<u>Section II</u> Toll Location 2 After Sheikhupura Bypass on Main road @ km 33+000
Toll Location 3 At km 54+000
<u>Section III</u> Toll Location 4 After Shahkot Urban Area @ km 86+000
<u>Section IV</u> Toll Location 5 Near end of the project road @ km 114+000</td></tr>
</table>

Description of Actual Services Provided:

The following supervision tasks were carried out during the course of the project:

- Detailed Topographic Surveys
- Traffic counts and analysis & Tolling strategy
- Capacity Analysis
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- ROW Analysis and Plans
- FWD Studies
- Feasibility Studies
- Detailed Geometric Design
- Detailed Engineering Design consists of Pavement design, Hydrological Studies, Structural design, Rigid Pavements and Toll Plazas
- Bidding Documents and BOQs
- Design of Landscaping/Arboriculture/Horticulture
- Project Impact Assessment Study
- Environmental Study & *Detailed Afforestation Plan and Tree Plantation*
- Detailed Construction Supervision
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Assist the client in land acquisition proceedings and utilities relocation
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.
- As built drawings
- Operations management
- Highway Maintenance Survey
- Maintenance Management includes maintenance strategy, supervision, approvals and certifications
- Coordination with Stakeholders

- Tolling Strategy and Revenue Analysis/Management
- ROW Management/Controls, Leasing, Concessions
- Development Control and NOCs
- Hoarding, Signology, Planning and Management
- Road Space Management
- Traffic Safety and Control Planning and Management
- Expropriation and Monitoring Performance of Commercial Model
- Advising RBOC/LAFCO for Remedial Measures
- Advise, Plan and Execute Arbori culture works
- Concession Marketing Strategies and Plans
- Concession Assets Management
- Rolling Maintenance Program
- Concession Management

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Environmental and Social Studies, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of LAFCO), Material Testing, Quality Control, Project Monitoring and Evaluation, Concession Management, Maintenance Management, Arboriculture studies

Fields of Specialization:

Construction Industry Development Sector:
Construction Management, Corporate Firm Management, Concession Management

Transportation Sector:
National/Regional/Multimodel Transportation Planning, Highway Planning & Programming, Traffic Surveys and Demand Forecasting Transportation Models, Policies and Investment Programs New Highways/Improvements & Reconstruction, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety, tolling Strategies and Analysis, Concession management, Highway Traffic Control, Highway legislation, Road Transport Economics, Road User Charges, Financial Analysis and Costing of Terifs (Road Transportation Industry).

Urban Development Sector:
Strategic Development Planning and transport Planning

Concession Management:

Coordination with Stakeholders Tolling Strategy and Revenue Analysis/Management, ROW Management/Controls, leasing, Concession, Development Control and NOCs, Hoarding, Signology, Planning and Management, Road Space Management, Traffic Safety and Control Planning and Management, Expropriation, Monitoring Performance of Commercial Model.

Assets Management:
Asset management, asset administration, value engineering

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.79

<table>
<tr><td colspan="2">Assignment Name:
Training of Partners Organizations (Pos), PPAF Staff and Verification / Inspection of Construction of Houses in Earthquake Areas</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

NWFP</td><td>Number of person-months of the entire project:
6</td></tr>
<tr><td colspan="2">Name of Client:
Pakistan Poverty Alleviation Fund (PPAF) Plot 14, Street 12, G-8/1 (G8 Mauve Area), Islamabad</td><td>Total value of full project (in million US$):
Not Applicable</td></tr>
<tr><td colspan="2">No. of Staff:

5</td><td>No. of Persons-Months:

6</td></tr>
<tr><td>Start Date (Month/Year):
15 May 2007</td><td>Completion Date (Month/Year):

07 August 2007</td><td>Approx. Value of Services (in US$):

US $ 23,334/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Senior Engineer, Structure Engineer, Junior Structure Engineer, Materials Inspector and Sr. Laboratory Technician were engaged.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
PPAF was undertaken the Emergency Relief, Rehabilitation and Reconstruction Program (E3RP) under the PPAF-II project funded by the World Bank in 34 union councils in the earthquake affected areas of AJK and NWFP, PPAF's Rehabilitation and Reconstruction (PNR) team and its Partner Organizations (POs) were responsible for the overall supervision of the construction of the houses and quality control.

A careful house to house damage assessment of all 122,000 housing units in the 34 unions of NWFP and AJK found that 118,000 houses were completely destroyed (107,000) or partially damaged (10,900). At the time, 75,000 cases have been passed as eligible for compensation.

There are 7000 completed destroyed houses in three Union Councils of Abottabad where the inspection of the houses was to be carried out as per ERRA guidelines. PPAF desired to engage a technical consultant who can provide technical services to PPAF for quality check of the house and carry out the inspection of the houses at plinth level where disbursement has to be made. The three union councils i.e. Boi, Dalola and Khokhmang.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
In order to comply with the ERRA guidelines and to provide proper supervision/inspection of the houses which have been constructed, PPAF desired that proper inspection of the houses was to be carried out. The construction of houses should follow the ERRA guide lines of construction and proper measures should be developed for quality control, inspection and training of PPAF staff and Partner Organizations (Pos).

Following activities are required was to be carried out:-
➢ Verification / inspection of construction of houses in three union councils on sample basis. 15% of the houses to be checked on random basis.
➢ Inspection of the construction of houses to be carried out in three Union Councils upon receiving the inspection checklist from PPAF RCO.
➢ Houses already cleared by the POs shall be cross checked.
➢ Training on various aspects of Inspection/Verification of houses in accordance with ERRA guide lines to PPAF staff and its Partner Organization (POs) was provided
➢ Inspection Check List to be provided by PPAF
➢ Inspection for staff traveling for inspection and checking of houses</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.78

Assignment Name: Feasibility and Detailed Design for Upgradation, Widening and Improvement of Fateh Jang – Jand Section of National Highway N-80 (72 kms)		**Country:** Pakistan
Location within Country: Punjab		**Number of person-months of the entire project:** 25
Name of Client: National Highways Authority, Ministry of Communications, Government of Pakistan, - # 28, Mauve Area, G-9/1, Islamabad.		**Total value of full project (in million US$):** US $ 31.90 million
No. of Staff: 18		**No. of persons-months:** 25
Start Date (Month/Year): Jan 2007	**Completion Date (Month/Year):** April 2007	**Approx. Value of Services (in million US$):** US$ 83,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Team Leader, one Geometric Expert, one Pavement Engineer, one Structural Specialist, one Contract Specialist, one Drainage Engineer, one Highway Engineer, one Material Engineer, Two Surveyors. Staff was employed to carry out detailed survey, design, technical feasibility and tender documents preparation including pavement evaluation. One transport economist provided inputs in economic feasibility report preparation. The team was supported by surveyors, draftsman, laboratory technicians, estimators, enumerators and other support staff.

Brief Brief Narrative Description of Project:

The project consisted of the Preparation of a Feasibility Study and Detailed Design, Preparation of Tender Drawings and Tender Documents for an additional carriageway, 72 kilometers in length. The project is situated in Punjab Province and forms a part of National Highway N-80 (Turnol – Fatehjang – Jand – Kohat). The project envisages widening and up-gradation of existing road and improvement of road geometry. In pursuance of the vision of the Economic and Social Development, the Tarnol – Kohat Highway has recently been federalized. Roads and bridges play a pivotal role in realization of this vision. This section would become further traffic load once the Khushal Garh Bridge on river Indus is reconstructed. Keeping in view the aforementioned objectives, the NHA intends to upgrade, widen and improve Fatehjang – Jand Section to international standards.

Description of Actual Services Provided:

The work entailed detailed topographic survey, study on alternate alignments, fixing of permanent reference monuments and establishing permanent benchmarks, soil and sub soil investigations, study of borrow sources and their analyses, Quarry material sources and analysis, traffic counts and surveys, traffic forecasts, design of major intersections and traffic flow analyses, Design of Urban Areas, Design of Street Lighting, Axle loads study and related analyses, Origin Destination Surveys, Hydrological studies, Design of Storm Water Drainage, Existing pavement evaluation Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis, Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities, Pavement Design, Structural Design, Design of Foundations, sub-structures, super structures, River Training Works, Preparation of Construction Drawings.

Bill of Quantities, Preparation of Mass Haul Diagram, Preparation of Specifications, Tender Documents, General and Special Terms and Conditions of Contract, Engineering Cost Estimates, Study of Regional

Development Plans, Market Studies – Regional Import Export Volumes, Crop Production etc., Transport Sector Policy Studies, Vehicle Operating Costs, Economic Analysis, Financial Analysis, Preparation of Technical and Economic Feasibility Report, Preparation of Project Planning Approval Document (PC I), Evaluation of Tenders as per IBRD Procurement Guidelines.

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Sector Studies, Regional Development Plans, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Earthquake Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Technical Assistance and Advisory Services, Material Testing.

Fields of Specialization:

Agriculture & Rural Development Sector:
Floor/River Control Works

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, International Transportation Tech., Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, New Structures/Reconstruction, Highways Safety, Road Transport Economics.

Urban Development Sector:
Land Readjustment, Traffic Management, Urban Transport Planning

Water Supply and Sanitation Sector:
Storm Drainage.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.77

<table>
<tr><td colspan="2">Assignment Name:

Feasibility and Detailed Design for Dualization of Tarnol – Fateh Jang Section of National Highway N-80 (32 kms).</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Punjab</td><td>Number of person-months of the entire project:
54</td></tr>
<tr><td colspan="2">Name of Client:
National Highways Authority, Ministry of Communications, Government of Pakistan - # 28, Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US $ 45.40 million</td></tr>
<tr><td colspan="2">No. of Staff:
22</td><td>No. of persons-months:
54</td></tr>
<tr><td>Start Date (Month/Year):
December 2006</td><td>Completion Date (Month/Year):

February 2007</td><td>Approx. Value of Services (in million US$):
US$ 69,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Team Leader, one Senior Structure Engineer, One Traffic / Pavement Engineer, One Hydraulic / Drainage Engineer, One Contractor Engineer, one Environmental Engineer, One Junior Highway / Survey Engineer. Staff were employed to carry out detailed survey, design, technical feasibility and tender documents preparation including pavement evaluation. One transport economist provided inputs in economic feasibility report preparation. The team was supported by surveyors, draftsman, laboratory technicians, estimators, enumerators and other support staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project consisted of the Preparation of a Feasibility Study and Detailed Design, Preparation of Tender Drawings and Tender Documents for an additional carriageway, 32 kilometers in length. The project is situated in Punjab Province and forms a part of National Highway N-80 (Turnol – Fatehjang – Jand – Kohat). The project envisages widening and up-gradation of existing road and improvement of road geometry. In pursuance of the vision of the Economic and Social Development, the Tarnol – Kohat Highway has recently been federalized. Roads and bridges play a pivotal role in realization of this vision. This section would become further traffic load once the Khushal Garh Bridge on river Indus is reconstructed. Keeping in view the aforementioned objectives, the NHA intends to upgrade, widen and improve Fatehjang – Jand Section to international standards.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The work entailed detailed topographic survey, study on alternate alignments, fixing of permanent reference monuments and establishing permanent benchmarks, soil and sub soil investigations, study of borrow sources and their analyses, Quarry material sources and analysis, traffic counts and surveys, traffic forecasts, design of major intersections and traffic flow analyses, Design of Urban Areas, Design of Street Lighting, Axle loads study and related analyses, Origin Destination Surveys, Hydrological studies, Design of Storm Water Drainage, Existing pavement evaluation using Benkleman Beam Deflection Method, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis, Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities, Pavement Design, Structural Design, Design of Foundations, sub-structures, super structures, River Training Works, Preparation of Construction Drawings, Traffic Audits, Traffic Safety Measures, Strategy for Road Safety Bill of Quantities, Preparation of Mass Haul Diagram, Preparation of Specifications, Tender Documents, General and Special Terms and Conditions of Contract, Engineering Cost Estimates, Study of Regional Development Plans, Market Studies – Regional Import Export Volumes, Crop Production etc., Transport Sector Policy Studies, Vehicle Operating Costs, Economic Analysis, Financial Analysis, Preparation of Technical and Economic Feasibility Report, Preparation of Project Planning Approval Document (PC I), Evaluation of Tenders as per IBRD Procurement Guidelines.</td></tr>
</table>

Type of Services provided:
Hydrological Surveys, Soil Surveys, Topographic Surveys, Sector Studies, Regional Development Plans, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Earthquake Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Technical Assistance and Advisory Services, Material Testing.

Fields of Specialization:
Agriculture & Rural Development Sector:
Floor/River Control Works

Transportation Sector:

Urban Development Sector:
Land Readjustment, Traffic Management, Urban Transport Planning
Water Supply and Sanitation Sector:
Storm Drainage.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.76

Assignment Name: Detailed Design, Geotechnical Investigation and Condition Survey for National Trade Corridor (NTC) from Dherki to Sukkur	**Country:** Pakistan
Location within Country: Since Province	**Number of person-months of the entire project:** 13
Name of Client: National Highway Authority, Ministry of Communications, Government of Pakistan, # 28 Mauve Area, G-9/1, Islamabad	**Total value of full project (in million US$):** US$ 150.00 million
No. of Staff: 10	**No. of Persons-Months:** 13
Start Date (Month/ Year): 04 Nov 2006 / **Completion Date (Month/Year):** 19 Dec 2006	**Approx. Value of Services:** US $ 76,493/- (Pak Rs.4,567,500/-)
Name of Associated Firm(s), If Any: Nil	**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Team Leader, one Senior Structure Engineer, One Traffic / Pavement Engineer, One Hydraulic / Drainage Engineer, One Contractor Engineer, one Environmental Engineer, One Junior Highway / Survey Engineer. Staff were employed to carry out detailed survey, design, technical feasibility and tender documents preparation including pavement evaluation.

Brief Narrative Description of Project:

National Trade Corridor project was envisaged by ADB and includes the rehabilitation of different sections of N-5. ACC carried out the condition surveys, detailed engineering design, geotechnical and soil investigations for the section between Dehrki to Sukkur of National Highway N-5.

Description of Actual Services Provided:

The consultant established GPS control points to carry out detailed topographic survey to enable the detailed design of the NTC to provide all the necessary data and information required for detailed engineering design also for the necessary land acquisition and application.

Quarry material sources and analysis, traffic counts and surveys, traffic forecasts, design of major intersections and traffic flow analyses, Design of Urban Areas, Design of Street Lighting, Axle loads study and related analyses, Origin Destination Surveys, Hydrological studies, Design of Storm Water Drainage, Existing pavement evaluation using Benkleman Beam Deflection Method, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis, Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities, Pavement Design, Structural Design, Design of Foundations, sub-structures, super structures, River Training Works, Preparation of Construction Drawings, Traffic Audits, Traffic Safety Measures, Strategy for Road Safety Bill of Quantities, Preparation of Specifications, Tender Documents, General and Special Terms and Conditions of Contract, Engineering Cost Estimates, Preparation of Technical and Economic Feasibility Report etc.

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management/Administration (on behalf of owner), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector: Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Ex-Post Monitoring Survey 2006 on JBIC Financed Projects in Pakistan		**Country:** Pakistan
Location within Country: Sindh, Punjab and Balochistan		**Number of person-months of the entire project:** Not Applicable
Name of Client: M/s IC Net Limited Japan/JBIC		**Total value of full project (in million US$):** -
No. of Staff: 3		**No. of Persons-Months:** 1.75
Start Date (Month/Year): 24 Jul 2006	**Completion Date (Month/Year):** 30 Sept 2006	**Approx. Value of Services (in US$):** US $ 19,287/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Tariq Rizwan Farooqi Senior Electrical Engineer, Syed Rehan Ali Junior Electrical Engineer, Ahmad Luqman Sarwar Coordination Engineer alongwith support staff

Brief Narrative Description of Project:

Ex-Post Survey for the following two JBIC Financed projects has been done:-

- Bin Qasim Thermal Power Station Unit No.6 Project (I) and (II)
- Second 220 KV Guddu-Sibbi-Quetta Transmission Project

The main objectives of the survey were:-

To access a certain project's effectiveness and impact so that one can draw lessons to reflect in JBIC's future policy thereby enhancing the quality of JBIC's assistance operation and to review the current situation, operation, maintenance and management of the completed projects, so that one can make recommendations, to the Borrower/Executing Agency to ensure proper operation in the future.

The Ex-post monitoring on JBIC-financed projects is to be done on three of the five evaluation criteria, i.e. 1) Relevance, 2) Efficiency in Implementation, 3) Effectiveness, 4) Impact and 5) Sustainability. The monitoring focus on Effectiveness, Impact and Sustainability because Relevance and Efficiency in Implementation have already been examined in the previous Ex-post evaluation.

Description of Actual Services Provided:

Conducted interviews with the implementation agencies based on the prepared comprehensive questionnaire and site visits. Meetings with CEO of NTDC, WAPDA, KESC etc. Also conducted meeting alongwith site visit to Bin Qasim Thermal Power Station Unit No.6, Project I and II. Study the current status of the project including the organizational setup etc.

Conducted statistical research of the power sector in Pakistan and the economic situation in general and reporting. Assist the Japanese consultant in finalization of the report. Discuss with the executing agency to confirm the availability of necessary information based on the PCR form.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Detailed Design of Surab – Basima – Nag – Panjgur – Hoshab Road (Length 459 Kms)		**Country:** Pakistan
Location within Country: Balochistan		**Number of person-months of the entire project:** 52
Name of Client: National Highways Authority, Ministry of Communications, Government of Pakistan, # 28, Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US $ 350.00 million
No. of Staff: 15		**No. of persons-months:** 58
Start Date (Month/Year): Nov 2005	**Completion Date (Month/Year):** Jun 2006	**Approx. Value of Services (in million US$):** US$ 138,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Team Leader, one Geometric Expert, one Pavement Engineer, one Structural Specialist, one Contract Specialist, one Drainage Engineer, one Highway Engineer, one Material Engineer, Two Surveyors. Staff was employed to carry out detailed survey, design, technical feasibility and tender documents preparation including pavement evaluation. One transport economist provided inputs in economic feasibility report preparation. The team was supported by surveyors, draftsman, laboratory technicians, estimators, enumerators and other support staff.

Brief Narrative Description of Project:

Surab-Basima-Nag-Panjgur-Hoshab Road (approximately 459 Kms) was taken by National Highway Authority for improving the present condition of the road so as to transform it to an all-weather 2 lane National Highway, conforming to international standards. The subject road has been federalized and taken over by National Highway Authority. Total length of the project was approximately 459 kms. The project was divided into the following sections for uniformity and easy for construction:-

Surab – Basima	91 Kms
Basima – Nag	95 Kms
Nag – Panjgur	85 Kms
Panjgur Bypass – Gwargo	70 Kms
Gwargo – Hoshab	118 Kms

Description of Actual Services Provided:

The work entailed detailed topographic survey, fixing of permanent reference monuments and establishing permanent benchmarks, soil and sub soil investigations, study of borrow sources and their analyses, Quarry material sources and analysis, traffic counts and surveys, traffic forecasts, design of major intersections and traffic flow analyses, Design of Urban Areas, Design of Street Lighting, Axle loads study and related analyses, Origin Destination Surveys, Hydrological studies, Design of Storm Water Drainage, Existing pavement evaluation Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis, Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities, Pavement Design, Structural Design, Design of Foundations, sub-structures, super structures, River Training Works, Preparation of Construction Drawings, Preparation of PC-I, Economic Analysis using HDM-4, EIA Report and Social and Resettlement Analysis.

Bill of Quantities, Preparation of Mass Haul Diagram, Preparation of Specifications, Tender Documents, General and Special Terms and Conditions of Contract based upon FIDIC, Engineering Cost Estimates, Study of Regional Socio Economic Factors

Development Plans, Market Studies – Regional Import Export Volumes, Crop Production etc., Transport Sector Policy Studies, Vehicle Operating Costs, Economic Analysis, Financial Analysis, Preparation of Technical and Economic Feasibility Report, Preparation of Project Planning Approval Document (PC I), Evaluation of Tenders as per IBRD Procurement Guidelines.

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Sector Studies, Regional Development Plans, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Earthquake Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Technical Assistance and Advisory Services, Material Testing.

Fields of Specialization:

Agriculture & Rural Development Sector:
Floor/River Control Works

Transportation Sector:
National/Regional/Multimodal Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, International Transportation Tech., Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, New Structures/Reconstruction, Highways Safety, Road Transport Economics.

Urban Development Sector:
Land Readjustment, Traffic Management, Urban Transport Planning

Water Supply and Sanitation Sector:
Storm Drainage.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:

Design of Customs Head Quarter Building in Kabul Afghanistan Contract No.C05-341 / 00038222</td><td>Country:

Afghanistan</td></tr>
<tr><td colspan="2">Location within Country:

Kabul, Afghanistan</td><td>Number of person-months of the entire project:

16.5</td></tr>
<tr><td colspan="2">Name of Client:

United Nations Offices for Project Services (UNOPS) Afghanistan Project Implementation Facility (APIF), UNOPS House, UNOCA Compound, Jalalabad Road, Kabul, Afghanistan</td><td>Total value of full project (in million US$):

US $ 5.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

8</td><td>No. of Persons-Months:

16.5</td></tr>
<tr><td>Start Date (Month/Year):

01 June 2005</td><td>Completion Date (Month/Year):

31 March 2006</td><td>Approx. Value of Services (in US$):

US $ 98,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

The senior staff includes architect, structural engineer, electrical engineer, utilities engineer, contract specialist, measurement engineer, geotechnical engineer, chief surveyor and supporting staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

Structural Design and Bidding Documents for National Customs & Revenue Head Quarters, 5 storey Building Kabul, Afghanistan, funded by the World Bank. The building is a 5600 square meter office building with conference hall, minister and other senior staff offices, and other features. All procurement documents prepared according to World Bank guidelines.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

The following tasks were carried out during the course of the project:
• Architectural detail drawings
• Structural design calculations
• Reinforcement detail drawings
• Rebar schedules
• Electrical layouts and detail drawings
• Heating and air conditioning layouts and detail drawings
• Plumbing and services layouts and detail drawings
• IT Layouts
• Bill of Quantities
• Engineer’s Estimate
• Detail Technical Specifications
• Contract Document based on the World Bank document as applicable</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.72

Assignment Name: Pre-Feasibility Study for National Trade Corridor Improvement Programme (NTCIP) – Sehwan/Dadu – Ratodero – Rajanpur (M-6). Approx. 470 Kms		**Country:** Pakistan
Location within Country: Since Province		**Number of person-months of the entire project:**
Name of Client: National Highway Authority, Ministry of Communications, Government of Pakistan, # 28 Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US $ 200.00 million
No. of Staff: 14		**No. of Persons-Months:** 35
Start Date (Month/Year): 12th Nov 2005	**Completion Date (Month/Year):** 10th March, 2006	**Approx. Value of Services:** US $ 110,000/- (Pak Rs.6,580,000/-)
Name of Associated Firm(s), If Any: Nil		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Team Leader, Structural Specialists, Drainage Engineer, Geotechnical Engineer, Pavement Design Engineer, Traffic Engineer, Highway Design Engineers, Material Engineers, Structural/Bridge Design Engineers, Quantity Surveyors etc.

Brief Narrative Description of Project:

National Highway Authority Intends to engage consultants to undertake pre-feasibility study for National Trade Corridor Improvement Programme (NTCIP). The project comprises of the following sections:-

i) Faisalabad – Jhang – Muzaffargarh – D.G. Khan – Rajanpur
ii) Khanewal – Lodhran – Summar Sata – Rajanpur (M-5)
iii) Sehwan / Dadu – Ratodero – Rajanpur (M-6) (Approx length 470 Kms)
iv) Overlay on M2 including Re-alignment for Salt Range
v) Wazirabad / Gujranwala – Hafizabad – Pindi Bhattian (M-2 Link)

Each section of National Trade Corridor was assigned to different consultant and the Consultant carried out out preliminary survey / geographic characteristics, traffic study, OD surveys, cost estimates, cost benefit ratio, GPS survey, structure survey, environmental and social assessment and existing road condition survey. The Consultants were responsible for the Sehwan – Dadu – Ratodero – Rajanpur Section of Indus Highway (470 kms) which is the tentative alignment of the M-6 Motorway Project.

Description of Actual Services Provided:

The services provided by the Consultants included the following:

1. Selection of alternate alignment of the proposed motorway project.
2. Analysis of the existing road network, population of the area, source of income and communities on th either side of the alignment
3. Condition surveys including pavement of the existing road network
4. Traffic surveys, analysis and forecasting
5. Origin and Destination Surveys
6. Cost Estimates
7. Cost Benefit Analysis using HDM-4
8. GPS Surveys
9. Structure condition survey

10. Land acquisition requirements
11. Location of proposed bypasses
12. Environmental and social assessment
13. Rapid Environment Checklist
14. Feasibility Study
15. Standardization of Specifications
16. Future planning

Type of Services provided:
Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design –Engineering etc., Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.71

<table>
<tr><td colspan="2">Assignment Name:

Feasibility Study for Road from Ghulam Khan – Khost in Afghanistan.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Province of NWFP (FATA), Afghanistan</td><td>Number of person-months of the entire project:
4.65</td></tr>
<tr><td colspan="2">Name of Client:
National Highway Authority, M/o Communications Government of Pakistan, # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):
US $ 100.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
4</td><td>No. of Persons-Months:

4.65</td></tr>
<tr><td>Start Date (Month/Year):

November 2005</td><td>Completion Date (Month/Year):

February, 2006</td><td>Approx. Value of Services (in million US$):

US $ 170,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

No</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil.</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Project Manager, Technical Manager/Highways Engineer, Sr. Highway Engineer, Quantity Surveyor, Staff Engineer, Sr. CAD Draftsman, Cad Operators, Computer Operator etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project involves the preliminary feasibility study of Ghulam Khan to Khost in Afghanistan (Approximately 45 kms) for improving the present condition of he road so as to transform in to an all-weather 2-lane highway conforming to international standards. The project involves conditions survey for roadway and cross drainage structures, traffic counts, rough cost estimates, preliminary feasibility, analysis on HDM-4.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks are being carried out during the course of the project:
• Condition surveys, Traffic Surveys, Topographic Surveys, Conceptual Planning of Intersection
• Materials Testing
• Structures Design of Underpasses & Structures Design for Bridges and Flyovers
• Geometric Design & Pavement Design
• Costs Estimates & Bill of Quantities
• Tender Documents
• Transportation Study
• Economic Analysis
• Preparation of PC-I
• Environmental Studies
• Highway Safety Studies
• Rate Analysis
• Engineer’s Estimate
• Contract Packaging
• Construction Drawings</td></tr>
</table>

Type of Services provided:

Design – Engineering etc., Soil Mechanics and Foundation Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Drawings, Structural Engineering, Material Testing, Traffic Engineering, Economic Analysis, Resettlement, Environmental, Community Infrastructure, Procurement

Fields of Specialization:

Construction Industry Development Sector:
Detailed Implementation Plans

Transportation Sector:

Urban Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Traffic Surveys and Analysis, Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.70

<table>
<tr><td colspan="2">Assignment Name:

Structural Evaluation of Goverdish School Buildings in Nooristan – UNOPS Project (Multiple school buildings)</td><td>Country:

Afghanistan</td></tr>
<tr><td colspan="2">Location within Country:

Nooristan, Afghanistan</td><td>Number of person-months of the entire project:

Not Relevant</td></tr>
<tr><td colspan="2">Name of Client:

UNOPS, UNOPS House, UNOCA Compound, Jalalabad Road, Kabul, Afghanistan</td><td>Total value of full project (in million US$):

US $ 600.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

3</td><td>No. of Persons-Months:

1</td></tr>
<tr><td>Start Date (Month/Year):

February 2005</td><td>Completion Date (Month/Year):

March 2005</td><td>Approx. Value of Services (in US$):

US $ 9,750/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes senior structure engineer, structure engineer and supporting staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

Structural Evaluation of Goverdish School Building Nooristan being built by the communities using traditional construction methods through self help basis/USAID and recommendation for the improvements in design to enhance safety.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

As a part of the Mission, following tasks were carried out during the course of the project:
• Evaluate the design of the structure which is based on traditional construction methods and determine whether a design fault exists which may cause the structure to collapse or be unstable.
• Devise a methodology, which can provide an analytical approach to evaluate such structures, which are composite in Stone Masonry using Mud Mortar and Wood Beams/Columns as embedded structural elements.
• Carry out Finite Element Analysis using appropriate software for modeling.
• Prepare recommendations for improving the safety of the design provided by UNOPS and increase the reliability of these structures being built by the communities on self-help basis.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.69

Assignment Name: Review of Procurement Procedures of Pakistan Telecommunication Company Limited (PTCL).		**Country:** Pakistan
Location within Country: Islamabad, Pakistan		**Number of person-months of the entire project:** 06
Name of Client: Public Procurement Regulatory Authority (PPRA), Finance Division, Govt. of Pakistan, 1st Floor, Federal Bank for Cooperatives, Attaturk Avenue, G-5/2, Islamabad		**Total value of full project (in million US$):** N.A
No. of Staff: 1		**No. of persons-months:** 06
Start Date (Month/Year): Mar 2005	**Completion Date (Month/Year):** Sep 2005	**Approx. Value of Services (in million US$):** US $ 16,670/-
Name of Lead Firm (s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm (s):** Nil

Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Aized Hasan Mir, Procurement Specialist

Brief Narrative Description of Project:
Public Procurement Regulatory Authority (PPRA) has undertaken a review of procurement procedures of major public sector departments, the assignment required review of procurement procedures of Capital Development Authority, re-engineering and design of standard bidding documents, and preparation of procurement manual in compliance with PPRA rules. The overall objective being to bring transparency and efficiency in public procurement of goods, services and works.

Description of Actual Services Provided:
The services provided:

1. Collection and compilation of all existing procurement regulations, procedures and practices for procurement of goods, services and works, including appeal and grievance redressal procedure, bid/tender evaluation methodology and existing delegation of powers.
   - Identification of existing procurement procedures applicable during emergency and extraordinary conditions.
2. A critical review and analysis of existing procurement procedure and practices, in the light of Public Procurement Rules 2004, and any Regulations in this matter with a view to:
   i) Identify redundant procedures and practices resulting in non-transparency and corruption as well as expensive and substandard procurement of goods, services and works.
   ii) Analyze quality of bidding documents and bid evaluation procedure.
   iii) Analyze existing mechanism for ensuring transparency and accountability.
3. Review of existing code of ethics & conduct.
4. Undertake complete and comprehensive re-engineering of regulations, procedures and policies of public sector entity in accordance with Public Procurement Rules 2004, and any Regulations in this matter, for transparent procurement, inspection and quality of goods, services and works with a view to:
   - Devise new mechanism and procedures for public procurement for ensuring transparency & accountability in public procurement.

- Laying down code of ethics, bid evaluation guidelines as well as review of existing standard bidding documents.
- Propose steps for improvement, transparency and accountability
- Prepare simplified procurement procedures for advertisement, contract award etc.
- Develop procedures for procurement monitoring.
- Make recommendations for improvement in institutional framework of public sector entities.

5. Identify potential for indigenous development of goods, services and works and propose procurement systems and procedures fostering indigenous technology development leading to indigenous manufacture of goods services, and works.
6. Undertake an assessment of the quality and competence of procurement professionals and make recommendations for procurement management capacity building in order to improve transparency and reduce corruption.
7. Define and identify emergency situations and to recommend appropriate procurement procedures applicable during emergencies calling for immediate and prompt procurement of goods, services and works to expeditiously meet extraordinary conditions. Such recommended procedure shall ensure transparency and prompt response to the emergency situations.

Type of Services provided:

Policy Studies, Planning Studies, Procurement Services, Technical Assistance and Advisory Services, Management Information Systems, Institutional Strengthening/Restructuring, Organizational Development Studies, Training and Transfer of Technology, Legal Services.

Fields of Specialization:

Construction Industry Development Sector:
General, Institution Buildings.

Energy Sector:
General

Industry Sector:
Industry General

Transportation Sector:
General

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Supervision of Pakistan Poverty Alleviation Fund, infrastructure component – Phase II		**Country:** Pakistan
Location within Country: All Over Pakistan		**Number of person-months of the entire project:** Not Relevant
Name of Client: The World Bank, Islamabad - 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan		**Total value of full project (in million US$):** US $ 238.00 million
No. of Staff: 1		**No. of Persons-Months:** 3
Start Date (Month/Year): Feb 2005	**Completion Date (Month/Year):** May 2005	**Approx. Value of Services (in US$):** US $ 19,300
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience) Aized Hasan Mir Sr. Consultant Community Infrastructure		

Brief Narrative Description of Project:

Pakistan Poverty Alleviation Fund (PPAF) Phase II $USD 238 million program consists of several components including Micro Credit, Community Infrastructure, Training of Partner Organizations (including operation and technical assistance), MIS, health and education. Under the community infrastructure component, over 7,000 sub projects, 300 integrated area development projects, 4 drought mitigation and preparedness projects, and 130 technology intervention projects are planned. The aim of the project is to make a significant impact on poverty alleviation by community level interventions in over 90 districts of Pakistan through 38 partner organizations (NGOs). Purpose of the supervision mission is to provide continuous monitoring and evaluation of the program implementation, objectives and targets.

Description of Actual Services Provided:

The following tasks were carried out during the course of the supervision Mission:

- Review of the proposed CPI targets for Phase-II and the strategies and mechanisms for implementation of each CPI sub program. Assess whether these are still valid or if modifications are being suggested.
- Discuss PPAF's overarching vision for its CPI work (e.g. poverty impact, increased outreach, sustainability of schemes etc.,) and lack of clarity or concerns about competing objectives, if any.
- Conduct a detailed review of PPAF's work with each PO that has an active CPI program. This would include the current status of each PO (portfolio of schemes, PPAF commitments over the next few years, etc.)
- Review of PPAF's and PO's Monitoring system (indicators used, types of reports generated, etc.,)
- Review with PPAF staff the status of important issues mentioned in the previous aide memoirs: PPAF's medium term vision for each PO and how each one will move towards having an effective CPI program.
- Analyze CPI staff career development paths and expansion of the unit to handle increased projects scope.
- Review PPAF's drought mitigation and integrated plans for CPI for each PO. In addition, PPAF's system for managing the portfolio will be reviewed
- Review and agree with PPAF selection and eligibility criteria, including per capita limits, the size of the community contribution, and possibility of loans for infrastructure.
- Review the impact assessment methodology for CPI interventions and plans for Phase-II
- Review and monitor the progress of engaging new NGOs and steps taken to support such organizations
- Evaluate the proposed new MIS for CPI unit of PPAF and cost of delivery of schemes
- Prepare and submit supervision aide memoirs

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.67

<table>
<tr><td colspan="2">Assignment Name:
Road and Road Sector Assessment Study – Including Community Social Surveys - ADB TA No.4469-PAK</td><td>Country:
Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
All Over Pakistan</td><td>Number of person-months of the entire project:
22</td></tr>
<tr><td colspan="2">Name of Client:
Asian Development Bank - 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines</td><td>Total value of full project (in million US$):
US $ 56.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
12</td><td>No. of Persons-Months:
22</td></tr>
<tr><td>Start Date (Month/Year):

February 2005</td><td>Completion Date (Month/Year):

May 2005</td><td>Approx. Value of Services (in US$):

US $ 56,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes, Highway Engineers, Social Scientists, Enumerators etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

To assist ADB in preparing a post completion review of ADB’s road sector assistance and contribution in Pakistan.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

The tasks carried out included the Road Sector Assessment Study of the Completed project funded by ADB, Completion of surveys and other activities to obtain data related to approximately 40 rural access and provincial roads in eight locations throughout Pakistan selected from all projects funded by ADB, Preparation of survey questionnaires for – Road condition survey, Road History, Survey of Households - communities/beneficiaries, and Transporters and conducting such surveys in selected road influence areas, construction supervision, Compiling engineering and traffic related data for selected 20 roads completed under ADB, Field surveys in the communities along and around the selected roads to obtain information that will identify changes, if any due to the ADB funded road improvements, Compilation of all data for SPSS and preparation of a report for roads surveyed, Obtain data and provide assistance with the conduct of a broad sector study and preparation of the report, Traffic Safety Study and Environmental and Resettlement Study</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Project Completion Report on JBIC Financed Projects 2005</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

NWFP and Islamabad</td><td>Number of person-months of the entire project:
Not Applicable</td></tr>
<tr><td colspan="2">Name of Client:

M/s IC Net Limited Japan/JBIC</td><td>Total value of full project (in million US$):
US$ 2,989 million</td></tr>
<tr><td colspan="2">No. of Staff:
2</td><td>No. of Persons-Months:
0.75</td></tr>
<tr><td>Start Date (Month/Year):
Feb 2005</td><td>Completion Date (Month/Year):

March 2005</td><td>Approx. Value of Services (in US$):

US $ 3,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Highway Engineer, Telecommunication Engineer along with supporting staff</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Ex-Post Survey for the following two JBIC Financed projects has been done:-
➢ Kohat Tunnel Construction Project
➢ Telecommunication Network Expansion Project

<u>Kohat Tunnel Construction Project</u>
Main objective of the project is to provide an alternative route to the existing road over Kohat Pass, which has numerous hairpin bends on steep thus resulting in a traffic bottleneck and it is anticipated that due to constant traffic growth it will become progressively more so in the future. Another objective is to assistant the socio-economic development of the southern districts of NWFP and also to help improve the communication between the Southern Areas and the Northern Areas of the Country. The project comprise of a tunnel approximately 28.2 km long by passing Kohat town and Dara Adam Khel.

<u>Telecommunication Network Expansion Project</u>
Objective of the project is to improve and expand the telecommunication network in order to satisfy the telephone demand and provide high-quality and more reliable service of telecommunications, thereby accelerating the commercial and industrial activities. The project included procurement, installation and commissioning of optical fibre cable, digital radio links, digital communication system of earth station, international transit switch and coast station.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
During the survey the local consultant provided support in survey of many ways those who know the detailed situation in Pakistan in terms of social, economical and political issues. The overall flow of the survey was:-

Confirm the status of the project and PCR edition, including the organizational setup data and information collected etc.
Fill the PCR form based on the data and information collected.
Follow up the executing agency to complete the PCR after the Mission.
Arrange appointments with the executing agency.
Confirm the current status of the project and PCR, including the organizational setup etc.
Discuss with the executing agency to confirm the availability of necessary information based on the PCR form.
Provide logistic services for the Japanese consultant including arrangement for accommodation, transportation, communication etc.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: National Emergency Employment Program Afghanistan		**Country:** Afghanistan
Location within Country: Afghanistan		**Number of person-months of the entire project:** Not Relevant
Name of Client: The World Bank, Islamabad - 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan		**Total value of full project (in million US$):** US $ 83.00 million approximately
No. of Staff: 1		**No. of Persons-Months:** 1.5
Start Date (Month/Year): December, 2004	**Completion Date (Month/Year):** February 2005	**Approx. Value of Services (in US$):** US $ 12,900/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

The senior staff include Community Infrastructure/Road Sector Specialist

Brief Narrative Description of Project:

NEEP (National Emergency Employment Project) involves primarily generating employment through provision of basic rural access and labor intensive construction of infrastructure by communities in all provinces of Afghanistan. Under the project, to date achievements have been the improvement of more than 7,000 km of rural roads, key remote airstrips (e.g., in Chaghcharan), more than 10,000 running meters of cross-drainage structures (bridges, culverts, cause-ways), conservation works (seeding, nursery rehabilitation, and canal cleaning), and other sundry rural infrastructure. To achieve this delivery, NEEP has to-date, implemented more than 1,500 sub-projects executed by local contractors and Shuras, while investing US$ 58.18 mil in infrastructure assets. Through three of the NEEP Projects (LIWP, NEEP-1, and NEEPRA) alone, an average of US$ 1.5 mil in infrastructure assets has been committed to-date in each province (translating to an average infrastructure investment of US$ 3/capita, inclusive of labor inputs)—actual assets worth an average US$ 0.8 mil/province have been created. More than 80 percent of the allocations have been to rural access projects, which, within the wide rural infrastructure portfolio, have provided nation wide coverage and substantial rates of return on investment. MPW and MRRD have been the lead implementing ministries, while UNOPS, CARE and other international agencies have been the implementing partners.

Description of Actual Services Provided:

The assignment involved a detailed review of the outputs under NEEP, an evaluation of the implementing agencies, review of design standards, specifications and contracts, implementation capacity, institutional arrangements and needs, extensive community interviews, and field visits to project sites to determine the future direction for the program. A review was carried out structured around four key issues, and covered the two key implementation ministries—Ministry for Public Works (MPW) and Ministry for Rural Rehabilitation and Development (MRRD)—and the large Donors (Wbank, ARTF, JSDF, EC, USAID, WFP) and Implementing Partners (UNOPS, ILO, CARE, IOM, and UNHCR):

- Future strategy and policy directions for the program;
- Greater clarity on ministerial roles, responsibilities and mandates;
- Performance of the various Implementation Partners;
- How to improve program management and delivery systems, and find ways in which the Government can assume greater ownership of the program.

The Provinces/District Road visited during NEEP review:-

Nagarhar (Achin Khogyani, Sherzad) Wardak, Balkh (Char bolak, Mazar, Dehbedi) Samangan (Feroz Naksher, Surbag) Kabul-Torkham and Kabul Solang.

A detailed report on the Infrastructure component of the project was prepared including evaluation of implementation partner organizations.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.64

<table>
<tr><td colspan="2">Assignment Name:

Cross Border Facility and Efficient Transit Facilitation at Chaman, Balochistan ADB TA No.4221-PAK</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Balochistan</td><td>Number of person-months of the entire project:

31.5</td></tr>
<tr><td colspan="2">Name of Client:

Asian Development Bank, 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines</td><td>Total value of full project (in million US$):

US $ 50.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

2</td><td>No. of Persons-Months:

4.13</td></tr>
<tr><td>Start Date (Month/Year):

January, 2005</td><td>Completion Date (Month/Year):

Jul 2005</td><td>Approx. Value of Services (in US$):

US $ 28,508/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

Engineering Consultants International (Pvt) Ltd., Pakistan
NEA Transport Research & Training Intl., Netherlands
CPCS Transcom, Canada</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
20.62

2.21
3.61</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

The senior staff includes Legal Specialist and Institutional Expert.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
To develop a concept, prepare a plan and complete a package including outline design and specifications, for a pilot cross border facility to be established and operated at the Chaman Border Point. The pilot cross border facility will take cognizance of the environment and opportunities for coordinated operating of immigration, customs, vehicles inspections, and health and other phytosanitary inspection. The facility must be administratively least cumbersome, client-friendly and transparent in all processes while fully complying with applicable government policies, regulations and interests.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
As a part of the team following tasks are being carried out during the course of the project:
• Briefly review all significant recent (last 5 years) assessments of trade facilities arrangements (including port clearance and storage fees and other levies) at ports and border crossings conduced by the Government of Pakistan or internal or external agencies, ascertain the validity of such assessments and analyze why any proposals, if any, have not been implemented.
• Review the major legal financial, and administrative issues affecting cross-border transit and trade between Pakistan and Afghanistan, and identify any major gaps and required changes in the 1965 Transit Agreement to develop a comprehensive transit agreement that considers the interest and concerns of both governments and the competitive situation.
• Identify review and assess the key issues on transit of goods and vehicles carrying such goods. The review will include but will not be limited to (a) regulation of vehicle movement across the borders (b) harmonization of vehicle standards on dimensions, weights axle loads, emissions etc. (c) harmonization and cross acceptability of roadworthiness inspection criteria.
• Evaluate the one-step pilot trade facilitation arrangements at Qasim Port and Karachi Port and any border crossings where similar efforts may be underway and delineate the primary causes of the success and failures of such efforts.
• Analyze existing and identify institutional and administrative arrangements required for the facility.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.63

<table>
<tr><td colspan="2">Assignment Name:

Balochistan Rural Development and Drought Mitigation Project – ADB TA No.4367</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Balochistan</td><td>Number of person-months of the entire project:

27.5 - approx</td></tr>
<tr><td colspan="2">Name of Client:

Asian Development Bank, 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines</td><td>Total value of full project (in million US$):

US $ 50.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

1</td><td>No. of Persons-Months:

2.5</td></tr>
<tr><td>Start Date (Month/Year):

February, 2005</td><td>Completion Date (Month/Year):

March 2005</td><td>Approx. Value of Services (in US$):

US $ 12,750/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

M/s Halcrow Pakistan (Pvt) Ltd.</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):

Lead Firm, approximately 25</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Rural Road Specialist</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The TA Project entails preparation of drought mitigation program for Balochistan and covers the sectors of livestock, irrigation, small dams, and community infrastructure Assess the requirements and priorities of communities for physical infrastructure. Review the existing rural road network in Balochistan and identify the improvements in road network needed in Drought affected areas with the consultation of communities in selected areas.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
As a part of the team following tasks are being carried out during the course of the project:
• Review the existing rural access road network in the project districts and the proposed plans and schemes of the provincial and district government including technical standards, costs and construction practices.
• Critically examine the repair and maintenance practices, costs, budgetary allocation and funding. In particular examine the appropriateness of performance based maintenance contracts, including institutional constraints to introducing these methods.
• Assess the extent of corruption in the performance of maintenance contractors, and recommend methods of limiting such practices
• Identify gaps and linkages in the existing and planned networks and in consultation with the district government indicate priority roads linkages for inclusion in the project.
• Prepare outline technical specifications, unit costs and cost estimates for road linkages to be included in the project and discuss these with the concerned district government staff.
• Develop selection criteria for various infrastructure sub-components.
• Develop monitoring indicators for sub-projects.
• Develop implementation procedures for sub-projects.
• Develop maintenance and sustainability procedures for sub projects.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.62

Assignment Name: Topographic Survey Work of National Highways		**Country:** Pakistan
Location within Country: Four Provinces of Pakistan		**Number of person-months of the entire project:** 180
Name of Client: National Highways Authority, Government of Pakistan - # 28 Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US$ 25.00 million
No. of Staff: 6		**No. of Persons-Months:** 180
Start Date (Month/Year): July, 2002	**Completion Date (Month/Year):** Jan 2006	**Approx. Value of Services (in million US$):** US $ 110,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** None

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
One Senior Design Engineer, Two Highway Engineers, One Chief Surveyor, Five Senior Surveyors supported by junior Surveyors and helpers for carrying out the assignment.

Brief Narrative Description of Project:
The project work includes carrying out topographic works of certain portions of existing & proposed National Highways, establishment of permanent control stations, detail inventory of structures at the given NHA format etc.

Description of Actual Services Provided:
Carrying out the detailed Topographic Surveys of proposed new highways, existing highways and bridges for National Highway Authority. Collection of all features, buildings, utilities structures, side roads on either side within 35 meters of the centre line of the proposed highway. Establishment of permanent control stations and horizontal control through EDM traversing. Establishment of vertical control through BM leveling. Detailed inventory of each structure and cross sections at 50m interval. Counting of trees. Plotting of survey data on AutoCad for use in RoadCalc and Moss Programs.

Type of Services provided:
Topographic Survey and detailed inventory of existing and new highways and bridge.

Fields of Specialization:
Construction Industry Development Sector:
Highway Industry
Transportation Sector:
Detailed Topographic Survey and inventory of the highway and preparation of topographic maps of all national highway projects.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.61

<table>
<tr><td colspan="2">Assignment Name:

Re-Engineering of new MRRD Office Building at Darulaman, Kabul, Afghanistan</td><td>Country:

Afghanistan</td></tr>
<tr><td colspan="2">Location within Country:

Kabul, Afghanistan</td><td>Number of person-months of the entire project:

11.5</td></tr>
<tr><td colspan="2">Name of Client:

The World Bank, Islamabad - 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan</td><td>Total value of full project (in million US$):

US $ 1.65 million</td></tr>
<tr><td colspan="2">No. of Staff:

5</td><td>No. of Persons-Months:

10</td></tr>
<tr><td>Start Date (Month/Year):

December, 2004</td><td>Completion Date (Month/Year):

30 June 2005</td><td>Approx. Value of Services (in US$):

US $ 28,827/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

The senior staff includes architect, structural engineer, electrical engineer, utilities engineer, contract specialist and supporting staff.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

Re-engineering of the new 3 storey MRRD office building at Darulaman, Kabul. The building is a 4,000 square meter office building with conference hall, audio video facilities, offices, and other features. All procurement documents prepared according to World Bank guidelines.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

The following tasks were carried out during the course of the project:
• Architectural detail drawings
• Structural design calculations
• Reinforcement detail drawings
• Rebar schedules
• Electrical layouts and detail drawings
• Heating and air conditioning layouts and detail drawings
• Plumbing and services layouts and detail drawings
• IT Layouts
• Bill of Quantities
• Engineer’s Estimate
• Detail Technical Specifications
• Contract Document based on the World Bank document as applicable
• Time schedule, showing when a tender package would be ready and a full construction package would be complete.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 60

<table>
<tr><td colspan="2">Assignment Name:
Post Evaluation Data Collection Survey (PEDACS) 2004 on JBIC Financed Projects in Pakistan</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

NWFP/Punjab/Sindh</td><td>Number of person-months of the entire project:

Not Applicable</td></tr>
<tr><td colspan="2">Name of Client:

M/s IC Net Limited Japan/JBIC</td><td>Total value of full project (in million US$):
US $ 4500.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

5</td><td>No. of Persons-Months:

6.75</td></tr>
<tr><td>Start Date (Month/Year):

20 Aug 2004</td><td>Completion Date (Month/Year):

30 Jan 2005</td><td>Approx. Value of Services (in US$):

US $ 45,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Transportation Planner, Railway Planner, Traffic Survey Specialist, Transportation Specialist, Railway Engineer along with office support staff etc.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Conducted the post evaluation survey for the following projects:-
➢ Indus Highway Project Phase I & II
➢ Pakistan Locomotive Factory Connection Project
➢ Diesel Electric Locomotives Rehabilitation Project
➢ Diesel Electric Locomotives Rehabilitation Project

The Ex-post monitoring survey, part of post-evaluation and monitoring activities of the Japan Bank for International Cooperation (JBIC), covers all the JBIC-financed Yen loan projects in their second year after completion. Main objectives of the post-evaluation are:-

To review the implementation, effectiveness and impact of the project, and draw valuable lessons for enhancing the quality of JBIC's assistance in the future.
To review the current situation, operation, maintenance and management of the completed projects and make recommendations to the Borrower/Executing Agency to ensure proper operation in the future.

The survey method consists of i) questionnaire based interviews wit the executing agencies, operation and maintenance agencies and relevant organizations ii) visit to project facilities and iii) interviews with direct beneficiaries. The questions are to address three areas of concerns (effectiveness, impact and sustainability).</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Following services were provided:-
➢ Support the Japanese consultant in collection and compiling data/information from various sources including NHA, MOCR, NTRC and NLC as well as making appointments, making logistical arrangements for field trips, and following up on data collection after the return of Japanese Consultant.
➢ Support in conducting individual / group interviews with such entities as bus/transportation companies and authorities of selected districts and to analyze the projects impact on transportation and regional development.</td></tr>
</table>

- Carry out traffic volume survey and OD survey at least six locations along the Indus Highway.
- Calculated EIRR for each of 5 sections of the Indus Highway improved by the Project using available data including the results of above survey.
- Analyze and describe the Indus Highway Project's impact on transportation of goods and passengers (including changes in transportation patterns/modes in national context).
- Analyze and describe the Indus Highway Project's impact on regional development and poverty alleviation using available socio-economic statistics, results of traffic survey and field trips to the two cities.
- Assess sustainability of NHA from financial, human-resources and institutional aspects and make recommendations, referring to the past studies by JBIC and using available information and new collection information.
- Collection and compiling data/information from Pakistan Railway including the data/information requested through questionnaires and the follow up data collection.
- Visit to Locomotive factory/workshop at Risalpur and Lahore with Japanese Consultant.
- Report on various aspects of the Project

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Supervision Services for the Construction of Makran Coastal Highway Project, Ormara Pasni Section II.		**Country:** Pakistan
Location within Country: Province of Balochistan		**Number of person-months of the entire project:** 552
Name of Client: National Highways Authority, Government of Pakistan - # 28 Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US $ 12.04 million
No. of Staff: 26		**No. of Persons-Months:** 552
Start Date (Month/Year): November, 2002	**Completion Date (Month/Year):** Jan 2005	**Approx. Value of Services (in million US$):** US $ 230,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Resident Engineers, Assistant Resident Engineers, Material Engineers and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.

Brief Narrative Description of Project:

This road section is the part of Makran Coastal Highway Project. Makran Highway Project starts from Karachi and ends at Gwadar passing Ormara and Pasni along the shore of Arabian sea. This is an important section of the national highway network connecting Karachi with the new port being constructed at Gwadar.

In this Contract, ACC was the nominated Engineer for the Project, and the interpretation and implementation of the COCs was the responsibility of the Engineer on behalf of the Client.

The COCs and bidding documents are based on FIDIC sample documents. The works were awarded to M/s AM Construction Co., (Pvt.) Ltd. And M/s Nazir and Company (Pvt.) Ltd. Pakistan.

Description of Actual Services Provided:

The following supervision tasks are being carried out during the course of the project:

- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Preparation of drawings for the offices of the Contractor
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.

- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Drought Emergency Rehabilitation Assistance (DERA) Program – Road Sector Analysis</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:
Sindh, Punjab and Balochistan Provinces</td><td>Number of person-months of the entire project:
Not Applicable</td></tr>
<tr><td colspan="2">Name of Client:

The World Bank, Islamabad - 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan</td><td>Total value of full project (in million US$):

US $ 40.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
1</td><td>No. of Persons-Months:
0.5</td></tr>
<tr><td>Start Date (Month/Year):
September, 2004</td><td>Completion Date (Month/Year):

December 2004</td><td>Approx. Value of Services (in US$):

US $ 3,350</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Infrastructure/Road Sector Specialist</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The DERA program supports the Government's strategy to revive the rural economy after the drought that hit the country in the late 1990s and lasted for nearly four years. Its objectives are to: (i) assist the Government to alleviate the impact of the drought by restoring and improving productive capacity and the livelihoods and incomes of people most severely impacted by the drought; and (ii) help alleviate the macroeconomic impact of the drought through financing essential drought related import costs associated with re-establishing productive capacity. The program has four components.

Component 1: Rural Water Sector (infrastructure) Rehabilitation. This component provides support for the recovery of livelihoods and rehabilitation of assets in rural sectors, in particular for improved water management. Estimated cost: US$36.5 million.

Component 2: Drought induced imports. This component provides support for essential imports necessary to restore productive capacity and assets that have been affected by drought conditions, including animal vaccines, agriculture and water sector equipment and inputs, petroleum and fuel products, construction and power generating machinery and seed and fertilizers. Estimated cost: US$125 million.

Component 3: Emergency Preparedness and Coordination. This was intended to support initial strengthening of emergency management preparedness and capacity building. Estimated cost: US$0.5 million.

Component 4: Program Implementation and Coordination: Support for overall management and coordination of the program including technical assistance. Estimated cost: US$3.0 million.

The project entailed evaluation of the DERA in meeting its objectives and targets. Services related to evaluation of infrastructure sector were provided.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
As a part of the Mission following tasks were carried out:
• Compile list of roads selected and constructed under the DERA, and gather information on the selection criteria and procedures related to Drought Mitigation and community participation.
• Randomly select schemes at different stages of implementation (schemes where construction is about to start, if any, to schemes where construction is completed).</td></tr>
</table>

- Assess the organization of the work, particularly the participation of local governments and communities in the schemes, discuss with communities and find out their level of participation in the construction phase, and how they intend to operate and maintain the schemes after completion of construction.
- Discuss with the contractors/communities about the work and identify issues that the contractor may have in carrying out the tasks
- Assess the quality of the works of visited schemes from the engineering/technical point of view, to determine if it meets the specifications/requirements of the contract, and if it meets standard practices.
- Assess the sustainability of the schemes based on discussion with communities, local government officials and contractors
- Identify areas where improvements are needed and prepare specific recommendations for improvement.
- Share the key findings of mission and recommendations to the Provincial DERA Coordinator before completing the mission and reach an understanding on ways to implement agreed actions.
- Submit a consolidated report for each province highlighting major findings and recommendation.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.57

<table>
<tr><td colspan="2">Assignment Name:
Supervision Services for the Construction of National Highway N-65 between Dera Allah Yar and Nuttal, 55 Kilometers.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:
930</td></tr>
<tr><td colspan="2">Name of Client:
National Highways Authority, Government of Pakistan # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):
US $ 12.15 million</td></tr>
<tr><td colspan="2">No. of Staff:
29</td><td>No. of Persons-Months:
930</td></tr>
<tr><td>Start Date (Month/Year):

May 2000</td><td>Completion Date (Month/Year):

Dec 2004</td><td>Approx. Value of Services (in million US$):

US $ 342,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Resident Engineers, Assistant Resident Engineers, Material Engineers and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
This road from Sukkur to Quetta, designated as N-65 by NHA, is an important section of the national highway network connecting the N-5, N-55 and N-25. Apart from being the only significant highway joining Balochistan and Sind provinces, it also feeds central part of Balochistan. The total length of existing highway between Sukkur and Quetta is about 385 Kms. The general living standard of the inhabitant of the road influence area is below the mark on account of poor infrastructure provisions. There is hardly any noteworthy industry except the recently constructed Uch Power Station.
In this Contract, ACC was the nominated Engineer for the Project, and the interpretation and implementation of the COCs was the responsibility of the Engineer on behalf of the Client. The COCs and bidding documents are based on FIDIC sample documents. The works were awarded to M/s Al-Khan Construction Co., Pakistan.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following supervision tasks were carried out during the course of the project:
• Staking out, verification of PRM and permanent benchmarks.
• Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
• Assist the client in land acquisition proceedings.
• Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
• Insitu testing of densities and compaction using AASHTO standards
• Preparation of Concrete Mix Designs and testing of Concrete.
• Preparation of Job Mix Formulae for Asphalt.
• Review and adjustments to geometric design and design of structures as per site requirements.
• Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
• Assisting the contractor in improving his logistics and methodology. Construction Management Support.
• Checking and verifying IPCs and overall contract administration.</td></tr>
</table>

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.56

<table>
<tr><td colspan="2">Assignment Name:
Feasibility Study and Detailed Design to Enhance the Traffic Handling Capacity of Marir Chowk and Gawalmandi Chowk</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Punjab</td><td>Number of person-months of the entire project:

20</td></tr>
<tr><td colspan="2">Name of Client:

Rawalpindi Development Authority</td><td>Total value of full project (in million US$):

US $ 7.00 Million</td></tr>
<tr><td colspan="2">No. of Staff:

10</td><td>No. of Persons-Months:

16</td></tr>
<tr><td>Start Date (Month/Year):

August, 2003</td><td>Completion Date (Month/Year):

Dec 2004</td><td>Approx. Value of Services (in million US$):

US $ 10,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

No</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
10</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Transport Economist, Highway Engineer, Bridge Engineer, Material Engineer, Survey Engineer, Traffic Engineer, Contract and Procurement Specialist and Environmental Expert.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project involved the feasibility study and detailed designing of underpasses, flyovers and bridges at Marir Chowk and Gawalmandi Chowk, Rawalpinidi. These two chowks are facing a huge problem of traffic congestions in urban area of Rawalpindi and thus there is an urgent need for improvement the traffic handling capacity of these areas in the context of overall plan of traffic and transportation development for the Murree Road. The project involves detailed topographic surveys, traffic surveys, turning movement surveys, materials testing, detailed designing of bridges and underpasses, costs estimates, economic analysis and tender documents.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks are being carried out during the course of the project:
• Condition surveys
• Traffic Surveys
• Topographic Surveys
• Conceptual Planning of Intersection
• Materials Testing
• Structures Design of Underpasses, Structures Design for Bridges and Flyovers
• Geometric Design & Pavement Design.
• Rigid Pavement Design
• Costs Estimates & Bill of Quantities
• Tender Documents
• Transportation Study & Economic Analysis & Preparation of PC-I
• Environmental Studies & Highway Safety Studies
• Rate Analysis & Engineer’s Estimate
• Contract Packaging
• Construction Drawings</td></tr>
</table>

Project Data Sheet No.56

Type of Services provided:

Design – Engineering etc., Soil Mechanics and Foundation Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Drawings, Structural Engineering, Material Testing, Traffic Engineering, Economic Analysis, Resettlement, Environmental, Community Infrastructure, Procurement

Fields of Specialization:
Construction Industry Development Sector:
Detailed Implementation Plans
Environmental Sector

Transportation Sector:

Urban Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Traffic Surveys and Analysis, Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.55

<table>
<tr><td colspan="2">Assignment Name:
Detailed Design of Improvement and Rehabilitation of Kalat – Quetta – Chamman Section of N-25 (240 Kms).</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:
50</td></tr>
<tr><td colspan="2">Name of Client:
National Highways Authority, Government of Pakistan # 28 Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):
US $ 80.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
18</td><td>No. of persons-months:
36</td></tr>
<tr><td>Start Date (Month/Year):
May 2004</td><td>Completion Date (Month/Year):

August 2004</td><td>Approx. Value of Services (in million US$):
US $ 117,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm (s), If Any:

M/s ACE (Pvt.) Ltd. Lahore</td><td>No. of Months of Professional Staff Provided by Associated Firm (s):

14</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Sr. Design Engineer, Structural Engineer, Hydrologist, Highway Design Engineer, Transport Economist, Measurement Engineer, Material Engineers, Two Staff Engineers, Hydrologist, CAD Draftsmen, Laboratory Technician and other supporting staff were employed to carry out detailed survey, design, technical and economic feasibility and tender documents preparation.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Design review for the Improvement and Rehabilitation of Kalat – Quetta – Chamman Section of N-25 (240kms) including improvement of alignment, highway geometrics and design of cross drainage structures. The project was financed by Asian Development Bank under the Balochistan Road Development Sector Project.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The work entailed detailed topographic survey, study on alternate alignments, fixing of permanent reference monuments and establishing permanent benchmarks.
• Design Review
• Topographic surveys
• Soil and sub soil investigations, study of borrow sources and their analyses, traffic counts and surveys, design of major intersections and traffic flow analyses, axle loads study and related analyses, Origin Destination Surveys.
• Roughness Surveys
• Hydrological studies, Structural design of bridges and cross drainage structures.
• Existing pavement evaluation using FWD Deflection Method, Present Serviceability Ratings, Effective Thickness Method, Capacity Analysis
• Study on Land Acquisition and Right of Way, Reports on Relocation Requirements for Utilities
• Pavement Design
• Preparation of Construction Drawings, Bill of Quantities, preparation of Mass Haul Diagram, preparation of specifications, tender documents.
• Determination of VOCs and preparation of economic feasibility report.
• Toll study and analysis
• Land acquisition studies</td></tr>
</table>

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Material Testing.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning, Traffic/Origin-Destination Surveys, Demand forecasting, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, Bridges (Road Transportation Facilities), Highways Safety, Road Transport Economics.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.54

<table>
<tr><td colspan="2">Assignment Name:

ADB Assisted NWFP Roads Development Sector Project, TA No. 4116-PAK</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of NWFP</td><td>Number of person-months of the entire project:

60</td></tr>
<tr><td colspan="2">Name of Client:

Asian Development Bank - # 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines</td><td>Total value of full project (in million US$):

US $ 100.00 million</td></tr>
<tr><td colspan="2">No. of Staff: 13</td><td>No. of Persons-Months: 50</td></tr>
<tr><td>Start Date (Month/Year):

October, 2003</td><td>Completion Date (Month/Year):

May 2004</td><td>Approx. Value of Services (in million US$):

US $ 289,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

M/s Dainichi, Japan</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
10</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Transport Economist, Highway Engineer, Bridge Engineer, Material Engineer, Survey Engineer, Traffic Engineer, Contract and Procurement Specialist, Resettlement Expert, Environmental Expert and Social & Poverty Expert.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
NWFP Road Development Sector Project involves screening and prioritization of more than 2500 km rural and provincial roads based on the economic analysis of the project on HDM-4. Economic analysis and feasibility studies of more than 200 kms of National Highways including Peshawat Torkhum Section of N-5 and Sarai Gambila to Milana Junction of Indus Highway N-55, 2500 km of rural and provincial roads. National, provincial and rural roads have to be selected based upon the economic returns. Socio economic and poverty studies of all the project roads including national, provincial and rural roads. Resettlement and Environmental analysis of core roads including rural & and provincial roads and national highways will be carried out. Detailed design of 400 kms of core rural and provincial roads which includes the detailed topographic surveys, geo-tech and materials testing, traffic analysis, axle load surveys, OD surveys, geometric and pavement design, hydrological studies and structures design, rate analysis and engineers estimate and contract documentation. Work also involves preparation of contract packages. Detailed implementation plans and financial layout of the loan. Work also involves preparation of pre-qualification documents for Contractors.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks were out during the course of the project:

Screening and Prioritization of roads, Roughness surveys, Deflection surveys, Socio economic surveys, Economic Surveys based upon HDM-4, Poverty Analysis and surveys, Environmental Surveys and analysis, Resettlement Analysis, Community Analysis, Training needs assessment, Institutional Development studies, Detailed Implementation Plan Traffic Surveys, Axle Load Surveys, Origin Destination Surveys Highway/Traffic Safety Studies, Rate Analysis & Engineer's Estimate, Procurement Studies & Contract Packaging, Preparation of Pre-Qualification Documents for Contractors, Cross Border Analysis & Contract Documents, Construction Drawings</td></tr>
</table>

Type of Services provided:
Design – Engineering etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Drawings , Structural Engineering, Material Testing, Traffic Engineering, Economic Analysis, Resettlement, Socio and Poverty, Environmental, Community Infrastructure, Procurement.

Fields of Specialization:

Construction Industry Development Sector:
Detailed Implementation Plans
Environmental Sector, Resettlement Sector, Socio and poverty Sector

Transportation Sector:
Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Traffic Surveys and Analysis, Axle Load Surveys and Analysis, Highways Safety.

List of Roads

S.No	Projects Name	District	Road Length
1	Jehangira-Swabi Package-I (Jehangira To Manaki)	Swabi	11.00
2	Jehangira-Swabi Package-II (Manaki To Kunda More)	Swabi	12.00
3	Jehangira-Swabi Package-III (Kunda More To Swabi Road)	Swabi	9.85
4	Kohat-Thal Package-I (Hangu To Muhammad Khwaja)	Kohat/Hangu	12.00
5	Kohat-Thal Package-II (Muhammad Khwaja To Azimi Banda)	Kohat/Hangu	12.00
6	Kohat-Thal Package-II (Azimi Banda - Darsamand Nullah Doaba)	Kohat/Hangu	13.68
7	Kohat-Thal Package-I (Doaba To Thal Cantt)	Kohat/Hangu	13.52
8	Kohat-Thal Package-II (Thal Cantt To Kurram Agency)	Kohat/Hangu	10.45
9	Kohat-Thal Package-III (Hangu To Thal)	Kohat/Hangu	-
10	Batai-Kalail Kandao-Bar Kokhand (Section-I)	Bunair	8.40
11	Batai-Kalail Kandao-Bar Kokhand (Section-II)	Bunair	9.84
12	Gullu Bandi-Mong Via Kidu Pinju and Kali Tarar	Haripur	5.01
13	Karar-Berat Jinkiari Road	Manshera	4.45
14	Enzergai-Barorosar Road	Malakand	3.05
15	Maira Amjad Ali Road	Manshera	5.50
16	Umerzai-Harichand Dargai (Section-I)	Charsadda	10.00
17	Umerzai-Harichand Dargai (Section-II)	Charsadda	11.62
18	Patriak-Kalkot-Thall-Badgoi (Section-I)	Upper Dir	10.00
19	Patriak-Kalkot-Thall-Badgoi (Section-II)	Upper Dir	9.57
20	Sarqalla-Martung (Section-I)	Bunair	13.50
21	Sarqalla-Martung (Section-II)	Bunair	10.15
22	Lahor-Baika-Jabbal-Jehangira	Swabi	20.00

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Supervision of Pakistan Poverty Alleviation Fund Project Phase-I Program</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

All Over Pakistan</td><td>Number of person-months of the entire project:
Not Relevant</td></tr>
<tr><td colspan="2">Name of Client:
The World Bank, Islamabad - 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan</td><td>Total value of full project (in million US$):
US $ 28.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
1</td><td>No. of Persons-Months:
1</td></tr>
<tr><td>Start Date (Month/Year):
March, 2004</td><td>Completion Date (Month/Year):

April 2004</td><td>Approx. Value of Services (in US$):

US $ 6,500/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Aized Hasan Mir, Sr. Consultant Community Infrastructure</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
PPAF Phase-I was started in order to address the alarming levels of poverty and lack of access to opportunities amongst the poor communities of Pakistan. Funded by the World Bank, in a short period of three years, the project has delivered through its partner organization (NGOs) over 6,500 Community Physical Infrastructure projects benefiting over 3.7 million persons in 75 districts of Pakistan. In addition to grants to communities for infrastructure, micro credit is also being provided to the poor for livestock, farm inputs, small businesses, transport etc., The Bank being the donor agency carries out supervision missions on a regular basis of the project and NGOs. These involve review of all operational manuals, environmental monitoring reports, progress reports, benefit monitoring and evaluation, targets and objectives, cost analysis, specifications, community participation, implementation bottlenecks and constraints at both the PPAF and NGO levels. The purpose being to identify areas where administrative, procedural and technical improvements could be done to further improve the efficiency and efficacy of the program. The supervision mission also involved village immersion within the beneficiary communities households in Punjab in order to appreciate, first hand, their daily struggles in life.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

As a part of the Mission, the following tasks were carried out:
• Evaluate achieving Synergies through integrated CPI delivery and other PPAF Assisted interventions
• Evaluate progress in Alliance building and components sharing with local governments and other donors
• Review the use of appropriate technologies and diffusion of innovations
• Review environmental conservations and sustainable development objectives and achievements
• Participate in village immersion missions with the Bank staff.
• Analyze and review technical specifications, institutional arrangements, operational procedures of PPAF and NGOs
• Evaluate targets and achievements, and quality assurance being carried out through top supervision
• Review and analyze the Benefit monitoring and evaluation (BME) systems of PPAF and NGOs
• Review progress achieved in the Drought mitigation and preparedness – Pilot project Rodh Malazi
• CPI Credit Facility (CCF) for One-site Interventions
• Prepare Supervision mission aide memoir</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.52

<table>
<tr><td colspan="2">Assignment Name:
Review of Procurement Procedures of Capital Development Authority, Islamabad</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Islamabad, Pakistan</td><td>Number of person-months of the entire project:
06</td></tr>
<tr><td colspan="2">Name of Client:
Public Procurement Regulatory Authority (PPRA), Finance Division, Govt. of Pakistan, , 1st Floor, Federal Bank for Cooperatives, Attaturk Avenue, G-5/2, Islamabad</td><td>Total value of full project (in million US$):

N.A</td></tr>
<tr><td colspan="2">No. of Staff:
1</td><td>No. of persons-months:
06</td></tr>
<tr><td>Start Date (Month/Year):
May 2003</td><td>Completion Date (Month/Year):

Nov 2003</td><td>Approx. Value of Services (in million US$):
US $ 10,000/-</td></tr>
<tr><td colspan="2">Name of Lead Firm (s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm (s):
Nil</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Aized Hasan Mir, Procurement Specialist</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Public Procurement Regulatory Authority (PPRA) has undertaken a review of procurement procedures of major public sector departments, the assignment required review of procurement procedures of Capital Development Authority, re-engineering and design of standard bidding documents, and preparation of procurement manual in compliance with PPRA rules. The overall objective being to bring transparency and efficiency in public procurement of goods, services and works.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The services provided:

Collection and compilation of all existing procurement regulations, procedures and practices for procurement of goods, services and works, including appeal and grievance redressal procedure, bid/tender evaluation methodology and existing delegation of powers.

Identification of existing procurement procedures applicable during emergency and extraordinary conditions.

2. A critical review and analysis of existing procurement procedure and practices with a view to:
i) Identify redundant procedures and practices resulting in non-transparency and corruption as well as expensive and substandard procurement of goods, services and works.
ii) Analyze quality of bidding documents and bid evaluation procedure.
iii) Analyze existing mechanism for ensuring transparency and accountability.

3. Review of existing code of ethics & conduct.
4. Undertake complete and comprehensive re-engineering of regulations, procedures and policies of public sector entity for transparent procurement, inspection and quality of goods, services and works with a view to:
• Devise new mechanism and procedures for public procurement for ensuring transparency & accountability in public procurement.</td></tr>
</table>

- Laying down code of ethics, bid evaluation guidelines as well as review of existing standard bidding documents.
- Propose steps for improvement, transparency and accountability
- Prepare simplified procurement procedures for advertisement, contract award etc.
- Develop procedures for procurement monitoring.
- Make recommendations for improvement in institutional framework of public sector entities.

5. Identify potential for indigenous development of goods, services and works and propose procurement systems and procedures fostering indigenous technology development leading to indigenous manufacture of goods services, and works.
6. Undertake an assessment of the quality and competence of procurement professionals and make recommendations for procurement management capacity building in order to improve transparency and reduce corruption.
7. Define and identify emergency situations and to recommend appropriate procurement procedures applicable during emergencies calling for immediate and prompt procurement of goods, services and works to expeditiously meet extraordinary conditions. Such recommended procedure shall ensure transparency and prompt response to the emergency situations.

Type of Services provided:

Policy Studies, Planning Studies, Procurement Services, Technical Assistance and Advisory Services, Management Information Systems, Institutional Strengthening/Restructuring, Organizational Development Studies, Training and Transfer of Technology, Legal Services.

Fields of Specialization:

Construction Industry Development Sector:
General, Institution Buildings.

Energy Sector:
General

Industry Sector:
Industry General

Transportation Sector:
General

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.51

<table>
<tr><td colspan="2">Assignment Name:
Preparation of Second Pakistan Poverty Alleviation Fund, infrastructure component</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

All Over Pakistan</td><td>Number of person-months of the entire project:
Not Applicable</td></tr>
<tr><td colspan="2">Name of Client:
The World Bank, Islamabad - 20-A Shaharah-e-Jamhuriat, G-5/1, Islamabad, Pakistan</td><td>Total value of full project (in million US$):
US $ 238.00 million</td></tr>
<tr><td colspan="2">No. of Staff:
1</td><td>No. of Persons-Months:
1</td></tr>
<tr><td>Start Date (Month/Year):
June, 2003</td><td>Completion Date (Month/Year):

July 2003</td><td>Approx. Value of Services (in US$):

US $ 5,200/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: (Specialist Input / Individual Experience)

Aized Hasan Mir Sr. Consultant Community Infrastructure Projects</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
During Pakistan Poverty Alleviation Fund (PPAF) Phase-I $28 million were provided for 2,500 Community Physical Infrastructure projects benefiting 3.7 million persons in over 75 districts of Pakistan. Projects were implemented through 28 partner organizations (NGOs) of PPAF. Several supervision missions were undertaken by the Bank and areas identified where further administrative, procedural and technical improvements could be done to further improve the efficiency and efficacy of the program. The purpose of this Appraisal Mission was to evaluate the progress achieved under Phase I and assist the Bank in preparing the Project Appraisal Document for planned Phase-II Program - determine targets, performance and monitoring indicators, scope of CPI projects, technology initiatives and procedures of enhancing capacity of POs (NGOs).</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
As a part of the mission, following tasks were carried out:
• Evaluate the proposed plans for Phase-II and the strategies and mechanisms for implementation of each CPI sub program – finalize targets for Phase II program.
• Review the Bank Rural Access and Mobility report (John Howe, 2002) and explore the possibility of developing a business line in Rural Access and Mobility (Infrastructure + Micro finance + CB)
• Agree with the PPAF the targets and mechanisms to be adopted to achieve the delivery targets
• Agree on Performance Monitoring and Evaluation Criteria
• Evaluate and identify potential bottlenecks in proposed Phase-II, agree on proposed remedial actions.
• Analyze proposed CPI staff career development paths and expansion of the unit to handle increased projects scope.
• Review the CPI unit operations manual and other relevant documents, suggest measures to improve keeping in view the enhanced scope of CPI.
• Review and finalize PPAF selection and eligibility criteria, including per capita limits, the size of the community contribution, and possibility of loans for infrastructure.
• Assess the capacity and evaluate training needs of partner organizations
• Review the impact assessment of CPI interventions and plans for Phase-II
• Discuss the appropriate technology plan of PPAF and agree on targets and objectives
• Discuss and finalize drought mitigation and preparedness plans and steps taken to address critical issues
• Assist in preparation if Project Appraisal Document for Phase II $USD 238 million program.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.50

<table>
<tr><td colspan="2">Assignment Name:
ADB Assisted Balochistan Roads Development Sector Project, TA No. 3897-PAK</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Balochistan</td><td>Number of person-months of the entire project:

60</td></tr>
<tr><td colspan="2">Name of Client:

Asian Development Bank - # 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines</td><td>Total value of full project (in million US$):

US $ 150.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

13</td><td>No. of Persons-Months:

50</td></tr>
<tr><td>Start Date (Month/Year):
Feb, 2003</td><td>Completion Date (Month/Year):

August, 2003</td><td>Approx. Value of Services (in million US$):
US $ 381,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

M/s Dainichi, Japan</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):
10</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
The senior staff includes Transport Economist, Highway Engineer, Bridge Engineer, Material Engineer, Survey Engineer, Traffic Engineer, Contract and Procurement Specialist, Resettlement Expert, Environmental Expert and Social & Poverty Expert.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Balochistan Road Development Sector Project involves screening and prioritization of more than 3000 km rural and provincial roads based on the economic analysis of the project on HDM-4. Economic analysis and feasibility studies of 500 km of National Highways including Kalat-Quetta-Chamman Section and Gwadar Turbat Section of M-8, 1200 km of rural and provincial roads and 250 km national highways are selected based upon the economic returns. Socio economic and poverty studies of all the project roads including national, provincial and rural roads. Resettlement and Environmental analysis of 6 core roads covering 400 km of rural & and provincial roads and 250 km of national highways. Detailed design of 400 kms of core rural and provincial roads which includes the detailed topographic surveys, geo-tech and materials testing, traffic analysis, axle load surveys, OD surveys, geometric and pavement design, hydrological studies and structures design, rate analysis and engineers estimate and contract documentation. Work also involves preparation of contract packages and detailed TORs for the construction supervision of Consultants. Detailed implementation plans and financial layout of the loan. Work also involve preparation of pre-qualification documents for Contractors.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The following tasks were carried out during the course of the project:
• Screening and Prioritization of roads
• Roughness surveys
• Deflection surveys
• Socio economic surveys
• Economic Surveys based upon HDM-4
• Poverty Analysis and surveys
• Environmental Surveys and analysis
• Resettlement Analysis
• Community Analysis
• Training needs assessment
• Institutional Development studies
• Detailed Implementation Plan Traffic Surveys
• Axle Load Surveys, Origin Destination Surveys
• Highway / Traffic Safety Studies</td></tr>
</table>

- Rate Analysis
- Engineer's Estimate
- Procurement Studies
- Contract Packaging
- Preparation of Pre-Qualification Documents for Contractors
- Cross Border Analysis
- Contract Documents
- Construction Drawings

Type of Services provided:

Design – Engineering etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Drawings , Structural Engineering, Material Testing, Traffic Engineering, Economic Analysis, Resettlement, Socio and Poverty, Environmental, Community Infrastructure, Procurement

Fields of Specialization:
Construction Industry Development Sector:
Detailed Implementation Plans
Environmental Sector
Resettlement Sector
Socio and poverty Sector

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Traffic Surveys and Analysis, Axle Load Surveys and Analysis, Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.49

Assignment Name: Design and Construction supervision of approach road to Shell Depot Chaklala		**Country:** Pakistan
Location within Country: Province of Punjab		**Number of person-months of the entire project:** 18
Name of Client: Shell, Pakistan (Shell Depot Chaklala, Rawalpindi)		**Total value of full project (in million US$):** US $ 0.05 million
No. of Staff: 6		**No. of Persons-Months:** 15
Start Date (Month/Year): Jan 2002	**Completion Date (Month/Year):** Apr 2002	**Approx. Value of Services (in million US$):** US $ 10,000/-
Name of Associated Firm(s), If Any: Nil		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Project Engineer and Planning Engineers. Detailed engineering design teams consist of Highway Engineer, Structure Engineer, Material Engineer, Traffic Engineer & Quantity Surveyor. The Project also includes the complete supervision of the project and the staff includes 1 Assistant Resident Engineers, 1 Material Engineers and 1 Quantity Surveyors.

Brief Narrative Description of Project:

The project requires rehabilitation and construction of the existing road going towards Shell Oil Depot Chaklala, Rawalpindi and is used by heavy loaded oil tankers. The project has to be deigned to cater for the heavy traffic. We have introduced the crushed water bound macadam at this project and proper construction supervision was done. By providing a thick layer of WBm, thickness of asphalt was reduced to just 4 inches. For the asphalt refusal density tests and softening point tests were introduced in the specifications.

Description of Actual Services Provided:

The following supervision tasks are being carried out during the course of the project:

- Detailed Topographic Surveys
- Traffic analysis
- Detailed Geometric Design
- Detailed Engineering Design consists of Pavement design, Hydrological Studies, Structural design
- Bidding Documents and BOQs
- Detailed Construction Supervision
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.

Type of Services Provided:

Design –/ Engineering / etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration, Material Testing, Quality Control

Fields of Specialization:

Construction Industry Development Sector:
Construction Management,

Transportation Sector:

Transportation Planning, Highway Planning, Research and Development, New Highways/Improvements & Reconstruction,

Urban Development Sector:
Strategic Development Planning and transport Planning

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.48

Assignment Name: Detailed Engineering Design & Construction Supervision of Asian Development Bank financed Rural Access Roads Project Phase-I Balochistan - Loan 1185 & 1401 Pak (SF)		**Country:** Pakistan
Location within Country: Province of Balochistan		**Number of person-months of the entire project:** 3510
Name of Client: Communication & Works Department, Government of Balochistan.		**Total value of full project (in million US$):** US $ 20.67 million
No. of Staff: 45		**No. of Persons-Months:** 3510
Start Date (Month/Year): May 1995	**Completion Date (Month/Year):** December 2001	**Approx. Value of Services (in million US$):** US $ 2,242,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

During design the senior staff comprised of a Technical Manager, highly experienced Highway, Bridge, Materials and Pavement, Design Engineers, measurement engineer, surveyors and other technical staff with extensive experience in detailed engineering design of roads and bridges. The design work is completed and supervision services are now being provided during construction.

The supervision staff comprises of a Chief Resident Engineer, Resident Engineers, Material Engineers, Site Engineers, Laboratory Technicians, Surveyors and Quantity Surveyors.

Brief Narrative Description of Project:

The project comprised detailed engineering design and construction supervision of rural roads totaling 188 kilometers. The road projects are: Anjira to Zehri, Mangochar to Zard, Panjgur to Gwargo and Kingri to Musakhel. Design stage which included major bridges has been completed and Construction supervision has been started on the four project roads:-

Kingri-Musakhel Road	58.962 kms
Anjira-Zehri Road	57.850 kms
Mangochar-Zard Road	47.420 kms
Panjgoor-Gwargo Road	29.390 kms

Description of Actual Services Provided:

The design work entailed topographic survey, soil investigations and surveys, route alignment studies, traffic studies, pavement design, retaining walls, hydrological studies, and design of cross drainage structures including 9 major bridges, river training works, guide banks, protection works and preparation of all tender documents, BOQ, Engineers Estimates, Specifications and Drawings.

After design stage was completed, services for pre-qualification of contractors, NIT, pre-bid meetings, bid evaluations and recommendations for awards were provided.

For the supervision stage, staff including Project Coordinator, Resident Engineers, Material Engineers, Site Inspectors/Engineers, Laboratory Technicians, Surveyors and Quantity Surveyors have been deputed to ensure construction as per specifications and provide project management support to the client.

Project Benefit Monitoring and Evaluation is also being carried out.

Type of Services provided:

Hydrological Surveys, Soil Surveys, Topographic Surveys, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management/Administration (on behalf of owner), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Agriculture & Rural Development Sector:
Rural Development Planning, Physical Infrastructure, Flood/River Control Works

Construction Industry Development Sector:
Construction Management

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Policies & Investment Programs, Highway Planning & Programming, Rural Feeder Roads (Farm to Market) (Highway Planning & Programming), New Highways/Improvements & Reconstruction, Rural Feeder Roads (Farm to Market) New Highways, New Structures/Reconstruction, Bridges (Road Transportation Facilities), Highways Safety, Road Transport Economics.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Assignment Name: Detailed Engineering Design & Construction Supervision of Asian Development Bank financed Rural Access Roads Project Phase-I Sindh - Loan 1185 & 1401 Pak (SF)		**Country:** Pakistan
Location within Country: Province of Sindh		**Number of person-months of the entire project:** 5000
Name of Client: Communication & Works Department, Government of Sindh.		**Total value of full project (in million US$):** US $ 45.00 million
No. of Staff: 36		**No. of Persons-Months:** 2160
Start Date (Month/Year): June 1995	**Completion Date (Month/Year):** December 2001	**Approx. Value of Services (in million US$):** US $ 2,056,000/-
Name of Associated Firm(s), If Any: M/s ABM in association with M/s Osmani & Co.		**No. of Months of Professional Staff Provided by Associated Firm(s):** 1680

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff comprised of a Technical Manager, highly experienced Highway, Bridge, Materials and Pavement Design Engineers, Contract Documents Specialist and support staff with extensive experience in detailed engineering design of roads and bridges. The supervision staff comprises of a Chief Resident Engineer, Resident Engineers, Material Engineers, Site Engineers, Laboratory Technicians, Surveyors and Quantity Surveyors.

Brief Narrative Description of Project:

The project comprised detailed engineering design and construction supervision of roads totaling 398 kilometers in Districts Dadu, Shikarpur, Sukkur, Nawabshah, Badin and Thatta including several major bridges.

ACC (Pvt) Ltd. was the lead consultant for the project. Design stage completed and Construction supervision was provided. The associated firms are responsible for the districts of Nawabsha, Badin and Thatta.

Description of Actual Services Provided:

The design work entailed topographic survey, soil investigations, hydrological surveys, route alignment studies, traffic studies, pavement design, design of bridges and structures, river training works/flood control measures, quantity estimation, specifications, environmental assessment studies and preparation of all tender documents and drawings as per ADB guidelines. A total length of 210 k of rural roads were designed by ACC as detailed below:-

District Dadu

Road # 25503-A	Karimori to Mian Nasir Mohammad	12.000 kms
Road # 25503-B	Karimori to Mian Nasir Mohammad	12.545 kms
Road # 25503-B	Karimori to Mian Nasir Mohammad	Brdiges
Road # 25505	Sita to K.N Shah at Choudagi to Mehr	12.189 kms
Road # 25505	Sita to K.N Shah at Choudagi to Mehr	Bridges
Road # 25508	Jhangara to Nawab Khan Rind	04.651 kms
Road # 25508	Jhangara to Nawab Khan Rind	Causeway
Road # 25511	Jhangara to Bandani	16.281 kms
Road # 25511	Jhangara to Bandani	Causeway

Project Data Sheet No.47
Page 2 of 2

District Sukkur

Road # 21101-A	Urror to Pir Bachal Shah	15.000 kms
Road # 21101-B	Urror to Pir Bachal Shah	15.000 kms
Road # 21101-C	Urror to Pir Bachal Shah	11.000 kms
Road # 21101-D	Urror to Pir Bachal Shah	11.000 kms
Road # 21102-A	Sangrar to Rohri Saleh Pat Road	08.000 kms
Road # 21102-B	Sangrar to Rohri Saleh Pat Road	08.817 kms

District Shikarpur

Road # 21601	Road to Ali Khan Goheja	07.624 kms
Road # 21602-A	Khanpur to Garhi Syed	16.342 kms
Road # 21602-B	Zerkhail to Mian Jo Goth	06.903 kms
Road # 21603	Salar to Darwesh	07.008 kms
Road # 21604-A	Garhi Yasin to Jaggan	10.000 kms
Road # 21604-B	Garhi Yasin to Jaggan	08.897 kms

For the supervision stage, all necessary staff to provide full time supervision was deputed to ensure construction as per specifications and provide project management support to the client. Project Benefit Monitoring and Evaluation Studies and post project evaluation was also provided by ACC.

Type of Services provided:
Hydrological Surveys, Soil Surveys, Topographic Surveys, Regional Development Plans, Planning Studies, Feasibility Studies, Economic Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management/Administration (on behalf of owner), Material Testing, Quality Control, Project Post-Evaluation, Project Monitoring and Evaluation.

Fields of Specialization:
Construction Industry Development Sector:
Construction Management

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Policies & Investment Programs, Highway Planning & Programming, Rural Feeder Roads (Farm to Market) (Highway Planning & Programming), New Highways/Improvements & Reconstruction.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:
Civil Structures Building Works for 7.5 MW Thermal Power Plant Project at Attock Refinery Limited.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Rawalpindi, Province of Punjab</td><td>Number of person-months of the entire project:

24</td></tr>
<tr><td colspan="2">Name of Client:

Attock Refinery Ltd., Morgah Rawalpindi</td><td>Total value of full project (in million US$):

US $ 22.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

8</td><td>No. of persons-months:

24</td></tr>
<tr><td>Start Date (Month/Year):

October 1999</td><td>Completion Date (Month/Year):

March 2001</td><td>Approx. Value of Services (in million US$):

US $ 22,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm (s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm (s):
Nil</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Sr. Structural Designer, Road Designer, Water Supply and Sanitation Design Engineer, and Architect for design. For top supervision one Sr. Engineer supported by a Site Engineer, Surveyor and one Lab. Technician.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:

A 7.5 MW Power Plant in Attock Refinery Limited, Morgah Rawalpindi was to be constructed for which detailed design and supervision services were provided to the Contractor as a joint venture in this turnkey project. The civil works contractor was responsible for construction of the power plant and ancillary buildings.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:

Detailed architectural design and construction drawings for civil works were prepared for a 7.5 MW Power Plant. The work entailed:-

• Main Power House Design = 1930 sqm
• Tank Farm Area = 110 sqm
• Purifier Room Area = 110 sqm
• Cooling Tower Area = 125 sqm
• Workshop and Maintenance areas = 125 sqm
• Internal Road = 0.5 km
• Foundation designs for heavy equipment including generators
• Storm Water Drainage
• Pipe Rack supports
• Steel Tanks
• Water Supply, Plumbing and Sanitation
• Interior and exterior finishes
• Preparation of detailed BOQ

After approval of design, top supervision and on site supervision of construction were provided.</td></tr>
</table>

Type of Services provided:

Soil Surveys, Topographic Surveys, Technical Studies, Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Earthquake Engineering, Quantity Surveying / Cost Estimating, Estimation/Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/ Inspection of Construction, Technical Assistance and Advisory Services, Materials Testing, Quality Control.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Energy Sector:
General

Industry Sector:
Industrial Plant/Factory Buildings

Urban Development Sector:
Office Buildings Design, Building Construction Management, Land Development (Residential/Commercial/ Industrial), Municipal Services

Water Supply and Sanitation Sector:
Water Supply, Water System Planning & Design, Sewage Treatment, Storm Drainage.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.45

Assignment Name: Preparation of Proposal for Design & Construction of Highway on a New Alignment Across Lakh Pass on BOT basis - National Highway N-40.		**Country:** Pakistan
Location within Country: Province of Balochistan		**Number of person-months of the entire project:** 20
Name of Client: M/s Rakhshani Builders – # 17, 1st Floor, Regal Plaza, Quetta, Balochistan, Pakistan Ph:081-2835474		**Total value of full project (in million US$):** US $ 4.20 million
No. of Staff: 6		**No. of Persons-Months:** 20
Start Date (Month/Year): October 2000	**Completion Date (Month/Year):** March 2001	**Approx. Value of Services (in million US$):** US $ 20,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
One Highway Engineer, one Structural Engineer, one Pavement Engineer, one Material Engineer, one Transport Economist and one Contracts Specialist were deployed for this assignment.

Brief Narrative Description of Project:
A proposal was prepared for a private investor for re-alignment of National Highway N-40 across Lakh Pass near Quetta on a BOT basis for a 25 year concession period. The existing alignment has steep gradients of 10 to 14% with sharp hair pin bends. The project envisages a new alignment and extensive cutting of over 85 meters depth in order to improve the gradients to less than 6% and meeting horizontal geometric standards as per AASHTO. The proposal has been accepted by the Employer National Highway Authority, MOC, Govt. of Pakistan and concession agreement is about to be signed.

Description of Actual Services Provided:

The services provided included

- Preliminary Topographic Survey
- Study of Alternative Alignments
- Soil, Borrow Sources, Quarries and their analysis
- Traffic Counts and Surveys
- Axle Loads Study
- Capacity Analysis
- Preliminary Pavement Design
- Preliminary Geometric Design
- Preparation of Typical Cross Sections
- Land Acquisition Studies
- Relocation of Utilities
- Organization for Road Building and Operating Company
- Operating and Maintenance Resource Planning
- Work Plan

- Preliminary Bill of Quantities and Estimates
- Review of Concession Agreement, Conditions of Contract
- Toll Rates/User Charges Study
- Financial Analysis
- Financing Arrangements
- Bid Negotiations

Type of Services provided:

Topographic Surveys, Planning Studies, Feasibility Studies, Economic Studies, Financial Studies, Tariff Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Architectural / Engineering/ Industrial etc., Quantity Surveying / Cost Estimating, Estimation/Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction, Maintenance of Highways, Organization / Funding & Programming, Highway Legislation, Highway Safety, Road Transport Economics, Road User Charges, Financial Analysis / Costing & Tariffs (Road Transportation Industry).

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

<table>
<tr><td colspan="2">Assignment Name:

Preparation of Proposal for Construction of Lahore – Faisalabad Highways on BOT basis.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Punjab,</td><td>Number of person-months of the entire project:

20</td></tr>
<tr><td colspan="2">Name of Client:

Frontier Works Organization - # 509, Kashmir Road, R.A. Bazar, Rawalpindi</td><td>Total value of full project (in million US$):

US $ 75.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

7</td><td>No. of Persons-Months:

20</td></tr>
<tr><td>Start Date (Month/Year):

October 2000</td><td>Completion Date (Month/Year):

March 2001</td><td>Approx. Value of Services (in million US$):

US $ 2,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):

Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Two Highway Engineers, one Transportation Economist, one Structural Engineer, one Material Engineer, one Measurement Engineer and one Contracts Specialist supported by surveyors and laboratory technicians carried out the assignment.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project consisted of the preliminary design and preparation of a Technical and Financial Feasibility Study for a 4 lane divided highway from Lahore to Faisalabad including urban areas and bypasses. Project is to be undertaken on a BOT basis for a concession period of 25 years.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The services provided included
▪ Preliminary Topographic Survey and alternate alignment studies
▪ Study of Alternative Routes
▪ Regional Development Plans
▪ Soil Surveys
▪ Study of Borrow Sources
▪ Traffic Counts and Surveys
▪ Axle Loads Study
▪ Capacity Analysis
▪ Preliminary Pavement Design
▪ Preliminary Structural Design
▪ Preliminary BOQ and Cost Estimates
▪ Study on Land Acquisition and Right of Way
▪ Study on Relocation of Utilities and Costs
▪ Road Facility Planning
▪ Construction Management and Resource Planning
▪ Planning Studies
▪ Feasibility Studies</td></tr>
</table>

- Technical Studies
- Economic Studies
- Toll Studies, Road User Charges
- Organization and Management for a Road Building and Operating Company
- Operations and Maintenance Requirements Planning
- Financial Studies, Sensitivity Analysis, Risk Analysis
- Project Financing Advice.

Type of Services provided:

Topographic Surveys, Sector Studies, Regional Development Plans, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Tariff Studies, Technical Studies, Design – Architectural / Engineering / Industrial etc., Quantity Surveying / Cost Estimating, Structural Engineering, Technical Assistance and Advisory Services, Material Testing, Manpower Requirements Studies.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management, Corporate/Firm Management

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction, Highways, Organization / Funding & Programming, Highway Traffic Control, Highway Legislation, Highway Safety, Road Transport Economics, Road User Charges, Management Firms, Financial Analysis / Costing & Tariffs (Road Transportation Industry).

Urban Development Sector:
Strategic Development Planning (Incl. Master Planning), Urban Transport Planning.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No. 43

<table>
<tr><td colspan="2">Assignment Name:

Preparation of Shop Drawings for Islamabad-Peshawar Motorway (M1) – 160 Kms</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Punjab & NWFP</td><td>Number of person-months of the entire project:

184</td></tr>
<tr><td colspan="2">Name of Client:

National Highways Authority, Government of Pakistan - # 28, Mauve Area, G-9/1, Islamabad</td><td>Total value of full project (in million US$):

US $ 400.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

7</td><td>No. of persons-months:

168</td></tr>
<tr><td>Start Date (Month/Year):

April 1999</td><td>Completion Date (Month/Year):

February 2001</td><td>Approx. Value of Services (in million US$):

US $ 260,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm (s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm (s):

Nil</td></tr>
<tr><td colspan="3">Names of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Technical Manager, One Structural Engineer, Five Cad Operators and supporting staff were deputed to prepare shop drawings, bar bending schedules and other details for the Contractor.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
Preparation of Shop Drawings for all the structures including five interchanges, major and minor bridges, railway overhead bridges, underpasses, box culverts and for formwork for structures on Islamabad-Peshawar Motorway Project. Major bridges include bridges over river Indus, Kabul and Haro rivers. The Motorway is a 4 lane facility with 16 meters wide median. All structures and embankment are being constructed for a six lane motorway.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
Technical staff provided their expertise in the preparation of over 1400 shop drawings. The complete data required including construction drawings and joint survey levels are being provided by the Client.

Senior staff vetted the drawings and data provided by the consulting engineers and any ambiguity was reported to the Contractor for resolution. The shop drawings were prepared on the basis of data supplied.

The shop drawing of interchanges and major/minor bridges include pile layout drawings, reinforcement details of all the sub-structures and super-structures elements and the bar bending schedules.

The shop drawings of culverts include excavation sketches and the layout drawings, reinforcement details and bar bending schedules.

Hard and soft copy of all drawings prepared using Autocad was provided to the Contractor.</td></tr>
</table>

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.43

Type of Services provided:

Technical Studies, Design – Architectural / Engineering / Industrial etc., Quantity Surveying / Cost Estimating, Estimation, Structural Engineering, Supervision/Inspection of Construction, Project Management/ Administration (on behalf of owner), Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Transportation Sector:

New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction, Bridges (Road Transportation Facilities), Interchanges.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.42

Assignment Name: Supervision Services for the Construction of National Highway N-40 between Dalbandin and Nokkundi, 86 Kilometers, Section III-A		**Country:** Pakistan
Location within Country: Province of Balochistan		**Number of person-months of the entire project:** 1040
Name of Client: National Highways Authority, Government of Pakistan - # 28, Mauve Area, G-9/1, Islamabad		**Total value of full project (in million US$):** US $ 33.00 million
No. of Staff: 52		**No. of Persons-Months:** 1040
Start Date (Month/Year): February 1994	**Completion Date (Month/Year):** February 2001	**Approx. Value of Services (in million US$):** US $ 1,356,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

The senior staff includes Resident Engineers, Assistant Resident Engineers, Material Engineers and Quantity Surveyors. All staff was deployed to provide contract administration and quality control and assurance on behalf of the client.

Brief Narrative Description of Project:

Construction of Section III-A (86 Kms) is a part of improvement of National Highway N-40 from Lakhpass to Nokkundi. The design of this highway from Quetta (Lakhpass) to Taftan, 607 Kms, was also carried out by ACC (Pvt) Ltd., This project is of great regional and international importance as it is a part of the National Highway N-40 and also of the RCD Highway which constitutes the countries only land link with Iran, Turkey and onwards to Europe. The project is located in a very remote area of Pakistan with logistics support being provided over a distance of 1600 kilometers. Highway consists of 7.3 meters wide asphaltic pavement with 3 meter shoulders on both sides. In this Contract, ACC was the nominated Engineer for the Project, and the interpretation and implementation of the COCs was the responsibility of the Engineer on behalf of the Client.

The COCs and bidding documents are based on FIDIC sample documents. The works were awarded to M/s Al-Khan Construction Co., Pakistan.

Description of Actual Services Provided:

The following supervision tasks are being carried out during the course of the project:

- Staking out, verification of PRM and permanent benchmarks.
- Soil investigations and approval of borrow areas including particle size analysis, CBR, atterberg limits, salt contents, water table determination and other standard tests, approval of quarries and related analyses of materials.
- Assist the client in land acquisition proceedings.
- Testing of materials brought on site like steel, cement, asphalt, aggregates etc.
- Insitu testing of densities and compaction using AASHTO standards
- Preparation of Concrete Mix Designs and testing of Concrete.
- Preparation of Job Mix Formulae for Asphalt.
- Review and adjustments to geometric design and design of structures as per site requirements.
- Liaison with the client and keeping him abreast of day to day problems and progress of works. Informing him ahead of time regarding contractual problems, delays and anticipated bottlenecks.
- Assisting the contractor in improving his logistics and methodology. Construction Management Support.
- Checking and verifying IPCs and overall contract administration.

Project Data Sheet No.42

Type of Services provided:

Design – Architectural / Engineering / Industrial etc., Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation / Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Supervision/Inspection of Construction, Project Management / Administration (on behalf of owner), Material Testing, Quality Control, Project Monitoring and Evaluation.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management

Transportation Sector:

Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Primary Roads, New Structures/Reconstruction, - Bridges (Road Transportation Facilities), Maintenance of Highways, - Execution (Highways), Highways Safety.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.41

<table>
<tr><td colspan="2">Assignment Name:

Preparation of Proposal for Construction of Khanewal – Lodhran Road on BOT basis.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Punjab,</td><td>Number of person-months of the entire project:

20</td></tr>
<tr><td colspan="2">Name of Client:

Frontier Works Organization - # 509, Kashmir Road, R.A. Bazar, Rawalpindi</td><td>Total value of full project (in million US$):

US $ 20.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

7</td><td>No. of Persons-Months:

20</td></tr>
<tr><td>Start Date (Month/Year):

October 2000</td><td>Completion Date (Month/Year):

January 2001</td><td>Approx. Value of Services (in million US$):

US $ 2,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):

Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Two Highway Engineers, one Transportation Economist, one Structural Engineer, one Material Engineer, one Measurement Engineer and one Contracts Specialist supported by surveyors and laboratory technicians carried out the assignment.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project consisted of the preliminary design and preparation of a Technical and Financial Feasibility Study for a 2 lane highway from Khanewal to Lodhran including urban areas and bypasses. Project is to be undertaken on a BOT basis for a concession period of 25 years.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The services provided included
▪ Preliminary Survey and alternate alignment studies
▪ Regional Development Plans
▪ Preliminary Soil Survey
▪ Capacity Analysis
▪ Preliminary Pavement Design
▪ Preliminary Structural Design
▪ Preliminary BOQ and Cost Estimates
▪ Road Facility Planning
▪ Planning Studies
▪ Feasibility Studies
▪ Technical Studies
▪ Economic Studies
▪ Toll Studies, Road User Charges
▪ Financial Studies, Sensitivity Analysis, Risk Analysis
▪ Project Financing Advice</td></tr>
</table>

Type of Services provided:

Sector Studies, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Tariff Studies, Technical Studies, Preliminary Design – Architectural / Engineering / Industrial etc., Quantity Surveying / Cost Estimating, Structural Engineering, Technical Assistance and Advisory Services, Material Testing, Manpower Requirements Studies.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management, Corporate/Firm Management

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction, Highways, Organization / Funding & Programming, Highway Traffic Control, Highway Legislation, Highway Safety, Road Transport Economics, Road User Charges, Management Firms, Financial Analysis / Costing & Tariffs (Road Transportation Industry).

Urban Development Sector:
Strategic Development Planning (Incl. Master Planning), Urban Transport Planning.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.40

<table>
<tr><td colspan="2">Assignment Name:

Feasibility Study of Construction of Lahore- Kahna- Kasur Dual carriageway on BOT basis.</td><td>Country:

Pakistan</td></tr>
<tr><td colspan="2">Location within Country:

Province of Punjab,</td><td>Number of person-months of the entire project:

20</td></tr>
<tr><td colspan="2">Name of Client:

Frontier Works Organization - # 509, Kashmir Road, R.A. Bazar, Rawalpindi</td><td>Total value of full project (in million US$):

US $ 9.00 million</td></tr>
<tr><td colspan="2">No. of Staff:

7</td><td>No. of Persons-Months:

20</td></tr>
<tr><td>Start Date (Month/Year):

October 2000</td><td>Completion Date (Month/Year):

January 2001</td><td>Approx. Value of Services (in million US$):

US $ 2,000/-</td></tr>
<tr><td colspan="2">Name of Associated Firm(s), If Any:

None</td><td>No. of Months of Professional Staff Provided by Associated Firm(s):

Nil</td></tr>
<tr><td colspan="3">Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
One Highway Engineers, one Transportation Economist, one pavement Engineer, one Structural Engineer, one Material Engineer, one Measurement Engineer and one Contracts Specialist supported by surveyors and laboratory technicians carried out the assignment.</td></tr>
<tr><td colspan="3">Brief Narrative Description of Project:
The project consisted of the preliminary design and preparation of a Technical and Financial Feasibility Study for a 4 lane divided carriageway from Lahore to Kahna and 2 lane highway from Kahna to Kasur including urban areas and bypasses. Project is to be undertaken on a BOT basis for a concession period of 25 years.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided:
The services provided included
▪ Preliminary Survey and alternate alignment studies
▪ Regional Development Plans
▪ Preliminary Soil Survey
▪ Capacity Analysis
▪ Preliminary Pavement Design
▪ Preliminary Structural Design
▪ Preliminary BOQ and Cost Estimates
▪ Road Facility Planning
▪ Planning Studies
▪ Feasibility Studies
▪ Technical Studies
▪ Economic Studies
▪ Toll Studies, Road User Charges
▪ Financial Studies, Sensitivity Analysis, Risk Analysis
▪ Project Financing Advice.</td></tr>
</table>

Project Data Sheet No.40

Type of Services provided:

Sector Studies, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Tariff Studies, Technical Studies, Preliminary Design – Architectural / Engineering / Industrial etc., Quantity Surveying / Cost Estimating, Structural Engineering, Technical Assistance and Advisory Services, Material Testing, Manpower Requirements Studies.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management, Corporate/Firm Management

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction, Highways, Organization / Funding & Programming, Highway Traffic Control, Highway Legislation, Highway Safety, Road Transport Economics, Road User Charges, Management Firms, Financial Analysis / Costing & Tariffs (Road Transportation Industry).

Urban Development Sector:
Strategic Development Planning (Incl. Master Planning), Urban Transport Planning.

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.39

Assignment Name: Feasibility Study of Construction of Sialkot – Sambrial Road on BOT basis.		**Country:** Pakistan
Location within Country: Province of Punjab,		**Number of person-months of the entire project:** 20
Name of Client: Frontier Works Organization - # 509, Kashmir Road, R.A. Bazar, Rawalpindi		**Total value of full project (in million US$):** US $ 4.00 million
No. of Staff: 7		**No. of Persons-Months:** 20
Start Date (Month/Year): October 2000	**Completion Date (Month/Year):** January 2001	**Approx. Value of Services (in million US$):** US $ 2,000/-
Name of Associated Firm(s), If Any: None		**No. of Months of Professional Staff Provided by Associated Firm(s):** Nil

Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Two Highway Engineers, one Transportation Economist, one Structural Engineer, one Material Engineer, one Measurement Engineer and one Contracts Specialist supported by surveyors and laboratory technicians carried out the assignment.

Brief Narrative Description of Project:
The project consisted of the preliminary design and preparation of a Technical and Financial Feasibility Study for a 2 lane highway from Sialkot to Sambrial including urban areas and bypasses. Project is to be undertaken on a BOT basis for a concession period of 25 years.

Description of Actual Services Provided:
The services provided included

- Preliminary Survey and alternate alignment studies
- Regional Development Plans
- Preliminary Soil Survey
- Capacity Analysis
- Preliminary Pavement Design
- Preliminary Structural Design
- Preliminary BOQ and Cost Estimates
- Road Facility Planning
- Planning Studies
- Feasibility Studies
- Technical Studies
- Economic Studies
- Toll Studies, Road User Charges
- Financial Studies, Sensitivity Analysis, Risk Analysis
- Project Financing Advice.

Type of Services provided:

Sector Studies, Planning Studies, Feasibility Studies, Market Studies, Economic Studies, Financial Studies, Tariff Studies, Technical Studies, Preliminary Design – Architectural / Engineering / Industrial etc., Quantity Surveying / Cost Estimating, Structural Engineering, Technical Assistance and Advisory Services, Material Testing, Manpower Requirements Studies.

Fields of Specialization:

Construction Industry Development Sector:
Construction Management, Corporate/Firm Management

Transportation Sector:

National/Regional/Multimodel Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Policies & Investment Programs, Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction, Highways, Organization / Funding & Programming, Highway Traffic Control, Highway Legislation, Highway Safety, Road Transport Economics, Road User Charges, Management Firms, Financial Analysis / Costing & Tariffs (Road Transportation Industry).

Urban Development Sector:
Strategic Development Planning (Incl. Master Planning), Urban Transport Planning.