

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

Project Data Sheet No.180

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Assignment Name: Independent Engineer for Sialkot (Sambrial) – Kharian Motorway Project (Build, Operate and Transfer Basis).		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 679
Name of Client: Saikot Kharian Infrastructure Management (Pvt) Ltd. (SKIM), # 509 R.A Bazar Kashmir Road Rawalpindi and 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\$ 130 million
No. of Staff: 33		No. of Persons-Months: 679
Start Date (Month / Year): 14 June 2022	Completion Date (Month/Year): 13 June 2024	Approx. Value of Services (in US\$): Total US \$ 890,420 (Rs.186,987,360)
Name of Associated Firm(s), If Any: Nil		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: The staff included Aized Hasan Mir, Contract Specialist/BOT Specialist, Akhtar Mahmood Mir Sr. Highway Engineer, Ahmad Luqman Sarwar Pavement Design Engineer, Iram Noreen Bridge Design Engineer, Ch. Zahoor Sardar Project Coordinator/Sr. Highway Engineer, Tehmina Shahid Contract Engineer, Muhammad Zeeshan Sr. Design Engineer, Rameez Akram Sr. Structure Engineer, Ayaz Shah, ITS Expert, Col Nasir Farid QAI/TL, Majid Abbasi Planning & Contract Engineer, Bakhtiar Ali Manager Administration & Document Controller, Asif Zaman Material Engineer, Tariq Niazi & Abdul Sattar Dy. QAI, Gul Riaz Nabi & Ghulam Shabbir Narejo Structure Engineers, and others.		
Brief Narrative Description of Project: The subject motorway (Sambrial to Kharian) originates from end of Lahore – Sialkot Motorway (LSM) at Sambrial city and terminates at closest feasible North of Kharian city. The total length of the motorway was approximately 67 kms. The proposed motorway was parallel to the N-5 between Sambrial and JalalpurJattan. Construction of a bridge over Chenab River was required to provide the link between Sambrial and Jalalpur Jattan. The subject motorway was connected with the Rawalpindi Kharian Motorway Project and provided a shorter route from Rawalpindi to Lahore.		
Description of Actual Services Provided: Design Review Phase: The Independent Engineer was responsible for review of designs, drawings, construction monitoring, progress monitoring, and affirmations and/or objections of all certifications made by the Concessionaire or its Contractor, in each case, in accordance with and as contemplated by the PPP Documents and this Agreement. Reviewed, validated and endorsed the adequacy of topographical surveys, geo-technical and sub-soil investigations, hydrological investigation for the Motorway and other structures.		
Construction Monitoring Phase: The Independent Engineer was responsible to:- <ol style="list-style-type: none"> a. monitor the Works and attend such tests, as and when required, in accordance with, <i>inter alia</i>, section 12.12.6 of the PPP Agreement; b. inspect the Works, as and when required, for the purpose of, <i>inter alia</i>, the issuance of the Premises Completion Certificate, the Section Substantial Completion Certificate, the Section Completion Certificate, the Substantial Completion Certificate, the Completion Certificate and such other certificates as were contemplated and issued by the Independent Engineer in terms of this Agreement and the PPP Documents; 		

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- c. review the monthly progress report submitted by the EPC Contractor in accordance with the PPP Agreement and the EPC Contract,
- d. review and approve execution of works program prepared and submitted by the Concessionaire or its Contractors;
- e. verify and check quality and quantity of the Works undertaken by the Concessionaire as against the Construction Performance Standards;
- f. review the material testing results and mix designs and order special tests of materials;
- g. review quality assurance and quality control during Construction Monitoring Phase and advise on corrective measures to be undertaken on any defects in the Works;
- h. ensure that the Approved Detailed Design and the Works were carried out within the relevant cost projections and construction schedules;
- i. ensure that the construction Works were accomplished in accordance with the applicable standards;
- j. certify the milestones for release of the Construction Performance Bond;
- k. identify construction delays, and recommend to the Key Stakeholders any remedial measures to expedite the progress and review the manpower and equipment accordingly;
- l. review "as built" drawings for each component of the Works prepared;
- m. review the safety measures provided for the traffic and Project workers;
- n. determine any extensions of the Project Completion Schedule in accordance with the relevant PPP Documents and Notify the stakeholders accordingly;
- o. review compliance by the Concessionaire or its Contractor of its obligations relating to technical and engineering matters under the PPP Agreement;
- p. determine the appropriate relief as a consequence of a Compensation Event and Relief Event, in accordance with the terms of the PPP Agreement;
- q. determine any Compensation Amount to be borne by NHA in accordance with the terms of the PPP Agreement;
- r. determine the Termination Payment for termination of the PPP Agreement jointly with the Independent Auditor;
- s. make recommendation to NHA for adoption and/or Approval of request for extension of time for completion of the Works, in each case, in accordance with the mechanism set out in the PPP Agreement;
- t. determine delay issues pertaining to handing over of Concession Area, encroachments, removal of Public Utilities etc.;
- u. the Independent Engineer is to attend completion Tests and issue the Section Substantial Completion Certificate, the Substantial Completion Certificate and/or Incomplete Works List, as applicable;
- v. for performance Tests and completion Tests:

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: JICA FY 2021 Ex-post Evaluation of ODA Projects Package IV-2		Country: Pakistan
Location within Country: KPK		Number of person-months of the entire project: 65 days
Name of Client: Global Group 21, Japan, Inc. (GG21) 1-9-7-607 Higashihigotanda, Shinagawa, Tokoya Japan Consultants of JICA		Total value of full project (in million US\$): US\$ 107.00 million
No. of Staff: 03		No. of Persons-Months: 65 days
Start Date (Month / Year): 28 Mar 2022	Completion Date (Month/Year): 30 Nov 2022	Approx. Value of Services (in US\$): US\$ 25,615
Name of Associated Firm(s), If Any: Nil		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: The staff included Mr. Ahmad Luqman Sarwar, Sr. Transportation Engineer/Team Leader, Mr Akhtar Mir, Transportation Engineer and Mr. Muhammad Zeeshan Junior Transportation Engineer.		
Brief Narrative Description of Project: The flood of Indus Basin System in 2010 brought severe disasters in KP Province. Government of Pakistan requested an ODA Loan Project "Khyber Pakhtunkhwa Emergency Rural Road Rehabilitation Project (PK-P62) from Japan. To restore and improve traffic in the flood-stricken areas of KP project through rehabilitating damaged road and bridges thereby contribution to prompt restoration of economic and social activities and reducing poverty of the rural areas of the Province, as well as redressing regional economic disparities. Reconstruction and rehabilitation work was done in Mardan, Charsadda, Peshawar, D.I. Khan, Buner, Swabi, Haripur, Chitral, Nowshera, Malakand, Dir Upper, Battagram, Mansehra, Shangla and Bannua districts. Total Provincial road were 3 sub projects, total 101 Km, District road: 77 sub projects total 427 km, Bridges 10 sub projects total 670m. JICA's Evaluation Department, in principle, conducted ex-post evaluation of JICA projects costing 1 billion yen or more, and other projects that were considered to provide valuable information, in two or three years after project completion.		
Description of Actual Services Provided: The ex-post evaluation verified such points as; whether the project activities have been carried out properly to produce the results; to what extent the project contributed to the expected development results; and to what extent its effectiveness will be maintained. Basic focus of the ex-post evaluation study was to compare the project's results with the established objectives, goals, and expectations and to ensure impartiality and transparency, the JICA Evaluation Department assigns and dispatches external evaluators. Throughout the evaluation process, the team of consultants visited the selected project site, as well as related agencies, conduct various research studies, and evaluate the project based on the criteria (relevance, coherence, effectiveness, efficiency, impact, sustainability). Local Assistant conducted the necessary field work under the supervision of the external evaluator from Japan. Evaluation results, including lessons learned and recommendations, was fed back to JICA and partner countries, including implementing agencies, to help improve JICA projects, as well as to ensure accountability and transparency. They were also made public via JICA's website.		
Type of Services provided: Planning Studies, Feasibility Studies, Technical Studies, Project Financing Advice		
Fields of Specialization: Transportation Sector: National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, New Structures/Reconstruction.		

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Assignment Name: Design Review and Construction Supervision for Rehabilitation and Upgradation of 54.80 Km Long Awaran-Jhaljao Road		Country: Pakistan
Location within Country: Balochistan		Number of person-months of the entire project: 912
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\$): 20.00
No. of Staff: 38		No. of Persons-Months: 174
Start Date (Month / Year): 10 June 2022	Completion Date (Month/Year): 09 October 2024	Approx. Value of Services (in US\$): US \$ 544,000 (Rs.112,154,403/-)
Name of Associated Firm(s), If Any: M/s NESPAK (Pvt.)Ltd. (Lead Firm) M/s ZAK Consulting Engineers (SMC-Pvt.) Ltd. (JV)		No. of Months of Professional Staff Provided by Associated Firm(s): 378 360
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Muhammad Nadeem Akhtar CRE, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist, Mr. Ghulam Sarwar RE, Muhammad Shafqat Munir Material Engineer, Asim Chiragh ARE (H), Abdul Sattar, ARE (H), Abdul Rehman ARE (Str), Sher Muhammad Naich ARE (Str), Iftikhar Ahmad Virk QS and other staff.		
Brief Narrative Description of Project: Awaran - Jhaljao road was two lane road facilitating two-way traffic between Awaran and Jhaljao. Existing road length is 54.8 Kms and width is 5 - 6m and has TST on top, which is not in good condition. Awaran - Jhaljao road is under administrative control of Balochistan Government and connects N-25 at Bela on eastern part, however on western part, it continues up to Hoshab and connects N-85. Due to strategic importance and for easy access to counter security conditions in district Awaran, Awaran - Jhaljao road was proposed to be a NHA standards road. Objective of the project was to enhance the mobility from Awaran to Jhaljao and plays a vital role for the development of deprived population of the Balochistan province. The project road was an integral connection to Hoshab and connects to N-85 which links it up to Gawadar and other southern regions for native community. It will provide the commuters of the area with fast access to the markets. Besides that, it will also reduce the travel times and hence will improve the overall socioeconomic development of country.		
Description of Actual Services Provided: The responsibility of supervision shall rest with the Engineer who shall issue instructions in writing to the Supervisory Consultants for the supervision of works as per the Contract. As the Engineer's Representative, the Consultants' authorized representative and other staff will implement the Works Contract and ensure that the Works are constructed in accordance with its provisions. The Consultant will have all the powers defined in the FIDIC Conditions of Contract as being the Engineer / Engineer's Representative. Supervisory Consultants shall carry out a revision in the plans and specifications as required by the Engineer and prepare all change orders instantly thereto and shall further assist the Engineer in negotiations necessary for execution of the changes. Such revisions shall be encouraged which result in improved project performance, in accordance with the plans and conforming to the specifications. The Supervisory Consultants shall carry out the Construction Supervision but not limited to the following tasks: <ul style="list-style-type: none"> • Make sure execution of works as per design, standards, specification and technical construction drawings. 		

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- To intimate NHA in each matter and must obtain formal approval from NHA to proceed in the matter.
- Assure quality of the works during execution by using suitable and tested construction material.
- To ensure the good quality construction survey work, levels and grade achieved during and after construction.
- Make sure the continuous supervision/inspection of the soils, materials construction operations and the works with regard to workmanship and compliance with the specifications.
- Certify the payment bills of Contractor according to the approved procedure and also maintain the payment record maintaining consolidated project accounts and assist NHA for settlement of Audit Para's.
- Make sure the existing traffic management and safety plan all times in a safe and secure manner.
- Monitor and appraise progress of the works for timely completion of work. Review and accept or reject Contractor's proposed work schedules.
- The supervisory Consultants shall prepare the revised PC-I of the project and will be responsible to incorporate all changes up to final approval from the relevant forum.

Type of Services provided:

Study of existing hydrological regime based on rainfall and flood records, Hydrology Study, Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

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Assignment Name: Design Review and Construction Supervision for Central Asia Regional Economic Cooperation Corridor Development Investment Program (CAREC) Tranche-II and Tranche-III Projects - ADB Loan No.4099-PAK		Country: Pakistan
Location within Country: KPK		Number of person-months of the entire project: 8623
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: 279		No. of Persons-Months: 1050
StartDate(Month/Year): 26 April 2022	Completion Date (Month/Year): 25 April 2025	Approx. Value of Services (in US\$): Total US \$ 8,289,000
Name of Associated Firm(s), If Any: M/s Minconsult Sdn. Bhd (Malaysia) - Lead Firm M/s SAMAN Corporation (Korea) M/s Sheladia Associates Inc. (USA) M/s Creative Engineering Consultants (Pak) M/s AA Associates (Pvt.)Ltd.(Pak) M/s Asif Ali & Associates (Pvt) Ltd. (Pak) M/s Associated Consulting Engineers Ltd. (Pak)		No. of Months of Professional Staff Provided by Associated Firm(s): 7573
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Johari J. Abdullah CRE/TL, Mr. Hwang, Hyo-sub, Sr. Pavement Design Engineer, Mr. Muhammad Islam Sr. Bridge Engineer, Mr. Liberato J. Ocastro Jr. Lead Material Engineer, Mr. Helmut F. Giesa, Sr. Contract Specialist, Mr. Shah Nawaz, Sr. Geometric Design Engineer, Dr. MD Mohsin Almaji, Sr. Environmental Specialist, Mr. Aizaz Ahmad, Road Safety Auditor, Mr. Roze M. Sherani DTL, Mr. Abid Hayat Khan Khattack, RE, Mr. Yousaf Zaman, RE, Mr. Firdous Khan, RE, Mr. M. Khurshid Khan, RE, Mr. Amar Nasim, RE, Mr. Faisal Pervaiz, RE, Mr. Najeebullah Khan, RE, Mr. Nasir Imtiaz, RE, Mr. Adnan Khan RE, Mr. Farzad Khan, RE, Mr. Abdul Nasir Highway Engineer, Mr. Khadim Hussain Baloch Highway Engineer, Mr. Lai Khan Highway Engineer, Mr. Inam Ali Highway Engineer, Mr. Gul Riaz Nabi Memon Highway Engineer, Mr. Muhammad Zahid Khan Highway Engineer, Mr. Abdul Sattar Highway Engineer, Mr. Allah Yar Shah Highway Engineer, Mr. Mahmood A Malik Highway Engineer, Mr. Nisar A. Narejo Highway Engineer, Mr. Abid Qayum Babar Str. Engineer, Mr. Sibtain Ahmd Sial Str. Engineer, Mr. Shabbir Ahmad Str. Engineer, Mr. Zahoor Shah Str. Engineer, Mr. Iftikhar Said Str. Engineer, Dr. Ehtisham Raza Environmental Specialist, Mr. Kashif Bashir Environmental Specialist, Mr. Sultan Alam, Contract Specialist, Mr. Asif Ali Burney Contract Specialist, Mr. M. Iqbal A. Niazi Resettlement/Social Dev. Specialist, Mr. Wazir Ali Resettlement/Social Dev. Specialist, Mr. Salim Kateron Sr. Hydrologist, Mr. Ghani Shaaban Sr. Geotechnical Engineer, Mr. Zahoor Sardar PC, Mst Iram Noreen, PC, Mr. M. Zakria Tunio, ME, Mr. Asif Zaman, ME, Mr. Pervaiz Ahmad Khan ME, Mr. Zia Ullah Khan Niazi ME, Mr. Khalid Javed ME, Mr. Ghafoor Ahmad ME, Mr. Masood Aslam ME, Mr. Gul Hameed Khalil ME, Mr. Amanullah Marri ME, Mr. Rehan Ali ME, Mr. Muhammad Awais Roohani Plg Engr, Mr. Majid Wazir Abbasi Plg Engr, Mr. Akhtar Mahmood Mir Geometric Design Engr, Mr. Ahmad Luqman Sarwar Pavement Design Engineer, Dr. Ashfaq Ahmad Sheikh Hydrologist, Mr. Malik Saqib Mehmood, Road Safety Specialist and others.		
Brief Narrative Description of Project: The CAREC road network corridor 5 and 6 will connect Pakistan up North to China and West through Afghanistan respectively. Asian Development Bank lately designated N-55 section between Peshawar to DI Khan as an important CAREC Link other than corridor 5 and 6. The N-55 from Peshawar to Hyderabad is 1,264 km in length. On the right bank of river Indus, it is the shortest North-South route between Peshawar and Karachi. Government of Pakistan, realizing its importance, was already working on the Improvement and Dualization of this Road in various sections. In continuation the following section of N-55 are being undertaken for improvement and Dualization.		

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Details given as under:-

- Indus Highway N-55 Additional Carriageway (Shikarpur-Rajanpur section) (PKG-1) 221.95 Km
- Construction of Rajanpur – DG Khan setion as 4 Lane Highway of N-55 (PKG-2) 121.5 Km
- Dualization and Rehabilitation of DG Khan - DI Khan of N-55 (PKG-3) 208 Kms

These road section are further divided into sub-sections given as under:-

Package-1

Shikarpur - Rajanpur Section

- Section-I Shikarpur - Kandhkot Section 62.42 Km
- Section-II Kandhkot – Kashmore Section 58.78 Km
- Section-III Kashmore – Rojhan Section 50.30 Kms

Package-2

Ranjapur - DG Khan Section

- Section-I Rajanpur – Jampur Section 57.5 Km
- Section-II Jampur – DG Khan Section 64.0Km

Package-3

DG Khan – DI Khan Section

- Section-I DG Khan – Shahdan Lund Section 55.0 Km
- Section-II Shahdan Lund – Tibi Qaisrani Section 56.7 Km
- Section-III Tibi Qaisrani - Ramak Section 48.0 Km
- Section-IV Ramak – DI Khan Section 48.5 Km

Description of Actual Services Provided:

In undertaking the design review of the project, the consultant was to take into account that the procurement of the project's civil works was preceded in parallel with the consultant selection process, with the objective that the consultants and the civil work contracts was signed at the same time. Accordingly, the consultant's review of the designs must reflect the possible contractual impacts arising from recommending substantial changes to the designs, for contracts that would have already been procured. Where in the consultants opinion such changes are essential, its recommendations to the client must reflect the possible risks in terms of contractual claims, delays or other impacts.

The Consultants performed the duties of the Engineer specified in the FIDIC conditions of contract and required to nominate Resident Engineers for the contract(s) who was be full-time residents in the areas or located in the proximity of project areas. In addition to the primary role, the Consultants assisted the Employer in the efficient administration and implementation of the sub-projects, support and strengthen it in its tasks, monitor progress, financial management, social design review problems during construction (if arised) and environmental safeguards and gender mainstreaming in the project.

Type of Services provided:

Study of existing hydrological regime based on rainfall and flood records, Hydrology Studies, Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional / Multimodel Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Consultancy Services for Design Review and Construction Supervision of Nokundi - Mashkhel Road (103 Km)		Country: Pakistan
Location within Country: Province of Balochistan		Number of person-months of the entire project: 1182
Name of Client: National Highway Authority, M/o Communications, Govt. of Pakistan, Islamabad # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US \$ 70.00 million
No. of Staff: 58		No. of Persons-Months: 354
Start Date (Month / Year): 30 August 2021	Completion Date (Month/Year): 30 Dec 2023	Approx. Value of Services (in US\$): US \$ 663,000 (Rs.109,299,332/-)
Name of Associated Firm(s), If Any: M/s Prime Engineering & Testing Services (Pvt) Ltd. M/s Republic Engineering Corporation M/s Concept Engineering Services		No. of Months of Professional Staff Provided by Associated Firm(s): Prime 296 REC 296 CES 236
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Ahmad Luqman Sar Highway Design Engr, Mst. Iram Noreen Structure Engr, Mst. Iram Aamir Drainage Engr/Hydrologist, Mr. Akhtar Mahmood Mir Traffic/Pavement Engr, Mr. Mansoor Ahmad Geotechnical / Soil & Material Engr, Dr. Ahtesham Raza Environmental Engr, Mr. Muhammad Yousaf Baloch Resident Engineer, Mr. Muhammad Ishaque ARE Highway, Mr. Hidayat Ali Khaki, ARE (H) Mr. Nadir Ali ARE Str/Bridge, Mr. Ajeet Kumar ARE Str/Bridge, Dr. Ashfaq Ahmad Sheikh Hydraulic Drainage Engineer, Mr. Shakeel Ahmad Memon ME, Mr. Shafait Munir ME, Mr. Imran Ali QS and others.		
Brief Narrative Description of Project: NHA was planned to connect Mashkhel (a town which is 30 Km away from Iran border located in District Washuk) with National Highway N-40 at Nokundi. The purpose of the proposed project was to develop a road link which will ultimately provide a connection with Iran, so that China Pakistan Economic Corridor (CPEC) was taken into account. The proposed road would also be future part of CPEC program. The proposed alignment would be a strategic route as it may be connected in future with M-8 at Panjgur going to Gwadar Sea Port. The project aimed to develop a two (2) lane, 103-kilometer-long highway primarily. The area was comprised of alluvial fans / piedmont, and non fractured, low land/valley floor. The area was mainly comprised of largest seasonal desert lake namely Human-e-Mashkel approximately 85 km long and 35 km wide.		
Description of Actual Services Provided: <ul style="list-style-type: none"> ➤ Work as the Engineers Representative for the Client ➤ Study of existing hydrological regime based on rainfall and flood records ➤ Make sure execution of works as per design standards, specifications and technical construction drawings. ➤ To intimate NHA in each matters and must obtain formal approval from NHA to proceed in the matter. ➤ Assure quality of the works during execution by using suitable and tested construction material. ➤ To ensure the good quality construction survey work, levels and grade achieved during and after construction. ➤ Make sure the continuous supervision/inspection of the soils, materials construction operations and the works with regard to workmanship and compliance with the specifications. ➤ Certify the payment bills of Contractor according to the approved procedure and also maintain the payment record maintaining consolidated project account and assist NHA for settlement of Audit Paras. 		

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- Make sure the existing traffic management and safety plan all times in a safe and secure manner.
- Monitor and appraise progress of the works for timely completion of work. Review and accept or reject Contractor's proposed work schedules.
- Prepare the revised PC-I of the project and will be responsible to incorporate all changes upto the final approval from the relevant forum.

Type of Services provided:

Hydrology Studies, Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, **Environment, Resettlement, Land Acquisition and Social Sector Studies.**

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Consultancy Services for Design Review and Construction Supervision of Ziarat Mor-Kach-Harnai Road (107.2km) Harnai Sanjavi Road (55.1km)		Country: Pakistan
Location within Country: Balochistan		Number of person-months of the entire project: 2538
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\$ 94.00 million
No. of Staff: 68		No. of Persons-Months: 837
Start Date (Month / Year): 09 Aug, 2021	Completion Date (Month/Year): 08 Aug, 2024	Approx. Value of Services (in US\$): US \$ 1,765,300 (Rs.291,276,769/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers ACE Ltd. (Lead) M/s Indus Associated Consultants (Pvt) Ltd. M/s Design Management & Development Consultancy		No. of Months of Professional Staff Provided by Associated Firm(s): Lead 711 JV 609 JV 381
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Ahmad Luqman Sarwar Highway Design Engineer, Mst. Iram Noreen Structure Engineer, Mr. Munawar Ali Traffic/Pavement Engineer, Dr. Tabbasum Zahoor Drainage Engineer / Hydrologist, Mr. Sameen Khokhar Environmental Engineer, Mr. Waqar Ahmad Geotechnical/Soil Material Engineer, Mr. Ajaz Ahmad Guriro Resident Engineer, Mr. Tariq Khan ARE (H), Mr. Abdul Sami Kandhair ARE (H), Mr. Suresh Kumar ARE (H), Mr. Sher Muhammad Naich ARE Str/Bridge Engr, Mr. Munawar Muneer Sheikh Str/Bridge Engr, Mr. M. Siddique Memon Str/Bridge Engr, Mr. Khadim Hussain ME, Mr. Asif Zaman ME, Mr. M. Qabil Chandio ME, Mr. Iftikhar Ahmad Virk, SQS and others.		
Brief Narrative Description of Project: Construction of Ziarat Mor Kach Harnai Road (107.2 km) and all weather road from Harnai to Sanjavi (55.1 Km) is connection Balochistan to Punjab. Technically both the existing roads are passing through hilly and rolling terrain under jurisdiction of the Balochistan Government. The proposed road was single / kacha track which is not in good condition. The proposed road link was mostly about 35 Kms passing through toughest mountain terrain of 8000ft higher and was very key route connection district Harnai and connecting Balochistan to Punjab, however remaining 45 Kms passing through flat terrain (cut and fill section). The purpose underlying the project was rehabilitation, improvement in geometry and widen of existing carriageway from around 4-6 meter wide carriageway to 6.1 meter carriageway with 1.5 meter shoulders. The project consist of flexible pavement with 6.1cm, asphalt wearing + asphalt base course 7.0cm, base course 20.0cm, design speed plain 100, hilly 40-60 KPH.		
Description of Actual Services Provided: The supervisory consultants shall carry out the following activities: <ul style="list-style-type: none"> ➤ Make sure execution of works as per design standards, specifications and technical construction drawings. ➤ Encl: Attendance Sheets To intimate NHA in each matters and must obtain formal approval from NHA to proceed in the matter. ➤ Assure quality of the works during execution by using suitable and tested construction material. ➤ To ensure the good quality construction survey work, levels and grade achieved during and after construction. ➤ Make sure the continuous supervision/inspection of the soils, materials construction operations and the works with regard to workmanship and compliance with the specifications. ➤ Certify the payment bills of Contractor according to the approved procedure and also maintain the payment record maintaining consolidated project account and assist NHA for settlement of Audit Paras. ➤ Make sure the existing traffic management and safety plan all times in a safe and secure manner. 		

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- Monitor and appraise progress of the works for timely completion of work. Review and accept or reject Contractor's proposed work schedules.
- Prepare the revised PC-I of the project and will be responsible to incorporate all changes upto the final approval from the relevant forum.

Type of Services provided:

Hydrology Studies, Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Consultancy Services for Feasibility Study and Detailed Design of Dunyapur Interchange on N-5A		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 38
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\$ 12.00 million
No. of Staff: 68		No. of Persons-Months: 30
Start Date (Month / Year): 09 Aug, 2021	Completion Date (Month/Year): 08 Nov, 2021	Approx. Value of Services (in US\$): US \$ 55,000 (Rs.9,032,716/-)
Name of Associated Firm(s), If Any: M/s ECOS (SMC-Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 8
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Ahmad Luqman Sarwar Team Leader/Sr. Highway Engineer, Ms. Irum Noreen Sr. Structure/Bridge Engineer, Dr. Ahitesham Raza, Environmental Specialist, Akhtar Mahmood Mir Pavement Engineer, Dr. Ashfaq Ahmad Hydrology/Drainage Engineer, Mr. Abdul Majeed Transport Economist, Mr. Muhammad Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: <p>National Highway (N-5) originates from Khanewal in Punjab Souh after passing through Dunyapur city it terminates at Lodhran on N-5 and N-5A Junction. N-5A also links with motorway M-4 through N-5 at Shamkot Interchange. The project under consideration with three options:-</p> <ul style="list-style-type: none"> ➤ Option-1 is construction of two nos. Overhead Bridges at Dunyapur-Dakota road and Dunyapur-Malsi Road ➤ Option 2 is construction of Dunyapur Bypass ➤ Option 3 is construction of Roundabout on N-5A in Dunyapur <p>The Feasibility Study and Detailed Design for Dunyapur Interchange on N-5A was a major initiative required to improve this section of N-5A. The project consist of 04 lanes, lane with 3.65m, Inner shoulder 1.0m, Outer shoulder 2.5m+0.5m rounding, design speed 100/80/60 KPH.</p>		
Description of Actual Services Provided: <ul style="list-style-type: none"> • Coordination with Locals & Concerned Departments including NHA field formations • Collection of required data • Reconnaissance Survey, Alignment Study and Inception Report • Recommendation to NHA regarding alignment options • Traffic & Axle Load Survey • Feasibility Study • Detailed Topographic Survey • Evaluation of existing pavement • Soil & Material Investigations • Pavement Design along with surface drainage analysis • Environmental Impact Assessment (EIA) and NOC • Highway Safety Audit • Hydrology and Hydraulic Study • Tender Documents, Engineer's Estimate, BOQ etc. • Land Acquisition and utilities Report • Preparation of PC-I 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Type of Services provided:

Planning Studies, Feasibility Studies, **Hydrology Studies**, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, **Environment, Resettlement**, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Project Data Sheet No.173

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Assignment Name: Consultancy Services for Design Review and Construction Supervision of Lodhran- Multan Section (North Bound 621 Km of N-5 & Construction of Flyovers (02 Nos.) at Railway Crossing on Lodhran Multan Bypass.		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 981
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\$ 66.00 million
No. of Staff: 48		No. of Persons-Months: 391
Start Date (Month / Year): 09 July 2021	Completion Date (Month/Year): 08 Nov 2023	Approx. Value of Services (in US\$): US \$ 742,000 (Rs.118,805,992/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers ACE Ltd. (Lead) M/s ZAK Consulting Engineers (SMC-Pvt.) Ltd. (JV)		No. of Months of Professional Staff Provided by Associated Firm(s): 451 139
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Munawar Ali Highway Design/Traffic Engineer, Mr. Muhammad Imran Structure Design Engineer, Mr. Muhammad Abbas Ijaz Pavement Design Engineer, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Ijaz Ahmad Buriro Resident Engineer, Abid Qayum Babar ARE (H), Mr. Muhammad Tariq Niazi ARE (H), Mr. Muhammad Zeeshan Hussain ARE (Str), Mr. Ghulam Shabbir Narejo ARE (Str), Mr. Amar Nasim Bridge Engr, Mr. Gul Riaz Nabi Memon Bridge Engr, Mr. Zia Ullah Khan Niazi ME, Mr. Muhammad Daud Iqbal, QS and others.		
Brief Narrative Description of Project: The project is located in District Lodhran and Multan of Punjab Province. Lodhran - Multan Section (N-5) starts from Lodhran (chowk permit) and ends at Multan (Bahawalpur City). The project envisages reconstruction of 2 lane Northbound carriageway section of N-5 from Lodhran (chowk permit) to Multan (Bahawalpur Chowk) measuring 62 km in length. The existing level difference between the North and Southbound carriageways has resulted in drainage, water logging and road safety issues, therefore, NHA plans to reconstruct the Northbound carriageway to bring to the same level as the 2 lane Southbound carriageway. No work will be carried out on the Southbound carriageway. The scope of work included construction of two flyovers at railway crossing on Lodhran Bypass, provision of two interchanges at Super Chowk and one interchange at Bahawalpur Chowk Multan, 04 minor bridges, reconstruction / widening of culverts and urban area improvement at Basti Malook Multan City and Larr Town. The scope of work also includes 25.269 km of merging lanes (slip lanes) for connecting local roads, 9.12 km of U-turns with storage lanes, 8.911 km of service roads in urban areas with transition lanes and 1.94 km length of road having 8 lanes for 1 No. Toll Plaza.		
Description of Actual Services Provided: Design Review: Design Review Consultant will review and ensure that the design meets all the standards and parameters specified in the TOR of Detailed Design, NHA Specifications & Best International practices. The scope of services of design review consultants shall include following tasks: <ul style="list-style-type: none"> ➤ Topographic Survey ➤ Pavement Design along with surface drainage analysis ➤ Environmental Impact Assessment (EIA) and NOC ➤ Geometry Design, Pavement Design, Soil Investigation ➤ Hydrology and Hydraulic Study ➤ Structure Design ➤ Review of BOQ, Costs Estimates and Tender Documents ➤ Final Detailed Design Review Report 		

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

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Construction Supervision:

The responsibility of supervision was with the Engineer who issued instructions in writing to the supervisory consultants for the supervision of works as per the contract. As the Engineer's Representative, the Consultants' authorized representative and other staff was to implement the Works Contract and ensure that the Works are constructed in accordance with its provisions. The Consultant will have all the powers defined in the FIDIC Conditions of Contract as being the Engineer / Engineer's Representative. Supervisory consultants shall carry out a revision in the plans and specifications as required by the Engineer and prepare all change orders instantly thereto and shall further assist the Engineer in negotiations necessary for execution of the changes. Such revisions were encouraged which result in improved project performance, in accordance with the plans and conforming to the specifications. The supervisory consultants carried out the construction supervision but not limited to the following tasks:

- Make sure execution of works as per design, and technical construction drawings. To intimate NHA in each matter and must from NHA to proceed in the matter.
- Assure quality of the works during execution by using suitable and tested construction material.
- To ensure the good quality construction survey work, levels and grade achieved during and after construction.
- Make sure the continuous supervision / inspection of the soils, materials construction operations and the works with regard to workmanship and compliance with the specifications.
- Certify the payment bills of contractor according to the approved procedure and also maintain the payment record maintaining consolidated project accounts and assist NHA for settlement of Audit Para's.
- Make sure the existing traffic management and safety plan all times in a safe and secure manner.
- Monitor and appraise progress of the works for timely completion of work. Review and accept or reject contractor's proposed schedules.
- The supervisory consultants shall prepare the revised PC-I & PC of the project and will be responsible to incorporate all changes up final approval from the relevant forum.

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

Project Data Sheet No.172

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Assignment Name: Consultancy Services for Road Condition Surveys and HDM Analysis for Preparation of AMP 2020-21, 2021-22 & 2022-23.		Country: Pakistan
Location within Country: All over Pakistan		Number of person-months of the entire project: 809
Name of Client: National Highway Authority, M/o Communications, Govt. of Pakistan, Islamabad # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 100.00 million
No. of Staff: 32		No. of Persons-Months: 283
Start Date (Month / Year): 19 Jul 2021	Completion Date (Month/Year): 18 Jan 2024	Approx. Value of Services (in US\$): US \$ 542,000 (Rs.89,278,611/-)
Name of Associated Firm(s), If Any: M/s Partners in Development-PID (Lead firm) M/s Creative Engineering Consultants M/s Global Consultants		No. of Months of Professional Staff Provided by Associated Firm(s): Lead 243 JV 202 JV 81
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Shahid Zaman Khan Team Leader, Mr. Ahmad Luqman Sarwar HDM Expert, Mr. Muhammad Zeeshan FWD Data Analyst, Mr. Muhammad Ishaq Economist, Mr. Abdullah Khan Database Officer, and others		
Brief Narrative Description of Project: National Highway Authority being a statutory body, was assigned the mandate for planning, construction, maintenance and operations of National Highway and Motorway Network. To fulfill these duties assigned under the NHA Act, Road Maintenance Account (RMA) was created to provide road users with a well-maintained, safe and efficiently operated road network. RMA is financed by road user revenues and other earmarked sources to ensure a stable and secure source of maintenance and operations funding. NHA was established Road Asset Management Division (RAMD) to cope with the requirements of fee-for-service / value-for-money concept embodied as the guiding principle of RMA. NHA engaged a well reputed consulting firm with relevant expertise for collecting road condition/roughness data and undertaking requisite surveys to prepare the Annual Maintenance Plan for three years i.e. FY 2020-21, 2021-22 and 2022-23. Tentative length of national highways, motorways and strategic highways to be surveyed shall be \pm 12,000 km (as per actual surveyed)		
Description of Actual Services Provided: The consultants shall perform the following specific data collection and surveys on entire NHA road network, as indicated below: <ul style="list-style-type: none"> ➤ Pavement Condition Survey ➤ Pavement Roughness Survey ➤ FWD Survey ➤ Calibrations of Equipment ➤ Calibrations Data ➤ Data Collection ➤ Data Compilation ➤ Data Validation ➤ HDM-4 Analysis ➤ Training for NHA Engineers 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Consultancy Services for Feasibility Study, Detailed Engineering Design and Commercial Cum Financial Feasibility Study on PPP Modalities of Construction of Expressway from Baba Seri District Buner to Katlung Interchange Swat Expressway (29 km) – Component of ADP Scheme No.992/[1700] 200245		Country: Pakistan
Location within Country: Province of Khyber Pakhtunkhwa		Number of person-months of the entire project: 35
Name of Client: Pakhtunkhwa Highway Authority (PKHA), Government of Khyber Pakhtunkhwa, Attached Department Complex, Khyber Road Peshawar		Total value of full project (in million US\$): US\$ 50.00 million
No. of Staff: 11		No. of Persons-Months: 20
Start Date (Month / Year): 24 June 2021	Completion Date (Month/Year): 23 Oct 2021	Approx. Value of Services (in US\$): US\$ 663,000 (Rs.109,299,332/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers Ltd. (Lead)		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: The staff included Mr. Munawar Ali Team Leader/Project Manager, Mr. Ahmad Luqman Sarwar Highway & Pavement Design Engineer, Mr. Shahid Javed Structural/ Bridge Engineer, Mr. M. Abbas Ejaz Geometric Expert, Mr. Waqar Ahmad Geo Technical Engineer, Mr. Sameen Khan Environmental & Resettlement Specialist, Dr. Tabassum Zahoor Hydrology & Hydraulic Engineer, Mr. Munir Ahmad Baig Tunnel Expert, Mr. Aized Hasan Mir PPP Expert, Mr. Arsalan Vardag Financial Expert and Mr. Umar Farooq Legal Expert.		
Brief Narrative Description of Project: The provincial Government of Khyber Pakhtunkhwa (KPK) was planned to upgrade its infrastructure and build new highways. Buner Expressway having total length 35 Km was one of the major projects announced by the Government. The alignment of Buner Expressway (35 Km) starts from East of Shahbaz Garhi on Swat Motorway and terminated near Ambela on Pir Baba Sowari road. After providing link with Swat Expressway, Buner was on the path of development. The proposed expressway was provided safe and efficient corridor for commuters travelling to the Northern areas, and will facilitate regular travelers and also the tourists traveling to Swat and other attraction within the vicinity.		
Description of Actual Services Provided: <ul style="list-style-type: none"> ➤ Condition Survey ➤ Initial Environmental Examination (IEE) ➤ Land Acquisition Plans ➤ Design of Motorway including all its allied structures ➤ Inventory of Road and Bridges ➤ Topographic Surveys ➤ Preparation of Design Based on relevant standards ➤ Material Surveys, geo-technical surveys ➤ Soil Samples classification ➤ Study of existing hydrological regime based on rainfall and flood records ➤ Accesses cross drainage requirements ➤ Determine the most cost effective improvement option ➤ Preparation of detailed engineering designs, BOQs etc. ➤ Preparation of contract packages ➤ Preparation of construction schedules 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Preparation of Bidding documents, contract drawings including road plans
- Assistant the Client in pre-qualification of Contractors
- Preparation of Invitations to Bid and Evaluation of bids

Type of Services provided:

Planning Studies, **Hydrology Studies**, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Consultancy Services for Feasibility (Technical + Commercial) Study and Detailed Design for Dualization and Rehabilitation of Karachi-Quetta-Chaman Road (790 Km) on Build-Operate Transfer (BOT) basis under Public Private Partnership (PPP) Modality		Country: Pakistan	
Location within Country: Province of Balochistan		Number of person-months of the entire project: 81	
Name of Client: National Highway Authority, M/o Communications, Govt. of Pakistan, Islamabad # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 1000.00 million	
No. of Staff: 20		No. of Persons-Months: 30	
Start Date (Month / Year): 19 Feb 2021	Completion Date (Month/Year): 18 July 2021	Approx. Value of Services (in US\$): US\$ 240,000 (Rs.38,254,467/-)	
Name of Associated Firm(s), If Any: Prime Engineering & Testing Consultants (Pvt) Ltd. Finite Engineering (Pvt) Ltd. ECOS Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 18 17 16	
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mst Irum Noreen Team Leader/Sr. Structural Engineer, Mr. Ahmad Luqman Sarwar Sr. Highway Engineer, Vashdev Khatri Jr. Str./Bridge Engineer, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Muhammad Imran Jr. Str./Bridge Engineer, Dr. Muhammad Arsalan Khan Jr. Highway Engineer, Syed Mohammad Ali Jr. Highway Engineer, Mr. Muhammad Tahir Masood Pavement Design Engineer, Mr. Mohammad Ahmad Transport Economist, Mr. Arsalan Vardag PPP/Financial Expert, Mr. Omer Farooq Corporate Law Expert and others.			
Brief Narrative Description of Project: National Highway N-25 Karachi-Quetta-Chaman connects Karachi (sea port) with Quetta the capital of Baluchistan and provided access to Afghanistan via Chaman. The total length of the route was 813 Km, though 790 Km length was reflected in the PSDP 2019-20, which tantamount to Hub Chaman section. N-25 also links Karachi with Taftan on the Iranian border via N-40 branching off near Lakpass and therefore, serves as a vital link for trade with Iran and beyond on the one hand and Afghanistan and Central Asian States on the other. The project included technical and commercial studies for Construction of additional carriageway and rehabilitation of existing road (where required) to make it a 4-lane divided carriageway. As Hub Bypass was being taken up as a separate project, the start point of this project for detailed design was north of Hub bypass. However, the consultant was considered the Hub Bypass in its commercial feasibility study. The Khuzdar - Charhan section was already designed by another Consultant. As a part of this Consultancy, Karachi Khuzdar section was designed in detail. The technical study was comprised of this section only. The Consultant was responsible to carry out the commercial study for the whole Karachi-Quetta-Chaman stretch of N-25. NHA would provide the requisite technical details of Khuzdar Chaman section to facilitate the consultant in carrying out the commercial feasibility			
Description of Actual Services Provided: The scope of work for Technical Study is given as under: ➤ Existing road condition survey report with recommendations for rehabilitation ➤ Highway Safety Audit Report			

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Study of existing hydrological regime based on rainfall and flood records
- Hydrology and Hydraulic Study
- Road furniture design including traffic signs and gantries.
- Land Acquisition & utility folders
- Detailed working in collaboration of NH&MP & NHA departments for buildings for beats along with all allied facilities including provision of vehicles as per requirement of NH&MP as agreed by NHA.
- Tender Drawings, Documents, C-Factor, cost Estimates & BOQ.
- **Environmental Impact Assessment (EIA) Study**
- Economic Analysis Report
- Preparation of Project PC-I and land / utility relocation PC-I

The scope of work for commercial Feasibility is given as under:

- Option Analysis with complete length as well as small viable packages
- Workability of toll models and "Willingness to Pay" survey
- Review of legal framework
- CAPEX (Capital Expenditure) Analysis
- OPEX (Operational Expenditure) Analysis
- Revenue Analysis
- Viability Gap Funding options
- Debt Servicing & Amortization analysis
- Financial Model & bankability analysis
- RFP and draft Concession Agreement
- PPP Procurement assistance in technical proposal stage

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and **Social Sector Studies**.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Project Data Sheet No.169

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Assignment Name: Consultancy Services for Detailed Design for Construction of Road from Dalbandin to Ziarat Blanosh (77Km) District Chaghi		Country: Pakistan
Location within Country: Province of Balochistan		Number of person-months of the entire project: 35
Name of Client: National Highway Authority, M/o Communications, Govt. of Pakistan, Islamabad # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 35.00 million
No. of Staff: 17		No. of Persons-Months: 13
Start Date (Month / Year): 31 Dec 2020	Completion Date (Month/Year): 31 Mar 2021	Approx. Value of Services (in US\$): US\$ 104,000 (Rs.16,799,128/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers Ltd. (Lead) M/s ZAK Consulting Engineering (SMC-Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 22
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Ahmad Luqman Sarwar Sr. Highway Engineer/Team Leader, Ms. Irum Noreen Sr. Structural Engineer, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Muhammad Imran & Mr. Muhammad Abbas Jr. Engineers, Mr. Muhammad Zeeshan Jr. Highway Engineer, Mr. Munawar Ali Pavement Engineer, Mr. Waqar Ahmad Slope Stability Expert, Mr. Saeed Uz Zafar Transport Economist and others.		
Brief Narrative Description of Project: The road from Dalbandin-Ziarat Blanosh (77km) is a provincial road under jurisdiction of Government of Baluchistan and was maintained by C&W Department Baluchistan. The subject road is located in District Chaghi. Its territory attached with Quetta in East and with Iran in West at Taftan Border through National Highway N-40. The road from Dalbandin-Ziarat Blanosh 77km located in district Chaghi which was less developed & deprived area near Iran Boarder. The development of this road will address the depriveness of this area. The project envisages improvement, widening and Construction of existing road from Dalbandin to Ziarat Blanosh about 77 kms as per NHA Standards of having 7.3m width alongwith 2.0m shoulder on each side with 2-Lane facility to cater for the requirement of traffic plying between Dalbandin and Ziarat Blanosh. The project takes off from Dalbandin Bypass at Chaghi Chowk and ends at Ziarat Blanosh traverses Girdh Jungle, Dasht Yoran, Nadarabad & Tehsil Chaghi etc. The road has been divided in two sections:- Section 01: Dalbandin to Tehsil Chaghi (60 km) Section 02: Tehsil Chaghi to Ziarat Blanosh (17 km in west from Tehsil Chaghi) including Chaghi Bypass.		
Description of Actual Services Provided: <ul style="list-style-type: none"> Detail Design for road and structures and Ground Validation and alignment study Land acquisition and utilities folders and Preparation of BOQ Coordination with concerned departments regarding their development plans, land acquisition & availability of ROW Collection of required data Evaluation of existing Pavement Alignment Study. Hydrological/ Hydraulic study & surface Drainage / Runoff calculation. Environmental Impact Assessment {EIA} Reconnaissance survey & alignment study Topographic survey Traffic & Ade Load Survey 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

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- Soil & Material Investigations
 - Geo-Technical Investigations
 - Construction Machinery & Material Survey with identification of Quarry Sites.
 - Road furniture design including traffic signs and gantries
 - Highway safety Audit & Provision of Highway safety Measures.
 - Geometric Design
 - Evaluation of existing structural (bridges, culverts, retaining walls, side drains, causeways, etc.)
 - Land Acquisition & Utility folders
 - Tender Documents/Drawings, cost Estimate, BOQ, C-Factor etc.
 - Economic Analysis/Benefits with traffic study in light of existing and anticipated generated traffic.
- Preparation of PC-I (if required)

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering / Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Feasibility Study and Detailed Design for Construction of 4-Lane Flyover at Bhara Kahu (N-75) (Length 3.5 Km) including Commercial Feasibility on PPP		Country: Pakistan
Location within Country: Province of Punjab		Number of person-months of the entire project: 46
Name of Client: National Highway Authority, M/o Communications, Govt. of Pakistan, Islamabad # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 45.00 million
No. of Staff: 16		No. of Persons-Months: 13
Start Date (Month / Year): 17 Feb. 2020	Completion Date (Month/Year): 15 Dec 2020	Approx. Value of Services (in US\$): US\$ 92,000 (Rs.14,793,427/-)
Name of Associated Firm(s), If Any: JV Partners M/s Associated Consulting Engineers – ACE Ltd. M/s Finite Engineering (Pvt) Ltd. M/s ECOS Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 12 12 09
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Dr. Shahid Nasir Team Leader/Sr. Str. Engineer, Mr. Vashdev Khatri Structural/Bridge Engineer, Mr. Ahmad Luqman Sarwar Highway Engineer, Dr. Ashfaq Ahmad Sheikh Hydraulic / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist, Mr. Sheraz Khan Electrical Engineer, Malik Saqib Mahmood Highway Safety Engineer, Dr. Asim Yousaf GIS Expert, Mr. Muhammad Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: National Highway Islamabad - Satra Mile-Lower Topa Kohala (N-75) is a strategic road. Its length upto Kohala was about 90km. It connects Azad, Jammu & Kashmir (AJ&K) with Pakistan at Kohala further it moves towards Muzaffarabad which is capital of Azad Jammu & Kashmir. NHA appointed consultants carried out Feasibility Study and Detailed Design for Construction of 4-Lane Flyover/Overhead Bridge at Bhara Kahu on N-75. The approximately length of the proposed Flyover was 4.0 Kms. Later on the project was converted on PPP basis and Consultants was asked to prepare the Commercial Feasibility Study on PPP/BOT, Financial Modeling and Technical Part of Concession Agreement. The proposed site for construction of 04-Lane of flyover located at Bhara Kahu on National Highway N-75 (Islamabad – Satra Mile – Lower Topa – Kohala) which is 8.6 Km from Zero Point of N-75. Bhara Kahu city is part of Islamabad Capital Territory. Total Length of the Flyover was 3.6 km.		
Description of Actual Services Provided: The services comprises of two phases i.e:- Stage-I <ul style="list-style-type: none"> ➤ Comment on TOR and query about them at pre-proposal meeting ➤ Data Collection / Coordination with concerned Departments. ➤ Desk Study and Reconnaissance visit, Alignment Study ➤ Traffic Survey and Axle Load Survey ➤ Satellite images of entire corridor Stage-II <ul style="list-style-type: none"> ➤ Topographic Survey with establishment of survey control points ➤ Soil Investigations ➤ Hydrological/ Hydraulic study & surface Drainage / Runoff calculation. ➤ Environmental Impact Assessment (EIA) ➤ Evaluation of existing pavement strength, if any ➤ Identification of quarry sites and construction material survey ➤ Geotechnical investigation survey for Structures ➤ Road furniture design including traffic signs and gantries ➤ Hydrology and Hydraulic Design Study, Evaluation of Existing Structures ➤ Structural Flyover Design (3.6 km) 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Geometric Design
- Provision of Ducts / Crossing of future utilities
- Pavement Design
- Highway Safety Audit
- Horticulture and Landscaping of intersections etc.
- Financial Model
- Technical Annexures / Schedules for Concession Agreement

Stage-III

- Tender Documents including Drawings, C-Factor, BOQ, Engineer's Estimate, Specifications
- Preparation of Utility Folders
- Stakeout of Design Alignment after approval for ground validation
- Fixation of ROW markers
- Preparation / Revision of PC-I
- Analysis of Toll lanes
- Preparation of Commercial Feasibility Study on PPP

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, **Environment, Resettlement**, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Transaction Advisor for Public Private Partnership (PPP) Project – Dualization of Okara-Satghara-Syedwala, Jaranwala & Chak Jhumra Expressway Road, Length = 135.00 Kms		Country: Pakistan
Location within Country: Province of Punjab		Number of person-months of the entire project: 100
Name of Client: Chief Engineer, Research and Design Department, Communication and Works (C&W) Department, Government of Punjab. Road Research Institute, Canal Road near University of Punjab Lahore Ph:042-99231779-80		Total value of full project (in million US\$): US\$ 50.00 million
No. of Staff: 14		No. of Persons-Months: 50
Start Date (Month / Year): 10 Mar 2020	Completion Date (Month/Year): 10 Sept 2020	Approx. Value of Services (in US\$): US\$ 186,000 (Rs.30,499,770/-)
Name of Associated Firm(s), If Any: M/s AZ Engineering Associates Lahore M/s J.A.S.B & Associates Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 35 15
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Mr. Ahmad Luqman Sarwar Team Leader, Mr. Arsalan Vardag Deputy Team Leader, Mr. Aized Hasan Mir PPP Specialist, Mr. Sultan Alam Procurement & Contract Specialist, Mr. Muhammad Ashraf Tiwana Legal Advisor, Mr. Kashif Khurshid Sr. Bridge / Flyover Structure Specialist, Mr. Muhamamd Naeem Sr. Geometric Design Engineer, Malik Saqib Mahmood Sr. Traffic Engineer, Dr. Ahtesham Raza Environmental and Social Safeguard Specialist, Mr. Saeed-uz-Zafar Land Acquisition and Resettlement Specialist, Dr. Ashraf Ahmad Sewerage and Drainage System Specialist, Mr. Jamshed-ul-Hasan Sr. Material/Geo Technical Engineer, Mr. Akhtar Mahmood Mir Sr. Land Survey Engineer, Mr. Zahoor Sardar Planning Specialist etc.		
Brief Narrative Description of Project: The Government of the Punjab was striving to meet its development objective focusing to engage Private Parties for financing, planning, designing, execution and operation of the projects for Sustainable development in the Region. Keeping in view the vision of the Punjab Government, the Communication and Works Department selection 08 major roads for PPP Modality. This Okara-Satghara-Syedwala, Jaranwala & Chak Jhumra Expressway Road, Length = 135.00 Kms was among one of those selected project.		
Description of Actual Services Provided: The services comprises of two phases i.e:- Phase-I <ul style="list-style-type: none"> ➤ Detailed Reconnaissance of Existing Road ➤ Preparation of Reconnaissance Report highlighting following: <ul style="list-style-type: none"> ➤ Inventory and Condition Survey of all existing Cross-Drainage Structures ➤ Inventory and Condition Survey of Flyovers, Underpasses, Pedestrian Crossing Bridges etc. ➤ Preliminary Topographic Survey, Traffic Survey, Preparation of Traffic Studies Report ➤ Preliminary Geotechnical and Soils investigation Study ➤ Preparation of Preliminary Pavement Design ➤ Preparation of preliminary design of structures ➤ Preparation of Plan and Profile Drawings ➤ Preparation of Schematic Designs for Toll Gates, Rest Areas, Weigh Bridges, office and residence for Toll Collection, Operation and Maintenance Staff ➤ Environmental Impact Assessment (EIA) ➤ Submission of Preliminary-Design, Cost Estimates, Pavement Design Report, Detailed Specifications, Unit Rate Analysis ➤ Preparation of Technical Feasibility Study 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Financing Options for project implementation i.e Construction, Operation and Maintenance, like BOT/BLT.
- Evaluation and recommendation of Toll Rates for different vehicle types
- Suggest Implementation strategy for the project.
- Preparation of Financial and Commercial Viability, Estimation of Revenue Generation, Payback Period of Project Capital Cost and Financial Model of Project

Phase-II

- Transaction Preparation
- Investor Solicitation
- Prequalification of Bidders
- Bid Invitation, Evaluation and Selection of Bidder
- Transaction Negotiations and Closure

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Design & QA/QC Consultancy Services for Lahore Ring Road Southern Loop-3 (SL-3)		Country: Pakistan	
Location within Country: Province of Punjab		Number of person-months of the entire project: 378	
Name of Client: National Logistic Cell, Headquarters Sowam Camp Rawalpindi Ph:051-4917092		Total value of full project (in million US\$): US\$ 60.20 million	
No. of Staff: 42		No. of Persons-Months: 378	
Start Date (Month / Year) 21 Jan 2020	Completion Date (Month/Year): 31 Mar 2021	Approx. Value of Services (in US\$): US\$ 730,000 (Rs.119,917,900/-)	
Name of Associated Firm(s), If Any: N.A		No. of Months of Professional Staff Provided by Associated Firm(s): N.A	
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Chief Resident Engineer, Resident Engineer, Assistant Resident Engineer, Quality Assurance Manager, Assistant Manager Quality Assurance Planning Engineer, Dr. Ashfaq Ahmad Sheikh Hydraulic / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist, Contract & Claims Manager, Design Coordinator, Highway / Structure Engineer, Assistant Manager Highway & Construction, Material Engineer, 3 Laboratory Technicians, 4 Lab. Helpers, Document Controller, Assistant Document Controller, 3 Site Inspectors, Chief Surveyor, 2 Surveyors, 2 Survey Helpers, 2 Quantity Surveyor/Assistant Quantity Surveyors, 2 AutoCad Operators, 2 Superintendent/Clerks, 2 Store Keeper/Inventory Control, 2 Data Entry Operators, 2 Dispatcher/Runner, Health & Safety Manager, Health Safety & Environment Inspector etc.			
Brief Narrative Description of Project: The project Lahore Ring Road Southern Loop (SL-3) was remaining part of Lahore Ring Road Project. The LRRP SL-3 consist of 08 kms length with 06 lanes road, 2 interchanges, 3 bridges, 14 culverts and 4 toll plaza. This project was PPP-BOT mode. Concession period was 25 years.			
Description of Actual Services Provided: <u>Design Consultancy Services</u> Following design services were provided by the consultant. <ul style="list-style-type: none"> • Design of Retaining walls and provide slope stability solutions, where needed. • Design of Flyovers, bridges and culverts • Design roadside drains, cross drainage facilities, exterior elevations, rendering and color palette. • Roads geometric design and Pavement/Road structural design. • Prepare drawings and design reports for infrastructure development works. • Hydrological/ Hydraulic study & surface Drainage / Runoff calculation. • Environmental Impact Assessment (EIA) • Pavement design • Calculation of quantities and cost estimate, Preparation of Drawings • Plan and profile of road works • Pavement cross section details • Complete set of drawings for flyover, bridges and culverts. • Retaining wall and slope stabilization details • Prepare Architectural and structural drawings of toll plazas including its plans, section and elevations. • Prepare Site plans, layouts, traffic circulation, lighting, signage and utilities • Optimization/ rationalization of design in conformance with design parameters required by client. • 			

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Ensure stability, soundness and adequacy of design.
- Resolution of comments and approval of design by Independent Engineer/ Client.
- Assist employer in compliance to design terms mentioned in Concession Agreement.

QA/QC Consultancy Services

Scope of Services includes contract management, site management and supervision. Consultant shall be jointly and severally responsible for provision of Construction Supervisory and Management Consultancy for the project. Objectives of Consultant include:-

- Ensure main contract management and follow time lines, response to the Employer's day to day;
- Evolve and finalize reporting mechanism / hierarchy in coordination with Project Manager and Project's Consultants to ensure timely response to all kind of requirements from the Employer and expeditious execution;
- Coordinate with The Client, Project Management Unit (PMU) of the Employer and Construction Supervision Consultants (CSC), the Project's Consultant;
- Coordination with the design teams;
- Coordination with sub-contractors and suppliers;
- Preparation of tender procedures for subletting including technical meetings and negotiation rounds;
- Scheduling and process control;
- Handling / processing Variation Orders / Statements;
- Conduct quality checks while ensuring quality control and quality assurance of works even during currency of the works at the site safety;
- Supervision, monitoring and testing of construction materials and equipment, etc.
- Prepare and submit IPC to Client for onwards submission to Employer and assist in release of payments; and
- Monitoring and initiation of progress reports as per Client's formatted template:-
- Documentation and correspondence for all aspects of site management and construction;
- Coordination of Commissioning and Handing over of all project facilities;
- Quantity verification as per requisite specifications and invoice processing of the Client's subcontractors; and
- Monitoring of work program on daily basis and review and revise work program as and when required.

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Feasibility Study and Detailed Design for Rehabilitation / Upgradation and Construction of Lodhran – Multan Section (North Bound 62 Km) of N-5 and Construction of Flyovers (2 Nos.) at Railway Crossing on Lodhran Bypass.		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 15
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\$ 66.00 million
No. of Staff: 10		No. of Persons-Months: 12
Start Date (Month / Year): 27 Sept 2019	Completion Date (Month/Year): 26 Nov 2019	Approx. Value of Services (in US\$): US\$ 60,000 (Rs.9,259,006)
Name of Associated Firm(s), If Any: M/s Hussain Engineering Services Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 03
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included for Mr. Ahmad Luqman Sarwar Team Leader/Highway Design Engineer, Mr. Akhtar Mahmood Mir Pavement Engineer, Dr. Ashfaq Ahmad Sheikh Hydraulic / Drainage Engineer, Ms. Irum Noreen Sr. Structural Engineer, Dr. Ahtisham Raza, Environmental Specialist, Mr. Kashif Khurshid Jr. Structural Engineer, Mr. Muhammad Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: National Highway N-5 serves as an important North-South road artery, extending. Its total length was divided into 1201 km in Punjab, 671 Km in Sindh, 127 Km in Khyber Pakhtunkhwa and the remaining 38 Km in the FATA which was managed by the National Highway Authority. Lodhran-Multan Section of N-5 (North Bound) was in fair to poor condition and was a candidate section for Sustainable National Highway Improvement Project in May 2018 (SNHIP) through financial assessment of Asian Development Bank (ADB). However it did not get matured. Therefore NHA was planned to rehabilitate and upgrade the section of N-5 from Lodhran to Multan (North Bound 62 Kms) along with construction of Flyovers at Railway crossings on Lodhran bypass. For this, Government of Pakistan was requested to provide the funds through PSDP.		
Description of Actual Services Provided: <ul style="list-style-type: none"> ➤ Feasibility Study, Topographic Survey ➤ Traffic Studies including OD surveys ➤ Hydrological/ Hydraulic study & surface Drainage / Runoff calculation. ➤ Environmental Impact Assessment (EIA) ➤ Pavement & Geometric Design ➤ Structural Design of 2 Flyovers, Bridges and 2 No. major Interchanges ➤ Preparation of Tender Documents, Design Documents, BOQ and Construction Drawings ➤ Land Acquisition study ➤ Highway Safety Audit ➤ Economic & Social Analysis, Preparation of PC-I 		
Type of Services provided: Planning Studies, Feasibility Studies, Technical Studies Design – Engineering/Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.		
Fields of Specialization: Transportation Sector: National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.		

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Assignment Name: Additional Financing to Khyber Pakhtunkhwa Provincial Roads Improvement Project (KP PRIP) – [Dualization of Mardan-Swabi Road Project – Loan No.3756-PAK		Country: Pakistan
Location within Country: Province of Khyber Pakhtunkhwa		Number of person-months of the entire project: 2122
Name of Client: Communication & Works Department, Project Implementation Unit, KPK Provincial Roads Improvement Project, Govt. of Khyber Pakhtunkhwa, H. # 24, C/3, Circular Road, University Town, Peshawar Ph:+92 91 9216459		Total value of full project (in million US\$): US\$ 100.00 million
No. of Staff: 75		No. of Persons-Months: 637
Start Date (Month / Year): 11 July 2019	Completion Date (Month/Year): 10 Jan 2023	Approx. Value of Services (in US\$): US\$ 1,715,000 (Rs.265,780,039)
Name of Associated Firm(s), If Any: M/s Creative Engineering Consultants M/s The Consulting Provenance (Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): M/s Creative Engineering - 1273 M/s Consulting Provenance - 212
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included for Mr. Ejaz Ali Bokhari Chief Resident Engineer / Team Leader, Mr. Muhammad Shoaib Senior Resident Engineer, Mr. Sultan Alam Contract Specialist, Dr. Ahtesham Raza Environmental Specialist, Mr. Wazir Ali Resettlement Specialist, Mr. Marwat Khan Architect/Landscape Architect, Mr. Waqar Tanoli Traffic/Road Safety Specialist, Abdul Wahab ARE, Mr. Nasir Imtiaz ARE, Mr. Sanaullah Khattak ARE, Mr. Junaid Khattak ARE, Mr. Inyat ullah Khan ARE, Mr. Rehan Ali Material Engineer, Mr. Ahmad Luqman Sarwar Highway Design Engineer, Mr. Kashif Khurshid Structural Design Engineer, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Khalid Mahmood Geotechnical Engineer, Mr. Sohail Khan Chief Quantity Surveyor and others.		
Brief Narrative Description of Project: The project mainly included the rehabilitation, Dualization and upgrading of the Mardan Swabi provincial highway (42 kms dualized highway). Besides this, construction of C&W House (Office)/C&WD Central Laboratory at Hayatabad Peshawar was also part of the project. Project proposed formation width was open area was 7.3m black top with 0.60m inner shoulder, 2m outer shoulder each side and 1.5m center median. Total 11 no bridges, 08 number existing bridges were retained, 14 no new bridges was constructed, 75 no culverts along the alignment, 01 underpass, 42 nos. U-Turns etc,		
Description of Actual Services Provided: The staff appointed full-time was Team Leader and Resident Engineer for on-site works supervision, resident in the project area at specified locations, probably at Mardan or Swabi. In addition, the Consultants provided support to strengthen the PIU in the conduct of its functions and responsibilities such as monitoring physical progress, financial management, social management, social and environmental safeguards and gender mainstreaming in the project. The Consultants worked under the overall guidance, condition and direction of the Project Director (PD). The main responsibilities were as under: <ul style="list-style-type: none"> • Review the design of road which have already been designed by the ADB Consultant. Consultant suggested changes in the design where found necessary viz a viz site conditions. Such changes will be approved by the Employer. • Hydrological / Hydraulic study & surface Drainage / Runoff calculation. • Environment Monitoring 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Consultant's Team Leader to act as the "Engineer" on the Project and the Resident Engineer are the "Representative of the Engineer".
- 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.
- Quality Assurance Manual and Plan
- Construction Supervision and Project Management
- Project Management as per FIDIC
- Environmental monitoring and evaluation
- Construction Supervision of bridges
- Supervision of Piling Operations
- 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 Monitoring and Evaluation

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Detailed Design of Top City Housing Society Infrastructure – Phase II		Country: Pakistan
Location within Country: Islamabad		Number of person-months of the entire project: 20
Name of Client: Top City 1, 7-11, Sajid Sharif Plaza, G-11 Markaz, Islamabad Ph:+92 051 2830461-3		Total value of full project (in million US\$): US\$ 1.00 million
No. of Staff: 10		No. of Persons-Months:
Start Date (Month / Year): July 2019	Completion Date (Month/Year): Sept 2019	Approx. Value of Services (in US\$): US\$ 20,600 (Rs.3,200,000/-)
Name of Associated Firm(s), If Any: Nil		No. of Months of Professional Staff Provided by Associated Firm(s): N.A.
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included for Mr. Akhtar Mahmood Mir, Design Highway Engineer, Mr. Ahmad Luqman Sarwar, Pavement Engineer, Mrs. Irum Noreen Structure Engineer, Mr. Muhammad Zeeshan, Design Engineer, Mr. Muhammad Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: Design Review and Detailed Design of infrastructure of the housing society including roads, water supply, electricity etc.		
Description of Actual Services Provided: <ul style="list-style-type: none"> • Detail design of roads in expansion and development (Tentative Length = 40 Km). • Topographic surveys shall be carried out in the corridor width of 60 meter along the alignment of each road. • Cross sections shall be observed at 25 meter interval along the alignment. • One (01) no. of soil pit shall be dug per kilometer for soil investigation to be used for pavement design • Design of vertical alignment and preparation of plan and profile drawings • Pavement design shall be carried out using Road Note 31 Pavement Design Method. • Cross drainage structure (if required) shall be designed. • Detailed BOQ is to be prepared. • Submissions will include both hard and soft copies of final design reports, calculations, plans, drawings and BOQ etc. • The work shall be done by the Consultant using the method and the requirements of Engineering Codes and Standards required for such project in metric system. • All reports, drawings plans shall have Top City logo and panel. • The Consultant shall be fully responsible for the stability and safety of Design. 		
Type of Services provided: Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Detailed Design of Top City Housing Society Infrastructure – Phase I		Country: Pakistan
Location within Country: Islamabad		Number of person-months of the entire project: 05
Name of Client: Top City 1, 7-11, Sajid Sharif Plaza, G-11 Markaz, Islamabad Ph:+92 051 2830461-3		Total value of full project (in million US\$): US\$ 1.00 million
No. of Staff: 10		No. of Persons-Months:
Start Date (Month / Year): Jul 2019	Completion Date (Month/Year): Jul 2019	Approx. Value of Services (in US\$): US\$ 8,900 (Rs.1,385,000)
Name of Associated Firm(s), If Any: Nil		No. of Months of Professional Staff Provided by Associated Firm(s): N.A.
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included for Mr. Akhtar Mahmood Mir, Design Highway Engineer, Mr. Ahmad Luqman Sarwar, Pavement Engineer, Mrs. Irum Noreen Structure Engineer, Mr. Muhammad Zeeshan, Design Engineer, Mr. Muhammad Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: Detailed Design of infrastructure of the housing society including roads, water supply, electricity etc.		
Description of Actual Services Provided: <ul style="list-style-type: none"> • Design review and detailed design of 6.5 Km Ring Road. • Topographic surveys shall be carried out in the corridor width of 60 meter along the alignment • Cross section shall be observed at 25 meter interval along the alignment. • 06 no's of soil pits shall be dug for soil investigation to be used for pavement design • Design of vertical alignment and preparation of plan and profile drawings • Pavement design shall be carried out using Road Note 31 Pavement Design Method. • Cross drainage structure (1 Box Culvert) shall be designed. • Detailed BOQ is to be prepared. • Submissions will include both hard and soft copies of all draft and final design reports, calculations, plans, drawings, BOQ etc. • The work shall be done by the Consultant using the method and the requirements of Engineering Codes and Standards required for such project in metric system. • All reports, drawings plans shall have Top City logo and panel. • The Consultant shall be fully responsible for the stability and safety of Design. 		
Type of Services provided: Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.		

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Assignment Name: Design Review and Detailed Design of Top City Housing Society Infrastructure		Country: Pakistan
Location within Country: Islamabad		Number of person-months of the entire project: 04
Name of Client: Top City 1, 7-11, Sajid Sharif Plaza, G-11 Markaz, Islamabad Ph:+92 051 2830461-3		Total value of full project (in million US\$): US\$ 1.00 million
No. of Staff: 08		No. of Persons-Months:
Start Date (Month / Year): Dec 2018	Completion Date (Month/Year): Dec 2018	Approx. Value of Services (in US\$): US\$ 6,800 (Rs.1,046,800)
Name of Associated Firm(s), If Any: Nil		No. of Months of Professional Staff Provided by Associated Firm(s): N.A.
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included for Mr. Akhtar Mahmood Mir, Design Highway Engineer, Mr. Ahmad Luqman Sarwar, Pavement Engineer, Mrs. Irum Noreen Structure Engineer, Mr. Muhammad Zeeshan, Design Engineer, Mr. Muhammad Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: Design Review and Detailed Design of infrastructure of the housing society including roads, water supply, electricity etc.		
Description of Actual Services Provided: <ul style="list-style-type: none"> • Services will include design review and detailed design of 2.2 Km Road. • Topographic surveys shall be carried out in the corridor width of 60 meter along the alignment • Cross section shall be observed at 25 meter interval along the alignment. • 04 no's of soil pits shall be dug for soil investigation to be used for pavement design • Design of vertical alignment and preparation of plan and profile drawings • Pavement design shall be carried out using Road Note 31 Pavement Design Method. • Cross drainage structures shall be designed. • Detailed BOQ is to be prepared • Validation of 03 no's box culverts shall be carried out. • Design of duct for crossing utilities is to be carried out. • Submissions will include both hard and soft copies of all draft and final design reports, calculations, plans, drawings, BOQ etc. • The work shall be done by the Consultant using the method and the requirements of Engineering Codes and Standards required for such project in metric system. • All reports, drawings plans shall have Top City logo and panel. • The Consultant shall be fully responsible for the stability and safety of Design. 		
Type of Services provided: Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Quality Assurance Inspector - Additional Lanes between Faizpur Interchange to Ravi Toll Plaza, Expansion of Ravi Toll Plaza and Construction of Administration Building – Overlay & Modernization of Lahore-Islamabad Motorway M-2 (V.O # 2) on BOT Basis		Country: Pakistan
Location within Country: Province of Punjab		Number of person-months of the entire project: 214
Name of Client: Motorway Operations & Rehabilitation Engineering (Pvt) Ltd. (MORE) - Frontier Works Organization (FWO) Headquarter, 509 Kashmir Road, R.A Bazar Rawalpindi. Ph:051-9271847		Total value of full project (in million US\$): US\$ 170.00 million
No. of Staff: 42		No. of Persons-Months: 140
Start Date (Month / Year): 01 Jan 2019	Completion Date (Month/Year): 31 Dec 2019	Approx. Value of Services (in US\$): US\$ 235,000 (Rs.31,604,200)
Name of Associated Firm(s), If Any: M/s Prime Engineering & Testing Consultants (Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 74
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included for Design Mr. Akhtar Mahmood Mir Sr. Highway Engineer, Mr. Ahmad Luqman Sarwar Pavement Engineer, Ms. Irum Noreen Structure Engineer, Mr. Kashif Khurshid Design Engineer, Mr. Muhammad Arshad Janjua Quantity Surveyor and for Supervision Col Khalid Bashir QAM/CRE, Mr. Sultan Alam Contract Specialist, and others.		
Brief Narrative Description of Project: Review of Designs, additional detailed design and construction supervision of additional lanes between Faizpur Interchange to Ravi Toll Plaza, Expansion of Ravi Toll Plaza and Construction of Administration Building.		
Description of Actual Services Provided: Detailed Design / Design Review Phase: Detailed engineering design of the following facilities: <ul style="list-style-type: none"> NHA Admin Building Extension in existing Toll Plaza Lighting System Design review of the road structures etc. Construction Supervision Phase: <ul style="list-style-type: none"> To supervise the works as the Engineer under the FIDIC Conditions of Contract and to approve the materials and workmanship of the Works. To review and approve the Project Implementation Programme prepared and submitted by the Concessionaire. To carry out the required material testing as per specifications and mix designs To review quality assurance and quality control during the Construction Phase. To ensure that the Works are accomplished in accordance with the specifications and standards stated in the Construction Agreement. To identify construction delays, if any and recommend to the Concessionaire and NHA the remedial measures to expedite the progress. To review as built drawings for each component of the Works prepared To review the safety measures provided for the traffic and project workers. To determine any extension of the construction schedule, to which the Concessionaire is entitled and shall notify the NHA accordingly. 		

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Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Quality Assurance / Quality Control of Lahore – Sialkot Motorway Project on BOT Basis (Km 0+000 to Km 10+000)		Country: Pakistan
Location within Country: Province of Punjab		Number of person-months of the entire project: 150
Name of Client: Frontier Works Organization (FWO) Headquarter, 509 Kashmir Road, R.A Bazar Rawalpindi Ph:051-9271847		Total value of full project (in million US\$): US\$ 237.00 million
No. of Staff: 15		No. of Persons-Months: 150
Start Date (Month / Year): Sept 2017	Completion Date (Month/Year): Sept 2020	Approx. Value of Services (in US\$): US\$ 458,000 (Rs.47,997,500)
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 staff included Muhammad Arshah Khan Swati, Resident Engineer, Abdul Aziz Material Engineer, Adnan Mujahid, Sr. Site Engineer; and others.		
Brief Narrative Description of Project: Through the competitive bidding, the Frontier Works Organization (FWO) has been awarded the project. FWO had engaged the services of Consultants for Quality Assurance / Quality Control (QA/QC) services during the project execution.		
Description of Actual Services Provided: Scope of work comprises on the following:- The general duties and responsibilities of the QA/QC Consultants include but not limited to the following:- a) Provide adequate supervisory staff to perform supervisory duties as per engineering practices or as directed by FWO. b) Monitor the works carried out by the construction contractors to ensure that they conform to the Construction Performance Standards and the Approved Detailed Design. c) Supervise / Validate all tests as required in Construction Performance Standards. d) Preparation of all construction methodologies. e) Approve all materials, Mix Designs, Job Mix Formulas as per the Construction Performance Standard. f) Check / Verify survey works and inspect all construction activities at site. g) Vetting of IPC as per the agreed milestones specified in the EPC Contract. h) Facilitate and assist FWO for obtaining substantial completion, sectional completion certificate or any other certification as required in EPC Contract / Concession Agreement. i) Assist in ensuring that the construction of the works is carried out within the relevant cost project and otherwise in accordance with the Terms of Concession Agreement.		
Type of Services provided: Planning Studies, Construction Supervision Quality Control and Assurance, Land Acquisition and Social Sector Studies.		
Fields of Specialization: Transportation Sector: National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.		

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Assignment Name: Design Review of Dualization & Improvement of Old Bannu Road Project, N-55 Gaandi Chowk – Sarai Naurang (8 Km) & Domail – Khurram (40 Km) Sections & Dualization & Improvement Of Old Bannu Road Project, N-55 Khurram - Krapa (35 Km)		Country: Pakistan
Location within Country: Province of Khyber Pakhtunkhwa		Number of person-months of the entire project: 12
Name of Client: M/s. National Engineering Services Pakistan – NESPAK (Pvt.) Ltd. NESPAK House, 2 nd Floor Attuturk Avenue, G-5/2, Islamabad		Total value of full project (in million US\$): US\$ 60 million
No. of Staff: 8		No. of Persons-Months: 12
Start Date (Month / Year): June 2018	Completion Date (Month/Year): July 2018	Approx. Value of Services (in US\$): US\$ 32,000 (Rs.3,847,140/-)
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 staff included Ahmad Luqman Sarwar, Sr. Highway Engineer, Akhtar Mahmood Mir Pavement Engineer, Iram Noreen, Structure Engineer, Dr. Ashfaq Ahmad Sheikh Hydraulic / Drainage Engineer, Muhammad Zeeshan Design Engineer, Shuja Uddin Quantity Surveyor		
Brief Narrative Description of Project: i. Detailed Engineering Design Review of Dualization & Improvement of Old Bannu Road Project, N-55 Gaandi Chowk – Sarai Naurang (8 Km) & Domail – Khurram (40 Km) Sections ii. Dualization & Improvement Of Old Bannu Road Project, N-55 Khurram - Krapa (35 Km)		
Description of Actual Services Provided: The design prepared by Design Consultant (NESPAK) according to AASHTO standards with a design speed of 50-80 kph. The Design Review Consultant reviewed the conformance of the said design with the required AASHTO Standards. The traffic count, projections and computation of ESAL's with appropriate damaging factors proposed by Design Consultant (NESPAK) were reviewed. Pavement Design Computations done by Design Consultant (NESPAK) were confirmed. Design Review Consultant advised to keep the Original Construction Contract intact as much as possible (excepting necessary mitigation) to avoid re-rating and variation orders, unless the project quality / safety is compromised. Review of hydrology report based on rainfall and flood record including surface runoff and drainage area characteristics. The discharge against individual drainage structures shall be checked. Stability of road embankment against erosion to be checked. Road surface runoff, collection of water and disposal to be adequately addressed. Any updation in the Report will be done by the Design Consultant. The Design Review Consultant to submit a Design Review Report indicating deficiencies / improvements required in the detailed design. The Design Review Comments of Design Review Consultant to be sent to the Design Consultant for incorporation of the same in the Construction Drawings and further issuance to the Contractor at site.		
Type of Services provided: Planning Studies, Hydrology Studies , Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies.		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.		

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Assignment Name: Feasibility Study and Detailed Design for Construction of Inter-Districts, 2-Lane Bridge Over River Chanab alongwith Link Roads at Mudwala Putten Tehsil Jalalpur Peerwala		Country: Pakistan
Location within Country: Province of Punjab		Number of person-months of the entire project: 63
Name of Client: National Highway 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: 24		No. of Persons-Months: 23
Start Date (Month / Year): 23 May 2018	Completion Date (Month/Year): 22 Sept 2018	Approx. Value of Services (in US\$): US\$ 276,000 (Rs.28,977,635)
Name of Associated Firm(s), If Any: M/s Prime Engineering & Testing Consultants (Pvt.) Ltd. (Lead) M/s Babar's Associates (Associate)		No. of Months of Professional Staff Provided by Associated Firm(s): 40
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The staff included Ms. Ghazala Farooq Asim Senior Structure Engineer / Team Leader, Ms. Iram Noreen Structure Engineer, Ms. Erum Aamir Hydrology & Drainage Engineer, Mr. Ahmad Luqman Sarwar Traffic / Highway Engineer, Mr. Rais Agha Geo-Technical/Material Engineer, Mr. Gul Mohammad Khoso Environmental Engineer, Mr. Sohail Arif Sheikh GIS Specialist and others.		
Brief Narrative Description of Project: The project envisages the construction of bridge over river Chanab at Mud Wala alongwith approach roads. Detail is given as under:- <ul style="list-style-type: none"> Bridge (2-lane) length with provision of substructure and super structure for 4-lane bridge = 1.0 km Approach road (2-lane) from Khan Bela to proposed bridge location (East side) = 5.00 km Approach road (2-lane) from Mud Wala basti to proposed bridge location (West side) = 4.0 km. River Training Works/Guide banks = on both sides Irrigation Jspers Bund/main bund = required on Khan Bela side (East side) Tender Drawings, documents and BOQ Land Acquisition and Utilities folder ROW demarcation EIA in all respect including approval from the approving authorities PC-I preparation 		
Description of Actual Services Provided: Scope of work comprises on the following:- Stage I <ul style="list-style-type: none"> Comments on Terms of Reference at pre-proposal meeting Data Collection/Co-ordination with local Departments, including Irrigation Department. Desk study and Reconnaissance visit. Alignment options and recommended alignment with type of bridge. Satellite images of entire corridor with recommended option duly marked on it. Traffic survey and Axle load survey or collection of data from nearby weigh stations. Presentation of bridge alignment along with conceptual plan of the bridge for approval from NHA. Feasibility Study. Stage II <ul style="list-style-type: none"> Detailed topographic survey Detailed soil investigation survey on the proposed alignment Identification of quarry sites and construction material survey. Geotechnical Investigation survey for bridge and structures. Geometric Design of alignment. 		

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- Road furniture design including traffic signs and gantries.
- **Hydrology & Hydraulic Studies.**
- Hydraulic Model Study.
- **Environment Impact Assessment Study**
- Structure Designs.
- Horticulture and Landscaping of intersections.
- Pavement Design with surface and subsurface drainage.
- Provision of ducts/crossing of future utilities like OFC, pipelines etc.

Stage-III

- Tender Documents, BOQ, Engineer's Estimate PC-1
- Stakeout of design alignment after approval for ground validation.
- Utility folders and Land acquisition plans using imageries, cadastral maps on GIS
- Fixation of ROW markers when required by the Client
- Training of NHA Engineers in field and at consultant's head office premises
- River Training Works / Guide Banks
- Irrigation J-spur Bund / main bund
- For EIA Consultant shall directly coordinate with GM (EALS)office
- Preparation/revisions of PC-1

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Design – Engineering, Structural Engineering, Procurement Services, Materials Testing, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction.

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Assignment Name: Verification of Community Driven Local Development Policy (CDLD) Programme in 12 districts of Khyber Pakhtunkhwa		Country: Pakistan
Location within Country: Province of Khyber Pakhtunkhwa		Number of person-months of the entire project: 200
Name of Client: Hulla & Co. Human Dynamics KGm, Austria Funded by EU Pakistan, H. # 9, Street No.88, G-6/3, Islamabad		Total value of full project (in million US\$): US\$ 100.00 million
No. of Staff: 08		No. of Persons-Months: 83
Start Date (Month / Year): 27 th March 2018	Completion Date (Month/Year): June, 2020	Approx. Value of Services (in US\$): US\$ 266,000
Name of Associated Firm(s), If Any: M/s Grant Thornton Consulting (Pvt.) Limited (Lead)		No. of Months of Professional Staff Provided by Associated Firm(s): 117
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The design staff includes Mr. Aized Hasan Mir, Team Leader, Mr. Ahmad Luqman Sarwar Project Coordinator, Mr. Aftab Ahmad, Field Engr, Mr. Zuhaib Rabbani, Field Engineer, Mr. Muhammad Tufail Field Engineer, Mr. Fazli Jalil, Field Engr, Mr. Muhammad Kamran Field Engineer, Mr. Sajid Syed, Field Engineer.		
Brief Narrative Description of Project: The validation required an assessment of compliance in implementation of the CDLD policy documents covering all processes and stakeholders and a technical evaluation of assets created under the project in Swat, Shangla, Chitral, Upper Dir, Lower Dir, Malakand, Buner, Nowshera, Swabi, Haripur, Torghur, and Battagram districts. The sectors involved in the CDLD program included Rural Access Roads, Works, Irrigation, Drinking Water Supply, Education, Social, Health, Sanitation, Agriculture, Sports and Livelihoods. Validation tools included questionnaires, focus group discussions, community interviews, physical verification of over 5,000 sub projects and assets created, budgetary processes and expenditure verification, institutional frameworks assessment, capacity building, MIS database development and others.		
Description of Actual Services Provided: Technical evaluation of at-least 2433 schemes in 12 districts of KPK (Swat, Shangla, Chitral, Dir Upper, Dir Lower, Malakand, Buner, Nowshera, Haripur, Kohistan, Torghar and Batagram) ensuring that construction work is as per design which includes inspection of structure, inspection of load-bearing columns, inspection of beams and lintels, inspection of roof slabs, workmanship of the structure, inspection of foundations, inspection of floors and plasters, inspection of water supply and sewerage system, inspection of electrification, inspection of irrigation schemes, inspection of flood protection bunds. Keeping in view of scope of work, the Consultant is specifically responsible for the following: <ul style="list-style-type: none"> ▪ Ensuring the availability of Team leader and Engineer throughout the duration of the contract agreement. The team leader and Engineer will be responsible for the assignment planning, meetings with clients and key stakeholders, reviewing and participating in developing sampling framework, providing M&E checklists, reporting formats, carrying out selected field visits and reviewing inception report, quarterly progress reports, draft consolidated and final report. ▪ Ensuring the availability of adequate field inspectors/engineers for carrying out field visits, completing developed checklists and reporting on pre-agreed protocols. ▪ Ensuring that SMP engineer designs and drawings are as per CDLD standards for each scheme ▪ Verify that SMP design engineer visited the project site during the project design phase ▪ Ensure that project cost estimates are reasonable (comparison with Market rates) and approved by the competent authority ▪ Ensure the availability of Technical/engineering assistance/guidance at critical construction stages ▪ Verify Engineer Certification and Physical Inspection of work done as per CBO standards 		

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- Review of inspection reports by POE engineers
- Ensure that new infrastructure projects are inventoried in MIS at accurate cost and with coordinates

Type of Services provided:

Engineering Design and supervision, verification and validation of design and constructed facilities

Fields of Specialization:

Buildings, Roads and bridges, Public Health, Irrigation, Buildings, Schools, Livelihood, Flood Protection Schemes.

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Assignment Name: Consultancy Services for Maintenance Backlog Reduction Program and Resurfacing and Strengthening Program for NHA Network (North Package)		Country: Pakistan
Location within Country: KPK / Punjab		Number of person-months of the entire project: 87
Name of Client: National Highway Authority, M/o Communications Govt. of Pakistan, # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 370.00 million
No. of Staff: 27		No. of Persons-Months: 40
Start Date (Month / Year): 23 Jan 2018	Completion Date (Month/Year): 28 October 2018	Approx. Value of Services: US\$ 386,000 (Rs.41,976,590)
Name of Associated Firm(s), If Any: M/s ACE (Pvt) Ltd. M/s PAVRON		No. of Months of Professional Staff Provided by Associated Firm(s): 47
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Akhtar Mahmood Mir Sr. Highway Engineer/Team Leader, Dr. Shahab Khanzada Sr. Pavement Engineer, Ms. Irum Noreen Sr Structure Engineer, Dr. Ashfaq Ahmad Sheikh Hydraulic/Drainage Engineer, Malik Saqib Mehmood Highway Safety Expert, Mr. Javed Iqbal Contract Engineer, Mr. Umair Aqil Geotechnical Engineer, Dr. Ahtesham Raza Environmental Engineer, Mr. Abdul Majeed Economist, Mr. Ahmad Luqman Sarwar Traffic Engineer, Mr. Rais Agha Material Engineer and others.		
Brief Narrative Description of Project: NHA hired the services of Consultant to analyze the existing pavement condition, road roughness, traffic and Heavy Weight Deflectometer (HWD) data and to evaluate the deteriorated road sections for Rehabilitation (candidate sections for Maintenance Backlog Reduction Program) & Resurfacing (candidate sections for Resurfacing and Strengthening Program). Based on latest road condition and roughness survey data, the list of road sections (with exact location, length and remaining service life) identified as candidate sections for resurfacing (521 Km with RSL between 2 to 2.5 years) and rehabilitation (1,113 km with RSL less than 2 years) attached at Annex- A to the Contract. The consultant identified road portions having homogenous conditions and pavement distresses for packaging them into continuous road sections and selected most appropriate rehabilitation or resurfacing treatment. The Consultant performed the tasks mentioned in the subsequent sections of this TOR for NHA network falling in the jurisdiction of North & Central Zones and submitted the reports accordingly in the form acceptable to NHA.		
Description of Actual Services Provided: Scope of work comprises on the following:- <ol style="list-style-type: none"> 1) Revalidation of Pavement Condition, Roughness and HWD survey data 2) Traffic Data Analysis 3) Axle Load Survey and Assessment Report 4) Soil Investigation and Drainage Assessment 5) Road Safety Audit of candidate sections 6) Structural (bridge/culverts) condition assessment (i.e. identification of structurally deficient and functionally obsolete structures within candidate sections). 7) Environmental Management Plan 8) Preparation of Pavement Design 9) Preparation of Engineer's Estimate upon approval of pavement design 10) Preparation of BOQs, Contract Document alongwith Tender / Construction Drawings etc. 11) Preparation of PC-I. 		

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Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design –Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Detailed Design and Construction Supervision of Improvement / Widening of Thokar Niaz Baig – Hudiyara Drain Section of N-5 from Existing 4 Lanes to 8 Lanes (Addl. 2-Lanes on Either Side)		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 483
Name of Client: National Highway Authority, Ministry of Communications, Govt. of Pakistan, Islamabad, # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 25.00 million
No. of Staff: 44		No. of Persons-Months: 193
Start Date (Month / Year): October 2017	Completion Date (Month/Year): Oct 2018	Approx. Value of Services (in US\$): US\$ 450,000 (Rs.45,597,839/-)
Name of Associated Firm(s), If Any: M/s Asif Ali Associates (Pvt) Ltd. M/s TurkPak International (Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 290
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: <p>The design staff includes Mr. Usman Riaz TL/Highway Design Engineer, Dr. Ashfaq Ahmad Shaikh Hydraulic / Drainage Engineer, Dr. Ahtesham Raza Environmental Engineer, Ms. Irum Noreen Structure/Bridge Engineer, Mr. Muhammad Nasir Khurshid Soil/Geo-technical Engineer, Mr. Ahmad Luqman Sarwar Traffic/Pavement Engineer, supervision staff includes Mr. Ejaz Ali Bokhari Resident Engineer, Mr. Muhammad Saeed Assistant Resident Engineers, Mr. Rais Agha ARE Materials, Mr. Muhammad Riaz Quantity Surveyor and others</p>		
Brief Narrative Description of Project: <p>Multan road from Thokar Niaz Baig to Hudiyara Drain was part of National Highway N-5, and was administrative control of National Highway Authority (NHA). The length of the project was 11 Km having an existing ROW of 34 m to 37 m. The existing road at present was 4 lane dual carriageways.</p> <p>The Thokar Niaz Baig intersection was a very busy junction in the South-West side of Lahore. It connected Johar Town, Raiwind, campus and Chauburji to National Highway N-5 along with accommodating the traffic entering and leaving Lahore at Islamabad Motorway M-2 junction as well as highway traffic coming from and to Multan on N-5. The road also links Northern and Southern Lahore to Sunder Industrial Estate. The traffic problems including vehicular jams, long queues and delays have become a normal routine also add to the traffic congestion. The commercial traffic for container depot involving long trailers plying on the route also add to the traffic congestion. The long queues in fast lane for traffic taking U-turn from and to North bound carriageway is creating bottlenecks which shall be eased out with proposed design of the project road section.</p> <p>The existing road was improved to 8-lane dual carriageway having a roadway width of 15.5 m on either side with a lane width of 3.65m. Additionally three U-turns was proposed in order to streamline the movement of traffic without any disturbance for HOV commuters.</p>		
Description of Actual Services Provided: <ul style="list-style-type: none"> • 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 • Hydrology & Hydraulic Study, • Construction of bridges • Supervision of Piling Operation 		

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- 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.

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.

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Assignment Name: Independent Engineer - Construction of Swat Expressway on BOT Basis		Country: Pakistan
Location within Country: KPK, Pakistan		Number of person-months of the entire project: 1330
Name of Client: Pakhtunkhwa Highway Authority (PKHA), Attached Department Complex, Khyber Road, Peshawar and Swat Expressway Planning Construction & Operations (Pvt) Ltd. (SEPCO) – FWO HQ 509 Kashmir Road, R.A Bazar, Rawalpindi Ph:051-9271847		Total value of full project (in million US\$): US\$ 340.00 million
No. of Staff: 123		No. of Persons-Months: 660
Start Date (Month / Year): 01 st May, 2017	Completion Date (Month/Year): Oct 2020	Approx. Value of Services: US\$ 3,840,000 (Rs.395,359,717)
Name of Associated Firm(s), If Any: M/s PAVRON		No. of Months of Professional Staff Provided by Associated Firm(s): 670
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: IE Team consisting of Brig Muhammad Ayub Independent Engineer, Mr. Sultan Alam Contract Specialist, Mr. Majid Wazir Abbasi Planning Engineer, Mr. Ahsan Imtiaz Butt Measurement Engineer, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Amir Ali Khan Manager Admin and Document Controller etc. IE Field Team consisting Maj Ahsan Akmal Dy.IE, Mr. Muhammad Tariq Dy. IE, Maj Adnan Aftab Khan Dy. IE, Mr. Jamshed Baig ME, Syed Hashmat Abbas ME, Two Structure Engineers, Mr. Arsalan Vardag Financial Expert, Mr. Irshad Hasan QS, Mr. Afzal Hussain QS, Mr. Muhammad Faizan QS and others.		
Brief Narrative Description of Project: Swat Expressway was one of the major projects announced by the Government of KPK. The Swat Expressway was provided safe and efficient corridor for commuters travelling to the Northern areas. The proposed project facilitated regular travelers and also the tourists traveling to Swat and other attraction within the vicinity. The proposed Swat Expressway was connected and provided additional route from M-1 (Islamabad - Peshawar Motorway) to the city of Chakdara. Swat Expressway (4-Lane) Expressway was originated from Kernal Sher Khan Interchange on M-1 and ends at Chakdara near intersection of N-45 and N-95. The Swat Expressway alignment was moved parallel to the existing N-45 highway. The proposed Swat Expressway had 7 interchanges including already existing Kernal Sher Khan Interchange on M-1. A Concession Agreement was signed between Pakhtun Khwa Highway Authority and Swat Expressway Planning Construction and Operation (Pvt.) Ltd. (SEPCO) for construction of Swat Expressway on BOT Basis.		
Description of Actual Services Provided: Following services were provided:- <ol style="list-style-type: none"> a) review and approve the adequacy of topographical surveys, geo-technical and sub-soil investigations, hydrological investigation for the Expressway and other structures; b) if applicable, review and approve die survey of existing bridges, culverts and other structures conducted by the Concessionaire to establish the structure adequacy, and proposed strengthening for the Expressway; c) review and approve the Detailed Design and working drawings prepared and submitted by the Concessionaire to the Independent Engineer for the construction of various components of the road, bridges/structures, estimates reports and other deliverables with regard to: <ol style="list-style-type: none"> (i) adequacy, completeness, optimality and capability of design to perform as required in anticipated operating conditions and to meet die technical requirements specified in this Agreement; 		

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<ul style="list-style-type: none"> (ii) (iii) (iv) (v) (vi) (vii) (viii) 	<p>identification of project design features or any major equipment component that documents not appear to meet design, performance requirements or fails to adhere to good engineer practice; and</p> <p>provided an opinion on the quality of the Detailed Design with respect to their effect on the anticipated service life of the facility, the degree of maintenance needed to meet performance requirements and long term availability over the Concession Period;</p> <p>review and approve reports prepared and submitted by the Concessionaire, with respect to the traffic, traffic management etc.;</p> <p>review and approve the implementation schedule of engineering, design, procurement and construction of the Expressway submitted by the Concessionaire and determine that adequate provisions have been made for the following:</p> <ul style="list-style-type: none"> (i) Design; (ii) Construction (iii) Testing (iv) review and approve the capability of the proposed toll collection system to perform as required in anticipated operating conditions; (v) review the available permits or permit applications; (vi) review the environmental management plan for the Expressway during the Construction Period (vii) review quality assurance and quality control provisions during the Design Review Phase, Construction Period and O&M Phase and shall: <ul style="list-style-type: none"> (i) prove due diligence and utmost expertise in ensuring that quality control provisions are maintained at all times during the Construction Period and die O&M Phase; (ii) report to the Financiers in case the quality standards and quality control provisions are not maintained on the Concession Area; (vi) audit the safety' of the Expressway during Construction Period and the O&M Phase; (vii) review and comment on die consistency of all Project design documents; (viii) review and comment on all utility arrangements for the Project, including (without limitation) to water supply and electricity supply.
<p>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. Quality Assurance and Management, Legal and Financial Monitoring, Environmental Monitoring.</p>	
<p>Fields of Specialization: Transportation Sector, Financial and Legal Sector</p>	

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Assignment Name: Feasibility Study and Preliminary Design for Peshawar-Kabul Motorway Section-I: Peshawar-Torkham (50 Km), Section-II Torkham-Jalalabad (76 Km), Section-III: Jalalabad-Kabul (155 Km).		Country: Pakistan & Afghanistan
Location within Country: KPK (Pakistan) Jalalabad & Kabul (Afghanistan)		Number of person-months of the entire project: 115
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\$ 900.00 million
No. of Staff: 66		No. of Persons-Months: 115
Start Date (Month / Year): 13 Mar 2017	Completion Date (Month/Year): 13 Sept 2017	Approx. Value of Services: US\$ 1,040,000 (Pak Rs.103,410,539)
Name of Associated Firm(s), If Any: M/s SAMBO Consulting Co. Ltd. Korea M/s Associated Consulting Engineers (Pvt) Ltd., Lahore M/s Assign Engineering Consult International Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 60
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: International Staff comprises of Mr. Yang, Sun Jib Team Leader / Highway Engineer, Mr. Choi, Chang Rim Tunnel Engineer, Mr. Kim, Ki Hwan Geotechnical Engineer, Mr. Kim, Keun Soo Geologist, Local staff comprises of Mr. Akhtar Mahmood Mir ARE, Mr. Ahmad Luqman Sarwar Pavement Engineer, Malik Saqib Mehmood Traffic/Network Analyst, Mr. Umair Aqil Assistant Geotechnical Engineer, Ms. Iram Aamir Senior Structure Engineer, Mr. Muhammad Imran and Mr. Shahid Iqbal Junior Structure Engineers, Dr. Tabassum Zahoor Hydrologist / Hydraulic Engineer, Mr. Rais Agha Soil & Material Engineer, Mr. Muhammad Tehseen Environmental Engineer, Mr. Asim Yousaf GIS Engineer, Mr. Muhammad Hafeez Butt Seismologist, Mr. Abdul Majeed & Mr. Saeed uz Zafar Chief Economists, Mr. Iqbal Niazi, Social Scientist, Mr. Mr. Muhammad Arshad Janjua and Mr. Muhammad Bashir Goraya QS and others.		
Brief Narrative Description of Project: <p>Pakistan by virtue of its geo-strategic location is a junction of South Asia, West Asia and Central Asia. It was a pathway from resource efficient countries to resource deficient countries. Pakistan could be termed as a Bridge between South Asia and South West Asia; Iran and Afghanistan were energy abundant while India and China were deficient.</p> <p>Land locked Afghanistan was at the phase of reconstruction finds its ways through Pakistan. It share a 2,640 Km Durand line, pours border with its neighboring Pakistan. There are number of un-administered and two administered Border Crossings; at Chaman in Balochistan and at Torkham in Khyber Pakhtunkhwa. Un-administered are through frequent routes in deserts and mountain passes in FATA.</p> <p>The existing road links through Borders also need to be up-graded, especially being damaged by the NATO supply transit traffic. Keeping in view the growing demand of trade between the two countries, the Government of Afghanistan has requested Government of Pakistan to develop Peshawar-Kabul Motorway. Pakistan's vision to access the CARs shall also be facilitated through this Motorway. It was desired by the Government of Pakistan to carry out a detailed feasibility study for Peshawar-Kabul Motorway.</p>		

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The project Peshawar-Kabul Motorway comprises of the following sections:-

- i. Peshawar-Torkham Section, 50 Kms
- ii. Torkham-Jalalabad Section, 76 Kms
- iii. Jalalabad-Kabul Section, 155 Kms

Description of Actual Services Provided:

- a) Reconnaissance survey/visit report
- b) Review and update the existing alignments of Peshawar-Jalalabad-Kabul road and if required, submit other alignment options
- c) The project shall have maximum incorporation of existing facilities and must submit comprehensive rational if we choose not to use the existing facilities.
- d) A presentation of the Alignments Options with recommendations
- e) Acquisition of fresh stereo satellite imagery 0.5 m.
- f) Establishing permanent Bench Marks at every 10 km with DFGPS and ortho-rectification of stereo imagery. Observe cross section at every 100 m interval.
- g) Aerial visit with flag marking on ground
- h) Provision of services roads
- i) Number and type of cross drainage structures, including bridges, box / pipe culverts etc.**
- j) Construction material study report
- k) Outline plan and profile design with Satellite Image (0.5 m) geo-rectified in background.
- l) Identification and preliminary design of interchanges, flyovers for access roads, underpasses, cattle creeps etc.
- m) Typical structural drawings with general layout of bridges.
- n) Network level/Project level Traffic study report and pavement design.
- o) Limited soil investigation at average 10 km interval.
- p) Soil Impact Assessment (SIA), Environment Impact Assessment Study (EIA) and Ecology studies be undertaken as per EPA Guidelines.**
- q) Road furniture including but not limited to pavement markings, traffic signs, cat eyes, gantries and lightings on required motorway locations and Interchanges.
- r) Land Acquisition and utility/infrastructure estimated and folders.
- s) Outline design of Toll Plazas, rest areas, service areas and weigh stations.
- t) Location and outline designs of NHA and Afghan Highway Project offices
- u) Emergency phone systems/monitoring control rooms
- v) Hydrology of the area and hydraulics of major rivers
- w) Preparation of PC-I
- x) GIS Map on satellite imagery.
- y) The seismic maps shall be part of Feasibility Study and adequately will be utilized in the design.
- z) Review of the design of cross border facilities and detail description of facilities and control systems.
- aa) Economic / Financial Analysis with indicators
- bb) Obtain advice from NHA and Afghan government with respect to International Trade Agreements/MOUs between Pakistan and Afghanistan and suggested improvements.

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, **Environment**, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional / Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Consultancy Services For Design Review and Construction Supervision of Trap to Pindi Gheb, Package-4 (50 Kms) Section of Hakla (M-1) to Yarak (D.I. Khan) Motorway		Country: Pakistan
Location within Country: KPK / Punjab		Number of person-months of the entire project: 1052
Name of Client: National Highway Authority, M/o Communications Govt. of Pakistan, # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US\$ 600.00 million
No. of Staff: 47		No. of Persons-Months: 605
Start Date (Month / Year): Sep 2016	Completion Date (Month/Year): October 2021	Approx. Value of Services: US\$ 921,000 (Rs.94,844,007/-)
Name of Associated Firm(s), If Any: M/s ACE (Pvt) Ltd. – Transportation Engineering Services Division (Lead)		No. of Months of Professional Staff Provided by Associated Firm(s): 447
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Munawar Ali Highway Design Engineer/Team Leader, Dr. Tabassum Zahoor Hydraulic / Drainage Engineer, Mr. Rais Agha Geotechnical Engineer, Mr. Ahmad Luqman Sarwar Traffic/Pavement Engineer, Habib ur Rehman Resident Engineer/Team Leader, Mr. M. Tariq Niazi Highway Engineer, Mr. Iftikhar Ahmad Structure Engineer, Mr. Khadim Hussain Material Engineer, Mr. Muhammad Afzal Quantity Surveyor and others.		
Brief Narrative Description of Project: Prime Minister of Pakistan directed NHA to conduct aerial survey to study various options for the Western Alignment of China Pakistan Economic Corridor (CPEC). Several alternate proposals were prepared and discussed with their merits and demerits and the route corridor from Hakla on M-1 to Yarak on N-55 near D.I. Khan via Pindigheb, Kalabagh, and Kundal was finally approved. The alignment of subject motorway originates at Yarak (N-55), traverses through Paniyala, Abdul Khel Kundal, crossing River Indus, Mianwali, Daud Khel Sikandarabad, Tarap, Pindigheb, Fatehjang and finally terminates at Hakla on Motorway (M-1). The proposed motorway was part of the Western Alignment of the CPEC. National Highway Authority-NHA intends to appoint Consultants for Design Review & Supervision of CPEC Western Route: Hakla on M-1 to D.I. Khan Motorway/Expressway. The subject project will be implemented on fast-track basis. Therefore, to meet the pace of work and for execution of good quality construction as per specification & NHA standards, the construction & its supervision undertaken through five sections/packages.		
Description of Actual Services Provided: The available tender drawings/design suffice for the purpose of tendering. Before the supplementary / construction drawings are formally issued to the Contractor, the Supervisory Consultants have on fast track without fail established the traverse and level controls along the Alignment, Joint cross section, with the Contractor, are observed and formed the basis of Construction Drawings and validation of the project estimate. The location, size and quantity of structures was checked and validated. The Consultant reviewed the conformance of the said design with the required AASHTO standards. The traffic count, projections and computation of ESAL's with appropriate damaging factors revalidated. Pavement design computations confirmed. Consultants advised to keep the original Contract intact as much possible. To avoid re-rating and variation orders, unless the project quality / safety is compromised.		

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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.

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Assignment Name: Quality Control / Supervisory Services for Karachi-Lahore Motorway Project: Abdul Hakeem-Lahore Section (Km 1009+000 to Km 1146+950).		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 306
Name of Client: M/s China Railway 20 Bureau Group Corporation Apartment No.1507, Tower A, Centaurus, F-8/4, Islamabad		Total value of full project (in million US\$): US\$ 700.00 million
No. of Staff: 20		No. of Persons-Months: 306
Start Date (Month / Year): September 2016	Completion Date (Month/Year): September 2019	Approx. Value of Services: US\$ 1,017,000 (Rs.104,815,200/-)
Name of Associated Firm(s), If Any: Nil		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: Mr. Adnan Farrukh Hasan Team Leader / Chief Resident Engineer, Mr. Naeem Jamshed Ali Planning Engineer, Mr. Gul Riaz Nabi Memon Structural Engineer, Mr. Amjad Riaz Toor Materials Engineer, Ms. Sehar Zaib Architect/Building Engineer, Mr. Najeeb Ullah Khan, Abdul Sattar & Mujahid Hussain Deputy Team Leaders/Resident Engineers and others.		
Brief Narrative Description of Project: The Government of Pakistan through National Highway Authority (NHA) was planned to construct 230 Kms long 6-lane Motorway between Abdul Hakim and Lahore as a part of Karachi Lahore Motorway. The contract of motorway project was signed between CR20G-ZKB KLM Joint Venture and NHA, CR20G was became the EPC leading contractor of this project. ACC was hired as a in house team of consultant for Quality Assurance / Quality Control of this project by CR20G of 4 divisions of Section III undertaken by CR20G (from Km 1009+000 to Km 1146+950).		
Description of Actual Services Provided: Consultants (QA) was performed the services and carried out their obligations with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices and was observed sound management practices and employ appropriate advanced technology & safe methods. Consultants (QA) was always act, in respect of any matter relating to this Contract to the Services, as faithful advisers to the Client, at all times support and safeguard the Client's legitimate interests in any dealings with other consultants or third parties. Consultants (QA) nominated & appointed staff for monitoring of field verification and validation of surveys, investigations and field/laboratory tests and executed quantities. The Consultant provided Quality Assurance Services for the Project complying with the Employer's (hereinafter also called the National Highway Authority (NHA) requirements in the EPC contract including but not limited to the following: <ol style="list-style-type: none"> a. Preparation and Implementation of Quality Assurance plan and Quality Assurance Manual (QAM); b. to perform duties as per standard engineering practices or as per approved QAM; c. Monitor the works carried out by the construction contractor(s) to ensure that they conform to the Construction Performance Standard and the Approved Detailed Design in collaboration with Quality Management Team to be formulated by the Contractor; d. Supervise/Validate tests on a sampling basis as required in Construction Performance Standards to be conducted by the Client. e. Review and approve all construction methodologies prepared/submitted by the contractors considering their resources and work schedule; f. Approve all materials, Mix Designs, Job Mix Formulae as per the Construction Performance Standard after formulation of the same by the Contractor and Employers representatives (QC team). Check/verify survey works and inspect all construction activities at site; 		

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- g. Monitor work done as per the agreed yardstick / milestones specified in the Contract;
- h. Assist in ensuring that the construction of the works is carried out within the relevant cost projections and otherwise in accordance with the Terms of EPC contract;
- i. Facilitate and assist the Contractor (the Client) for obtaining substantial completion, sectional completion certificate or any other certification as required under the Contract;
- j. Assist the Contractor(s) in liaison with AER, appointed by NHA.
- k. Client will be responsible for the execution of Works in accordance with standards specifications and technical construction drawings. The Consultants shall supervise the work's Contracts, make engineering decisions, be responsible for quality assurance, provide general guidance and furnish timely response to the Contractors in all matters related to the Works.
- l. Assist CR20G for establishment and implementation of a project management system.
- m. To coordinate, supervise and support the decision making actions by Employers Representative and NHA concerning engineering and design matters during the construction stage in order to ensure that quality control and engineering standards are consistently maintained throughout the project within cost and time constraints.
- n. Inspect and evaluate Contractors facilities especially laboratory items to ensure compliance with the specifications and terms and conditions of the Contract Agreement. Without relieving the Contractors of their obligations under the Contract, monitor the Contractors' laboratory testing, evaluate the Portland cement concrete and bituminous mixture designs prepared by the contractors, and recommend improvements (if any),
- o. Monitor the concrete Batching and asphalt Mixing Plants as per approved mix designs & specifications, monitor the testing of steel and High Tensile wire/ cable for Stressing as per specifications and also monitor the stress cable for Stressing activity as per approved procedure and Specifications.
- p. Assure quality of the works during construction continuously inspect soils and materials, construction operations and the works with regard to workmanship and compliance with the specifications; and carry out independent testing in the field and/or in the "Employers Representative" laboratory and approve or disapprove and certify the works that conform with the specifications and maintain permanent records of results of all the tests made.
- q. Give notice to the Contractors of any defects and deficiencies through Non Compliance Reports (NCR), and issue instructions for the removal and substitution of the improper works, where provided under the contract and recommend to Contractor other recourse available under the Contract without relieving the Contractors of their obligations under the Contract, review and approve the traffic management and safety plan, environment mitigation plan and ensure compliance such that the Works are carried out at all times in a safe and secure manner and damage or injury to persons or property is avoided.
- r. Inspect quarries and borrow pits, and crushing plants, and order tests of materials and ensure adherence to specifications.
- s. Review evaluate and approve the planned construction methodology by the Contractor and ensuring that the Contractor has incorporated the most effective and expeditious methodology of carrying out the works; and ensure in setting up a computerized project control system for reporting physical and financial progress by the Contractor as well as the forecasts, if included in the bids and/or if demanded later on by the NHA. Subsequently closely monitor the construction progress on regular basis to determine whether it is proceeding in accordance with the approved work program.
- t. Establish a comprehensive system of maintaining site records including site correspondence, survey data, inspection records test data, site diaries, records of meetings, financial records, progress records etc.
- u. Recommend any modification of complementary items to be necessary to Contractor. Supervising information program on STDs and HIV/AIDs which the Works Contractor is required to carry out at construction campsites.

Type of Services provided:

Topographic Surveys, Planning Studies, Technical Studies, Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quality Control Services Planning, Management Studies, Manpower Requirements Studies, Environment

Fields of Specialization:

Transportation Sector:

Transportation Sector, Quality Control Services



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Assignment Name: Quality Control Services for Peshawar-Karachi Motorway (Sukkur – Multan Section) Section 5 (50 Kms)		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 576
Name of Client: M/s China State Construction Engineering Corporation Ltd. House No.40, Street 27, F6/2, Islamabad		Total value of full project (in million US\$): US\$ 1500.00 million
No. of Staff: 16		No. of Persons-Months: 288
Start Date (Month / Year): August 2016	Completion Date (Month/Year): August 2019	Approx. Value of Services: US\$ 1,047,000 (Rs.107,820,000/-)
Name of Associated Firm(s), If Any: M/s ESS-I-AAR Karachi (Lead)		No. of Months of Professional Staff Provided by Associated Firm(s): 288
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Quality Control Manager / Chief Resident Engineer, Mr. Muhammad Zakria Tunio Chief Material Engineer, Senior Structure Engineer, Mr. Khadim Hussain Senior Highway Engineer and others.		
Brief Narrative Description of Project: The Government of Pakistan through National Highway Authority (NHA) planned to construct 392 Km. long 6- lane Motorway between Multan to Sukkur as a part of Peshawar -Karachi Motorway. It was also comprised construction of all allied structures (culverts, bridges / interchanges) and construction of 2-lane service roads on the either side of the Motorway. The proposed section of Motorway was further divided into seven sub-sections approx.55~60 Km. each to facilitate its construction. The contract of motorway project was signed between CSCEC and NHA, CSCEC was the EPC contractor of this project. ESS-I-AAR in association with M/s ACC was hired as a in house team of consultants of this project by CSCEC, in charge of the quality assurance service and quality control service of section V (Km 604+000 to Km 659+000).		
Description of Actual Services Provided: Consultants (QC/QA) performed the services and carried out their obligations with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices and observed sound management practices and employed appropriate advanced technology & safe methods. Consultants (QC/QA) was acted, in respect of any matter relating to this Contract to the Services, as faithful advisers to the Client, at all times supported and safeguard the Client's legitimate interests in any dealings with other consultants or third parties. Consultants (QC/QA) also nominated & appointed staff for Monitoring Team for field verification and validation of surveys, investigations and field/laboratory tests. The Consultant provided Quality Assurance and Quality Control Services for the Project complying with the Employer's (hereinafter also called the National Highway Authority (NHA) requirements in the EPC contract as under:- <ul style="list-style-type: none"> a) Preparation and Implementation of Quality control plan (QCP)/ Quality control Manual (QCM); b) to perform supervisory duties as per standard engineering practices or as per approved CQC Plan; c) Monitor the works carried out by the construction contractor(s) to ensure that they conform to the Construction Performance Standard and the Approved Detailed Design in collaboration with Quality Management Team to be formulated by the Contractor; d) Supervise/Validate all tests as required in Construction Performance Standards to be conducted by the Client. e) Review and approve all construction methodologies prepared/submitted by the contractors considering their resources and work schedule; f) Approve all materials, Mix Designs, Job Mix Formulae as per the Construction Performance Standard; g) Check/verify survey works and inspect all construction activities at site; h) Monitor work done as per the agreed yardstick / milestones specified in the Contract; 		

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- i) Assist in ensuring that the construction of the works is carried out within the relevant cost projections and otherwise in accordance with the Terms of EPC contract;
- j) Facilitate and assist the Contractor (the Client) for obtaining substantial completion, sectional completion certificate or any other certification as required under the Contract;
- k) Assist the Contractor(s) in liaison with AER, appointed by NHA.
- l) Consultant will be responsible for the execution of Works in accordance with standards specifications and technical construction drawings. The Consultants shall supervise the work's Contracts, make engineering decisions, be responsible for quality control and quality assurance, provide general guidance and furnish timely response to the Contractors in all matters related to the Works.
- m) Assist CSCEC for establishment and implementation of a project management system.
- n) To coordinate, supervise and support the decision making actions by Employers Representative and NHA concerning engineering and design matters during the construction stage in order to ensure that quality control and engineering standards are consistently maintained throughout the project within cost and time constraints.
- o) Inspect and evaluate Contractors facilities especially laboratory items to ensure compliance with the specifications and terms and conditions of the Contract Agreement. Without relieving the Contractors of their obligations under the Contract, monitor the Contractors' laboratory testing, evaluate the Portland cement concrete and bituminous mixture designs prepared by the contractors, and recommend improvements (if any),
- p) Monitor the concrete Batching and asphalt Mixing Plants as per approved mix designs & specifications, carry out the testing of steel and High Tensile wire/ cable for Stressing as per specifications and also monitor the stress cable for Stressing activity as per approved procedure and Specifications and also ensure the desired performance, and accord approval thereof.
- q) Assure quality of the works during construction continuously inspect soils and materials, construction operations and the works with regard to workmanship and compliance with the specifications; and carry out independent testing in the field and/or in the "Employers Representative" laboratory and approve or disapprove and certify the works that conform with the specifications and maintain permanent records of results of all the tests made.
- r) Give notice to the Contractors of any defects and deficiencies, and issue instructions for the removal and substitution of the improper works, where provided under the contract and recommend to Contractor other recourse available under the Contract without relieving the Contractors of their obligations under the Contract, review and approve the traffic management and safety plan, environment mitigation plan and ensure compliance such that the Works are carried out at all times in a safe and secure manner and damage or injury to persons or property is avoided.
- s) Inspect quarries and borrow pits, and crushing plants, and order tests of materials and ensure adherence to specifications and approve the sources of materials.
- t) Review evaluate and approve the planned construction methodology by the Contractor and ensuring that the Contractor has incorporated the most effective and expeditious methodology of carrying out the works; and ensure in setting up a computerized project control system for reporting physical and financial progress by the Contractor as well as the forecasts, if included in the bids and/or if demanded later on by the NHA. Subsequently closely monitor the construction progress on regular basis to determine whether it is proceeding in accordance with the approved work program.
- u) Establish a comprehensive system of maintaining site records including site correspondence survey data, inspection records test data, site diaries, records of meetings financial records progress records etc.
- v) Recommend any modification of complementary items to be necessary to Contractor. Supervising information program on STDs and HIV/AIDs which the Works Contractor is required to carry out at construction campsites.

Type of Services provided:

Topographic Surveys, Planning Studies, Technical Studies, Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quality Control Services Planning, Management Studies, Manpower Requirements Studies, Environment

Fields of Specialization:

Transportation Sector:

Transportation Sector, Quality Control Services



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Assignment Name: TA-8914 PAK Central Asia Regional Economic Cooperation Corridor Development Investment Program – Preparing the Pakistan CAREC Corridor Development Invest Program (48404-001)		Country: Pakistan
Location within Country: Sindh, Punjab and KPK (Pakistan)		Number of person-months of the entire project: 159
Name of Client: Asian Development Bank (ADB), # 6 ADB Avenue, Mandaluyong City, 0401 Metro Manila, Philippines, through M/s SAMBO Engineering Co. Ltd. Jeongpuyeong-dong, 7 th Floor, 63 Daehak-ro Gyeongsan-si Gyeongsangbuk-do Korea		Total value of full project (in million US\$): US\$ 700.00 million
No. of Staff: 18		No. of Persons-Months: 159
Start Date (Month / Year): June 2016	Completion Date (Month/Year): 30 April 2017	Approx. Value of Services: US\$ 274,797
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: Mr. Abdul Majeed Transport Engineer, Mr. Ahmad Luqman Sarwar Highway Engineer, Mr. Aized Hasan Mir Procurement Specialist, Mr. Arsalan Vardag Financial Specialist, Mr. Aziz ur Rehman Environmental Specialist, Ms. Iram Aamir Bridge Engineer, Mr. Iqbal Niazi Resettlement Specialist, Ms. Mehmooda Nasreen Social Development Specialist, Dr. Nawazish Ali Hydrologist, Mr. Rais Agha Geotechnical Engineer, Mr. Muhammad Amir Zaidi Material Engineer and others.		
Brief Narrative Description of Project: Pakistan was looking forward to overcoming the physical and non-physical barrier by joining the CAREC Program in order to growth and set in place Central Asia at the heart of trade and commerce in global markets since 2010. The CAREC Transport and Trade Facilitation Strategy (TTFS) 2020 included an expanded CAREC transport network, with CAREC corridors 5 and 6 now routing through Pakistan. This project routes will include; An alignment of the road corridor in Pakistan from Gwadar to Chaman via Surab, Corridor 6a,b,d, An alignment south from Karachi to Pindi Bhattian via DG Khan, Corridor 6 An alignment from DG Khan to Peshawar, National Road 55. NHA Pakistan accord higher priority to National Highway N-55 (Indus Highway). This TA project will assist the Pakistan Government in improving the CAREC corridors in Pakistan, and developed and designed MFF which had enhanced regional connectivity and trade via the CAREC Corridor 5 and 6. Based on proposed MFF the Consultant was decided the road section of Tranche 1 and carried out Feasibility Study and Preliminary engineering design for Tranche 1 project. The Consultant carried out the overall feasibility of the two corridors and develop MFF. Then the Consultant will select Tranche 1 through identifying sector roadmap. The Consultant carried out initial screening work for all the Tranches.		
Description of Actual Services Provided: Task 1: Road Sector Assessment and MFF Packaging Task 2: Feasibility Study for Engineer Design for Tranche 1 Project Task 3: Safeguards (Social, Environment and Resettlement) Task 4: Social, Poverty and Gender Analysis for Tranche 1 Project Task 5: Financial Analysis and Management Assessment Task 6: Economic Assessment for Tranche 1 Project The services included but not limited to the following: 1. Conduct preliminary surveys including safeguards for the carrying out the feasibility study of all the projects included in the CAREC corridors.		

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2. Conduct site surveys, topographic survey and field inspection & testing required for the preparation of Engineering Design for Tranche 1 Projects.
3. Soil Investigations for road and quarry sources
4. Conduct Roughness Survey of the Road
- 5. Hydrological studies and analysis**
6. Prepare and obtain approval for design of over 200 kms
7. Provide land acquisition and utilities folders
8. Design Optimization
9. Provide Construction Performance Standards
10. Access and validate Construction Cost, Physical & Price Contingencies or any other costs incur due to change in design.
11. Economic Analysis for all the Projects
12. Financial Analysis of NHA
- 13. Preparation of EIA/IEE**
14. Resettlement Framework
- 15. Social Surveys**
16. Approve construction and other related methodology provided by concessionaire/contractor.
17. Obtain approval from QAI for Construction/works methodology as agreed by construction Contractor and Consultant.
18. BOQ and milestones
19. Specifications
20. Procurement

Type of Services provided:

Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment, Resettlement, Land Acquisition and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction.

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Assignment Name: Flood Emergency Reconstruction and Resilience Project (FERRP) Project Management Consultant (PMC) Package No.CW-CS-02) ADB Loan 3264-PAK		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 1174
Name of Client: Project Implementation Unit (PIU), Flood Emergency Reconstruction and Resilience Project, Communication and Works Department, Government of Punjab, # 2-Lake Road, Lahore		Total value of full project (in million US\$): US\$ 400.00 million
No. of Staff: 78		No. of Persons-Months: 474
Start Date (Month / Year): 09 th June, 2016	Completion Date (Month/Year): Apr 2019	Approx. Value of Services: US\$ 1,085,000 (Rs.111,824,880/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers (ACE) Lahore M/s Osmani & Company (Pvt) Ltd. (OCL) Karachi M/s Assign Engineering Consult International Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 700
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Col Nasir Farid Team Leader/Project Manager, Mr. Akhtar Mir Deputy Team Leader (Design Review), Mr. Khalid Rasul Contract Specialist, Mr. Rais Agha Geotechnical Engineer, Mr. Ahmad Luqman Sarwar Pavement Engineer, Ms. Iram Noreen Structural Engineer, Mr. Ghulam Qadir Junejo M&E Specialist, Mr. Usman Farooq Finance & Administration Specialist, Mr. M Iqbal Akhtar Niazi Resettlement Specialist, Mr. Muhammad Tahseen Environment Specialist, Ms. Mahmooda Nasreen Gender Specialist, Mr. M. Tariq Niazi Resident Engineer, Mr. M. Arshad Khan, Mr. Ghulam Rasool, Mian Salimullah Jan and Muhammad Ayaz Assistant Resident Engineers, Mr. Shunaid Memon Material Engineer and others.		
Brief Narrative Description of Project: The 2014 flood in Pakistan significantly damaged the roads network in Punjab Province. The Asian Development Bank (ADB) was supported the efforts of the Government of Pakistan through the Flood Emergency Reconstruction and Resilience Project (project). The project was contributed to the economic and social recovery of flood affected areas in the affected districts of the Punjab and in northern districts through the rehabilitation and reconstruction flood damaged roads, bridges, irrigation and flood protection infrastructure and support ex ante disaster risk management activities in the aforementioned areas. Damaged and at-risk infrastructure in the flood-affected areas was upgraded to incorporate resilience considerations to mitigate the potential impact of future flood events.		
Description of Actual Services Provided: Communication & Works Department engaged the services of Engineering Consulting Firm as Resident Supervision for the design review, construction supervision and management of Flood Damaged Roads in Punjab Province as per agreed laid down standards/specifications. Consultancy services was covered for approx. 18 months. About 196 person-months of key experts staff was required for the implementation of 2014 flood damaged roads rehabilitation/reconstruction. The consultant reported to the Project Director of PIU, FERRP, C&W appointed by the GoPb as head of the PIU. Project Management Consultants (PMC) team was engaged to undertake design review and construction supervision, strengthen procurement capacity, prepare and implement and monitor safeguard action plans and gender action plans. The PMC was also performed financial control monitoring and implementation.		

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PMC services were required to review the design and assist IA in construction supervision, reporting, performance monitoring, financial management, procurement and management of civil works contracts, safeguards compliance and implementation of sub-projects. The TOR stipulates the national consulting services required for the rehabilitation of flood affected district and provincial roads.

Type of Services provided:

Design Review, Topographic Surveys, 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), Technical Assistance and Advisory Services, Material Testing, Quality Control, Project Monitoring and Evaluation, **Environmental Studies**, Resettlement and Land Acquisition Studies

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.

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Assignment Name: Traffic Study for Pakistan PKM Motorway Project (Sukkur - Multan Section)		Country: Pakistan
Location within Country: Punjab - Sindh		Number of person-months of the entire project: 40
Name of Client: M/s China State Construction Engineering Corporation Ltd. House No.40, Street 27, F6/2, Islamabad		Total value of full project (in million US\$): N.A
No. of Staff: 48		No. of Persons-Months: 40
Start Date (Month / Year): July, 2016	Completion Date (Month/Year): August, 2016	Approx. Value of Services: US\$ 67,000 (Rs.7,000,000/-)
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: Mr. Ahmad Luqman Sarwar Transport Specialist, Mr. Abdul Majeed Transport Economist, Mr. Muhammad Zeeshan Supervising Engineer, Mr. Zafar Sohail Kahoot Team Leader Field Surveys and 48 enumerators.		
Brief Narrative Description of Project: The Government of Pakistan through National Highway Authority (NHA) has planned to construct 392 Km. long 6- lane Motorway between Multan to Sukkur as a part of Peshawar -Karachi Motorway. Client requires to carry out a detailed Traffic Study for the Multan - Sukkur Section of the Peshawar Karachi Motorway (PKM) Project.		
Description of Actual Services Provided: The Consultant worked in coordination and close liaison with CSCEC. The work scope stated as follows: The consultant collected relevant data from concerned agencies and carried out minimum 72 hours traffic volumes counts, O & D Survey, willingness to pay survey, journey time travel survey, tire pressure and axle load survey etc. on existing roads crossing the alignment to get an estimate of current traffic volumes. Generated / diverted traffic volumes were worked out. Origin-Destination Surveys was carried out as and where required. Weekly and monthly correction factors were worked out to arrive at Annual Average Daily Traffic (AADT). Growth factors were worked out based on which the traffic was forecasted for 10 & 20 years. The Consultant completed data analysis and prepared traffic study report according to NHA's requirements. The report was included inter alia field work description, original data on the site covering observed actual traffic volumes (In numbers), OD survey data, methodology of data analysis, calculation, calibration and forecast, and forecast results and other aspects stipulated in the above paragraph.		
Type of Services provided: Technical Studies, Operations Studies, Traffic Engineering.		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Road Transportation Facilities, Highway Planning & Programming,		

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Assignment Name: Quality Control Services for Peshawar-Karachi Motorway (Sukkur-Multan Section) Sub Section 2		Country: Pakistan
Location within Country: Punjab – Sindh		Number of person-months of the entire project: 576
Name of Client: M/s China State Construction Engineering Corporation Ltd. House No.40, Street 27, F6/2, Islamabad		Total value of full project (in million US\$): US \$ 600.00 million
No. of Staff: 16		No. of Persons-Months: 576
Start Date (Month / Year): 10 June 2016	Completion Date (Month/Year): 30 Jun 2019	Approx. Value of Services: US\$ 1,047,000 (Rs.107,820,000)
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: Mr. Abdul Sattar Chief Resident Engineer / Quality Control Manager, Mr. Muhammad Youasf Chief Material Engineer, Mr. Sohail Ahmad Senior Highway Engineer and others.		
Brief Narrative Description of Project: <p>The Government of Pakistan through National Highway Authority (NHA) was planned to construct 392 Km long 6- lane Motorway between Multan to Sukkur as a part of Peshawar -Karachi Motorway. It comprised construction of all allied structures (culverts, bridges / interchanges) and construction of 2-lane service roads on the either side of the Motorway. The proposed section of Motorway was further divided into seven sub-sections approx.55~60 Km. each to facilitate its construction.</p> <p>The contract of motorway project was signed between CSCEC and NHA, CSCEC was the EPC contractor of this project. ACC was hired as an in house team of consultant for this project by CSCEC, in charge of the quality assurance services and quality control service of section-II (stake mark from K435+000 to K491+000).</p>		
Description of Actual Services Provided: <p>The Consultant provided Quality Assurance and Quality Control Services for the Project complying with the Employer's (hereinafter also called the National Highway Authority (NHA)) requirements in the EPC contract including but not limited to the following:</p> <ol style="list-style-type: none"> 1. Assist CSCEC for the establishment of the basic overall project construction schedule, budget and cash disbursement schedule. 2. Assist CSCEC for establishment and implementation of a project management system and procedures to monitor and control the cost and time schedule to enable timely corrective measures. 3. To coordinate, supervise and support the decision making actions by Employers Representative and NHA concerning engineering and design matters during the construction stage in order to ensure that quality control and engineering standards are consistently maintained throughout the project within cost and time constraints. 4. Assist CSCEC for setting up of an effective reporting system of project progress and status to the management of CSCEC and Employers Representative. 5. Prepare realistic construction schedules showing the anticipated progress of works and expenditures of the contract package. 6. Review proposal on variation orders and implementation schedule prepared by the Contractor. 		

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7. The QC Consultants shall be responsible that the Works are executed in accordance with the plans, grade and conform to the specifications. The QC Consultants shall carry out the quality control services ensuring the following items:
 - a. Stake the centerline, ROW limits and relocation of roadway structure and appurtenance
 - b. Setting of Grade-stakes
 - c. Relocation of Grade-stakes
 - d. Soil Tests
 - e. Concrete Tests
 - f. Reinforced Bar Tests
 - g. Structural steel Tests
 - h. Others Tests deemed necessary
8. Inspect and evaluate Contractors facilities especially laboratory items to ensure compliance with the specifications and terms and conditions of the Contract Agreement. Without relieving the Contractors of their obligations under the Contract, monitor the Contractors' laboratory testing, evaluate the Portland cement concrete and bituminous mixture designs prepared by the contractors, and recommend improvements (if any),
9. Monitor the concrete Batching and asphalt Mixing Plants as per approved mix designs & specifications, carry out the testing of steel and High Tensile wire/ cable for Stressing as per specifications and also monitor the stressing activity as per approved procedure and Specifications and also ensure the desired performance, and accord approval thereof.
10. Assure quality of the works during construction continuously inspect soils and materials, construction operations and the works with regard to workmanship and compliance with the specifications; and carry out independent testing in the field and/or in the "Employers Representative" laboratory and approve or disapprove and certify the works that conform with the specifications and maintain permanent records of results of all the tests made.
11. Give notice to the Contractors of any defects and deficiencies, and issue instructions for the removal and substitution of the improper works, where provided under the contract and recommend to Contractor other recourse available under the Contract without relieving the Contractors of their obligations under the Contract, review and approve the traffic management and safety plan, environment mitigation plan and ensure compliance such that the Works are carried out at all times in a safe and secure manner and damage or injury to persons or property is avoided.
12. Inspect quarries and borrow pits, and crushing plants, and order tests of materials and ensure adherence to specifications and approve the sources of materials.
13. Review evaluate and approve the planned construction methodology by the Contractor and ensuring that the Contractor has incorporated the most effective and expeditious methodology of carrying out the works; and ensure in setting up a computerized project control system for reporting physical and financial progress by the Contractor as well as the forecasts, if included in the bids and/or if demanded later on by the NHA. Subsequently closely monitor the construction progress on regular basis to determine whether it is proceeding in accordance with the approved work program.
14. Advising on the selection of Contractor's equipment. Assess minimum construction equipment, plant and machinery requirements by type and specifications and monitor, keep and regularly update a list of the Contractors' equipment, plant and machinery in order to keep a check on the Contractors' mobilization".
15. Monitor and control progress of works and initiate corrective measures if required.
16. Establish a comprehensive system of maintaining site records including site correspondence survey data, inspection records test data, site diaries, records of meetings financial records progress records etc.
17. Recommend any modification of complementary items to be necessary to Contractor. Supervising information program on STDs and HIV/AIDs which the Works Contractor is required to carry out at construction campsites.

Type of Services provided:

Topographic Surveys, Planning Studies, Technical Studies, Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quality Control Services Planning, Management Studies, Manpower Requirements Studies, Environment

Fields of Specialization:

Transportation Sector, Quality Control Services



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Assignment Name: Consultancy Services for Detailed Design of Pakistan PKM Motorway Project (Multan – Sukkur Section) – 200 km		Country: Pakistan
Location within Country: Punjab - Sindh		Number of person-months of the entire project: 50
Name of Client: M/s China State Construction Engineering Corporation Ltd. House No.40, Street 27, F6/2, Islamabad		Total value of full project (in million US\$): US\$ 1000.00 million
No. of Staff: 15		No. of Persons-Months: 26
Start Date (Month / Year): April, 2016	Completion Date (Month/Year): October, 2016	Approx. Value of Services: US\$ 8,000 (Rs.82,151,710/-)
Name of Associated Firm(s), If Any: Prime Engineering & Testing Consultants (Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 24
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Akhtar Mir & Mr. Ahmad Luqman Sarwar Highway Engineers, Mr. Abdul Majeed Transportation Economist, Ms. Iram Noreen Structural Engineer, Mr. Siddique Akbar Material Engineer, Mr. Muhammad Arshad Measurement Engineer, Mr. Arsalan Vardag Financial Expert, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Aized Hasan Mir Contracts Specialist and others.		
Brief Narrative Description of Project: The Consultant had provided design services for sections Km 380+000 to Km 408+000, Km 408+000 to Km 435+000, Km 688+600 to Km 716+000 and Km 716+000 to Km 740+620 of the Pakistan Motorway Project (Multan - Sukkur Section) complying with the Employer (M/s National Highway Authority) requirements in the EPC contract. The project also included the design of bridge over River Sutluj.		
Description of Actual Services Provided: <ol style="list-style-type: none"> Detailed Engineering Reports / Construction Drawings Geometric Design including plan and profile and cross section etc., pavement and embankment design, structural design for interchanges, bridges, Sutlej bridge including guide bank design, underpasses, subways, cattle creeps, culverts etc. Flood protection works design, road safety design, road side drainage, roadside furniture design including curb, signs, markings, median strips, guardrail, w beam guardrail, design of rest areas/parking, detailed design report, construction drawings, Lands capping, Preparation of Environmental Management Plan (EMP). Approval of complete detailed design documents from NHA Hydrological studies, Structural design of bridges and cross drainage structures. 		
Type of Services provided: Planning Studies, Feasibility Studies, Technical Studies, Operations Studies, Project Financing Advice, Design – Architectural / Engineering/ Industrial etc., Structural Engineering, Procurement Services, Materials Testing, Operation Maintenance, Maintenance Planning, Management Studies, Manpower Requirements Studies, Environment and Social Sector Studies.		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads, New Structures/Reconstruction,		

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Assignment Name: South Sudan Rural Roads Project (SSRRP) UNOPS IC Agreement 167338-P63308-L0-00 & 167338-P63031-L0-00		Country: South Sudan
Location within Country: Juba, South Sudan		Number of person-months of the entire project: 04
Name of Client: UNOPS/AfDB		Total value of full project (in million US\$): US \$ 654.6 million
No. of Staff: 01		No. of Persons-Months: 04
Start Date (Month / Year): April 2016	Completion Date (Month/Year): Aug 2016	Approx. Value of Services (in US\$): US \$ 30,000
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: (Specialist Input / Individual Experience) Aized H. Mir; International Sector Specialist, Strategic Sector Planner		
Brief Narrative Description of Project: South Sudan's transport system was deficient in terms of both quantity and quality of infrastructure, and level of services as well as in terms of investments and maintenance. The system was inadequate and does not fulfill its function as a catalyst for the country's economic growth, and social and political integration. To address these issues and facilitate the road transport sector's transition into a single strategic approach in the long run, a Road Sector Development Program has been established based on the recommendations of the studies undertaken under this project. The purpose of this program was to achieve greater synergy and coherence among various projects and donor/government funds within a framework aligned with development partners' requirements and strategic goals of the government.		
Description of Actual Services Provided: As sector specialist was responsible to assess the various policies and/or sector strategy and development plans under the Ministry of Transport, Roads and Bridges (MTRB) as well as Ministerial Policy Statements; Lead the discussion on potential approaches and viable strategies for engaging the private sector and the development partners and the marketing strategy, with MTRB and SSRA; Assess Government policies related to MTRB's mandate and extract policy actions and/or activities therein with a view to consolidating them into one document; Initiate the review of the MTRB planning process, and identify critical high-level concerns and issues; Initiate and lead the discussion with MTRB, SSRA, and other key stakeholders on approaches toward the evaluation of road sector performance; Assess the position and view of key stakeholders on the annual Joint Infrastructure Sector Review; Assess MTRB's and SSRA's current structure and the respective inter- and intra-accountability mechanisms and lead the discussion with MTRB and SSRA on existing performance issues.		
Fields of Specialization: Transportation Sector		

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Assignment Name: Transport Sector Needs Assessment for Somalia IC Agreement UNOPS 2015/IICA-SP/61625		Country: Somalia
Location within Country: Mogadishu/Kenya Somalia		Number of person-months of the entire project: 03
Name of Client: UNOPS/AfDB/EC		Total value of full project (in million US\$): Estd 800 + Million over 10 years program
No. of Staff: 01		No. of Persons-Months: 03
Start Date (Month / Year): Sep 2015	Completion Date (Month/Year): Dec 2015	Approx. Value of Services (in US\$): US \$ 49,920
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: (Specialist Input / Individual Experience) Aized H. Mir; International Transport Sector & Facilitation Specialist		
Brief Narrative Description of Project: The African Development Bank (AfDB) undertook a series of infrastructure needs assessments in Somalia's key infrastructure subsectors. These include the Transport Sector Needs Assessment (TSNA), as well as assessments in the energy, ICT, and water and sanitation subsectors. ACC's staff were involved in preparing the key deliverables for the Federal Government of Somalia's (FGS) Economic Recovery Plan. In addition, the study also fed into an overall Infrastructure Action Plan (IAP) for Somalia – i.e. a pipeline of priority and costed projects – and also provide input for Somalia's new National Development Plan (NDP). The overall objective of the TSNA was to determine short, medium and long-term needs and investments in the transport sector that will develop sector policy and institutional and funding arrangements and deliver tangible results in the transport sector infrastructure development for economic recovery through sequenced investments.		
Description of Actual Services Provided: Responsible for providing a post-conflict transport sector needs assessment covering road, air and sea transport. Assess current institutional and stakeholders implementation capacity; evaluate Somalia's trade potential and trade and transport linkages with African corridors; identify strategic sectoral investments for infrastructure and institutional development and prioritize; devise a short, medium and long-term investment plan; Conduct and participate in consensus building workshops for Somali and international stakeholders.		
Fields of Specialization: Transportation Sector		

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Assignment Name: Detailed Project Design of Sustainable Agriculture Investment and Livelihood (SAIL) Project Egypt – PO No.0000029091 – Contract No.61240-0009		Country: Egypt
Location within Country: Egypt		Number of person-months of the entire project: 12
Name of Client: International Food for Agricultural Development IFAD- Via Paolo di Dono, 44 00142 Rome, Italy		Total value of full project (in million US\$): 90.973 million
No. of Staff: 01		No. of Persons-Months: 02
Start Date (Month / Year): June 2014	Completion Date (Month/Year): July, 2014	Approx. Value of Services (in US\$): US\$ 32,000
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: (Specialist Input / Individual Experience) Aized H. Mir; Irrigation and Rural Infrastructure Specialist		
Brief Narrative Description of Project: IFAD a UN organization engaged services for project preparation and detailed project designing of a planned agriculture sector investment of about US\$90.973 million with the Government of Egypt. The project locations are spread in lower, middle and upper Egypt in 40 settlements. Role of specialist was to evaluate existing irrigation practices and propose means to promote efficient use of scarce water resources through new technologies such as drip, fixed sprinkler systems, solar pumps – surface and submersible, buried pipe systems etc., as per requirements of specific areas, cropping patterns, nature of soil, climate and other factors. Of the total project investment, more than 50% was to be invested for improving irrigation systems.		
Description of Actual Services Provided: Services for project preparation and detailed project designing of a planned agriculture sector investment of about US\$90.973 million with the Government of Egypt. The project locations are spread in lower, middle and upper Egypt in 40 settlements. Role of specialist was to evaluate existing irrigation practices and propose means to promote efficient use of scarce water resources through new technologies such as drip, fixed sprinkler systems, solar pumps – surface and submersible, buried pipe systems etc., as per requirements of specific areas, cropping patterns, nature of soil, climate and other factors. Of the total project investment, more than 50% was to be invested for improving irrigation systems.		
Fields of Specialization: <ul style="list-style-type: none"> • Infrastructure and Irrigation Systems in Agriculture Development • Technical Feasibility Studies 		

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Assignment Name: Project Preparation Sustainable Agriculture Investment and Livelihood (SAIL) Project, Egypt - PO No.0000028278 – Contract No.61240-0008		Country: Egypt
Location within Country: Egypt		Number of person-months of the entire project: 12
Name of Client: International Food for Agricultural Development IFAD - Via Paolo di Dono, 44 00142 Rome, Italy		Total value of full project (in million US\$): 90.973 million
No. of Staff: 01		No. of Persons-Months: 01
Start Date (Month / Year): 31 Mar 2014	Completion Date (Month/Year): 26 April, 2014	Approx. Value of Services (in US\$): US\$ 32,000
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: (Specialist Input / Individual Experience) Aized H. Mir; Irrigation and Rural Infrastructure Specialist		
Brief Narrative Description of Project: Services provided for project preparation of all infrastructure related investments under the project. Assessed and characterized the main features of infrastructure rehabilitation activities in particular of relevance to smallholder farmers with potential for high impact; identified the main obstacles and bottlenecks caused by the lack of proper infrastructure in the target area and developed proposals for activities to be funded under the infrastructure rehabilitation component inclusive of cost-benefit analysis and implementation approach. Outputs included Draft Project Implementation Manual (PIM); Environmental and Social Review Note; and papers on Gender and Poverty, Community Development, the Agricultural Development and the Environmental and Social Issues.		
Description of Actual Services Provided: Services provided for project preparation of all infrastructure related investments under the project. Assessed and characterized the main features of infrastructure rehabilitation activities in particular of relevance to smallholder farmers with potential for high impact; identified the main obstacles and bottlenecks caused by the lack of proper infrastructure in the target area and developed proposals for activities to be funded under the infrastructure rehabilitation component inclusive of cost-benefit analysis and implementation approach. Outputs included Draft Project Implementation Manual (PIM); Environmental and Social Review Note; and papers on Gender and Poverty, Community Development, the Agricultural Development and the Environmental and Social Issues.		
Fields of Specialization: <ul style="list-style-type: none"> • Infrastructure and Irrigation Systems in Agriculture Development • Technical Feasibility Studies 		

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Assignment Name: Detailed Engineering Design for Improvement of Karachi – Hyderabad Motorway Project M-9 (136 Kms) on BOT basis.		Country: Pakistan
Location within Country: Sindh		Number of person-months of the entire project: 90
Name of Client: Frontier Works Organization (FWO) 509, Kashmir Road R.A. Bazar, Rawalpindi Ph:051-9271847		Total value of full project (in million US\$): US \$ 300.00 million
No. of Staff: 18		No. of Persons-Months: 90
Start Date (Month / Year): March 2015	Completion Date (Month/Year): December 2016	Approx. Value of Services: US\$ 1,240,000 (Rs.125,487,500/-)
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: Mr. Aized Hasan Mir Team Leader, Mr. Akhtar Mir Highway Design Engineer, Mr. Ahmad Luqman Sarwar Pavement Design Engineer, Ms. Iram Aamir Structure Design Engineer, Mr. Rais Agha Material Engineer, Mr. Muhammad Zeeshan Design Engineer, Dr. Muhammad Nawazish Hydrologist, Malik Saqib Mahmood Traffic Engineer, Mr. Aziz ur Rehman Environmental Engineer, Mr. Siddique Akbar Material Inspector, Mr. Muhammad Arshad PQS and others.		
Brief Narrative Description of Project: Project Karachi-Hyderabad Motorway (M-9) comprised of widening of 136 km 4 lanes road into 6 lane, rehabilitation of existing highway 136 km 4 lanes construction of 185 km 2 lane service road of M-9 Super Highway Karachi – Hyderabad. Design of the project carried out to establish adequacy, stability, safety, economy, functionality and adherence to the relevant codes and sound engineering practices of all designs, drawings, and specifications etc. of the design of M-9 Super Highway construction on BOT basis project.		
Description of Actual Services Provided: <ol style="list-style-type: none"> 1. Conduct site surveys, topographic survey and field inspection & testing required for the preparation of Design Proposal & Detailed Engineering Design. 2. Conduct NDT testing for Road using FWD 3. Conduct NDT for bridges 4. Soil Investigations for road and quarry sources 5. Geotechnical Investigations for Interchange Bridges and Existing Bridges 6. Conduct Roughness Survey of the Road 7. Detailed Engineering Design of Road and 8 No. Interchanges 8. Hydrology & Hydraulic Study of bridges and Cross Drainage Structures 9. Detailed Engineering Design of 11 x2 major bridges 10. Hydrological studies and analysis 11. Prepare and obtain approval for Design from Client, QAI & NHA as per Concession Agreement. 12. Provide land acquisition and utilities folders 13. Design Optimization 14. Prepare and obtain approval for Detailed Design from Client, QAI & NHA as per PEC Contract & Concession Agreement. 15. Provide Construction Performance Standards 		

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16. Provided and validate all technical details related to design and quality required for obtaining NOC from government bodies pursuant to terms and condition of EPC Contract & Concession Agreement.
17. Access and validate Construction Cost, Physical & Price Contingencies or any other costs incur due to change in design.
18. Provided reasons and/or justification and or cost benefit ratio in case of variation in Design Proposal vs detailed design.
19. Approve construction and other related methodology provided by concessionaire/contractor.
20. Obtain approval from QAI for Construction/works methodology as agreed by construction Contractor and Consultant.
21. BOQ and milestones
22. Specifications
23. Any Addenda

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, **Environment and Social Sector Studies.**

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal 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).

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Assignment Name: Consultancy Services For Feasibility and Detailed Design of Yakmach – Kharan Road (200 Km)		Country: Pakistan
Location within Country: Balochistan		Number of person-months of the entire project: 107
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\$ 100.00 million
No. of Staff: 34		No. of Persons-Months: 52
Start Date (Month / Year): 10 th February, 2015	Completion Date (Month/Year): 10 th August, 2015	Approx. Value of Services: US\$ 248,835 (Rs.25,132,325/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers (Pvt) Ltd. M/s MASCON Associates (Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 55
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Muhammad Azad Khan Team Leader/Sr. Highway Engineer; Ahmad Luqman Sarwar Pavement Specialist, Irum Amir Bridge Design Engineer, Shabbir Ahmad Tarar Contract Specialist, Intesab Ahmad Structure Engineer, Dr. Tabassum Zahoor Hydrology & Drainage Engineer, Aziz ur Rehman Environment Engineer, Ahmad Rizwan Geo Technical Engineer, Malik Saqib Mahmood Traffic Engineer, Akhtar Mahmood Mir Survey Engineer, Muhammad Iqbal Akhtar Niazi Social Development Scientist, Ahmad Bakhsh Material Engineer, Muhammad Arshad Janjua Quantity Surveyor, Asim Yousaf GIS Specialist and others.		
Brief Narrative Description of Project: The existing road link from Yakmach (Dalbandin) to Kharan (113 Km) and onward from Kharan to Basima 9122 Kms) was a provincial road under jurisdiction of the Balochistan Government. Total length of this Yakmach-Kharan-Basima road link was 235 Kms. The proposed road was shingle/kacha track except 22 Km asphaltic section between Yakmach and Kharan which was not in good condition. Yakmach – Kharan section of this link was mostly passing through flat terrain whereas Kharan-Basima section was passing through hilly/mountainous terrain. With the construction of this road, there would be saving of 376 Km from Gwadar and 194 Km from Karachi to Taftan. In addition, if Khuzdar-Basima link was also developed, the distance from Karachi to Taftan was further shortening by 267 Kms. Constructed upto Basima will significantly shorten/save the distance from Gwadar and Karachi to Taftan, it will also act as a link between N-40 and N-85.		
Description of Actual Services Provided: The following tasks were carried out during the course of the project: <ul style="list-style-type: none"> • 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, 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 		
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), Quality Control, Project Monitoring and Evaluation.		
Fields of Specialization: Transportation Sector: Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction,		

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

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Assignment Name: Quality Assurance Inspector - Overlay and Modernization of Lahore – Islamabad Motorway (M-2) on BOT Basis.		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 561
Name of Client: MORE (Pvt.) Ltd. # 509 Kashmir Road, R.A. Bazar, Rawalpindi / National Highway Authority, M/o Communications Govt. of Pakistan, # 28 Mauve Area, G-9/1, Islamabad (Ph:051-9271847)		Total value of full project (in million US\$): US\$ 243.00 million
No. of Staff: 63		No. of Persons-Months: 561
Start Date (Month / Year): 17 Dec 2014	Completion Date (Month/Year): 31 March 2017	Approx. Value of Services: US\$ 3,790,000 (Rs.376,243,001/-)
Name of Associated Firm(s), If Any: Nil		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: <p>QAM Team consisting of Mr. Aized Hasan Mir Project Management Coordination, Brig Muhammad Ayub Quality Assurance Manager, Majid Wazir Abbasi Planning Engineer, Mr. Sultan Alam Contract Specialist, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Arsalan Vardag Financial Expert, Legal Expert, Anwar Awan Tolling and Systems Expert, Mr. Iftikhar Ahmad Virk Measurement Engineer.</p> <p>QAM Field Team consisting Maj Ehsan Akmal Mr. M. Tariq Naizi & Nasir Hameed But DY. Quality Assurance Managers, Mr. Mazhar Waseem & Ahsan Imtiaz Butt Quantity Surveyors and others.</p>		
Brief Narrative Description of Project: <p>Lahore - Islamabad Motorway (M-2) was a section of Pakistan Motorway. Total length of this track was 333 km in addition to Islamabad Link Road (7 kms) and Lahore Bypass which was 17 km in length. The remaining service life of M-2 was approximately between 2 to 3 years as per an independent study carried out by NHA.</p> <p>A Concession Agreement was signed between National Highway Authority and Motorway Operations and Rehabilitation Engineering Company (MORE) for Overlay and modernization of M-2 on BOT Basis. Lenders have hired M/s Associated Consultancy Centre Pvt. Ltd. (ACC) as the Quality Assurance Inspector (QAI) for review the design proposal, detailed design procedures and construction activities. The design of Rehabilitation & Modernization M-2 was initiated with Design proposal (preliminary design) with the detailed on ground surveys and highway testing to convert it into Detailed Design. Scope of work for the project is as follows:</p> <ul style="list-style-type: none"> ➤ Overlay of M-2 to achieve improved riding quality to an international motorway standard. The basic parameters of the riding quality for any lane per km as per the Concession Agreement. ➤ Modernization of Motorway facilities and allied equipment. 		
Description of Actual Services Provided: <ul style="list-style-type: none"> • Review and approval of the adequacy of topographical surveys, geo-technical and sub-soil investigations, and hydrological investigation for the road, bridge and other structures. • Review and approval of the Design and working drawings prepared and submitted by Concessionaire or its relevant Contractor to the QAI for the construction of various components of the Works, estimates, reports and other deliverables • Adequacy, completeness, optimality and capability of Design to perform as required in Review and approval of reports prepared and submitted by the Concessionaire or its relevant Contractor, with respect to the traffic, traffic management, progress, and any other report regarding the New 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Flyover etc.

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- Review and approval of the implementation schedule of engineering, design, procurement and construction of the Project submitted by the Concessionaire or its relevant Contractor and determination that adequate provisions have been made for Design; Raw material sourcing; Raw material processing equipment; Public Utilities; Other equipment procurement; Construction and testing.
- Review and approval of the planning and design of emergency relief arrangements, traffic operation and safety arrangements.
- To prove due diligence and utmost expertise in ensuring that quality control provisions are maintained at all times; and shall be responsible to report to the Concessionaire and NHA in case the quality standards and quality control provisions are not maintained on the Concession Area.
- The duties of the QAI are to supervise the Works on random sample basis and to approve the materials and workmanship of the Works. The QAI shall have no authority to relieve the Concessionaire, the Construction Contractor or any other relevant Contractor of any of their duties or to impose additional obligations. The QAI shall review and approve the Project Implementation Programme prepared and submitted by the Concessionaire, the Construction Contractor or any other relevant Contractor, as the case may be.
- Review the material Testing results and mix designs and to order special Tests of materials and/or completed Works, and/or order removal and substitution of substandard material and/or Works as required. Review the quality assurance and quality control during the Construction Phase.
- Ensure that the Works are accomplished in accordance with the specifications and standards stated in the Concession Agreement. The QAI shall identify construction delays, if any, and recommend to the Finance Parties, the Concessionaire and NHA the remedial measures to expedite the progress.
- Review “as built” drawings for each component of the Works prepared and submitted to the QAI by the Concessionaire, the Construction Contractor or any other relevant Contractor and review the safety measures provided for the traffic and Project workers.
- Determine any extension of the construction schedule, to which the Concessionaire is entitled and shall notify the Finance Parties and NHA, accordingly. Review compliance by the Concessionaire or its Contractor of its obligations under the Concession Agreement.
- Issuance of Certificate of Completion after checking the results of prescribed Tests. Issue the Certificate of Substantial Completion duly appended with a list of outstanding items and defective items established after joint inspection with the Concessionaire, Construction Contractor or its relevant Contractor in accordance with the terms of the Concession Agreement and the EPC Contract.
- Monitor successful completion of each Incomplete Works List item, and make one final visit to the Concession Area to verify that the Incomplete Works List items have been completed and thereafter sign and submit the Certificate of Completion.

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. Quality Assurance and Management, Legal and Financial Monitoring, **Environmental Monitoring**.

Fields of Specialization:

Transportation Sector, Financial and Legal Sector

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Assignment Name: Preparation of Technical and Financial Proposal for Lahore - Khanewal Multan Section of KLM on PPP		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 04
Name of Client: M/s China State Construction Engineering Corporation Pakistan. (House No.40, Street No.27, F-6/2, Islamabad) Ph:051-2824268		Total value of full project (in million US\$): US\$ 250.00 million
No. of Staff: 10		No. of Persons-Months: 04
Start Date (Month / Year): 20 August 2014	Completion Date (Month/Year): 30 th September, 2014	Approx. Value of Services: US\$ 12,000
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: Mr. Akhtar Mir & Mr. Ahmad Luqman Sarwar Highway Engineers, Mr. Abdul Majeed Transportation Economist, Ms. Iram Noreen Structural Engineer, Mr. Siddique Akbar Material Engineer, Mr. Muhammad Arshad Measurement Engineer, Mr. Arsalan Vardag Financial Expert, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Aized Hasan Mir Contracts Specialist and others.		
Brief Narrative Description of Project: The construction of Karachi-Lahore Motorway, a 6 lane limited access facility was planned to construct. The upgradation from 4-lane to 6-lane motorway section from Karachi to Hyderabad (M-9) was already offered on PPP mode. The Hyderabad - Lahore Motorway comprised of three sections. Section I from Hyderabad to Sukkur, Section II from Sukkur to Multan and Section III from Multan to Lahore comprised a total length of over 950 kms. Section III (Lahore - Multan Section) was offered by NHA on BOT basis. The consultants prepared the cost estimates based upon preliminary design, financial analysis, financial modeling and preparation of technical and financial Proposals for NHA.		
Description of Actual Services Provided: The services provided included ✓ Preliminary Engineering Design ✓ Hydrology & Hydraulic Studies for cross drainage structures ✓ Financial Modeling ✓ Technical Proposal on BOT basis ✓ Coordination with Financial and Legal Consultants ✓ Preparation of Cost Estimation / Rate Analysis		
Type of Services provided: Planning Studies, Feasibility Studies, Tariff Studies, Technical Studies, Design – Architectural / Engineering/ Industrial etc., Quantity Surveying / Cost Estimating, Estimation/Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Procurement Services, Financial and Legal Studies		
Fields of Specialization: Transportation Sector: 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,		

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Assignment Name: Detailed Engineering Design of Karachi - Lahore Motorway Project (Multan Sukkur Section) - 20 kms		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 28
Name of Client: M/s China State Construction Engineering Corporation Pakistan. (House No.40, Street No.27, F-6/2, Islamabad) (Ph:051-2824268)		Total value of full project (in million US\$): US \$ 250.00 million
No. of Staff: 12		No. of Persons-Months: 28
Start Date (Month / Year): 26 July 2014	Completion Date (Month/Year): 30 th September, 2014	Approx. Value of Services: US \$ 500,000 (Rs. 5.0 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: Mr. Ahmad Luqman Sarwar TL / Highway Engineer, Ms. Iram Noreen Structural Engineer, Mr. Abdul Majeed Transportation Economist, Mr. Siddique Akbar Material Engineer, Mr. Muhammad Arshad Measurement Engineer, Mr. Arsalan Vardag Financial Expert, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Aized Hasan Mir Contracts Specialist and others.		
Brief Narrative Description of Project: The construction of Karachi-Lahore Motorway, a 6 lane limited access facility has been planned to be constructed. The upgradation from 4-lane to 6-lane motorway section from Karachi to Hyderabad (M-9) was already offered on PPP mode. The Hyderabad - Lahore Motorway comprised of three sections. Section I from Hyderabad to Sukkur, Section II from Sukkur to Multan and Section III from Multan to Lahore comprised a total length of over 950 kms. This project involved the detailed engineering design of first 20 km section of Sukkur - Multan Section of KLM. It includes 14 bridges/flyovers and 1 major interchange.		
Description of Actual Services Provided: The services provided included <ul style="list-style-type: none"> ✓ Detailed Engineering Design, Ground Verification of Alignment and features ✓ Pavement Design with alternatives ✓ Detailed Geometric Design ✓ Cross drainage structures, hydrology and hydraulic study ✓ Hydrology & Hydraulic Study ✓ Detailed Design of 14 Bridges ✓ Detailed Design of Interchanges and Flyovers ✓ Drainage Design ✓ Structures Design estimating ✓ Traffic Analysis and Estimation - review of data provided ✓ Coordination with Financial and Legal Consultants ✓ Preparation of Cost Estimation / Rate Analysis 		
Type of Services provided: Planning Studies, Feasibility Studies, Tariff Studies, Technical Studies, Design – Architectural / Engineering/ Industrial etc., Quantity Surveying / Cost Estimating, Estimation/Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Procurement Services,		
Fields of Specialization: Transportation Sector: 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,		

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Assignment Name: Ground Validation / Review of Feasibility Study for Karachi – Lahore Motorway: Hyderabad – Sukkur Section-I (400 Km)		Country: Pakistan
Location within Country: Sindh and Punjab		Number of person-months of the entire project: 277
Name of Client: National Highway Authority, M/o Communications Govt. of Pakistan, # 28 Mauve Area, G-9/1, Islamabad		Total value of full project (in million US\$): US \$ 85.00 million
No. of Staff: 83		No. of Persons-Months: 117
Start Date (Month / Year): 05 th June, 2014	Completion Date (Month/Year): 04 th Oct 2014	Approx. Value of Services: US \$ 535,000 (Rs.35,360,622/-)
Name of Associated Firm(s), If Any: M/s ACE (Pvt) Ltd. Lahore M/s Assign International, Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 160
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Muhammad Azad Khan Team Leader, Mr. Akhtar Mahmood Mir & Munwar Ali Highway Engineers, Ms. Iram Aamir & Intesab Ahmad Structure Engineers, Mr. Aziz ur Rehman & Zafar Iqbal Environmental Engineers, Mr. Iqbal A. Niazi Social Development Scientist, Mr. M. Arshad Janjua Quantity Surveyor and others.		
Brief Narrative Description of Project: The construction of Karachi-Lahore Motorway, a 6 lane limited access facility was planned to be constructed. The upgradation from 4-lane to 6-lane motorway section from Karachi to Hyderabad (M-9) was already offered on PPP mode. The Hyderabad - Lahore Motorway comprised of three sections. Section I from Hyderabad to Sukkur, Section II from Sukkur to Multan and Section III from Multan to Lahore comprised a total length of over 950 kms. The subject project included the validation of proposed alignment of Hyderabad - Sukkur Section. The Motorway section from Hyderabad to Sukkur essentially follows the existing Railway line. The alignment was finalized by the Chinese Contractor M/s CSCEC. The subject project required to validate the proposed alignment on ground and to prepare the cost estimates along with an EIA Report . Estimated length of this section was about 400 Kms. It was connected en-route Khairpur, Ranipur, Mehrabpur, Nawabshah, Shahdadput and Tando Adam etc. After crossing river Indus and was connected with Motorway M-9. The planned 6-lane Motorway was largely contributed to ensure smooth and efficient movement of goods and traffic in healthy environment and to the economic development of the country. Its strategic objectives was included opening the hinder-land areas and was brought more population into the stream of benefits, which in turn was changed to social complexion of people around this corridor.		
Description of Actual Services Provided: <u>Stage-I</u> Tentative alignment provided available by NHA. Firm up alignment after field visits and presented to the client with value addition for concurrence from NHA. <u>Stage-2</u> After the concurrence, the alignment has been put to ground for following objectives:- <ol style="list-style-type: none"> Develop ROW plans, land acquisition folders, list of underground and visible utilities to be relocated, complete in all respect. To develop the cost estimates of land acquisition and relocation of utilities after investigating the prevailing rates. 		

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- c. GIS of land acquisition on satellite imagery with inventory of utilities and structures along with photographs of buildings and any manmade structures to be demolished.
- d. Detailed inventory of all type of structures on the Motorway, Interchanges, required rest areas and weighing stations
- e. **Hydrology and hydraulic study for cross drainage structures**
- f. Preliminary plan and profile drawings
- g. **EIA / SIA (Social Impact Assessment) as per PEPA Rules and Guidelines**
- h. Indus River Protection Bunds Coordinates to define its geometry with respect to Motorway alignment.
- i. Connection roads from major cities / towns with the motorway shall be identified and a separate rough cost estimate shall be prepared.

Stage-3

- ✓ Land acquisition and utility / infrastructure estimates and folders
- ✓ GIS Map on satellite imagery
- ✓ Tender Documents based on engineering, Procurement and Construction (EPC) /Turnkey basis
- ✓ Preparation / Updating PC-I

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, Environment and Social Sector Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal 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).

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Assignment Name: Technical Analysis and Financial Modeling of Construction of Lahore - Khanewal - Multan Section (330 km) of Karachi Lahore - Motorway Project on (PPP) Basis.		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 04
Name of Client: M/s China State Construction Engineering Corporation Pakistan. (House No.40, Street No.27, F-6/2, Islamabad) - Ph:051-2824268		Total value of full project (in million US\$): US\$ 250.00 million
No. of Staff: 10		No. of Persons-Months: 04
Start Date (Month / Year): 15 May 2014	Completion Date (Month/Year): 30 th July, 2014	Approx. Value of Services: US\$ 500,000 (Rs. 5.0 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: Mr. Ahmad Luqman Sarwar TL / Highway Engineer, Ms. Iram Noreen Structural Engineer, Mr. Abdul Majeed Transportation Economist, Mr. Siddique Akbar Material Engineer, Mr. Muhammad Arshad Measurement Engineer, Mr. Arsalan Vardag Financial Expert, Dr. Ashfaq Ahmad Sheikh Hydrologist / Drainage Engineer, Dr. Ahtisham Raza, Environmental Specialist Mr. Aized Hasan Mir Contracts Specialist and others.		
Brief Narrative Description of Project: The construction of Karachi-Lahore Motorway, a 6 lane limited access facility has been planned to be constructed. The upgradation from 4-lane to 6-lane motorway section from Karachi to Hyderabad (M-9) had already offered on PPP mode. The Hyderabad - Lahore Motorway comprised of three sections. Section I from Hyderabad to Sukkur, Section II from Sukkur to Multan and Section III from Multan to Lahore comprised a total length of over 950 kms. We carried out the technical analysis of the feasibility study carried out by CSCEC, traffic analysis, tolling analysis, review of construction costs, O&M Costs, Study of VGF, alternate options for raising revenues other than tolling, and Financial Modeling based upon various suitable options for CSCEC.		
Description of Actual Services Provided: The services provided included ✓ Preliminary Engineering Design ✓ Construction Cost Estimates ✓ Hydrology and hydraulic study for cross drainage structures ✓ EIA / SIA (Social Impact Assessment) ✓ Traffic Analysis, Tolling Analysis, Estimation of O&M Costs, Study VGF ✓ Financial Modeling ✓ Technical Proposal on BOT basis ✓ Coordination with Financial and Legal Consultants ✓ Preparation of Cost Estimation / Rate Analysis		
Type of Services provided: Planning Studies, Feasibility Studies, Tariff Studies, Technical Studies, Design –Quantity Surveying / Cost Estimating, Estimation/Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Procurement Services, Financial and Legal Studies		
Fields of Specialization: Transportation Sector: 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,		

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Assignment Name: Traffic counts on Lahore - Islamabad Motorway Project (M-2)		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 120
Name of Client: M/s Frontier Works Organization (FWO) # 509, Kashmir Road, R.A. Bazar, Rawalpindi		Total value of full project (in million US\$): US\$ 250.00 million
No. of Staff: 90		No. of Persons-Months: 120
Start Date (Month / Year): 15 May 2014	Completion Date (Month/Year): 30 th July, 2014	Approx. Value of Services: US\$ 500,000 (Rs.5.0 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: Mr. Ahmad Luqman Sarwar Traffic Engineer, Mr. Abdul Majeed Transportation Economist, Mr. Zafar Sohail Kahoot Senior Traffic Enumerators and 86 Traffic Enumerators.		
Brief Narrative Description of Project: Lahore - Islamabad Motorway Project (M-2) was the first Motorway build in Pakistan. FWO hired the services of ACC for carrying out the traffic counts on 24 different locations between Lahore and Islamabad on M-2. Traffic counts were carried out for 24 hours, 7 days duration. A detailed report was prepared incorporating the traffic forecasts and design ESALs.		
Description of Actual Services Provided: The services provided included <ul style="list-style-type: none"> ✓ Traffic Counts ✓ Traffic Analysis ✓ Calculation of Hourly Traffic ✓ Estimation of Seasonal Factors ✓ Calculation of Design Traffic ✓ Estimation of Traffic Growth ✓ Traffic Forecasts 		
Type of Services provided: Feasibility Studies, Traffic Studies, Technical Studies,		
Fields of Specialization: Transportation Sector: Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads,		

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Assignment Name: Feasibility Study and Design of "Establishment of Axle Load Control Regime on Provincial Highways at 5-Stations".		Country: Pakistan
Location within Country: Khyber Pakhtunkhwa (KPK)		Number of person-months of the entire project: 13
Name of Client: Pakhtunkhwa Highways Authority (PKHA), Govt. of KPK Attached Department Complex, Khyber Road Peshawar		Total value of full project (in million US\$): US\$ 2.50 million
No. of Staff: 13		No. of Persons-Months: 13
Star Date (Month / Year): 03 March 2014	Completion Date (Month/Year): 03 May 2014	Approx. Value of Services: US\$ 28,000 (Rs.2,850,000/-)
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: Mr. Ahmad Luqman Sarwar Transportation Specialist, Mr. Akhtar Mahmood Mir Highway Design Engineer, Ms. Iram Amir Structure Design Engineer, Ms. Tehmina Shahid Design Engineer, Syed Farrukh Hussain Weigh Station Specialist, Mr. Mukhtar Ahmad Electrical Engineer, Mr. Abdul Majeed Transport Economist, Mr. Aziz ur Rehman Environmental Expert, Mr. Muhammad Arshad Janju Quantity Surveyor and others.		
Brief Narrative Description of Project: The Pakhtunkhwa Highway Authority (PKHA) acquired the services of Consultants for design of Establishment of Axle Load Control Regime on Provincial Highways at 5-Stations". Consultants identified five locations in northern and southern part of the province on the road carrying most of the heavy loaded vehicles.		
Description of Actual Services Provided: The consultancy services included local soil investigation, planning, detailed engineering design, preparation of estimates, PC-I, tender documents and implementation programme. The following four stages were performed:- Stage-1: Compile Site – Specific Information: The consultant has compiled and review relevant information available from private and public sources, to the extent feasible, which will provide an understanding of physical conditions within the vicinity of the sites, including topography characteristics, soil bearing capacity, geologic characteristics, surface and groundwater hydrology, drainage and sanitation conditions, water supply, fire protection, electrical supply, road conditions and traffic. Stage-2: Specific Data / Survey The consultant carried out all survey work to the optimum that is necessary to enable them to adequately perform the services. Property survey, topographic surveys, soil surveys was done as input parameters for the design like bearing capacity, water table level and type of soil etc. and identification of all underground facilities (i.e. cables, drains, gas lines, telephone lines and electrical lines etc). Consultants conducted detailed study to the over loaded traffic, for identification of potential sites for installation of equipment and construction of the allied buildings. Stage-3: Preliminary Engineering The Consultant analyzed the information gathered and data generated in the above tasks and identify a minimum of three options of site for each station. Accordingly the develop alternative layouts and design schemes for each of the weigh station sites. They carried out benefit analysis, Economic and Financial Analysis, Feasibility Report, Implementation Programme etc. Stage-4: Detailed Engineering: The Consultants developed detailed design of each station considering all design parameters and requirements stipulated by the Client and incorporate findings, conclusions and decisions developed during tasks in Stage-I and 2.		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

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Type of Services provided:

Topographic Surveys, Planning Studies, Feasibility Studies, Economic Studies, Financial 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, Manpower Requirements Studies.

Fields of Specialization:

Transportation Sector:

National/Regional/Multimodal Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, New Structures/Reconstruction.

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Technical Services for Construction of Karachi - Hyderabad Project M-9 on BOT Basis.		Country: Pakistan
Location within Country: Sindh		Number of person-months of the entire project: 24
Name of Client: M/s Frontier Works Organization (FWO) # 509, Kashmir Road, R.A. Bazar, Rawalpindi Ph:051-9271847		Total value of full project (in million US\$): US \$ 30.00 million
No. of Staff: 10		No. of Persons-Months: 24
Start Date (Month / Year): 5 Dec 2013	Completion Date (Month/Year): 28 th Feb, 2014	Approx. Value of Services: US\$ 670,000 (Rs.6.7 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: Mr. Akhtar Mahmood Mir and Mr. Ahmad Luqman Sarwar Highway Engineers, Mr. Abdul Majeed Transportation Economist, Mrs. Irum Noreen Structural Engineer, Mr. Siddique Akbar Material Engineer, Muhammad Arshad Janjua Measurement Engineer, Malik Saqib Mahmood Traffic Engineer and Sultan Alam Contracts Specialist and others.		
Brief Narrative Description of Project: A detailed technical proposal was prepared for FWO for Hyderabad - Karachi Motorway M-9 for submission to National Highway Authority. The technical studies included detailed topographic surveys, soil and materials testing, traffic counts and analysis, costs estimates, O&M Estimates. Preliminary design of Road, Pavement. 8 No. Interchanges, Rest Areas, Service Areas, Weigh Stations etc. .		
Description of Actual Services Provided: The services provided included <ul style="list-style-type: none"> ✓ Engineering Design, Topographic Studies, Traffic Studies and analysis ✓ Soil and Materials Studies ✓ Hydrology and hydraulic study for cross drainage structures ✓ EIA / SIA (Social Impact Assessment) ✓ Pavement Design ✓ Construction Cost Estimates ✓ Design of 8 No Interchanges ✓ Design of Rest Areas ✓ Design of Weigh Stations ✓ Tolling Analysis ✓ Estimation of O&M Costs ✓ Cost Estimates ✓ Technical Proposal on BOT basis ✓ Coordination with Financial and Legal Consultants ✓ Preparation of Cost Estimation / Rate Analysis 		
Type of Services provided: Planning Studies, Feasibility Studies, Tariff Studies, Technical Studies, Design –Quantity Surveying / Cost Estimating, Estimation/Preparation of Contract Documents and Bid Evaluation, Structural Engineering, Procurement Services, Financial and Legal Studies		
Fields of Specialization: Transportation Sector: 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,		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

Project Data Sheet No.129

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Assignment Name: Commercial Feasibility Study for Construction of Additional 2-Lane Bridge at Khushalgarh over River Indus on N-80 on Public Private Partnership (PPP) Basis.		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 12
Name of Client: National Highway Authority, Ministry of Communications, Government of Pakistan, # 28 Mauve Area, G-9/1, Islamabad (Ph:051-9032901)		Total value of full project (in million US\$): US \$ 50.00 million
No. of Staff: 12		No. of Persons-Months: 12
Start Date (Month / Year): 25 October, 2013	Completion Date (Month/Year): 24 December 2013	Approx. Value of Services: US\$ 33,070 (Rs.3,538,480/-)
Name of Associated Firm(s), If Any: Nil		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: Mr. Ahmad Luqman Sarwar Team Leader, Dr. Farrukh M. Shaikh Financial Expert, Malik Saqib Mahmood Traffic Engineer, Mr. Akhtar Mir Highway Engineer, Ms. Iram Amir Structure Engineer and others.		
Brief Narrative Description of Project: National Highway N-80 provides shortest link between Rawalpindi and Indus Highway. This route has the potential to provide a short, all weather, safe and economical trade route to traffic between capital and southern and western districts of the country. Up till now full benefits of the route cannot be capitalized due to non-existence of geometrically negotiable crossing over river Indus. A 2-lane balanced cantilever type 348m long bridge along with one 25m long via duct span is already under construction on the river Indus. NHA engaged Consultants for preparation of commercial feasibility for additional 2-lane bridge on PPP basis. The Consultant's team helped NHA in structuring the project that provides value-for-money solution to NHA. The project was conceived in a manner whereby the private sector was responsible for Design Review, Financing, Constructing, Operating and Maintaining the Project. The private party recovered their investment over the concession period via toll collection. At the end of concession period, the entire project was transferred to NHA.		
Description of Actual Services Provided: The services provided included:- Phase-I: Analysis including needs analysis, options, analysis presentation and approval of concepts and project due diligence Phase-II: Preliminary Design Study including alignment study, topographic survey, preliminary soil investigation/geo technical investigation, hydrological and hydraulic study , traffic study and preliminary design Phase-III: Commercial Feasibility including transaction structuring, financial assessment etc.		
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: 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
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Project Data Sheet No.128

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Assignment Name: Environment Impact Assessment Study for Lahore – Karachi Motorway Project		Country: Pakistan
Location within Country: Punjab & Sindh		Number of person-months of the entire project: 08
Name of Client: M/s China State Construction Engineering Corporation Pakistan. (House No.40, Street No.27, F-6/2, Islamabad)		Total value of full project (in million US\$): US \$ 300.00 million
No. of Staff: 4		No. of Persons-Months: 06
Start Date (Month / Year): 12 October 2013	Completion Date (Month/Year): 10 December 2013	Approx. Value of Services: US \$ 63,520 (Rs.6,796,575/-)
Name of Associated Firm(s), If Any: M/s Assign Engineering Consult International (Pvt) Ltd. Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 02
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Ahmad Luqman Sarwar Team Leader, Mr. Aziz ur Rehman Environmental Specialist, Mr. Kashif Khurshid Highway Engineer and eight Enumerators.		
Brief Narrative Description of Project: Preparation of EIA Report as per the requirement of Pakistan Environmental Protection Agency (EPA).		
Description of Actual Services Provided: The services provided included:- <ul style="list-style-type: none"> ✓ Preparation of EIA Report as per the requirement of Pakistan Environmental Protection Agency (EPA). ✓ The contents of this assessment report was to satisfy the requirements of the environmental protection laws of Pakistan including:- <ul style="list-style-type: none"> • The Overview of the project • The surrounding environmental condition • The analysis, prediction and the assessment of the possible impact • The measures, technology and the arguments of the environmental protection • The economic cost-benefit analysis of the environmental impact • The suggestion of carrying out environmental monitor • The conclusion of the environmental influence assessment ✓ The basic requirements for EIA were:- <ul style="list-style-type: none"> • The overall arrangement of the environmental impact report wa prepared in accordance with the requirements of Pakistan construction project regarding editing environmental assessment, and was successfully passed the examination of the competent department. • The basic data must be reliable • The model of prediction and the selection of parameters must be reasonable • The view point of the conclusion must be unequivocal, objective, and reliable • The sentences should be smooth, clear not too long and coherent • This environmental impact assessment report should contain the certificate of the assessment qualification, the signed report book and signature of the report auditor. 		
Type of Services provided: Environmental Engineering, Highway Engineering		
Fields of Specialization: Transportation Sector: Environmental Sector		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Project Data Sheet No.127

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Assignment Name: Traffic Counts & OD Surveys on Lahore – Karachi Motorway Project		Country: Pakistan
Location within Country: Punjab & Sindh		Number of person-months of the entire project: 04
Name of Client: M/s China State Construction Engineering Corporation Pakistan. (House No.40, Street No.27, F-6/2, Islamabad)		Total value of full project (in million US\$): N.A
No. of Staff: 45		No. of Persons-Months: 03
Start Date (Month / Year): 07 October 2013	Completion Date (Month/Year): 07 November 2013	Approx. Value of Services: US \$ 65,000 (Rs.6,909,950/-)
Name of Associated Firm(s), If Any: M/s Assign Engineering Consult International (Pvt) Ltd. Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 01
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Ahmad Luqman Sarwar Team Leader, Ms. Tehmina Shahid Supervising Engineer, Mr. Abdul Majeed Transportation Economist, Malik Saqib Mahmood Transport Sector Specialist, 40 Enumerators.		
Brief Narrative Description of Project: Detailed Traffic Counts and Origin destination Surveys were carried out for the Feasibility Study of Lahore – Karachi Motorway Project for the CSCEC, China.		
Description of Actual Services Provided: The services provided included:- ✓ One day traffic count at 27 locations ✓ OD Survey at 25 locations (sample based survey) ✓ Willingness to Pay Survey ✓ Travel time survey (sample based survey) ✓ Survey report including survey methodology, survey process description, survey photo-pictures (2 or 3) for each station etc.		
Type of Services provided: Traffic Engineering		
Fields of Specialization: Transportation Sector: National/Regional/Multimodal Transportation Planning – Traffic/Origin-Destination Surveys – Demand forecasting, - Transportation Models, - Road Transportation Facilities, Highway Planning & Programming, Highways, New Highways/Improvements & Reconstruction, Toll Roads etc.		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Assignment Name: Feasibility Study and Detailed Design for Nowshera-Peshawar Road Project (N-5)		Country: Pakistan
Location within Country: Khyber Pakhtunkhwa (KPK)		Number of person-months of the entire project: 14
Name of Client: M/s Sambo Engineering Co. Ltd. Korea (200-2 Bangi 1-dong, Songpa-gu, Seoul, Korea)		Total value of full project (in million US\$): US 100.00 million
No. of Staff: 8		No. of Persons-Months: 14
Start Date (Month / Year): 01 October 2013	Completion Date (Month/Year): 30 November 2013	Approx. Value of Services: US\$ 35,000
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 included Mr. Akhtar Mir Highway Engineer, Ms. Iram Amir Structural Engineers, Mr. Ahmad Luqman Sarwar Pavement Engineer, Mr. Muhammad Arshad Quantity Surveyor, Mr. Siddique Akbar Material Engineer, Mr. Abdul Majeed Transport Economist and others.		
Brief Narrative Description of Project: This Project route was National Highway(N-5) connecting Nowshera City and Peshawar City of Khyber Pakhtunkhwa Province. This section of the highway was amongst the most densely trafficked in the Province, the existing highway was served heavy traffic volume with large portion of truck traffic. The NHA (National Highway Authority) intended to construct existing 4-lane Nowshera- Peshawar Highway (N-5) as 6-lane. The project started at Nowshera, Khyber Pakhtunkhwa Province (N-5) and ends at Peshawar, Khyber Pakhtunkhwa Province(N-5). Length of the project was about 43km. The Consultants hired by the Sambo Engineering prepared a feasibility study based upon engineering design for the preparation of the project on PPP basis.		
Description of Actual Services Provided: <ul style="list-style-type: none"> 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 Hydrology and Hydraulic Study of cross drainage structures Structural Design of Bridges Preparation of Drawings, Bill of Quantities, preparation of Mass Haul Diagram, Determination of VOCs and preparation of economic feasibility report. Feasibility Study using HDM-4 Environmental Studies 		
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, Structural Engineering and Material Testing.		
Fields of Specialization: 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
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Assignment Name: Bid Evaluation and Drafting of Contract for Additional School Rooms etc. (LFA Reference # 4.2.2)		Country: Pakistan
Location within Country: Chitral		Number of person-months of the entire project: 2
Name of Client: M/s THRIVE-CIADP Project & Technical Department		Total value of full project (in million US\$): N.A
No. of Staff: 3		No. of Persons-Months: 2
Start Date (Month / Year): 24 September 2013	Completion Date (Month/Year): 23 October 2013	Approx. Value of Services: US \$ 1,870 (Rs.200,000/-)
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: Ms. Iram Amir Structure Engineer, Mr. Muhammad Arshad Measurement Engineer, Mr. Aized Hasan Mir Contract Specialist		
Brief Narrative Description of Project: Review of structural drawings and costs prepared for schools in Chitral, Preparation of Tender Documents.		
Description of Actual Services Provided: <ul style="list-style-type: none"> • Review and advise on THRIVE-CIADP the pre-qualified Contractors (short listing has already done by THRIVE-CIADP) • Advise on the prototype design already prepared by THRIVE-CIADP and amend the existing bid documents for the pre-qualified contractors as per the design. • Assist in bid opening and evaluation of bids • Amendments in the existing contract according to the contractor selected and make schedule for payments • Review periodic invoices 		
Type of Services provided: Measurement Engineer, Design of School Buildings, Structural Analysis, Cost Estimation, Tender Documents.		
Fields of Specialization: Design of Schools		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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Project Data Sheet No.124

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Assignment Name: Technical, Financial and Legal Service for Design, Financing, Construction, Operation and Maintenance of Lahore Ring Road (Southern Loop) on BLT Model		Country: Pakistan
Location within Country: Punjab		Number of person-months of the entire project: 12
Name of Client: M/s China State Construction Engineering Corporation Pakistan. (House No.40, Street No.27, F-6/2, Islamabad)		Total value of full project (in million US\$): US \$ 450.00 million
No. of Staff: 9		No. of Persons-Months: 09
Start Date (Month / Year): 04 September 2013	Completion Date (Month/Year): 30 September 2013	Approx. Value of Services: US\$ 116,822 (Rs.12,500,000)
Name of Associated Firm(s), If Any: M/s Assign Engineering Consult International (Pvt) Ltd. Islamabad		No. of Months of Professional Staff Provided by Associated Firm(s): 03
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Mr. Akhtar Mir and Mr. Ahmad Luqman Sarwar Highway Engineers, Mr. Abdul Majeed Transportation Economist, Ms. Iram Amir Structural Engineer, Mr. Siddique Akbar Material Engineer, Mr. Muhammad Arshad Measurement Engineer, Mr. Kashif Khurshid Design Engineer and others.		
Brief Narrative Description of Project: A proposal was prepared for a private investor (M/s CSCEC, China) for Design, Financing, Construction, Operation and Maintenance of Lahore Ring Road (Southern Loop) on BLT Model. The project included preliminary design, preparation of proposals, Financial Modeling, Legal Services & Draft Concession Agreement, Bid Preparation and Submission, etc.		
Description of Actual Services Provided: The services provided included ✓ Preliminary Design ✓ Ground Verification of Alignment and features ✓ Preliminary Pavement Design with alternatives ✓ Preliminary Structures Design review and estimating ✓ Traffic Analysis and Estimation - review of data provided ✓ Financial Analysis and Modeling ✓ Legal Service ✓ Legal Audit of the Agreement ✓ Preparation of Cost Estimation / Rate Analysis ✓ Review of Concession Agreement - Technical, Financial and Legal aspects ✓ Preparation of Technical and Financial Proposal for Bid ✓ Legal Assistance ✓ Financial Model		
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: 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 User Charges, Financial Analysis / Costing & Tariffs (Road Transportation Industry).		

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

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Assignment Name: Construction Supervision of Three Bridges in District Malakand & Charsadda, Khyber Pakhtunkhwa		Country: Pakistan
Location within Country: Khyber Pakhtunkhwa		Number of person-months of the entire project: 264
Name of Client: Pakhtunkhwa Highway Authority, Government of Khyber Pakhtunkhwa, Attached Department Complex, Khyber Road, Peshawar.		Total value of full project: N.A
No. of Staff: 11		No. of Persons-Months: 264
Start Date (Month / Year): Jan 2012	Completion Date (Month/Year): March 2016	Approx. Value of Services: US \$ 186,600/- (Rs.16,794,000)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers (Pvt) Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 132
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: The senior staff included Mr. Abdul Manan Khan Resident Engineer, Mr. Abdul Nasir Assistant Resident Engineer, Mr. Wali Rehman Quantity Surveyor and others.		
Brief Narrative Description of Project: The Pakhtunkhwa Highway Authority intended to engage consultants for construction supervision of 3 nos. bridges over various rivers in District Charsadda and Malakand:- <ol style="list-style-type: none"> 1) Dildar Ghari bridge river Swat i/c 2.50 Km Approach District Charsadda 2) RCC bridge Thari on river Swat Batkela Totakan Road Malakand 3) RCC / Steel bridge Qulangai Sharbatai Road Malakand 		
Description of Actual Services Provided: The following supervision tasks were carried out during the course of the project: <ul style="list-style-type: none"> • 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 		
Type of Services provided: Soil Surveys, Topographic Surveys, Soil Mechanics and Foundation Engineering, Hydraulics Studies and Engineering, Quantity Surveying / Cost Estimating, Estimation Inspection of Construction, Project Management/Administration (on behalf of owner), Project Monitoring and Evaluation		
Fields of Specialization: Construction Management Construction Industry Development Sector: Transportation Sector		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

Project Data Sheet No.122

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Assignment Name: Flood Emergency Reconstruction Project for Design and Supervision for South Package ADB Loan No. 2742-Pak		Country: Pakistan
Location within Country: Sindh Province		Number of person-months of the entire project: 723
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\$): N.A
No. of Staff: 55		No. of Persons-Months: 223
Start Date (Month / Year): February 2012	Completion Date (Month/Year): 31 January 2015	Approx. Value of Services: US\$ 820,000 (Pak Rs. 81,260,826/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers Pvt. Ltd. (ACE) (Lead Firm) M/s Osmani & Company (Pvt) Ltd. (OCL)		No. of Months of Professional Staff Provided by Associated Firm(s): 500
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: <p>The senior staff includes Mr. Azad Khan Team Leader, Mr. A.R Qureshi Contract Specialist, Mr. Abdul Majeed Economist, Mr. Arif Hassan Sociologist, Dr. Jamil Kazmi Environmentalist, Mr. Akhtar Mir & Mr. Shoaib Ahmad Farooq Sr. Highway Design Engrs, Col M. Iqbal & Mr. Shahid Iqbal Sr. Str. Design Engrs, Mr. Ahmad Luqman Sarwar Sr. Pavement Design Engr, Mr. Amir Ali Wasan Sr. Traffic Engr, Mr. Muhammad Asif Survey Engr, Mr. Muhammad Arshad QS, Mr. Rais Agha Sr. Geotech Engr, Mr. Zafar Masood Siddiqui Sr. Hydrology Engr, Dr. Tabassum Zahoor Sr. Hydraulic / Drainage Engr</p> <p>Supervision Staff: Mr. Aqeel Ahmad & Col Nasir Farid REs, Mr. Khalil Shakir & M. Abbas MEs, Mr. Abdullah Rakhshani & M. Tariq Niazi AREs (H), Mr. M. Iqbal Javed & Mr. Iftikhar Ahmad Chaudhry ARE (Str), Mr. Ahid Masood Ahmad Drainage Engr, Mr. Ahmad Rizwan Geotechnical Engr., Mr. Munawar Ali Highway Design Engr, Ms. Iram Amir Str. Design Engr, and others.</p>		
Brief Narrative Description of Project: <p>As a result of Aug 2010 torrential rains and resulted unprecedented floods in almost all the rivers of Pakistan, the communication infrastructure, especially sections of roads and bridges received severe damage. Besides precious human life, at places, the man-made structures were completely wiped out, or were rendered unusable for human settlements. As per estimate drafted by international donor agencies in consultation with Government of Pakistan, the Floods have caused a damage of approx. US \$ 9.5 billion to Pakistan's infrastructure, agriculture and other sectors. The figure refers only to existing values of roads, buildings, irrigation system and other devastated sectors that were evaluated nationwide, not what it will cost to replace them.</p> <p>It was the top priority of the Government to restore the infrastructure on war footings, to undertake the mega restoration/development program. The life-line of this program was the Highway / Bridge network maintained by National Highway Authority where two projects have been included for reconstruction (including one section each of M-8 and N-5) and over 300 kms of roads for detailed engineering design.</p>		
Description of Actual Services Provided: <p>The following tasks were carried out during the course of the project:</p> <ul style="list-style-type: none"> Review the design and Construction Supervision of National Highways and Motorways including Ratodero – Shahdadt – Qubo Saeed Khan Section of M-8 and Pano Aqil – Dherki Section of section of N-5 which have already been designed by the NHA Consultant. Consultant suggested changes in the design where found necessary viz a viz site conditions. Such changes will be approved by the Employer. Detailed engineering design of 340 kms of National Highways and Bridges including National Highway N-5, National Highway N-55 (Indus Highway) and National Highway N-50. Detailed Engineering Design of 5 Bridges on Indus Highway (N-55). 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
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- Carried 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,
- Carried out 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.
- Traffic and soil surveys
- Detail Survey and Design of selected roads as per requirements of the ADB/NHA.
- Propose suitable contract packaging for selected roads.
- Prepare complete civil works bidding documents following ADB's Guidelines on Procurement and Sample Bidding Documents for Civil Works.
- Estimate Construction Costs
- Estimate maintenance cost (routine and periodic maintenance separately) on existing and improved roads for the purpose of economic evaluation.
- Construction Supervision of Selected NHA Sections of N-5 and M-8.
- Construction Management

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 and Detailed Engineering Design

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.121

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Assignment Name: "Project Management Consultancy" for the Flood Emergency Reconstruction Project (FERP) ADB Loan No.2742-PAK		Country: Pakistan
Location within Country: Sindh Province		Number of person-months of the entire project: 3638
Name of Client: Works & Services Department, Government of Sindh		Total value of full project (in million US\$): N.A
No. of Staff: 208		No. of Persons-Months: 1238
Start Date (Month / Year): January 2012	Completion Date (Month/Year): Jan 2015	Approx. Value of Services: US \$ 2,017,000 (Pak Rs.201,689,255/-)
Name of Associated Firm(s), If Any: M/s Associated Consulting Engineers Pvt. Ltd. (ACE) M/s Osmani & Company (Pvt) Ltd. (OCL) M/s Assign Engineering Consult International Pvt. Ltd.		No. of Months of Professional Staff Provided by Associated Firm(s): 2400
Name of Key Experts of the firm (Project Director/Coordinator, Team Leader) Involved and Functions Performed: <p>The senior staff includes Mr. Ghazanfar Ali Awan Team Leader, Mr. Shabbir Ahmad Tarar Contract Specialist, Ms. Iram Aamir Structural Specialist, Mr. Aziz ur Rehman Environmental Specialist, Mr. Iqbal A. Niazi Social/Resettlement Specialist, Syed Rizwan Abbas F&A Specialist, Ms. Mehmood Nasreen Arshad Gender Specialist, Mr. Aftab Uddin Qadri Geotechnical Engineer, Ms. Sajida Iqbal M&E Specialist, Mr. Ahmad Luqman Sarwar Pavement Design Engineer, Mr. Mukhtar H. Mirani & Amir Ali Wasan Resident Engineers, Mr. Akhtar Hussain Mangi, Mr. Javed Ahmda Sheikh, Mr. Altaf Hussain Abro and Barkat Ali Almani ARE (H), Mr. Aftab Ahmad Mangi & Mr. Ghulam Shabbir Narejo ARE (Str), Mr. Rais Agha & Mr. Ahmad Rizwan Material Engineers and others.</p>		
Brief Narrative Description of Project: <p>The floods took place in mid 2010, affected 20 million people and caused 1,600 deaths. Basic transport infrastructure and irrigation facilities were badly damaged. Similar devastation happened to health and education centers, housing, agriculture, livestock, fisheries and livelihoods. 80 out of the 110 districts across Khyber Pakhtunkhwa, Sindh, Punjab, and Balochistan were all seriously affected. About one-fifth of the country, equivalent to the size of England, was under floods. The total damage was estimated at \$10 billion. The major damage was to national roads and bridges, followed by the road network in Sindh and Khyber Pakhtunkhwa. About 793 kilometers (km) of national highways (7% of the network), including bridges, need urgent repair – to ensure their stability and public safety. About 24,000 km of provincial highways and many smaller access roads (representing 12% of the total provincial road network) are in bad shape. The bulk of problem centers on Sindh and Khyber Pakhtunkhwa (20% of their road networks affected). The consulting services required for the project management/construction supervision of selected flood affected provincial roads of over 980 kms in Sindh Province were rehabilitated and reconstructed under the Flood Emergency Reconstruction Project (FERP). The project roads were located in Districts Thatta, Dadu, Kamber-Shahdadkot, Shikarpur, Kashmore and Jacobabad.</p>		
Description of Actual Services Provided: <p>The following tasks were carried out during the course of the project:</p> <ul style="list-style-type: none"> Review the design of roads (980 kms) which have already been designed by the ADB Consultant. Consultant suggested changes in the design where found necessary viz a viz site conditions. Such changes will be approved by the Employer. Consultant's Team Leader to act as the "Engineer" on the Project and the Resident Engineers are the "Representative of the Engineer". 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. 		

MAJOR WORK DURING LAST TEN YEARS WHICH BEST ILLUSTRATES QUALIFICATIONS

Project Data Sheet No.121

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- 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.
- Detailed Survey and Design of selected roads where required by the Employer.
- Quality Assurance Manual and Plan
- Construction Supervision and Project Management
- Project Management as per FIDIC
- Environmental monitoring and evaluation
- Construction Supervision of bridges
- Supervision of Piling Operations
- 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 Monitoring and 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.120

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Assignment Name: Construction Supervision for Rehabilitation of Existing North and South Carriageway and Design of 3 rd & 4 th Rigid Lanes of Kashmir Highway from Peshawar More to G.T. Road (Both Sides)		Country: Pakistan
Location within Country: Islamabad		Number of person-months of the entire project: 249
Name of Client: Capital Development Authority (CDA), Headquarter, Khayaban-e-Suhrwardy, G-7/4, Islamabad.		Total value of full project (in million US\$): US\$ 70.00 million
No. of Staff: 12		No. of Persons-Months: 249
Start Date (Month / Year): 17 Feb 2011	Completion Date (Month/Year): March 2015	Approx. Value of Services (in US\$): US\$ 197,000 (Rs.16,700,000/-)
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 Mr. Zulfiqar Ali Shah Bokhari Resident Engineer, Mr. Muhammad Jhangir Khan Assistant Resident Engineer, Mr. Tariq Mahmood Bhatti Structure Engineers, Mr. Jamshed Baig Material Engineer, Mr. Muhammad Munsha Quantity Surveyor and others.		
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, was observed with a rapid development of capital and opening of motorway. The Authority was already dualized the Kashmir Highway, however according to ultimate cross section of Kashmir Highway, two lanes (rigid) with each carriageway were added to make it four lanes divided carriageway. The inter provincial heavy traffic including trucks coming from Margalla and Lawrencepur usually carried load more than the specified load limits. The survey was indicated that most of the heavy traffic carried as much as 20 to 25 tones per axle against the permissible load limit of 8 tones per axle and there are approx. 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).		
Description of Actual Services Provided: <ul style="list-style-type: none"> 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 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

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- 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.

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.

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. 119

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Assignment Name: Technical Advisory Services for Development of New Defence Housing Society, Peshawar		Country: Pakistan
Location within Country: Peshawar		Number of person-months of the entire project: 144
Name of Client: 11 Corps Headquarters Peshawar Cantt.		Total value of full project (in million US\$): US \$ 1250.00 million
No. of Staff: 1		No. of Persons-Months: 48
Start Date (Month / Year): Jan 2011	Completion Date (Month/Year): Dec 2016	Approx. Value of Services (in US\$): US\$ 100,000
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: (Specialist Input / Individual Experience) Aized H. Mir, Technical Advisory Services		
Brief Narrative Description of Project: 11 Corps HQ has launched a project to create a new Defence Housing Authority in Peshawar which was developed approximately 10,000 kanals of land as a state of the art housing development complete with all infrastructure including schools, parks, commercial areas and residential zones. The development is planned to be self-sustaining and green development. Technical Advisory Services for the project are being provided with other independent legal and financial experts.		
Description of Actual Services Provided: Technical Advisory Services for the project was provided with other independent legal and financial experts.		
Fields of Specialization: <ul style="list-style-type: none"> PPP models and negotiations Site Selection, Zoning and Master Planning Procurement Feasibility Studies 		

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

Project Data Sheet No.118

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Assignment Name: Design Review and Construction Supervision of Remaining Works of ADB Assisted Balochistan Roads Development Sector Project		Country: Pakistan	
Location within Country: Province of Balochistan		Number of person-months of the entire project: 600	
Name of Client: Communication & Works Department, Government of Balochistan, Quetta		Total value of full project (in million US\$): US\$ 47.00 million	
No. of Staff: 60		No. of Persons-Months: 600	
Start Date (Month / Year): 1-March 2011	Completion Date (Month/Year): July 2013	Approx. Value of Services (in US\$): US\$ 470,000	
Name of Associated Firm(s), If Any: Nil		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: The senior staff included:- Abdul Zahir Baloch Project Coordinator, Muhammad Muqem Khoso, Abdul Samad Memon and Nigar Ahmad Resident Engineers, Muhammad Ijaz Senior Highway Engineer, Bashir Ahmad Hyder and Furqan Ali Abbasi, Highway Design Engineers, Niaz Muhammad Material Engineer, Iqbal Akhtar Niazi Social/Resettlement Specialist, Abdul Majeed Transport Economist, Aziz-ur Rehman Environmental Specialist, Javed Hussain Senior Structural Engineer/Bridge Engineer, Rais Agha Geodetic Engineers, Aized Hasan Mir Contract Specialist, Malik Saqib Mahmood Traffic Engineer, Shahzad Ahmad Quantity Surveyor and others.			
Brief Narrative Description of Project: The Communication & Works Department, Government of Balochistan hire the Associated Consultancy Centre for the preparation of as build assessment, design review of roads and bridges and construction supervision of the left over work of ADB BRDSP Project in Balochistan. Some of the under construction roads through ADB projects were badly affected by the devastating floods during August 2010. Consultants have to ascertain the current condition of the road and to suggest remedial measures for these projects. The remaining construction work on different roads is to be supervised. Following is the list of the roads:			
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	Kach-Shahrag-Harni Road	Ziarat / Sibbi	93.400
6	Dera Allah Yar To Usta Muhammad, Section - I	Jaffarabad	20.000
7	Dera Allah Yar To Usta Muhammad, Section – II	Jaffarabad	21.489

**MAJOR WORK DURING LAST TEN YEARS WHICH BEST
ILLUSTRATES QUALIFICATIONS**

Project Data Sheet No.118

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Description of Actual Services Provided:

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

- Review the design of roads carried out by the previous consultants. Consultant will suggest changes in the design if found necessary viz a viz site conditions. Such changes shall be approved by the Employer.
- As built assessment of the construction work on the roads by carrying out field surveys, soil testing and measurements.
- Review of the existing condition of the roads including condition surveys and field laboratory testing to estimate the current condition of the roads and to propose remedial measures on the roads which were affected by the floods.
- 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.
- 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 as per FIDIC
- Environmental monitoring and evaluation
- Design Review and Construction Supervision of bridges
- Supervision of Piling Operation, construction of girders, launching of girders
- Completion reports and drawings

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:

Design review and 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.