

KHYBER PAKHTUNKHWA RURAL INVESTMENT AND INSTITUTIONAL SUPPORT PROJECT (KP-RIISP)

TERMS OF REFERENCE FOR Design & Supervision Consultants for Administrative Infrastructure and Key Roads in Newly Merged Areas

I. Introduction

1.1. **Background.** Khyber Pakhtunkhwa (KP), Pakistan's third-largest province by population, has made significant progress in poverty reduction in recent years, though parts of the province remain vulnerable. KP's poverty rate fell from 73.8 percent in FY02 to 27 percent in FY14, the largest decrease in among Pakistan's provinces. However, nearly half of the 30.5 million inhabitants of KP, as well as three-fourths of the five million inhabitants of the former Federally Administered Tribal Areas (FATA, henceforth Newly Merged Areas or NMA), live in multidimensional poverty.¹ Over 30 percent of the population is made up of youth between the ages of 15 and 29, but their opportunities remain limited with an unemployment rate of 11 percent.² About 85 percent of the population lives in rural areas, where access to public services is not only poorer, but also worsening. Only two-thirds of the rural population has access to improved water sources (as opposed to 94 percent of the urban population) and the share of rural households with access to piped water sources has declined from 40 to 29 percent during 2005-2015 due to deteriorating infrastructure.³ Together with malnutrition and poor access to clean water, sanitation and hygiene, these conditions contribute to childhood stunting, which affects 40 to 49 percent of children under the age of five in KP and NMA, respectively.⁴ There are persistent gender disparities in a range of outcomes, including in access to basic services.

1.2. **The Merged Areas.** The 2018 merger of the erstwhile Federally Administered Tribal Areas (FATA) into Khyber Pakhtunkhwa present the province and the country with an enormous development opportunity. The Newly Merged Districts (NMD) cover an area of 27,200 square kilometers, with a population of around 4.8 million.⁵ The area comprises seven districts (Bajaur, Mohmand, Khyber, Kurram, Orakzai, North Waziristan, and South Waziristan), which made up the erstwhile Federally Administered Tribal Areas (FATA). Six adjoining tribal areas, namely Peshawar, Kohat, Bannu, Lakki, Marwat, Tank and Dera Ismail Khan, are known as the Frontier Regions (FR). The NMD lag in many socio-economic and development indicators. At the time of the merger, historical factors and institutional and administrative systems in these areas meant that most of the basic services provision and development outcomes in these areas were some of the lowest and least developed in the country (see Table 1).

¹ Based on the report 'Multidimensional Poverty in Pakistan', June 2016. Multidimensional poverty includes education, health, and standard of living.

² Bureau of Statistics, Government of Pakistan, Population Census 2017.

³ World Bank 2018. *When Water Becomes a Hazard. A Diagnostic Report on the State of Water Supply, Sanitation, and Poverty in Pakistan and Its Impact on Child Stunting. WASH Poverty Diagnostic.* World Bank, Washington, DC.

⁴ National Nutrition Survey 2018.

⁵ Estimate from 2016

Table 1: Selected Comparative Indicators for NMD, KP and Pakistan (2018)

Indicator	Newly Merged Districts	Khyber Pakhtunkhwa (excl NMD)	Pakistan national averages
GNI (per capita) (2018)	US\$ 2,509	US\$ 4,328	US\$ 5,190
Human Development Index	0.216	0.628	0.557
Percent of population below poverty line	52.0%	40.0%	24.3%
Net enrollment rate (primary)	52.1%	59.0%	73.8%
Maternal Mortality Rate (per 100,000)	395	275	140
Immunization of children (%)	33.9%	40.0%	60.6%
Population with access to improved drinking water	46.7%	91.3%	92.6%
Children stunted (children under 5)	48.3%	40.0%	40.2%

Source: indicators drawn from World Bank, UNICEF, GoKP documents (2018)

1.3. **Institutional development.** A critical contributing factor to the low development outcomes in the merged areas is the relative lack of state presence that persists to this day. Historically, the FATA region was governed through a colonial-era designed political, administrative, and judicial system that separated the residents from the system prevailing in the rest of the country.⁶ This administrative and political system continued into the establishment of Pakistan, where tribal areas continued to follow Rewaj (customs), a tribal code that provides dispute resolution through Jirga, imposition of collective responsibility, and mutual restraint and revenge.⁷ The tribal areas remained outside the jurisdiction of provincial administration systems, and a FATA Secretariat (established in 2006) was responsible for planning, implementing and monitoring development activities in the region. In 2018, NMA was brought under the legal system and governmental authority of the Government of Khyber Pakhtunkhwa (GoKP). Following the merger, residents of NMA have expressed increased expectations for improved service delivery, particularly in the areas of clean water, food security, education, and health.⁸ The Tribal Decade Strategy (2020-2030) points to the extension of administrative and service delivery systems as a critical pre-requisite for improving development outcomes for areas facing some of the highest poverty rates in Pakistan.

1.4. In this context, the Government of Pakistan (GOP) and GoKP has requested World Bank financing to support the first phase of the Tribal Decade Strategy, with a strategic focus on building responsive and accountable institutions for service delivery and development in the Newly Merged Districts and Frontier Regions. **KP Rural Investment and Institutional Support Project (RIISP)** is positioned to address critical priorities in the merged areas as outlined in the GoKP's TDS (2020-2030). This includes financing strategic investments to put in place administrative systems and services to facilitate citizen driven service delivery. Bank financing will provide complementary and foundational investments in infrastructure and institutional systems that would strengthen the Government's own investments, both recurring and development investments in the merged areas. The project will also support institutional development and investments made at the local government level (e.g., village council level), strengthening these institutions for planning and implementation of local budgets in an accountable, transparent and sustainable manner, and bolstering citizen

⁶ Report of the Committee on FATA Reforms 2016

⁷ Report of the Committee on FATA Reforms 2016

⁸ Braley, Alia; Fraiberger, Samuel; Tas, Emcet O. 2021. Using Twitter to Evaluate the Perception of Service Delivery in Data-Poor Environments. Washington, DC: World Bank Group. Also see: FATA Vulnerability Assessment conducted by UN agencies and the World Bank in 2017.

participation and accountability systems. The project will pay particular attention to boosting the voice and participation of women at the grassroots level, to ensure that locally determined investments meet the needs of women and girls. The project components, when taken together, provide a critical and complementary set of investments into institution building and development of state systems in the NMD.

1.5. The objective of the proposed project is to expand access to and coverage of citizen-centric public services, to invest in the provision of critical public services in priority sectors, with a focus on poor and vulnerable households. The targeted project area will cover eight (8) newly merged districts (NMD) and six (6) Tribal Sub-Divisions (TSDs).

1.6. Public Health Engineering Department Government of Khyber Pakhtunkhwa is the major service provider of Water Supply and Sanitation in the areas falling under its jurisdiction. PHE is responsible for planning, designing, construction, operation, and maintenance of necessary infrastructure for the provision of safe drinking water and sanitation facilities to the beneficiaries.

1.7. These terms of reference (ToRs) are for engaging consulting services for the implementation of water supply, sewerage and sanitation program including treatment(s) involved, where required, to be implemented by the KP Public Health Engineering Department (PHED).

II. Scope of Work

2.1 **Objective and Summary of Consulting Services** The main objective of the consulting services is to support the PHE Department Government of Khyber Pakhtunkhwa in (a) Design review and construction supervision of the drinking water supply schemes as per the mode of source and power i.e. Gravity, Solar and Electric based. (b) Design review and construction supervision of sanitation schemes including Urban and Rural areas having components of drainage, sewerage and wastewater treatment. (c) Consulting Services shall ensure the design of all those schemes which have been replaced due to any reason OR requires designing and subsequently its construction supervision.

2.2 Table A below provides a list of locations where the required facilities would be construction in Six Tribal Sub Divisions and 07 Newly Merged Districts including Khyber, Orakzai, South Waziristan and North Waziristan, Bajur, Kurram and Mohamand. This is tentative and precises lists would be developed by the consultants at the start of the consultancy during needs assessment studies and finalized together with the stakeholders.

TABLE-A covering Districts and Tribal Sub-Divisions

Sr.No	Scheme Name
A	Water Suply Schemes in Newly Merged Areas of KP-
1	Sadda Sateen, Tehsil Kurram; District Kurram
2	Shalozan and Remaining Parachinar City District Kurram
3	Bangiwal, Tehsil: sararogha ; South Waziristan
4	Mega Water Supply Scheme Ladha and Adjacent areas District South Waziristan
5	Shaman Kel,tehsil Sarwekai, District South Waziristan
6	Mega Water Supply Scheme Sepoh District Orakzai
7	Mega Water Supply Scheme Essa Khel & Mishti Mela District Orakzai
8	Mega Water Supply Scheme Kandi Mishti to Ghiljo District Orakzai

9	Mega Water Supply Scheme Sama Mamozai District Orakzai
10	Arrang Utman Khel District Bajur
11	Construction of greater drinking water supply scheme from Shalman to Landi Kotal, 278/210252 (2022-23) District Khyber
12	Mega Water Supply Scheme Khwezai & Baizai District Mohmand
13	Rehabilitation & Solarization of Existing DWSSs in Merged Areas
Sub Total -A Cost of Water Supply	
B	Sanitation Schemes in Newly Merged Areas of KP
DISTRICT BAJAUR	
14	Sanitation Scheme Raghagan
15	Sanitation Scheme Khar
16	Sanitation Scheme Inayat Kali
DISTRICT MOHMAND	
17	Sanitation Scheme Mian Mandi
18	Sanitation Scheme Ghalani
19	Sanitation Scheme Yaka Ghund
DISTRICT KHYBER	
20	Sanitation Scheme Jamrud
21	Sanitation Scheme Bara
22	Sanitation Scheme Landi Kotal
DISTRICT KURRAM	
23	Sanitation Scheme Sadda Sateen
24	Sanitation Scheme Parachinar
DISTRICT NORTH WAZIRISTAN	
25	Sanitation Scheme Mir Ali
26	Sanitation Scheme Miran Shah
DISTRICT SOUTH WAZIRISTAN	
27	Sanitation Scheme Wana
28	Sanitation Scheme Makin
29	Sanitation Scheme Kani Guram
EX-FR KOHAT (SUBDIVISION DARA ADAM KHEL)	
30	Sanitation Scheme Darra Bazar
EX-FR D.I KHAN (SUBDIVISION DARAZINDA)	
31	Sanitation Scheme Darazinda Bazar
32	Drainage, Sewerage, PCC Street Pavement and Wastewater Treatment in all Merged Districts and Sub Division
Sub Total -B -	
Grand Total-D (A+B)	

2.3 **Summary of activities.** The consultants would carry out, but not limited to, the following main activities:

- (i) Based on information the already available, through surveys and consultations with the key stakeholders, such as KP Government, District Administration, local people and other stakeholders, determine and define technical, land scaping, and use requirements of all district and Tribal Sub-Division level Public Health Engineering Facilities required as well as equipment, electro-mechanical internet, information systems at each of the district and tehsil covered under the Project.
- (ii) Similarly based on the already available information and consultations with the stakeholders determine and define the needs for these facilities, as defined in (i) and/or key and important other PHE related facilities in the merged areas.
- (iii) After reaching shared understanding of the conceptual designs as determined in (i) and (ii), with all stakeholders, including consultations and dissemination

workshop, as appropriate, and obtaining necessary approvals, Consultants will prepare feasibility and detailed designs (architectural & structural designs, cost estimates & BOQs and specifications including other social and environmental reports where required, ready for bidding) and bidding documents and support in procurement process together with bid evaluation for different infrastructure packages.

- (iv) Construction supervision of the works, good and services to be provided under this component of the Project. The Consultant will be designated as “the Engineer / Project Manager” (*while Employer will be Project Director nominated by PHE*), under civil works contracts and carry out related/required studies and prepare reports, including but not limited to the environment, social and OHS studies and reports.
- (v) Prepare the Operations and Maintenance (O&M) manual for the construction of works and provide training for care and maintenance of the completed projects to relevant staff in line departments overseeing the infrastructure assets.
- (vi) Project management support, assistance to the GoKP in the institutional setup for project implementation, technical assistance, training, setting up of project offices at the district level, support in project implementation and procurement planning, carrying out procurement, financial management, contract management, etc.
- (vii) Develop an information system GIS based, as well as a system for supervising and monitoring construction and project activities remotely through the internet connection and systems etc. and integration with the existing PHED GIS System.
- (viii) Ensure full compliance with the World Bank’s Procurement Regulations and Environmental and Social Standards, including the preparation of site specific environmental and social screening and assessments, environmental and social impact assessments (EIA and SIA).

Preparation of Mid Term Review and Project Completion Reports, including assessment of completion of project results and objectives.

2.4 **Detailed Scope of Work:** The activities and scope of work will include, but are not limited to, the following tasks:

Task A: Needs Assessment, detailed layout, architectural, and structural Design

Task A1: Needs Assessment and overall Layout and Design:

- (i) The Consultants will review and make use of all relevant and existing information made available by the Government of KP, its entities and stakeholders existing PHE facilities at district and carry out stakeholders’ consultations and based that:
 - (a) Determine and recommend best approach (new, rehabilitation, upgradation, Augmentation etc.) and location of sources, outfalls, Rows and other associated facilities, commercial centers, considering availability of land, connectivity, lifecycle cost (incl capex and opex), security and ease in access by citizens of the target areas.
 - (b) Determine overall layout, and design considering technical, climatic, land scaping, citizen friendly use of these facilities and develop a standardized modular design approach that can be adjusted/fitted to, increased, or decreased in size depending upon the extent of the requirements, availability of site and other constraints for each location.

- (ii) Prepare drawings of all the facilities to be constructed and models and carry out consultations and feedback workshops and seminar to engage and get feedback of all stakeholders.
- (iii) Based on the feedback finalize the design of the facilities at each site along with required connectivity (including access road if needed) and other electrical, mechanical and information system that would be required for use of these all facilities in effective and productive manner, as well as estimated operation and maintenance costs for the lifecycle of the facilities.
- (iv) Propose implementation approach to develop all these facilities, optimal contract packing, procurement procedures and construction supervision arrangements.

Task A2: Preparation of Detailed Designs and Bidding Documents.

2.5 The scope of work and activities under this Task would include, but not limited to, the following:

- (i) **Preparation of detailed designs.** Carry out detailed designs for PHE facilities, including (a) Design review and construction supervision of the drinking water supply schemes as per the mode of source and power i.e. Gravity, Solar and Electric based. (b) Design review and construction supervision of sanitation schemes including Urban and Rural areas having components of drainage, sewerage and wastewater treatment. (c) Consulting Services shall ensure the design of all those schemes which have been replaced due to any reason OR requires designing and subsequently its construction supervision. The designs should be modular that can be adjusted to the requirements increased or reduced based on the requirements, and incorporate designs that are appropriate for the weather condition, promote citizen accessibility, including ensuring disabled access and the use of both men and women to the facilities keeping in mind the social structure and norms of the tribal districts. Facilities should be fully functional and integrate necessary power supply and other arrangements, be digitally enabled, integrate green and efficient design elements, support enabling infrastructure to ensure citizen needs.
- (ii) Consultant shall carry out necessary topographical, and other survey and site investigations, including soil and water sampling, where needed, using appropriate technology on the ground and satellite imagery, GIS, and other computerized systems to gather data necessary for database establishment and engineering studies as mentioned above and for the design of PHE Facilities. For the schemes to undertaken under the project, Consultants will carry out the required load studies(house counting and other overhead losses), geological investigations, and the geometric and structural designs in accordance with the acceptable standards, including integration of climate resilience in the designs.
- (iii) Determine appropriate locations for major facilities (Source, Storage, Diversion, Treatment Plants etc.) in the project area and assess land requirements and potential land acquisition requirements for the facilities.
- (iv) Determine space requirements, in discussion with relevant government departments, and develop designs of typical and custom design of facilities for specific site conditions during the detailed design stage, and determine criteria for similar construction works in light of availability of local materials for construction, functionality, access and use, foundation and topographic condition, existing and proposed communication network, centrality from the

population to be served, demarcation of population to be served, lowest cost investments for the capital costs, least amount of O&M during operation and including possible changes during life of the facilities.

- (v) Prepare estimates of quantities of construction, materials, equipment, and prepare cost estimates with appropriate physical and price contingencies and breakdown by major work items.
- (vi) Prepare bill of quantities and specifications and proper engineering drawings showing the new construction and rehabilitation works that need to be carried out, if any, in case of existing facilities.
- (vii) Prepare cost estimates for annual O&M of facilities to be constructed under the project and the budgetary requirements as well as manpower and resources required for O&M.
- (viii) Prepare and recommend best way to package the development of the selected facilities, procurement strategy, method of procurement, timetable and timelines for procurement and construction of each package, completion, and handover for regular use.
- (ix) Carry out environmental and social assessments in each cluster or package or facilities included in a group, which may form the basis for administrative and other management area.
- (x) Prepare Engineer's cost estimate for each contract package in standardized manner with appropriate level of contingencies, taxes, duties etc. The cost estimate should reflect market prices (In line with competitive bidding process of World Bank).
- (xi) Preparation of detailed design of all construction, equipment, plants, and facilities, will include, but not limited to the following work activities, due consideration to:
 - (a) site conditions and circumstances, technical standard, use, aesthetic and ergonomics.
 - (b) technological innovation to meet the requirements with least cost solutions including technology and construction methods.
 - (c) architectural and aesthetic, ergonomics, functionality, durability and sustainability, and easy replication and adjustment to varying use requirements and services according to the acceptable standards.
 - (d) Site investigations and laboratory analysis including soil investigation for construction sites, water quality testing of source for water supply schemes and waste water testing for Sanitation. Which may be additionally required to determine the basic design parameter for the construction, and to locate appropriate construction material (and/or disposal areas as needed) for material where required. In particular, the consultants will carry out technical, environmental, and social impact analysis of any material that may be generated during the construction activities and prepare detailed design for safe disposal of such materials.
 - (e) criteria for the detailed designs including supporting computations for the proposed structures and/or other allied works according to recognized international standards. Drawings will be prepared to the extent that

- adequate cost estimates will be possible and to facilitate contractors to prepare their bids and construction drawings.
- (f) choosing appropriate materials, optimize the designs and select least cost options that meet technical requirements and estimate quantities of construction, material, etc. for preparation of bidding documents.
 - (g) Hydrology of the area, drainage, and flood management systems ensuring the facilities are protected up to the possible extent to extreme floods, landslides, rocks and bolder movements, earthquakes, fires inside and around the area and other natural calamities and disasters.
 - (h) technical specifications, architecture and engineering drawings needed for tender documents, bill of quantities (BOQs), specifications and bidding documents. The bidding documents will be prepared in accordance with the formats and standards defined in the World Bank Procurement Regulations of such works. For contracts to be procured, the Bidding Documents will be prepared using World Bank Standard Procurement Documents.
 - (i) preparing engineer's cost estimates for the works/contracts, and requirements for construction supervision, including facilities, material testing labs, on or off site as needed, equipment and staffing or any other special requirements; and
 - (j) preparing a full design report, along with an Environmental Management Plan, Social Management Plan, and any other site-specific plans in line with project's Environment and Social Management Framework; and
 - (k) Web based electronic live monitoring system to be installed on the construction site with details enough that the construction supervision can be carried from re-mote location. The requirements and installation of this system would be incorporated as requirement and in the BOQ as paid items in each contract to be implemented under the Project.

Task A3: Environment and Social Impact Assessments, Occupational health and safety plans and preparation of Plans

2.6 Prior to starting detailed design of various contracts, the Consultants will prepare a full Environmental and Social Impact Assessment (ESIA) and identify the land requirements and ownership and environmental social issues that may arise or associated with construction of these infrastructure and facilities and the roads that would be constructed. At this stage the understanding is that the land already owned by Government would be provided for these facilities. This would be confirmed during the environment and social assessments and as required social management plan, as well as land acquisition and detailed Resettlement Action Plan (RAP) will be prepared if required in accordance with the World Bank Guidelines for works covering each contract. ESIA would identify and provide management plan for the environment and social issues (ESMP) and developed in consultations in the project area will follow World Bank guidelines and follow the procedures and guidelines of the KP Government.

2.7 The Consultant will provide any support needed in the identification of alternative sites for resettling people, if required, and related assets and cultural properties. The Consultants will prepare plans for the development of these sites, including planning and development infrastructure, utilities, replacement housing, etc. The Consultants will help in meeting architectural requirements of location, and with construction permits to complete the works. The Consultants will also support in carrying out design for critical infrastructure of any settlement, including roads, connectivity, utilities, prepare bidding documents, and carry out construction supervision of the development and housing as needed, upon instruction of the GoKP. The RAP will be updated and

modified from time to time but not less than once a year, showing the status of implementation changes in the RAP to reflect any changes on the ground during the implementation period.

2.8 Environmental Assessment, Environmental Management Plan, EIAs. The Consultants will prepare and Environmental Assessment and EMP for each package of works under the Project. This EA/EMP will form part of the design report and cleared by World Bank and KP EPA, the mentioned above and will be updated during implementation according to the requirements and procedures defined above. The Consultants will provide support in the implementation of the EMP activities during project implementation, including the preparation of documents, obtaining local permits, discussions with local authorities, and preparation of documents, resolution of issues, etc.

2.9 Carry out hydrological studies to determine upstream and downstream impact of the water extraction. Similarly, carryout environmental impact assessment of water disposal into the streams, after quality impact and required treatment of the water to be disposed off;

2.10 International Waterway Aspects: Evaluate if a sub-project or batch of sub-projects is located water that is an international waterway. The consultants should determine the impact of the sub-project outside the national boundaries, if any, and to the extent possible quantify the potential impact in accordance with the international procedures used for projects on international waterways. Prepare a framework and assist the Government in carrying out dialogue with the other riparian states about the project impact and in reaching shared understanding of such impacts.

2.11 Occupational Health and Safety Plans (OHS) plans would be prepared for each contract package.

Task B: Construction Supervision and Contract Management and Administration and Role as “the Engineer and/ or Project Manager”

2.12 The Consultants will be responsible for all construction supervision of all works, supply and install and other contracts that would be carried out under this component of the Project, in that context, will carry out, the following activities.

(i) Being designated as the “the Engineer” “(and or Project Manager)” for the civil works, goods, and equipment supply and installation contracts and other goods contracts, the Consultants will be responsible also for the inspection and supervision of the construction works, installation of equipment and testing of construction material, in order to ensure that the works implemented and the construction goods supplied are in accordance with the designs, specifications, and terms and conditions of the relevant contracts and standards. The Consultants will ensure that the procurement of construction goods, services, and civil works contracts is in accordance with the World Bank Policies and Regulations, the contracts and signed and managed appropriately, including and changes or variation orders necessary during implementation.

(ii) In the context of contract management, the Consultant will carry out, but not be limited to, the following activities:

(a) Contract administration and management

- (b) Detailed supervision of construction activities, measurement of quantities, certification of contractor payments, ensure adherence to specifications.
 - (c) Testing of materials on and off-site, as and when required during project life, as well as the inspection of goods and materials, where involved. Quality and quantity assurance shall be the sole responsibility of the consultants.
 - (d) Determination of construction quantities and identification/preparation of variation in work, where needed, and revisions to designs and costs accordingly as per the needs of the on-going contracts with submission duly as built drawings.
 - (e) Revision of PC-1 due to substantial change in the scope and/or cost of work.
 - (f) To prepare detailed cost estimates for technical sanction.
 - (g) To assist, if required, the client in the court of law, in case of any litigation by the contractor or stakeholder.
 - (h) Preparation of monthly, quarterly, midterm and final progress reports.
 - (i) Maintenance of records for all activities related to the assignment and handing over to client.
 - (j) Preparation of operation, maintenance and management manuals for the facilities constructed under the project.
 - (k) Assurance for proper demobilization and restoration of the construction sites after completion, O&M during warranty period by the contractors.
 - (l) In the event of contractual disputes which may result in legal action, adjudication or arbitration between the contractor and the Employer, and on the instruction of the Employer, the Consultant will collate and prepare factual documentation describing the circumstances of the dispute and will guide the client accordingly.
 - (m) Carry out all obligations provided for the Engineer/Project Manager in Civil Works Contracts
- (iii) Web based electronic live monitoring system to be installed on the construction site with detailed enough that the construction supervision can be carried from re-remote location. The requirements and installation of this system would be incorporated as requirement and in the BOQ as paid items in each contract to be implemented under the Project.

2.13 The Consultants will ensure that any data collected under the platform will adhere to data privacy standards.

Task C: Project Management Support

2.14 The Consultants will provide support to employer in overall project management throughout the project implementation stage in activities such as preparation of project implementation plans, annual expenditure planning budgeting and financing forecast and plans, monthly, quarterly reports and annual reports or work programs and presentations, as required by the GoKP and financiers of the project. They will also help in development of the procurement plans, contract management, financial management for which they will develop a system that can be linked with the Project Management or field units responsible for over financial management of the project. The plans will be updated on a regular basis as required by employer.

2.15 The Consultants will support in obtaining site permits, construction permits, or any other permits or paperwork which are necessary for the project and will act on behalf of the Owner as and when designated. The consultants will support employer in procurement of works and equipment under the project, preparation of bidding documents for such procurement, support in evaluation of bids, preparation of bid evaluation reports, contract management, and implementation of EIAs, EMPs, RAPs and day to day management issues.

2.16 The Consultants will support all procurement to be carried out under the Project and in that context prepare documents for the pre-qualification of the contractors and the pre-qualification criteria (where required). The consultants will also help Employer in any prequalification process such as invitation to pre-qualification, evaluation of the pre-qualification applications, preparation of pre-qualification reports etc.

2.17 The Consultants will support Employer in drafting terms of reference for any additional work that will be carried out under the project for which additional services will be required and identified during project implementation. The consultants will also provide technical assistance and training to the project staff and for that purpose prepare an overall training program for on-the-job training and possibly study tours based on the assessment of the training and technical assistance needs for the Employer for implementation of the Project and other programs. The training programs are likely to cover but are not limited to: (a) on the job training for management of data systems and digital platforms; (b) project management, project planning, expenditures planning, budgeting; (c) preparation of detailed designs according to international standards, EIAs, RAPs; and (d) procurement and contract management in accordance with the World Bank Procurement Regulations and any other applicable local rules and guidelines. The Consultant will support the Employer in meeting all the audit requirements.

III. Implementation Arrangements

3.1 The Consultants' Employer/Client would be PHE Department, but they would work closely with the and coordinate their work with other relevant departments, including the P&D, Local Government Department, District Administrations, local councils, C&W, Irrigation, Agriculture and other relevant agencies. The Consultant will establish their office in Peshawar at a convenient location to PHE offices/Secretariat, to whom they will be reporting on a day-to-day basis. The consultant will also be expected to establish or make use of district offices or any other required field offices during the implementation phase for resident supervision of the civil works packages and schemes. The Consultants will report to the Project Director, to be deputed by the Employer.

3.2 After the inception stage the Consultants will prepare a detailed schedule and task-flow diagram, setting out the various tasks specified by these Terms of Reference, identifying the ways in which these tasks are inter-related, designed to ensure timely implementation of the actions included in the assignment, leading to timely completion of works and setting out mechanisms of coordination with the client and other related entities. The schedule should be updated throughout the Project, as required to provide up-to-date guidance on required work activities and schedules.

3.3 PHED will nominate a person who will be representative of the client or Employer and will be designated coordinate all interfaces with the Consultants.

3.4 **Selection Procedure and Form of Contract.** The Consultants will be selected following Quality and Cost Based Selection (QCBS) criteria under the World Bank Procurement Regulation for selection of consultants. The form of the contract will be Time Based.

3.5 **Duration of the Assignment.** The proposed intervention period of the project will be initially for 04 years which may be extended upto 08 years subject to approval of Tranche-II from the World Bank. The contract will be for the duration of the project, subject to satisfactory performance, and also covering the warranty/defect notification

period of the works to be implemented under the Project. After the project closure, the Consultants will be responsible to respond to any technical related query arising from time to time and especially during the first year after closure (post defect notification/warranty period).

Responsibilities of the Consultant:

3.6 The Consultants shall be responsible for all aspects of performance of services as set forth in the preceding sections of this TOR. The Project Director, PHED KP, will be responsible for providing the existing data and information including all reports prepared so far for the Project. The GoKP will also be responsible for obtaining relevant clearances and permissions to undertake work in the NMD.

3.7 The Consultant will be fully responsible for providing and furnishing the office space and accommodation required for its Project-related activities and providing the transport required to undertake those activities for its staff. It is envisaged that the consultant will maintain an office in Peshawar for the duration of the assignment together with field offices as per the requirement of the implementation and supervision of civil works and other contract packages. The equipment to be provided by the consultant includes, but is not limited to:

- All desks, chairs, and storage facilities
- Computers with all required software, including but not limited to AutoCAD, a GIS program and standard word-processing, data analysis and spreadsheet software,
- Printer and copiers, plotters, scanners for all sized, small, and large maps
- Telephones
- Projector for presentations
- Surveying equipment and software
- All consumables (paper and other stationary, ink and toner etc.)
- The consultancy cost and consultants' proposals would cover all cost including but not limited to surveys and investigations, for technical studies, environment studies and social assessments and RAP as well as transport cost and office facilities.
- The assets procured under the consultancy for the project shall be reimbursable to the client on completion of the project

Staffing Requirements:

3.8 **Staffing Requirements.** The consultants are encouraged to use expertise available in Pakistan, wherever possible. International experience and experience with World Bank financed projects are necessary to carry out the assignment. When the key skills and expertise (national and international) are not available within the consulting firms, they are encouraged to make associations with other firms, either in the form of Joint Venture or Sub-Consultant arrangements. The Consultants should propose a comprehensive team composition with task assignments for each key staff along with sufficient support staff to meet the objectives and scope of the services outlined in these Terms of Reference.

3.9 **Indicative team structure.** An indicative list of the positions of the key professional staff/experts who will be evaluated during the technical evaluation process for the assignments is given in the table below. The Consultant must propose suitable individuals as experts in these key positions e in accordance with the tentative required number of person-months against each of these key positions to carry out the assignment in conformity with the scope of services. In addition to these key positions,

the Consultant should propose other experts and support professionals (non-key experts) with adequate experience in relevant fields. During the technical evaluation process, these (non-key experts) will not be evaluated individually. However, they will be considered collectively along with other support staff, if any, under “Organization and Staffing” criteria of evaluation and the deployment will be subject to the satisfaction and client’s approval.

3.10 Indicative staffing requirements:

Sr. No.	Position	Nos.	Months	Total Months
KEY STAFF				
1	Project Manager /Team Leader	1	48	48
2	Chief Water Resource Engineer	1	12	12
3	Chief engineer (Water Supply & Sanitation)	2	6	12
4	Senior Hydro Geologist	1	3	3
5	Senior Electrical Engineer	1	3	3
6	Procurement and Contracts Specialist	1	6	6
7	Senior Environmental Engineer	1	48	48
8	Senior Social Development Specialist / Conflict Resolution Expert.	1	12	12
9	Chief Resident Engineer	1	48	48
10	Deputy Project Manager / Resident Engineer - National (N)	7	48	336
11	Design Engineer Civil /Structural (N)	2	12	24
12	Design Engineer (E&M) (N)	2	18	36
13	Hydrologist/Hydraulic Specialist (N)	2	12	24
14	Planning Engineer (N)	2	12	24
15	Health and Safety specialist and Auditor	4	12	48
16	Water Supply and Wastewater Specialist (N)	7	48	336
17	Water Treatment Specialist (N)	2	12	24
18	Training Specialist (N)	1	6	6
19	Chief / Quantity surveyor	7	48	336
20	Computer systems and ICT Specialist (N)	2	48	96
Non-Key Staff				
1	Site Engineer (Civil)	14	48	672
2	Any other non-key experts as required to accomplish the assignment under the TORs (Consultant must provide in their technical proposal and cost properly their financial proposal)	8	48	384
3	Sub Engineer / Site Inspector	14	48	672
4	Computer Operator	8	48	384
5	Office Boy	16	48	768
Total				4362

IV. OUTPUTS

4.1 The following outputs are required to be completed by the consultants. All outputs are to be issued in electronic format along with paper copies to be submitted to

the Client/Employer. The EA/RAP summaries should also be prepared in local language for dissemination and disclosure in the Project area according to the World Bank guidelines. A summary of several outputs and their description is provided below:

4.2 Inception Report. This should confirm the consultant’s view of the objectives of the assignment, draw attention to any issues identified during the inception phase of the Project, where necessary suggesting changes in methodology to address them and provide a detailed workplan for completing the assignment. The work plan should include a task-flow diagram, which depicts the interrelationship of various tasks in the assignment which lead to the completion of works and mechanisms of coordination with the client and other related entities. This will be kept and updated throughout the Project duration.

4.3 Design Report and Bidding Documents. Consisting of reports for the design of the project works for subprojects, and contracts along with full EMP and RAP, if needed. The designs documents should be complete in all respect and ready for bidding (i.e., Complete final working drawings, BOQs, specifications, any social and environmental and OHS documents (as required). These will be phased over the implementation period of the project. Bidding documents would be prepared using World Bank standard bidding documents. Bill of Quantities.

4.4 A Quality Management Plan should be produced for each element of the works. The QMP will set out the process for monitoring construction activities and will identify specific activities to be approved and who those approvals will be carried out by. The QMP should be approved by Client for construction activities commence.

4.5 Construction reports, monthly reports, quarterly reports, and annual work plans to be prepared in line with the project implementation plan and on a regular basis.

4.6 Bid evaluation reports, pre-qualification reports as needed throughout the procurement process and construction supervision period.

4.7 Works/Project Completion report. The schedule for various reports to be issued by the Consultants is given below. The consultant will prepare reports in English and provide and electronic copy and two hard copies of the key reports to the Government and the World Bank. The EA/RAP summaries will also be prepared in Urdu/Pushto for dissemination and disclosure in the Project area according to the guidelines.

S/No	Outputs	Months from Contract Signing
1	Inception Report	6 weeks
2	Draft designs	3 rd month to 8 th Month or as agreed with GoKP
3	Design reports and bidding documents for the first two to three districts	3 rd month to 12 th Month or as agreed with GoKP
4	Digital monitoring system and dashboard design report	5 th month or as agreed with GoKP
5.	Contracting for first packages, bid evaluation reports, etc.	According to the agreed schedule

5	Bidding documents for the remaining packages	According to the agreed schedule but all would be completed by 12 th month
6	Mid Term Report of the project's status and performance	At the midterm review
7	Any other report as desired by the Client	According to the agreed schedule
8	Draft Final Report	One month before completion
9	Final Report	On completion